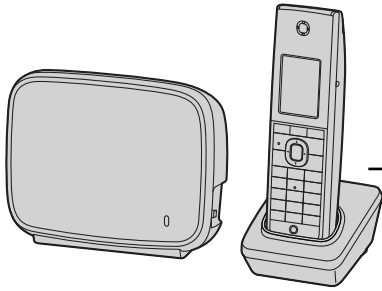


Panasonic®



Administrator Guide

SIP Cordless Phone

Model No. **KX-TGP600**

Thank you for purchasing this Panasonic product.
Please read this manual carefully before using this product and save this manual for future use.

In this manual, the suffix of each model number is omitted unless necessary.

Introduction

Outline

This Administrator Guide provides detailed information on the configuration and management of this unit.

Audience

This Administrator Guide contains explanations about the installation, maintenance, and management of the unit and is aimed at network administrators and phone system dealers.

Technical descriptions are included in this guide. Prior knowledge of networking and VoIP (Voice over Internet Protocol) is required.

Related Documentation

Quick Start Guide

Briefly describes basic information about the installation of the unit.

Operating Instructions

Describes information about the installation and operation of the unit.

Manuals and supporting information are provided on the Panasonic Web site at:

<https://panasonic.net/cns/pcc/support/sipphone/>

Technical Support

When technical support is required, contact your phone system dealer/service provider.

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NOTES

- The screen shots shown in this guide are provided for reference only, and may differ from the screens displayed on your PC.

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Section 1

Initial Setup

This section provides an overview of the setup procedures for the unit.

1.1 Setup

1.1.1 Factory Defaults

Many of the settings for this unit have been configured before the unit ships.

Where possible, these settings are configured with the optimum or most common values for the setting. For example, the port number of the SIP (Session Initiation Protocol) server is set to "5060".

However, many of the settings, such as the address of the SIP server or the phone number, have not been pre-configured, and they must be modified depending on the usage environment. If the port number of the SIP server is not "5060", the value of this setting must be changed.

This unit thus will not function properly using only the factory default settings. The settings for each feature must be configured according to the environment in which the unit is used.

Note

- If you are using a PoE hub, the number of devices that you can connect simultaneously is limited by the amount of power supplied by the hub.

1.1.2 Language Selection for the Unit

You can change the language used on the LCD.

In addition, various settings can be configured by accessing the Web user interface from a PC on the same network (→ see **4 Web User Interface Programming**). You can select the language for the Web user interface.

Note

- To select the display language for the unit, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).
- To select the display language for the Web user interface, see **4.4.2 Language Settings**.

1.1.3 Basic Network Setup

This section describes the basic network settings that you must configure before you can use the unit on your network.

You must configure the following network settings:

- IP Address Mode (IPv4 or IPv6 or IPv4/IPv6 Dual) settings
- TCP/IP settings (DHCP / RA for IPv6 / static IP)
- DNS server settings

For details about basic network settings via the Web user interface, see **4.3.1 Basic Network Settings**.

TCP/IP Settings for IPv4 (DHCP or Static IP Address Assignment)

A unique IP address must be assigned to the unit so that it can communicate on the network. How you assign an IP address depends on your network environment. This unit supports the following 2 methods for assigning an IP address:

Obtaining an IP Address Automatically from a DHCP Server

You can configure the unit to automatically obtain its IP address when it starts up from a DHCP server running on your network. With this method, the system can efficiently manage a limited number of IP addresses. Note that the IP address assigned to the unit may vary every time the unit is started up.

For details about the DHCP server, consult your network administrator.

Using a Static IP Address Specified by Your Network Administrator

If IP addresses for network devices are specified individually by your network administrator, you will need to manually configure settings such as the IP address, subnet mask, default gateway, and DNS servers. For details about the required network settings, consult your network administrator.

TCP/IP Settings for IPv6 (DHCP, RA or Static IP Address Assignment)

A unique IP address must be assigned to the unit so that it can communicate on the network. How you assign an IP address depends on your network environment. This unit supports the following 3 methods for assigning an IP address:

Obtaining an IP Address Automatically from a DHCP Server

You can configure the unit to automatically obtain its IP address when it starts up from a DHCP server running on your network. With this method, the system can efficiently manage a limited number of IP addresses. Note that the IP address assigned to the unit may vary every time the unit is started up. For details about the DHCP server, consult your network administrator.

Using a Static IP Address Specified by Your Network Administrator

If IP addresses for network devices are specified individually by your network administrator, you will need to manually configure settings such as the IP address, Prefix, default gateway, and DNS servers. For details about the required network settings, consult your network administrator.

Using a RA (Router Advertisement)

An IPv6 address can be assigned using Stateless Autoconfiguration. This enables the setting of addresses for only the router and the node without the need to manage information. For details about the required network settings, consult your network administrator.

DNS Server Settings

You can configure the unit to use 2 DNS servers: a primary DNS server is DNS1 and a secondary DNS server is DNS2. The primary DNS1 server receives priority over the secondary DNS2 server. If the primary DNS1 server returns no reply, the secondary DNS2 server will be used.

For details about configuring the DNS server settings using the unit, or using the Web user interface, see **Configuring the Network Settings of the Unit** in this section.

DNS Priority Using Configuration File

The setting for DNS server(s) may be configured using the configuration files by your phone system dealer/service provider (→ see "DHCP_DNS_ENABLE", "DHCP_DNS_ENABLE_IPV6", "USER_DNS1_ADDR"/"USER_DNS2_ADDR" (for IPv4) and "USER_DNS1_ADDR_IPV6"/"USER_DNS2_ADDR_IPV6" (for IPv6) in **5.3.3 Basic Network Settings**).

- When "DHCP_DNS_ENABLE" (for IPv4) is set to "Y", you can manually configure the DNS server address by using "USER_DNS1_ADDR" or ("USER_DNS1_ADDR" and "USER_DNS2_ADDR"). When set to "N", the DNS server address will be automatically transmitted. This setting is available only when ("IP_ADDR_MODE"="0" or "IP_ADDR_MODE"="2") and "CONNECTION_TYPE"="1".
- When "DHCP_DNS_ENABLE_IPV6" (for IPv6) is set to "Y", you can manually configure the DNS server address by using "USER_DNS1_ADDR_IPV6" or ("USER_DNS1_ADDR_IPV6" and "USER_DNS2_ADDR_IPV6"). When set to "N", the DNS server address will be automatically transmitted. This setting is available only when ("IP_ADDR_MODE"="1" or "IP_ADDR_MODE"="2") and "CONNECTION_TYPE_IPV6"="1".

Configuring the Network Settings of the Unit

The following procedures explain how to change the network settings via the unit.

For details about the individual network settings that can be configured via the unit, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).

For details about configuring network settings via the Web user interface, see **4.3.1 Basic Network Settings**.

To configure IP Mode (IPv4, IPv6, IPv4&IPv6)

1.  /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Network Settings" → **OK**
4. [▲]/[▼]: "IP Mode Select" → **OK**
5. [▲]/[▼]: "IPv4" / "IPv6" / "IPv4&IPv6" → **OK**
 - The initial value is IPv4.
6. 

Configuring the Network Settings Using IPv4

To configure network settings automatically

1.  /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Network Settings" → **OK**
4. [▲]/[▼]: "IPv4 Settings" → **OK**
5. [▲]/[▼]: "DHCP" → **OK**
6. [▲]/[▼]: "Auto" → **OK**
 - Select **Manual** to enter the addresses for DNS1 (primary DNS server) and, if necessary, DNS2 (secondary DNS server) manually, and then press **OK**.
7. 

To configure network settings manually

1.  /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Network Settings" → **OK**
4. [▲]/[▼]: "IPv4 Settings" → **OK**
5. [▲]/[▼]: "Static" → **OK**

6. Enter the IP address, subnet mask, default gateway, DNS1 (primary DNS server), and, if necessary, DNS2 (secondary DNS server), and then press **OK**.
7. 

Configuring the Network Settings Using IPv6

To configure network settings automatically using DHCP

1. /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Network Settings" → **OK**
4. [▲]/[▼]: "IPv6 Settings" → **OK**
5. [▲]/[▼]: "DHCP" → **OK**
6. [▲]/[▼]: "Auto" → **OK**
 - Select **Manual** to enter the addresses for DNS1 (primary DNS server) and, if necessary, DNS2 (secondary DNS server) manually, and then press **OK**.
7. 

To configure network settings automatically using RA

1. /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Network Settings" → **OK**
4. [▲]/[▼]: "IPv6 Settings" → **OK**
5. [▲]/[▼]: "RA" → **OK**
6. Enter the addresses for DNS1 (primary DNS server) and, if necessary, DNS2 (secondary DNS server) manually, and then press **OK**.
7. 

To configure network settings manually

1. /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Network Settings" → **OK**
4. [▲]/[▼]: "IPv6 Settings" → **OK**

5. [A]/[V]: "Static" → **OK**

6. Enter the IP address, Prefix (for IPv6), Default Gateway, DNS1 (primary DNS server), and, if necessary, DNS2 (secondary DNS server), and then press **OK**.

7. 

Note

- If your phone system dealer/service provider does not allow you these settings, you cannot change them even though the unit shows the setting menu. Contact your phone system dealer/service provider for further information.
- If you select **DHCP** for the connection mode, all the settings concerning static connection will be ignored, even if they have been specified.
- If you select **DHCP** for the connection mode and **Auto** for DNS, the DNS server settings (DNS1 and DNS2) will be ignored, even if they have been specified.

1.1.4 Overview of Programming

There are 3 types of programming, as shown in the table below:

Programming Type	Description	References
Phone user interface programming	Configuring the unit's settings directly from the unit.	→ 1.1.5 Phone User Interface Programming → 3 Phone User Interface Programming
Web user interface programming	Configuring the unit's settings by accessing the Web user interface from a PC connected to the same network.	→ 1.1.6 Web User Interface Programming → 4 Web User Interface Programming
Configuration file programming	Configuring the unit's settings beforehand by creating configuration files (pre-provisioning), and having the unit download the files from a server on the Internet and configure its own settings (provisioning).	→ 2 General Information on Provisioning → 5 Configuration File Programming

1.1.5 Phone User Interface Programming

You can change the settings directly from the unit.

For details about the operations, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).

For details about additional features available with direct commands, see **3 Phone User Interface Programming**.

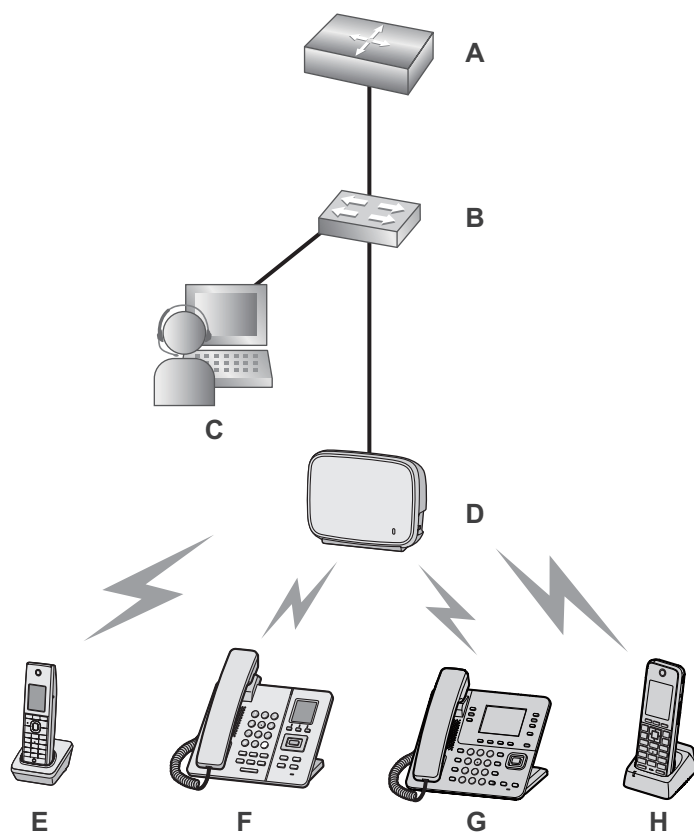
1.1.5.1 Changing the Language for Phone User Interface Programming

You can change the language used on the LCD. Because the language settings for the LCD of the unit are not synchronized, you must set the languages individually for the unit.

For details about changing the setting, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).

1.1.6 Web User Interface Programming

After connecting the unit to your network, you can configure the unit's settings by accessing the Web user interface from a PC connected to the same network. For details, see **4 Web User Interface Programming**.



- A. Router
- B. Switching Hub
- C. PC
- D. KX-TGP600
- E. KX-TPA60
- F. KX-TPA65
- G. KX-TPA68
- H. KX-TPA70/KX-TPA73

1.1.6.1 Password for Web User Interface Programming

To program the unit via the Web user interface, a login account is required. There are 2 types of accounts, and each has different access privileges.

- **User:** User accounts are for use by end users. Users can change the settings that are specific to the unit.
- **Administrator:** Administrator accounts are for use by administrators to manage the system configuration. Administrators can change all the settings, including the network settings, in addition to the settings that can be changed from a User account. A separate password is assigned to each account.

For details, see **Access Levels (IDs and Passwords)** in **1.1.6.3 Before Accessing the Web User Interface**.

Notice

- You should manage the passwords carefully, and change them regularly.

1.1.6.2 Changing the Language for Web User Interface Programming

When accessing the unit via the Web user interface on a PC connected to the same network, various menus and settings are displayed. You can change the language used for displaying these setting items. Because the language setting for the Web user interface is not synchronized with those of the unit, you must set the languages for each independently.

For details, see **4.4.2 Language Settings**.

1.1.6.3 Before Accessing the Web User Interface

Recommended Environment

This unit supports the following specifications:

HTTP Version	HTTP/1.0 (RFC 1945), HTTP/1.1 (RFC 2616)
Authentication Method	Digest

The Web user interface will operate correctly in the following environments:

Operating System	Microsoft® Windows® 7 or Windows 8 operating system
Web Browser	Windows Internet Explorer® 7, Windows Internet Explorer 8, Windows Internet Explorer 9, Windows Internet Explorer 10, Windows Internet Explorer 11 web browser, Firefox® (32.0.3), Google® Chrome™ (37.0.2062.103)
Language (recommended)	English

Opening/Closing the Web Port

To access the Web user interface, you must open the unit's Web port beforehand. For details, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).

Configuring Settings from the Unit

To open the unit's Web port

1.  /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "Setting Handset" → **OK**
3. [▲]/[▼]: "Other Option" → **OK**
4. [▲]/[▼]: "Embedded Web" → **OK**
5. [▲]/[▼]: "On" for "Embedded Web" → **OK**

To close the unit's Web port

1. /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "Setting Handset" → **OK**
3. [▲]/[▼]: "Other Option" → **OK**
4. [▲]/[▼]: "Embedded Web" → **OK**
5. [▲]/[▼]: "Off" for "Embedded Web" → **OK**

Configuring Settings from the Web User Interface

To close the unit's Web port

1. In the Web user interface, click **[Web Port Close]**.
2. Click **OK**.

Note

- The Web port of the unit will be closed automatically in the following conditions:
 - 3 consecutive unsuccessful login attempts occur.
- The Web port can be set to stay open continuously, through Configuration file programming (→ see "HTTPD_PORTOPEN_AUTO" in **5.3.9 HTTPD/WEB Settings**). However, please recognize the possibility of unauthorized access to the unit by doing so.

Access Levels (IDs and Passwords)

2 accounts with different access privileges are provided for accessing the Web user interface: User and Administrator. Each account has its own ID and password, which are required to log in to the Web user interface.

Account	Target User	ID (default)	Password (default)	Password Restrictions
User	End users	user	-blank-(NULL)	• When logged in as User, you can change the password for the User account (→ see 4.4.3 User Password Settings). • The password can consist of 6 to 64 ASCII characters (case-sensitive) (→ see Entering Characters in 1.1.6.4 Accessing the Web User Interface).

Account	Target User	ID (default)	Password (default)	Password Restrictions
Administrator	Network administrators, etc.	admin	adminpass	- When logged in as Administrator, you can change the password for both the User and Administrator accounts (→ see 4.4.4 Admin Password Settings). - The password can consist of 6 to 64 ASCII characters (case-sensitive) (→ see Entering Characters in 1.1.6.4 Accessing the Web User Interface).

Notice

- Only one account can be logged in to the Web user interface at a time. If you try to access the Web user interface while someone is logged in, you will be denied access.
- You cannot log in to the Web user interface even under the same account as someone who is already logged in.
- The user password is required to change the settings.
- The IDs can be changed through configuration file programming (→ see "ADMIN_ID" and "USER_ID" in **5.3.9 HTTPD/WEB Settings**).
- If you forget your account IDs or passwords, consult your phone system dealer/service provider.

1.1.6.4 Accessing the Web User Interface

The unit can be configured from the Web user interface.

To access the Web user interface

- Open your Web browser, and then enter "http://" followed by the unit's IP address into the address field of your browser.
 - When the IP address is 192.168.0.1 (IPv4), access the following URL.
http://192.168.0.1/
 - When the IP address is 2001:db8:1f70::999:de8:7648:6e8 (IPv6), access the following URL. With IPv6, the IP address is enclosed in square brackets "[" and "]".
http://[2001:db8:1f70::999:de8:7648:6e8]/

Note

- To determine the unit's IP address, perform the following operations on the unit:
 -  /MENU/Menu
 - KX-TPA60/KX-TPA65:
/[V]/[←]/[→]:  → **OK**
KX-TPA68:
/[V]: "System Settings" → **OK**
 - /[V]: "Status" → **OK**
 - /[V]: "IPv4 Settings"/"IPv6 Settings" → **OK**
 - /[V]: "IP Address".

6.

- For authentication, enter your ID (username) and password, and then click **OK**.

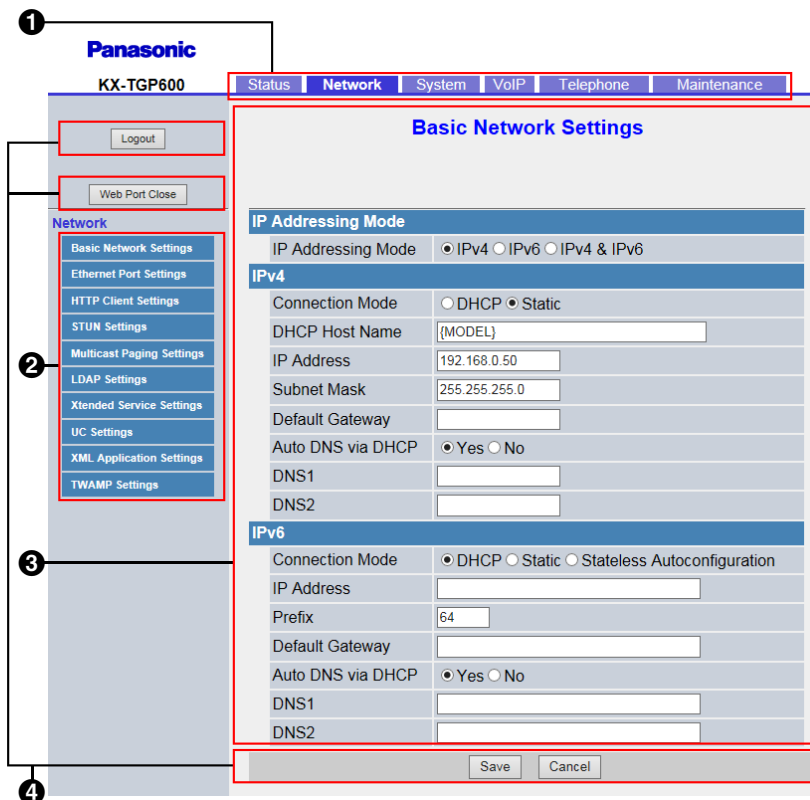
Notice

- The default ID for the User account is "user", and the default password is blank. The ID cannot be changed from the Web user interface, but it can be changed through configuration file programming.
- When you log in as User to the Web user interface for the first time, the **[User Password Settings]** screen (→ see 4.4.3 **User Password Settings**) will be displayed. Enter a new password, and then perform authentication again with the new password to log in to the Web user interface.
- The default ID for the Administrator account is "admin", and the default password is "adminpass". The ID cannot be changed from the Web user interface, but it can be changed through configuration file programming.

- The Web user interface window is displayed. Configure the settings for the unit as desired.
- You can log out from the Web user interface at any time by clicking **[Web Port Close]**.

Controls on the Window

The Web user interface window contains various controls for navigating and configuring settings. The following figure shows the controls that are displayed on the **[Basic Network Settings]** screen as an example:

**Note**

- Actual default values may vary depending on your phone system dealer/service provider.

1.1.6 Web User Interface Programming

- When you log in to the Web user interface with the User account, the languages of messages displayed on the configuration screen may differ depending on the country/area of use.

1 Tabs

Tabs are the top categories for classifying settings. When you click a tab, the corresponding menu items and the configuration screen of the first menu item appear. There are 6 tabs for the Administrator account and 3 tabs for the User account. For details about the account types, see **Access Levels (IDs and Passwords)** in this section.

2 Menu

The menu displays the sub-categories of the selected tab.

3 Configuration Screen

Clicking a menu displays the corresponding configuration screen, which contains the actual settings, grouped into sections. For details, see **4.2 Status** to **4.7.9 Restart**.

4 Buttons

The following standard buttons are displayed in the Web user interface:

Button	Function
Logout	Logs out of the Web user interface.
Web Port Close	Closes the Web port of the unit and logs you out of the Web user interface after a confirmation message is displayed.
Save	Applies changes and displays a result message (→ see Result Messages in this section).
Cancel	Discards changes. The settings on the current screen will return to the values they had before being changed.
Refresh	Updates the status information displayed on the screen. This button is displayed in the upper-right area of the [Network Status] and [VoIP Status] screens.

Entering Characters

In the Web user interface, when specifying a name, message, password, or other text item, you can enter any of the ASCII characters displayed in the following table with a white background.

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
20	SP	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
60	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70	p	q	r	s	t	u	v	w	x	y	z	{		}	~	

However, there are additional limitations for certain types of fields as follows:

- Number field
 - You may only enter a sequence of numeric characters.

- IP Address field
 - You can enter the IP address using dotted-decimal notation (i.e., "n.n.n.n" where n=0–255).
- FQDN field
 - You can enter the IP address using dotted-decimal notation (i.e., "n.n.n.n" where n=0–255).
 - With IPv6, the IP address is enclosed in square brackets "[" and "]").
Example: http://[2001:db8:1f70::999:de8:7648:6e8]/
- Display Name field (→ see **[Display Name]** in **4.6.3.1 Call Features**)
 - This is the only field in which you can enter Unicode characters.

Result Messages

When you click **[Save]** after changing the settings on the current configuration screen, one of the following messages will appear in the upper-left area of the current configuration screen:

Result Message	Description	Applicable Screens
Complete	The operation has successfully completed.	All screens except 4.6.7 Export Phonebook
Failed (Parameter Error)	The operation failed because: • Some specified values are out of range or invalid.	All screens
Failed (Memory Access Failure)	The operation failed because: • Access error to the flash memory occurred while reading or writing the data.	All screens
Failed (Transfer Failure) ¹⁾	The operation failed because: • A network error occurred during the data transmission.	All screens
Failed (Busy)	The operation failed because: • The unit is in an operation that accesses the flash memory of the unit.	All screens
	• When attempting to import/export the phonebook data, the unit is on a call. • While transferring the phonebook data, a call arrived at the unit.	4.6.6 Import Phonebook 4.6.7 Export Phonebook
	• When updating the firmware, the unit is on a call.	4.7.3 Upgrade Firmware
Failed (Canceled)	The operation failed because: • While transferring the phonebook data, the connection with the unit was interrupted.	4.6.6 Import Phonebook 4.6.7 Export Phonebook
Failed (Invalid File)	The operation failed because: • Analysis of the received data failed.	4.6.6 Import Phonebook
	• The firmware file is corrupted or invalid.	4.7.3 Upgrade Firmware

Result Message	Description	Applicable Screens
Failed (File Size Error)	The operation failed because: • The size of the imported phonebook is too large.	4.6.6 Import Phonebook
	• The size of the firmware file is insufficient.	4.7.3 Upgrade Firmware
Failed (No Handset, or Busy)	The operation failed because: • The specified Cordless Handset is not registered. (It cannot be found in an Cordless Handset search via Base Unit synchronization.)	4.6.6 Import Phonebook
	• The specified Cordless Handset cannot be connected to.	4.6.6 Import Phonebook
Failed (No Reception)	The operation failed because: • The connection to the specified Cordless Handset suddenly cuts out (becomes out of range).	4.6.6 Import Phonebook
Failed (Charge Battery)	The operation failed because: • The battery needs to be charged.	4.6.7 Export Phonebook
No Data	The operation failed because: • The imported phonebook file contains no valid phonebook entries.	4.6.6 Import Phonebook
	• No phonebook entry is registered in the export source the unit.	4.6.7 Export Phonebook

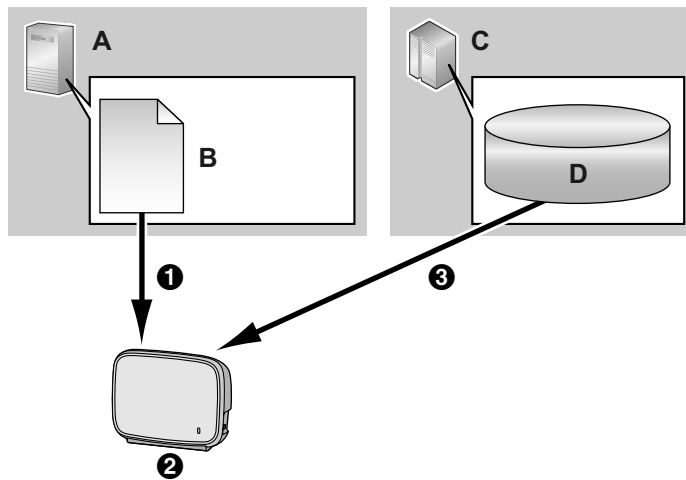
*1 "Failed (Transfer Failure)" may not be displayed depending on your Web browser.

1.2 Firmware Update

1.2.1 Firmware Update

You can update the unit's firmware to improve the unit's operation. You can configure the unit so that it automatically downloads the new firmware file from a specified location. The firmware update will be executed when the unit is restarted.

For details, see **7 Firmware Update**.



- A. Provisioning server
- B. Configuration file
- C. Firmware server
- D. Firmware

- ① Download
- ② Check for update
- ③ Firmware download and update

Section 2

General Information on Provisioning

This section provides an overview of the configuration file programming procedures for the unit, including pre-provisioning and provisioning.

2.1 Pre-provisioning

2.1.1 What is Pre-provisioning?

Pre-provisioning is an auto-provisioning mechanism that automatically obtains the server address saved in the configuration file administered by the carrier or distributor.

There are two methods for automatically obtaining the server address saved in the configuration file.

1. **SIP PnP**
The phone multicasts a SIP SUBSCRIBE message and obtains a provisioning server address via a SIP NOTIFY message.
2. **DHCP options**
The phone obtains a provisioning server address via the DHCP option information. DHCP options 66, 159 and 160 will be used when the phone's IP address mode is IPv4, and DHCP option 17 will be used when the phone's IP address mode is IPv6.

2.1.2 How to Obtain a Pre-provisioning Server Address

Upon startup, the phone will attempt to obtain a pre-provisioning server address as follows.

1. When the phone's IP address mode is IPv4
The phone will attempt to obtain a pre-provisioning server address using SIP PnP, but when it cannot, it will attempt to do so from DHCPv4 options.
2. When the phone's IP address mode is IPv6
The phone will attempt to obtain a pre-provisioning server address from DHCPv6 options.
3. When the phone's IP address mode is IPv4/v6 Dual
The phone will attempt to obtain a pre-provisioning server address using SIP PnP, but when it cannot, it will attempt to do so from DHCPv4 options. When this is not possible, it will attempt to do so from DHCPv6 options.

Note

- The SIP PnP function is enabled in the initial state. It can be enabled or disabled from the configuration parameter "**SIPPNP_PROV_ENABLE**".

2.1.3 Server Address Formats

1. **Basic format**
Format: <scheme>://<user>:<password>@<host>:<port>/<url-path>/<file name>
* The server name (<host>) may be the IP address or the domain.
* Maximum length: 384 characters
2. **Macros used with file names**

Macro Format {XXXX}	Macro Expansion
{MAC}	If the URL contains {MAC}, it will be replaced with the device's MAC address in uppercase letters. Example: {MAC} → 0080F0C571EB
{mac}	If the URL contains {mac}, it will be replaced with the device's MAC address in lowercase letters. Example: {mac} → 0080f0C571eb
{MODEL}	If the URL contains {MODEL}, it will be replaced with the device's model name. Example: {MODEL} → KX-TGP600

Macro Format {XXXX}	Macro Expansion
{fwver}	If the URL contains {fwver}, it will be replaced with the device's firmware version. Example: {fwver} → 01.000

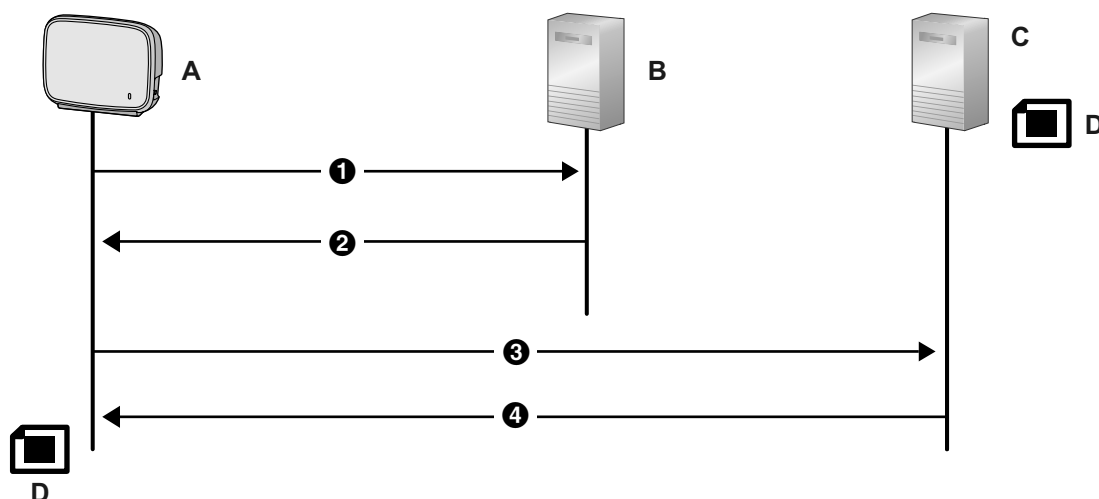
Note

- Macros distinguish between uppercase and lowercase letters.
- Macros not specified above will be treated as strings of characters.

2.1.4 Obtaining a Provisioning Server Address via SIP PnP

1. Basic Sequence

At startup, the phone will multicast a SIP SUBSCRIBE message for the ua-profile event, receive a SIP NOTIFY message from the PnP server and obtain a pre-provisioning server address. It will then obtain a provisioning server address from the pre-provisioning server.



A. KX-TGP600

B. PnP Server

C. Pre-provisioning Server

D. xxxxxxxxxxxx.cfg

① SUBSCRIBE (multicast)

② NOTIFY (unicast)
Body `http://server/{MODEL}.cfg`

③ HTTP GET {MODEL}.cfg

④ 200OK

Obtain provisioning server information

`CFG_STANDARD_FILE_PATH`

`CFG_PRODUCT_FILE_PATH`

`CFG_MASTER_FILE_PATH`

2.1.5 Obtaining a Provisioning Server Address from DHCP Options

2. Provisioning server URL formats

Format: <scheme>://<user>:<password>@<host>:<port>/<url-path>/<file name>

<scheme>	Mandatory	Protocol (TFTP/FTP/HTTP/HTTPS)
<user>	Optional	User name
<password>	Optional	Password
<host>	Mandatory	IP Address or Domain
<port>	Optional	Port number
<url-path>	Optional	Full path of the resource
<file name>	Mandatory	File name

1. Case 1: Protocol, server name and file name
http://10.0.0.1/{MODEL}.cfg
http://prov.com/{MODEL}.cfg
2. Case 2: Protocol, server name, path and file name
http://10.0.0.1/pana/{MODEL}.cfg
http://prov.com/pana/{MODEL}.cfg
3. Case 3 Protocol, user name, password, server name and file name
http://id:pass@10.0.0.1/{MAC}.cfg
http://id:pass@prov.com/{MAC}.cfg

2.1.5 Obtaining a Provisioning Server Address from DHCP Options

1. DHCPv4

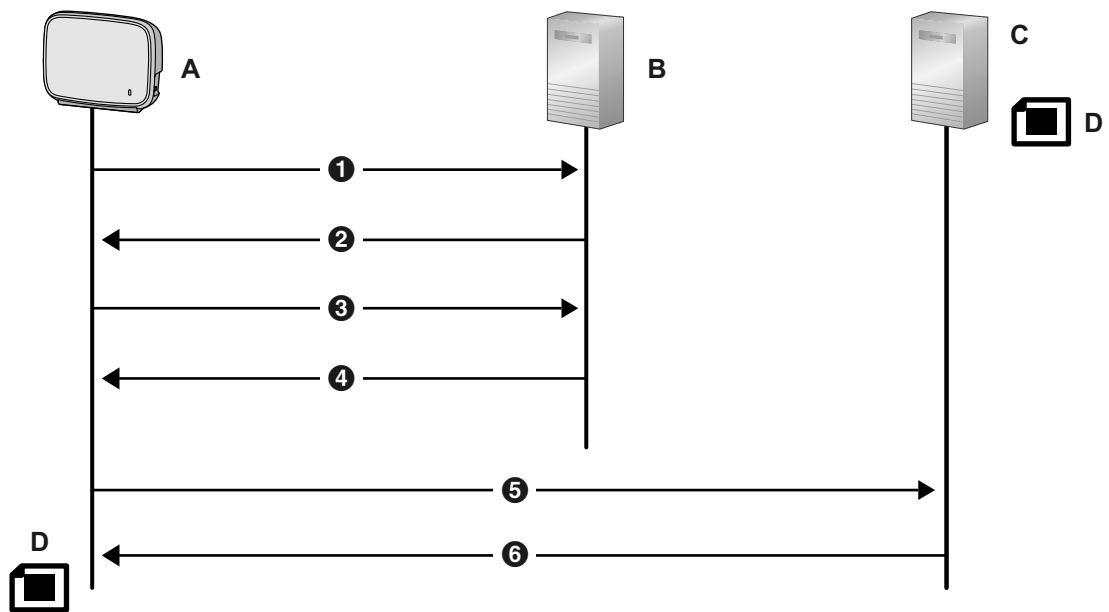
a. Basic Sequence

In a DHCPv4 environment, the phone will transmit a DHCP DISCOVER message for DHCP options (66, 67, 159 and 160), receive a DHCP OFFER message, obtain a pre-provisioning server address and obtain a provisioning server address from the pre-provisioning server.

Note

- DHCP options (66, 159 and 160) are enabled in the initial state and can be enabled and disabled from the configuration parameters.

DHCP options	Configuration parameter	Priority
Option 66	OPTION66_ENABLE	3
Option 159	OPTION159_PROV_ENABLE	2
Option 160	OPTION160_PROV_ENABLE	1



- A. KX-TGP600
 B. DHCP Server
 C. Pre-provisioning Server
 D. KX-TGP600.cfg

- ① DHCP DISCOVER
 ② DHCP OFFER
 ③ DHCP REQUEST
 ④ DHCP ACK
 ⑤ TFTP {MODEL}.cfg
 ⑥ 200OK

Obtain provisioning server information

CFG_STANDARD_FILE_PATH

CFG_PRODUCT_FILE_PATH

CFG_MASTER_FILE_PATH

- b. Format for pre-provisioning files obtained from DHCP option 67
 Format: <path>/<file name>

<path>	Optional	path
<file name>	Mandatory	file name

1. Case 1: File name only
 {MODEL}.cfg
 2. Case 2: Path and file name
 pana/{MODEL}.cfg

2.1.5 Obtaining a Provisioning Server Address from DHCP Options

- c. Format for pre-provisioning server address obtained from DHCP options 159 and 160
Format: <scheme>://<user>:<password>@<host>:<port>/<path>

<scheme>	Mandatory	Protocol (TFTP/FTP/HTTP/HTTPS)
<user>	Optional	User name
<password>	Optional	Password
<host>	Mandatory	IP Address or Domain
<port>	Optional	Port number
<path>	Optional	Path

The obtained file is the <path>/<file name> set in DHCP option 67.

If DHCP option 67 is not set, {MODEL}.cfg is obtained.

The examples in parentheses below are when {MODEL}.cfg is set for DHCP option 67.

1. Case 1: Protocol and server name
http://10.0.0.1 (http://10.0.0.1/{MODEL}.cfg)
http://prov.com (http://prov.com/{MODEL}.cfg)
2. Case 2: Protocol, server name and path
http://10.0.0.1/pana (http://10.0.0.1/pana/{MODEL}.cfg)
http://prov.com/pana (http://prov.com/pana/{MODEL}.cfg)
3. Case 3: Protocol, user name, password and server name
http://id:pass@10.0.0.1 (http://id:pass@10.0.0.1/{MODEL}.cfg)
http://id:pass@prov.com (http://id:pass@prov.com/{MODEL}.cfg)

- d. Format for pre-provisioning server address obtained from DHCP option 66
Format: <scheme>://<user>:<password>@<host>:<port>/<path>/<file name>

<scheme>	Optional	Protocol (TFTP/FTP/HTTP/HTTPS)
<user>	Optional	User name
<password>	Optional	Password
<host>	Mandatory	IP Address or Domain
<port>	Optional	Port number
<path>	Optional	Path
<file name>	Optional	File name

If DHCP option 66 does not include <scheme>, {MODEL}.cfg is obtained.^{*1}

If the last character of DHCP option 66 is "/", {MODEL}.cfg is obtained.^{*1}

If xxx.cfg is specified as <file name> in DHCP option 66, xxx.cfg is obtained.

^{*1} For models except those in the USA: Regardless of DHCP option 67 setting, {MODEL}.cfg is obtained.
For models in the USA: If DHCP option 67 is set, the file in DHCP option 67 is obtained.

The examples in parentheses below show when {MODEL}.cfg is obtained.

1. Case 1: Protocol and server name
http://10.0.0.1/ (http://10.0.0.1/{MODEL}.cfg)
http://prov.com/ (http://prov.com/{MODEL}.cfg)
2. Case 2: Protocol, server name and path
http://10.0.0.1/pana/ (http://10.0.0.1/pana/{MODEL}.cfg)
http://prov.com/pana/ (http://prov.com/pana/{MODEL}.cfg)
3. Case 3: Protocol, user name, password and server name

http://id:pass@10.0.0.1/ (http://id:pass@10.0.0.1/{MODEL}.cfg)
 http://id:pass@prov.com/ (http://id:pass@prov.com/{MODEL}.cfg)

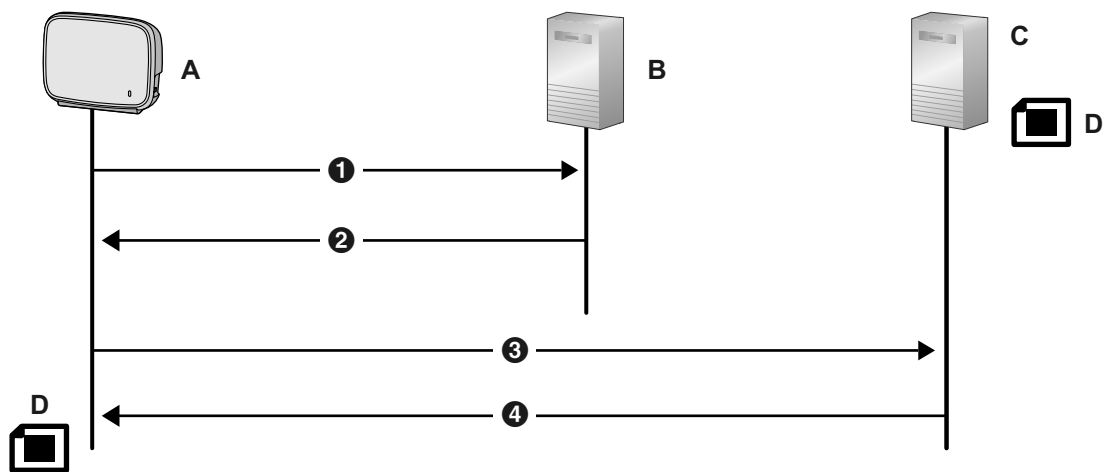
4. Case 4: Server name
 tftp://10.0.0.1 (tftp://10.0.0.1/{MODEL}.cfg)
 tftp://prov.com (tftp://prov.com/{MODEL}.cfg)

2. DHCPv6

- a. In a DHCPv6 environment, the phone will transmit a DHCPv6 REQUEST message for DHCP option 17, receive a DHCPv6 REPLY message, obtain a pre-provisioning server address and obtain a provisioning server address from the pre-provisioning server.

Note

- DHCP option 17 is enabled in the initial state and can be enabled and disabled from the configuration parameters ("DHCPV6_OPTION17_PROV_ENABLE").



- A. KX-TGP600
 B. DHCP Server
 C. Pre-provisioning Server
 D. KX-TGP600.cfg

- ① DHCPv6 REQUEST
 ② DHCPv6 REPLY
 ③ TFTP {MODEL}.cfg
 ④ 200OK

Obtain provisioning server information

CFG_STANDARD_FILE_PATH
 CFG_PRODUCT_FILE_PATH
 CFG_MASTER_FILE_PATH

- b. Format for pre-provisioning addresses obtained from DHCPv6 option 17
 Format: <scheme>://<user>:<password>@<host>:<port>/<url-path>

<scheme>	Mandatory	Protocol (TFTP/FTP/HTTP/HTTPS)
----------	-----------	--------------------------------

<user>	Optional	User name
<password>	Optional	Password
<host>	Mandatory	IP Address or Domain
<port>	Optional	Port number
<url-path>	Optional	Full path of the resource
<file name>	Mandatory	File name

1. Case 1: Protocol, server name, and file name
http://[2001:0db8:bd05:01d2:288a:1fc0:0001:10ee]/{MODEL}.cfg
http://prov.com/{MODEL}.cfg
2. Case 2: Protocol, server name, path and file name
http://[2001:db8::1234:0:0:9abc]/pana/{MODEL}.cfg
http://prov.com/pana/{MODEL}.cfg
3. Case 3: Protocol, user name, password, server name and file name
http://id:pass@[2001:db8::9abc]/{MAC}.cfg
http://id:pass@prov.com/{MAC}.cfg

2.2 Provisioning

2.2.1 What is Provisioning?

After pre-provisioning has been performed (→ see **2.1 Pre-provisioning**), you can set up the unit automatically by downloading the configuration file stored on the provisioning server into the unit. This is called "provisioning".

2.2.2 Protocols for Provisioning

Provisioning can be performed over HTTP, HTTPS, FTP, and TFTP. The protocol you should use differs depending on how you will perform provisioning. Normally, HTTP, HTTPS, or FTP is used for provisioning. If you are transmitting encrypted configuration files, it is recommended that you use HTTP. If you are transmitting unencrypted configuration files, it is recommended that you use HTTPS. You may not be able to use FTP depending on the conditions of the network router or the network to be used.

2.2.3 Configuration File

This section gives concrete examples of the functions of the configuration file and how to manage it. The configuration file is a text file that contains the various settings that are necessary for operating the unit. The files are normally stored on a server maintained by your phone system dealer/service provider, and will be downloaded to the units as required. All configurable settings can be specified in the configuration file. You can ignore settings that already have the desired values. Only change parameters as necessary. For details about setting parameters and their descriptions, see **5 Configuration File Programming**.

Using 3 Types of Configuration Files

The unit can download up to 3 configuration files. One way to take advantage of this is by classifying the configuration files into the following 3 types:

Type	Usage
Master configuration file	Configure settings that are common to all units, such as the SIP server address, and the IP addresses of the DNS and NTP (Network Time Protocol) servers managed by your phone system dealer/service provider. This configuration file is used by all the units. Example of the configuration file's URL: http://prov.example.com/Panasonic/ConfigCommon.cfg
Product configuration file	Configure settings that are required for a particular model, such as the default setting of the privacy mode. This configuration file is used by all the units that have the same model name. The same number of configuration files as models being used on the network are stored on the provisioning server, and units with the same model name download the corresponding configuration file. Example of the configuration file's URL: http://prov.example.com/Panasonic/Config{MODEL}.cfg Note When a unit requests the configuration file, "{MODEL}" is replaced by the model name of the unit.
Standard configuration file	Configure settings that are unique to each unit, such as the phone number, user ID, password, etc. The same number of configuration files as units are stored on the provisioning server, and each unit downloads the corresponding standard configuration file. Example of the configuration file's URL: http://prov.example.com/Panasonic/Config{MAC}.cfg Note When a unit requests the configuration file, "{MAC}" is replaced by the MAC address of the unit.

Depending on the situation, you can use all 3 types of configuration files, and can also use only a standard configuration file.

The above example shows only one possible way to use configuration files. Depending on the requirements of your phone system dealer/service provider, there are a number of ways to use configuration files effectively.

Using 2 Types of Configuration Files

The following table shows an example of using 2 types of configuration files: a master configuration file to configure settings common to all units, and product configuration files to configure settings common to particular groups.

Using Product Configuration Files According to the Position Groups

You can use product configuration files for different groups or for multiple users within the same group.

Department Name	URL of Product Configuration File
Sales	http://prov.example.com/Panasonic/ConfigSales.cfg

Department Name	URL of Product Configuration File
Planning	http://prov.example.com/Panasonic/ConfigPlanning.cfg

2.2.4 Downloading Configuration Files

Downloading a Configuration File via the Web User Interface

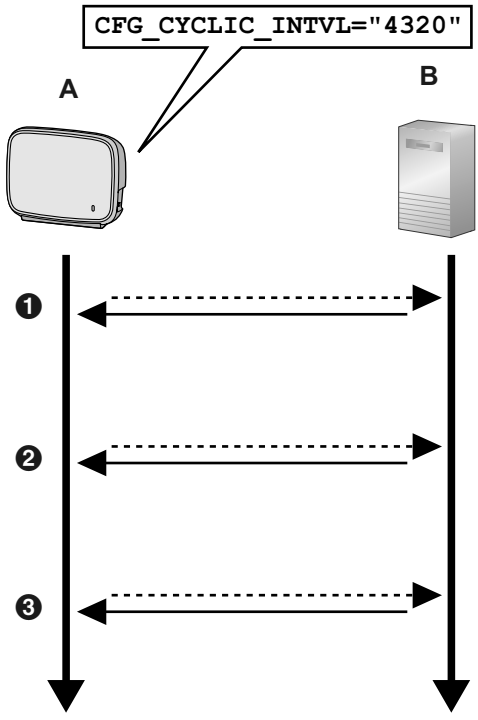
The following procedure describes how to enable downloading a configuration file via the Web User Interface to be used for programming the unit.

1. Confirm that the provisioning server's IP address/FQDN and directory are correct, and store the configuration files in the directory (e.g., http://provisioning.example.com/Panasonic/Config_Sample.cfg).
2. Enter the IP address of the unit into the PC's Web browser (→ see **1.1.6.3 Before Accessing the Web User Interface**).
3. Log in as the administrator (→ see **Access Levels (IDs and Passwords)** in **1.1.6.3 Before Accessing the Web User Interface**).
4. Click the **[Maintenance]** tab, and then select **[Provisioning Maintenance]**.
5. Enter the URL set up in Step 1 in **[Standard File URL]**.
6. Click **[Save]**.

Timing of Downloading

A unit downloads configuration files when it starts up, at regular intervals, and when directed to do so by the server.

Download Timing	Explanation
Startup	The configuration files are downloaded when the unit starts up.

Download Timing	Explanation
At regular intervals of time	The configuration files are downloaded at specified intervals of time, set in minutes. In the example below, the unit has been programmed to download configuration files from the provisioning server every 3 days (4320 minutes). CFG_CYCLIC_INTVL="4320" A B  A. KX-TGP600 B. Provisioning Server ① Power on ② 3 days later ③ 6 days later ---▶ : Check ◀ : Download

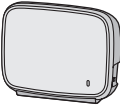
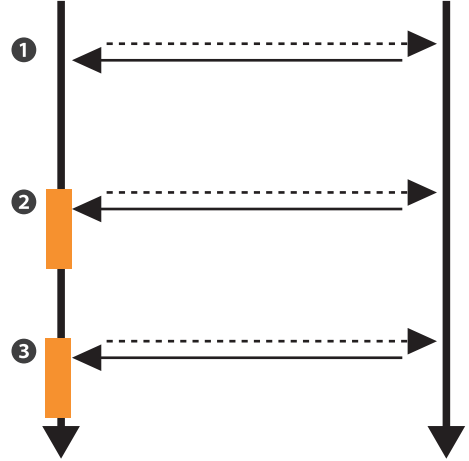
2.2.4 Downloading Configuration Files

Download Timing	Explanation
	The configuration files are downloaded periodically under the following conditions: • In the configuration file, add the line, <code>CFG_CYCLIC="Y"</code>. – Set an interval (minutes) by specifying "<code>CFG_CYCLIC_INTVL</code>". • In the Web user interface: – Click the [Maintenance] tab, click [Provisioning Maintenance], and then select [Yes] for [Cyclic Auto Resync]. – Enter an interval (minutes) in [Resync Interval]. Note • The interval may be determined by your phone system dealer/ service provider. A maximum interval of 28 days (40320 minutes) can be set on the unit.

Download Timing	Explanation
At a specified time each day	After the unit is powered on, it will download configuration files once per day at the specified time. CFG_RESYNC_TIME="02:00" A B A. KX-TGP600 B. Provisioning Server ① power on at 12:00 ② 02:00 ③ 02:00 ---▶ : Check ◀ : Download • In the configuration file: – Set a time by specifying "CFG_RESYNC_TIME". • In the Web user interface: – Click the [Maintenance] tab, click [Provisioning Maintenance], and then enter the time in [Time Resync]. Note • The time is specified using a 24-hour clock ("00:00" to "23:59").

2.2.4 Downloading Configuration Files

Download Timing	Explanation
When directed	When a setting needs to be changed immediately, units can be directed to download the configuration files by sending them a NOTIFY message that includes a special event from the SIP server. • In the configuration file: – Specify the special event text in "CFG_RESYNC_FROM_SIP". • In the Web user interface: – Click the [Maintenance] tab, click [Provisioning Maintenance], and then enter the special event text in [Header Value for Resync Event]. Generally, "check-sync" or "resync" is set as the special event text.

Download Timing	Explanation
At a specified time, day of week and weekly interval.	After the unit is powered on, it will download configuration files once per specified number of week(s) at the specified day of week and time. CFG_DL_WEEKLY_INTERVAL="2" CFG_DL_WEEKLY_DAY_OF_WEEK="6" CFG_RESYNC_TIME="02:00" CFG_RESYNC_DURATION="180" A  B   A. KX-TGP600 B. Provisioning Server ① power on at Saturday, 12:00 ② 02:00–05:00 on Saturday (2 weeks later) ③ 02:00–05:00 on Saturday (4 weeks later) ---▶ : Check ← : Download • In the configuration file: – Set a weekly interval, "CFG_DL_WEEKLY_INTERVAL". If "CFG_DL_WEEKLY_INTERVAL" is set to "0", refer to the "At a specified time each day". – Set a day of week "CFG_DL_WEEKLY_DAY_OF_WEEK". – Set a time by specifying "CFG_RESYNC_TIME". – Set a time range (in minutes) during which connected units can access the server by specifying "CFG_RESYNC_DURATION".

2.2.5 Provisioning Server Setting Example

This section gives an example of how to set up the units and provisioning server when configuring 2 units with configuration files. The standard configuration files and the master configuration file are used in this example.

Conditions

Item	Description/Setting
Provisioning server FQDN	prov.example.com
Units' MAC addresses	• 0080F0111111 • 0080F0222222
URL of the configuration files	Configure the following 2 settings either by pre-provisioning or through the Web user interface. The values of both settings must be the same. • <code>CFG_STANDARD_FILE_PATH="http://prov.example.com/Panasonic/Config{MAC}.cfg"</code> • <code>CFG_MASTER_FILE_PATH="http://prov.example.com/Panasonic/ConfigCommon.cfg"</code>
Directory on the provisioning server containing the configuration files	Create the "Panasonic" directory just under the HTTP root directory of the provisioning server.
File name of configuration files	Store the following configuration files in the "Panasonic" directory. • Contains the common settings for the 2 units: – ConfigCommon.cfg • Contains the settings unique to each unit: – Config0080F0111111.cfg – Config0080F0222222.cfg

To set up the provisioning server

1. Connect the units to the network, and turn them on.
 - a. The unit with the MAC address 0080F0111111 accesses the following URLs:
<http://prov.example.com/Panasonic/ConfigCommon.cfg>
<http://prov.example.com/Panasonic/Config0080F0111111.cfg>
 - b. The unit with the MAC address 0080F0222222 accesses the following URLs:
<http://prov.example.com/Panasonic/ConfigCommon.cfg>
<http://prov.example.com/Panasonic/Config0080F0222222.cfg>

Example Provisioning Direction from the Server

The following figure shows an example NOTIFY message from the server, directing the units to perform provisioning. The text "check-sync" is specified for "CFG_RESYNC_FROM_SIP".

```

NOTIFY sip:1234567890@sip.example.com SIP/2.0
Via: SIP/2.0/UDP xxx.xxx.xxx.xxx:5060;branch=abcdef-ghijkl
From: sip:prov@sip.example.com
To: sip:1234567890@sip.example.com
Date: Wed, 1 Jan 2014 01:01:01 GMT
Call-ID: 123456-1234567912345678
CSeq: 1 NOTIFY
Contact: sip:xxx.xxx.xxx.xxx:5060
Event: check-sync
Content-Length: 0

```

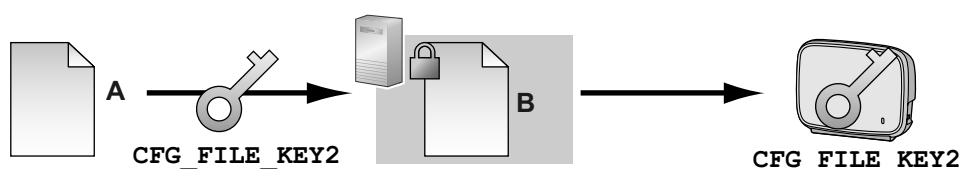
2.2.6 Encryption

Secure Provisioning Methods

In order to perform provisioning securely, there are 2 methods for transferring configuration files securely between the unit and the server.

Which method is used depends on the environment and equipment available from the phone system.

Method 1: Transferring Encrypted Configuration Files



A. Unencrypted configuration file

B. Encrypted configuration file

To use this method, an encryption key is required to encrypt and decrypt the configuration files. A preset encryption key unique to each unit, an encryption key set by your phone system dealer/service provider, etc., is used for the encryption. When the unit downloads an encrypted configuration file, it will decrypt the file using the same encryption key, and then configure the settings automatically.

Method 2: Transferring Configuration Files Using HTTPS

This method uses SSL, which is commonly used on the Internet, to transfer configuration files between the unit and server. For more secure communication, you can use a root certificate.

Notice

- To avoid redundant data transfer over the network, important data, such as the encryption key used to encrypt the configuration files and the root certificate for SSL, should be configured through pre-provisioning as much as possible.
- It is recommended that you encrypt the data in order to keep the communication secure when transferring configuration files.
However, if you are using the units within a secure environment, such as within an intranet, it is not necessary to encrypt the data.

To decrypt configuration files, the unit uses the encryption key registered to it beforehand. The unit determines the encryption status by checking the extension of the downloaded configuration file. For details about encrypting configuration files, contact the appropriate person in your organization.

2.3 Priority of Setting Methods

Extension of Configuration File	Configuration File Parameters Used for Decrypting
".e2c"	CFG_FILE_KEY2
".e3c"	CFG_FILE_KEY3
Other than ".e2c", and ".e3c"	Processed as unencrypted configuration files. The extension ".cfg" should be used for unencrypted configuration files.

Comparison of the 2 Methods

The following table compares the characteristics for the 2 transfer methods.

	Transferring Encrypted Configuration Files	Transferring Configuration Files Using HTTPS
Provisioning server load	Light	Heavy (The server encrypts data for each transmission.)
Operation load	Necessary to encrypt data beforehand.	Unnecessary to encrypt data beforehand.
Management of configuration files	Files must be decrypted and re-encrypted for maintenance.	It is easy to manage files because they are not encrypted on the server.
Security of data on the server when operating	High	Low (Configuration files are readable by anyone with access to the server.)

Moreover, there is another method: configuration files are not encrypted while stored on the server, and then, using the encryption key registered to the unit beforehand, they are encrypted when they are transferred. This method is particularly useful when several units are configured to download a common configuration file using different encryption keys. However, as when downloading an unencrypted configuration file using HTTPS, the server will be heavily burdened when transferring configuration files.

2.3 Priority of Setting Methods

The same settings can be configured by different configuration methods: provisioning, Web user interface programming, etc. This section explains which value is applied when the same setting is specified by multiple methods.

The following table shows the priority with which settings from each method are applied (lower numbers indicate higher priority):

Priority	Setting Method	
3	The factory default settings for the unit	
2	Pre-provisioning with the configuration file	
1	1-1	Provisioning with the standard configuration file
	1-2	Provisioning with the product configuration file
	1-3	Provisioning with the master configuration file
	Settings configured from the Web user interface or the phone user interface	

According to the table, settings configured later override previous settings (i.e., settings listed lower in the table have a higher priority).

Notice

- Make sure to perform Reset to Factory Default before connecting the unit to a different phone system. Contact your phone system dealer/service provider for further information.

2.4 Configuration File Specifications

The specifications of the configuration files are as follows:

File Format

The configuration file is in plain text format.

Lines in Configuration Files

A configuration file consists of a sequence of lines, with the following conditions:

- Each line must end with "<CR><LF>".

Note

<CR> or <LF> alone may be acceptable under certain conditions.

- Lines that begin with "#" are considered comments.
- Configuration files must start with a comment line containing the following designated character sequence (44 bytes):

```
# Panasonic SIP Phone Standard Format File #
```

The hexadecimal notation of this sequence is:

```
23 20 50 61 6E 61 73 6F 6E 69 63 20 53 49 50 20
50 68 6F 6E 65 20 53 74 61 6E 64 61 72 64 20 46
6F 72 6D 61 74 20 46 69 6C 65 20 23
```
- To prevent the designated character sequence being altered by chance, it is recommended that the configuration file starts with the comment line shown below:

```
# Panasonic SIP Phone Standard Format File # DO NOT CHANGE THIS LINE!
```
- Configuration files must end with an empty line.
- Each parameter line is written in the form of XXX="yyy" (XXX: parameter name, yyy: parameter value). The value must be enclosed by double quotation marks.
- A parameter line written over multiple lines is not allowed. It will cause an error on the configuration file, resulting in invalid provisioning.

Configuration Parameters

- The unit supports multiple telephone lines. For some parameters, the value for each line must be specified independently. A parameter name with the suffix "_1" is the parameter for line 1; "_2" for line 2, and so on.
 Examples of setting the line (phone number) for accessing a voice mail server:

```
"VM_NUMBER_1": for line 1,
"VM_NUMBER_2": for line 2, ...,
"VM_NUMBER_8": for line 8
```

Note

- The number of lines available varies depending on the phone being used, as follows:
 - KX-TGP600: 1–8
- Some parameter values can be specified as "empty" to set the parameter values to empty.
 Example:

```
NTP_ADDR=" "
```

2.5 Configuration File Examples

- The parameters have no order.
- If the same parameter is specified in a configuration file more than once, the value specified first is applied.
- All configurable settings can be specified in the configuration file. You can ignore settings that already have the desired values. Only change parameters as necessary.
- Boolean parameters (BOOLEAN) accept all of the following configurations.
"Y": "Y", "y", "Yes", "YES", "yes"
"N": "N", "n", "No", "NO", "no"

Parameter Extensions

You can use parameter extensions to specify parameters as Read-Only or Carrier Default.

Read-Only Specification

- When "?R" or "?r" is specified, the phone user interface and Web user interface for the parameter in question is restricted to Read-Only.
 - * Restricting the phone user interface to Read-Only
The Read-Only parameter settings menu appears, but an error occurs during registration.
 - * Restricting the Web user interface to Read-Only
The Read-Only parameter settings menu appears grayed out and nothing can be entered.

Note

- Parameters that can be configured from the device and from the Web can be confirmed from footnotes 1-3 on the parameter names in "5.1 Configuration File Parameter List".
- When "?R" or "?r" is not specified, the phone user interface and Web user interface are both readable and writable.
 - * Optional specifications for "?R" and "?r" are enabled when the last parameter in question is configured.

Carrier Default Specification

- When "?! " is specified, applicable parameter values are managed as carrier default values when applied to operational information.
 - * Carrier default values are applied once a reset to carrier defaults is executed. Carrier defaults will also be initialized when a reset to device defaults is executed.
 - * Once "?! " is specified, the parameter in question will be designated as a carrier default even if said parameter is configured without "?! ". (This setting will remain in place until restored to factory default.)

Specification of Multiple Parameter Extensions

- One parameter can be assigned multiple extensions.
Example: XXX?R?!=" / XXX?!?r="

Parameter Extension Configuration Example

1. In the configuration file, set IP Addressing Mode to IPv4 and Read-Only
Example parameter: IP_ADDR_MODE?R="0" ("0": IPv4)
2. If an error occurs when attempting to set the IP Mode to IPv6, see **To configure IP Mode (IPv4, IPv6, IPv4&IPv6)** in **Configuring the Network Settings of the Unit**.

2.5 Configuration File Examples

The following examples of configuration files are provided on the Panasonic Web site (→ see **Introduction**).

- Simplified Example of the Configuration File

- Comprehensive Example of the Configuration File

2.5.1 Examples of Codec Settings

Setting the Codec Priority to (1)G.729A, (2)G.722.2, (3)PCMU, (4)G.722

```
## Codec Settings
# Enable G.722.2 (AMR-WB)
CODEC_G722AMR_ENABLE="Y"
# Enable G722
CODEC_ENABLE0_1="Y"
CODEC_PRIORITY0_1="4"
# Disable PCMA
CODEC_ENABLE1_1="N"
# Enable G.722.2
CODEC_ENABLE2_1="Y"
CODEC_PRIORITY2_1="2"
# Enable G729A
CODEC_ENABLE3_1="Y"
CODEC_PRIORITY3_1="1"
# Enable PCMU
CODEC_ENABLE4_1="Y"
CODEC_PRIORITY4_1="3"
WIDEBAND_AUDIO_ENABLE="Y"
```

Setting Narrow-band Codecs (PCMA and G.729A)

```
## Codec Settings
# Disable G.722.2 (AMR-WB)
CODEC_G722AMR_ENABLE="N"
# Disable G722
CODEC_ENABLE0_1="N"
# Enable PCMA
CODEC_ENABLE1_1="Y"
CODEC_PRIORITY1_1="1"
# Disable G.722.2
CODEC_ENABLE2_1="N"
# Enable G729A
CODEC_ENABLE3_1="Y"
CODEC_PRIORITY3_1="1"
# Disable PCMU
CODEC_ENABLE4_1="N"
```

Setting the G.729A Codec Only

```
## Codec Settings
# Disable G.722.2 (AMR-WB)
CODEC_G722AMR_ENABLE="N"
# Disable G722
CODEC_ENABLE0_1="N"
# Disable PCMA
CODEC_ENABLE1_1="N"
# Disable G.722.2
CODEC_ENABLE2_1="N"
# Enable G729A
CODEC_ENABLE3_1="Y"
```

```
CODEC_PRIORITY3_1="1"  
# Disable PCMU  
CODEC_ENABLE4_1="N"
```

2.5.2 Example with Incorrect Descriptions

The following listing shows an example of a configuration file that contains incorrect formatting:

- ❶ An improper description is entered in the first line. A configuration file must start with the designated character sequence "**# Panasonic SIP Phone Standard Format File #**".
- ❷ Comment lines start in the middle of the lines.

Incorrect Example

```
# This is a simplified sample configuration file. —❶  
  
#####  
# Configuration Setting #  
#####  
  
CFG_STANDARD_FILE_PATH="http://config.example.com/0123456789AB.cfg"  
                                # URL of this configuration file  
  
#####  
# SIP Settings #  
# Suffix "_1" indicates this parameter is for "line 1". #  
#####  
  
SIP_RGSTR_ADDR_1="registrar.example.com" # IP Address or FQDN of SIP registrar server —❷  
SIP_PRXY_ADDR_1="proxy.example.com"     # IP Address or FQDN of proxy server
```

Section 3

Phone User Interface Programming

This section explains how to configure the unit by entering direct commands through the phone user interface.

3.1 Phone User Interface Programming

This section provides information about the features that can be configured directly from the unit, but that are not mentioned in the Operating Instructions.

3.1.1 Opening/Closing the Web Port

To access the Web user interface, you must open the unit's Web port beforehand.
(→ see **Opening/Closing the Web Port**).

Section 4

Web User Interface Programming

This section provides information about the settings available in the Web user interface.

4.1 Web User Interface Setting List

The following tables show all the settings that you can configure from the Web user interface and the access levels. For details about each setting, see the reference pages listed.

For details about setting up Web user interface programming, see **1.1.6 Web User Interface Programming**.

Status

Menu Item	Section Title	Setting	Access Level ¹		Ref.
			U	A	
Version Information	Base Unit	Model	✓	✓	page 62
		Operating Bank	✓	✓	page 62
		IPL Version	✓	✓	page 62
		Firmware Version	✓	✓	page 63
	Handset	Model	✓	✓	page 63
		Firmware Version	✓	✓	page 63
Handset Information	Handset Information	Handset 1–8 (Model)	✓	✓	page 63
		Handset 1–8 (Firmware Version)	✓	✓	page 63
Network Status	Network Common	MAC Address	✓	✓	page 64
		Ethernet Link Status	✓	✓	page 64
		IP Address Mode	✓	✓	page 64
	IPv4	Connection Mode	✓	✓	page 65
		IP Address	✓	✓	page 65
		Subnet Mask	✓	✓	page 65
		Default Gateway	✓	✓	page 65
		DNS1	✓	✓	page 65
		DNS2	✓	✓	page 65
	IPv6	Connection Mode	✓	✓	page 66
		IP Address	✓	✓	page 66
		Prefix	✓	✓	page 66
		Default Gateway	✓	✓	page 66
		DNS1	✓	✓	page 66
		DNS2	✓	✓	page 66
	VLAN	Setting Mode	✓	✓	page 67
		VLAN ID	✓	✓	page 67
		VLAN Priority	✓	✓	page 67

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
VoIP Status	VoIP Status	Line No.	✓	✓	page 67
		Phone Number	✓	✓	page 68
		VoIP Status	✓	✓	page 68

*1 The access levels are abbreviated as follows:

U: User; A: Administrator

A check mark indicates that the setting is available for that access level.

Network

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
Basic Network Settings	IP Addressing Mode	IP Addressing Mode ^{*2}		✓	page 69
	IPv4	Connection Mode ^{*2}		✓	page 69
		DHCP Host Name ^{*3}		✓	page 70
		IP Address ^{*2}		✓	page 70
		Subnet Mask ^{*2}		✓	page 70
		Default Gateway ^{*2}		✓	page 71
		Auto DNS via DHCP ^{*2}		✓	page 71
		DNS1 ^{*2}		✓	page 71
		DNS2 ^{*2}		✓	page 71
	IPv6	Connection Mode ^{*2}		✓	page 71
		IP Address ^{*2}		✓	page 72
		Prefix ^{*2}		✓	page 72
		Default Gateway ^{*2}		✓	page 72
		Auto DNS via DHCP ^{*2}		✓	page 73
		DNS1 ^{*2}		✓	page 73
		DNS2 ^{*2}		✓	page 73
Ethernet Port Settings	Link Speed/Duplex Mode	LAN Port ^{*2}		✓	page 74
	LLDP	Enable LLDP ^{*2}		✓	page 74
		Packet Interval ^{*3}		✓	page 75
	CDP	Enable CDP ^{*2}		✓	page 75
		Packet Interval ^{*2}		✓	page 75
	VLAN	Enable VLAN ^{*2}		✓	page 75
		VLAN ID ^{*2}		✓	page 76

4.1 Web User Interface Setting List

Menu Item	Section Title	Setting	Access Level ¹		Ref.
			U	A	
		Priority ²		✓	page 76
HTTP Client Settings	HTTP Client	HTTP Version ³		✓	page 76
		HTTP User Agent ³		✓	page 77
		Authentication ID ²		✓	page 77
		Authentication Password ²		✓	page 77
	Proxy Server	Enable Proxy ³		✓	page 77
		Proxy Server Address ³		✓	page 78
		Proxy Server Port ³		✓	page 78
STUN Settings	STUN	Server Address ³		✓	page 78
		Port ³		✓	page 79
		Binding Interval ³		✓	page 79
Multicast Paging Settings	Multicast Paging	Group 1–5	–	–	–
		- IPv4 Address ³		✓	page 79
		- IPv6 Address ³		✓	page 80
		- Port ³		✓	page 80
		- Priority ³ (Group 1–3 only)		✓	page 80
		- Label ³		✓	page 80
		- Enable Transmission ³		✓	page 80
LDAP Settings	LDAP	Enable LDAP ³		✓	page 81
		Server Address ³		✓	page 81
		Port ³		✓	page 81
		User ID ³		✓	page 82
		Password ³		✓	page 82
		Max Hits ³		✓	page 82
		Name Filter ³		✓	page 82
		Number Filter ³		✓	page 82
		Name Attributes ³		✓	page 82
		Number Attributes ³		✓	page 83
		Distinguished Name(Base DN) ³		✓	page 83
		Enable DNS SRV lookup ³		✓	page 83
Xtended Service Settings	Xtended Service	Enable Xtended Service ³		✓	page 84
		Server Address ³		✓	page 84
		Port ³		✓	page 84

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
		Protocol ^{*3}		✓	page 85
		SIP Credentials ^{*3}		✓	page 85
		Line 1–8	–	–	–
		- User ID ^{*2}		✓	page 85
		- Password ^{*2}		✓	page 85
		- Enable Phonebook ^{*3}		✓	page 85
		- Phonebook Type ^{*3}		✓	page 85
		- Group ^{*3}		✓	page 86
		- GroupCommon ^{*3}		✓	page 86
		- Enterprise ^{*3}		✓	page 86
		- EnterpriseCommon ^{*3}		✓	page 87
		- Personal ^{*3}		✓	page 87
		- Enable Call Log ^{*3}		✓	page 87
UC Settings	Presence Feature	Enable UC ^{*3}		✓	page 88
		Server Address ^{*3}		✓	page 88
		Local XMPP Port ^{*3}		✓	page 88
		Handset 1–8	–	–	–
		- User ID ^{*2}		✓	page 89
		- Password ^{*2}		✓	page 89
XML Application Settings	XML Application	Enable XMLAPP ^{*3}		✓	page 89
		User ID ^{*3}		✓	page 89
		Password ^{*3}		✓	page 90
		Local XML Port ^{*3}		✓	page 90
	XML Phonebook	LDAP URL ^{*3}		✓	page 90
		User ID ^{*3}		✓	page 90
		Password ^{*3}		✓	page 90
		Max Hits ^{*3}		✓	page 91
TWAMP Settings	TWAMP	Enable TWAMP ^{*3}		✓	page 91
		Control Port ^{*3}		✓	page 91
		Test Port ^{*3}		✓	page 91
		Wait Time for Control ^{*3}		✓	page 92
		Wait Time for Reflector ^{*3}		✓	page 92

^{*1} The access levels are abbreviated as follows:

4.1 Web User Interface Setting List

U: User; A: Administrator

A check mark indicates that the setting is available for that access level.

^{*2} This setting can also be configured through other programming methods (phone user interface programming or configuration file programming).

^{*3} This setting can also be configured through configuration file programming.

System

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
System Settings	System	Enable Multi Number ^{*2}		✓	page 92
		Enable Repeater Mode ^{*2}		✓	page 93
		Enable SIP Trunk Service ^{*2}		✓	page 93
		Enable Non-Registering SIP UA ^{*2}		✓	page 93
		Send RTP on Call Hold ^{*2}		✓	page 93
Language Settings	Selectable Language	Handset ^{*2}		✓	page 94
		Web ^{*2}		✓	page 95
	Web Language	Web Language ^{*2}	✓	✓	page 96
User Password Settings	User Password	Current Password	✓	✓	page 98
		New Password ^{*2}	✓	✓	page 98
		Confirm New Password	✓	✓	page 98
Admin Password Settings	Admin Password	Current Password		✓	page 99
		New Password ^{*2}		✓	page 99
		Confirm New Password		✓	page 99
Time Adjust Settings	Synchronization	Server Address ^{*2}		✓	page 100
		Synchronization Interval ^{*2}		✓	page 100
	Time Zone	Time Zone ^{*2}		✓	page 100
	Daylight Saving Time (Summer Time)	Enable DST (Enable Summer Time) ^{*2}		✓	page 101
		DST Offset (Summer Time Offset) ^{*2}		✓	page 101
	Start Day and Time of DST (Start Day and Time of Summer Time)	Month ^{*2}		✓	page 101
		Day of Week		✓	page 102
		Time ^{*2}		✓	page 102
	End Day and Time of DST (End Day and Time of Summer Time)	Month ^{*2}		✓	page 102
		Day of Week		✓	page 103
		Time ^{*2}		✓	page 104
Handset Basic Settings	Handset x	Handset Name ^{*3}	✓	✓	page 104
		Language ^{*2}	✓	✓	page 105

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
Handset Advanced Settings	Soft Key during IDLE Status	Soft Key A (Left) ^{*2}		✓	page 105
		Soft Key B (Center) ^{*2}		✓	page 106
		Soft Key C (Right) ^{*2}		✓	page 106
	Soft Key during IDLE Status (For KX-TPA70/73)	Soft Key A (Left) ^{*2}		✓	page 106
		Soft Key B (Center) ^{*2}		✓	page 107
		Soft Key C (Right) ^{*2}		✓	page 107
	Handset x	Enable Admin Ability ^{*2}		✓	page 108
		Enable Handset Lock ^{*2}		✓	page 108
		Password for Unlocking ^{*2}		✓	page 108
		Missed Call Notification	—	—	—
		- Message ^{*3}		✓	page 109
		- LED ^{*3}		✓	page 109
		Voice Message Notification	—	—	—
		- Message ^{*3}		✓	page 109
		- LED ^{*3}		✓	page 109
		- Alarm ^{*3}		✓	page 110
		Shortcut Key Function ^{*2}		✓	page 110
Parallel Mode Settings	Parallel Mode	Slave Handset Number ^{*3}		✓	page 111
		Mode ^{*3}		✓	page 111

^{*1} The access levels are abbreviated as follows:

U: User; A: Administrator

A check mark indicates that the setting is available for that access level.

^{*2} This setting can also be configured through configuration file programming.

^{*3} This setting can also be configured through other programming methods (phone user interface programming or configuration file programming).

VoIP

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
SIP Settings	User Agent	User Agent ^{*2}		✓	page 112
	NAT Identity	Enable Rport (RFC 3581) ^{*2}		✓	page 113
		Enable Port Punching for SIP ^{*2}		✓	page 113
		Enable Port Punching for RTP ^{*2}		✓	page 113

4.1 Web User Interface Setting List

Menu Item	Section Title	Setting	Access Level ¹		Ref.
			U	A	
SIP Settings [Line 1]–[Line 8]	Advanced	TLS Port Random ²		✓	page 114
		UDP Port Random ²		✓	page 114
	Basic	Phone Number ²		✓	page 115
		Registrar Server Address ²		✓	page 115
		Registrar Server Port ²		✓	page 116
		Proxy Server Address ²		✓	page 116
		Proxy Server Port ²		✓	page 116
		Presence Server Address ²		✓	page 116
		Presence Server Port ²		✓	page 116
		Outbound Proxy Server Address ²		✓	page 116
		Outbound Proxy Server Port ²		✓	page 117
		Service Domain ²		✓	page 117
		Authentication ID ²		✓	page 117
		Authentication Password ²		✓	page 117
	Advanced	SIP Packet QoS (DSCP) ²		✓	page 117
		Enable DNS SRV lookup ²		✓	page 117
		SRV lookup Prefix for UDP ²		✓	page 118
		SRV lookup Prefix for TCP ²		✓	page 118
		SRV lookup Prefix for TLS ²		✓	page 118
		Local SIP Port ²		✓	page 119
		SIP URI ²		✓	page 119
		T1 Timer ²		✓	page 119
		T2 Timer ²		✓	page 120
		REGISTER Expires Timer ²		✓	page 120
		Enable Session Timer (RFC 4028) ²		✓	page 120
		Session Timer Method ²		✓	page 120
		Enable 100rel (RFC 3262) ²		✓	page 120
		Enable SSAF (SIP Source Address Filter) ²		✓	page 121
		Enable c=0.0.0.0 Hold (RFC 2543) ²		✓	page 121
		Transport Protocol ²		✓	page 121

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
		TLS Mode ^{*2}		✓	page 122
VoIP Settings	RTP	RTP Packet Time ^{*2}		✓	page 122
		Minimum RTP Port Number ^{*2}		✓	page 123
		Maximum RTP Port Number ^{*2}		✓	page 123
		Telephone-event Payload Type ^{*2}		✓	page 123
	Voice Quality Report	Server Address ^{*2}		✓	page 123
		Port ^{*2}		✓	page 123
		Enable PUBLISH ^{*2}		✓	page 123
		Alert Report Trigger ^{*2}		✓	page 124
		Threshold MOS-LQ (Critical) ^{*2}		✓	page 124
		Threshold MOS-LQ (Warning) ^{*2}		✓	page 124
		Threshold Delay (Critical) ^{*2}		✓	page 124
		Threshold Delay (Warning) ^{*2}		✓	page 124
VoIP Settings [Line 1]–[Line 8]	Basic	G.722 ^{*3}	–	–	–
		- Enable ^{*2*3}		✓	page 125
		- Priority ^{*2*3}		✓	page 125
		PCMA	–	–	–
		- Enable ^{*2}		✓	page 126
		- Priority ^{*2}		✓	page 126
		G.722.2 (AMR-WB) ^{*3}	–	–	–
		- Enable ^{*2*3}		✓	page 126
		- Priority ^{*2*3}		✓	page 126
		G.729A	-	-	-
		- Enable ^{*2}		✓	page 126
		- Priority ^{*2}		✓	page 126
		PCMU	–	–	–
		- Enable ^{*2}		✓	page 127
		- Priority ^{*2}		✓	page 127
		DTMF Type		✓	page 127
	Advanced	RTP Packet QoS (DSCP) ^{*2}		✓	page 127
		RTCP Packet QoS (DSCP) ^{*2}		✓	page 127
		Enable RTCP ^{*2}		✓	page 128

4.1 Web User Interface Setting List

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
		Enable RTCP-XR ^{*2}		✓	page 128
		RTCP&RTCP-XR Interval ^{*2}		✓	page 128
		SRTP Mode ^{*2}		✓	page 128
		Enable Mixed SRTP & RTP by Conference ^{*2}		✓	page 129
		Enable Mixed SRTP & RTP by Transfer ^{*2}		✓	page 129

^{*1} The access levels are abbreviated as follows:

U: User; A: Administrator

A check mark indicates that the setting is available for that access level.

^{*2} This setting can also be configured through configuration file programming.

^{*3} This setting is not displayed by default.

Telephone

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
Multi Number Settings	Group Handset / Handset select for receiving call	Line ^{*2}	✓	✓	page 130
		Phone Number	✓	✓	page 130
		Handset Number	✓	✓	page 131
		Paging ^{*3}	✓	✓	page 131
	Handset and Line Number select for making call	Handset	✓	✓	page 131
		Line Number ^{*2}	✓	✓	page 131
		Default ^{*2}	✓	✓	page 131
Call Control	Call Control	Send SUBSCRIBE to Voice Mail Server ^{*3}		✓	page 132
		Conference Server URI ^{*3}		✓	page 132
		First-digit Timeout ^{*3}		✓	page 133
		Inter-digit Timeout ^{*3}		✓	page 133
		Timer for Dial Plan ^{*3}		✓	page 133
		Enable # Key as delimiter ^{*3}		✓	page 133
		International Call Prefix ^{*3}		✓	page 133
		Country Calling Code ^{*3}		✓	page 134
		National Access Code ^{*3}		✓	page 134
		Call Park Number ^{*3}		✓	page 134
		Enable Call Park Key ^{*3}		✓	page 134

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
		Park Retrieve Number ^{*3}		✓	page 134
		Park Retrieve Soft Key ^{*3}		✓	page 135
		Group Call Pickup ^{*3}		✓	page 135
		Private Hold ^{*3}		✓	page 135
	Emergency Call Phone Numbers	1–5 ^{*3}		✓	page 135
Call Control [Line 1]–[Line 8]	Call Features	Display Name ^{*3}		✓	page 136
		Voice Mail Access Number ^{*3}		✓	page 136
		Enable Anonymous Call ^{*2}	✓	✓	page 137
		Enable Block Anonymous Call ^{*2}	✓	✓	page 137
		Enable Do Not Disturb ^{*2}	✓	✓	page 137
		Enable Call Waiting ^{*3}		✓	page 137
		Enable Call Forwarding Always ^{*2}	✓	✓	page 137
		Forwarding Number (Always) ^{*2}	✓	✓	page 138
		Enable Call Forwarding Busy ^{*2}	✓	✓	page 138
		Forwarding Number (Busy) ^{*2}	✓	✓	page 138
		Enable Call Forwarding No Answer ^{*2}	✓	✓	page 138
		Forwarding Number (No Answer) ^{*2}	✓	✓	page 138
		Ring Counts (No Answer) ^{*2}	✓	✓	page 138
		Enable Shared Call ^{*3}		✓	page 139
		Enable Key Synchronization ^{*3}		✓	page 139
		Enable Call Park Notification ^{*3}		✓	page 139
		Enable Click to Call ^{*3}		✓	page 139
		MoH Server URI ^{*3}		✓	page 140
	Dial Plan	Dial Plan (max 1000 columns) ^{*3}		✓	page 140
		Call Even If Dial Plan Does Not Match ^{*3}		✓	page 140

4.1 Web User Interface Setting List

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
	Call Rejection Phone Numbers	1–20 ^{*2}		✓	page 140
Hotline Settings	Hotline	Handset 1–8	–	–	–
		- Enable ^{*3}		✓	page 141
		- Hotline Number ^{*3}	✓	✓	page 141
		Hotline Delay ^{*3}		✓	page 141
Tone Settings	Dial Tone	Tone Frequencies		✓	page 142
		Tone Timings ^{*3}		✓	page 143
	Busy Tone	Tone Frequencies		✓	page 143
		Tone Timings ^{*3}		✓	page 143
	Ringing Tone	Tone Frequencies		✓	page 144
		Tone Timings ^{*3}		✓	page 144
	Stutter Tone	Tone Frequencies		✓	page 144
		Tone Timings ^{*3}		✓	page 145
	Reorder Tone	Tone Frequencies		✓	page 145
		Tone Timings ^{*3}		✓	page 145
Import Phonebook	Import Phonebook	Handset Number	✓	✓	page 146
		File Name	✓	✓	page 146
Export Phonebook	Export Phonebook	Handset Number	✓	✓	page 147
Flexible Key Settings for KX-TPA68	Handset 1–8	No.1–12	–	–	page 148
		Type ^{*3}	✓	✓	page 148
		Parameter ^{*3}	✓	✓	page 149
		Label Name ^{*3}	✓	✓	page 149

^{*1} The access levels are abbreviated as follows:

U: User; A: Administrator

A check mark indicates that the setting is available for that access level.

^{*2} This setting can also be configured through other programming methods (phone user interface programming or configuration file programming).

^{*3} This setting can also be configured through configuration file programming.

Maintenance

Menu Item	Section Title	Setting	Access Level ^{*1}		Ref.
			U	A	
Provisioning Maintenance	Provisioning Maintenance	Standard File URL ^{*2}		✓	page 150
		Product File URL ^{*2}		✓	page 150
		Master File URL ^{*2}		✓	page 150
		Cyclic Auto Resync ^{*2}		✓	page 151
		Resync Interval ^{*2}		✓	page 151
		Time Resync ^{*2}		✓	page 151
		Header Value for Resync Event ^{*2}		✓	page 151
Firmware Maintenance	Firmware Maintenance	Enable Firmware Update ^{*2}		✓	page 152
		Firmware File URL ^{*2}		✓	page 152
Upgrade Firmware	Upgrade Firmware	File Name		✓	page 152
Import Wallpaper	Import Wallpaper	Gradation Type		✓	page 153
		File Name		✓	page 154
Import Wallpaper for KX-TPA68	Import Wallpaper for KX-TPA68	File Name		✓	page 154
Import Wallpaper for KX-TPA70/73	Import Wallpaper for KX-TPA70/73	Gradation Type		✓	page 155
		File Name		✓	page 155
Export Logging File	Export Logging File	Logging File Type		✓	page 155
Reset to Defaults	Reset to Carrier Defaults	The following settings will be reset to carrier default values when you click [Reset to Carrier Defaults] .		✓	page 156
Restart	Restart	Click [Restart] to proceed. Restarting will take a few moments.		✓	page 156
DECT Monitoring	DECT Monitoring	Displays the results of DECT monitoring.		✓	page 157
Call Status Monitoring	Call Status Monitoring	Displays the status of each handset.		✓	page 157

^{*1} The access levels are abbreviated as follows:

U: User; A: Administrator

A check mark indicates that the setting is available for that access level.

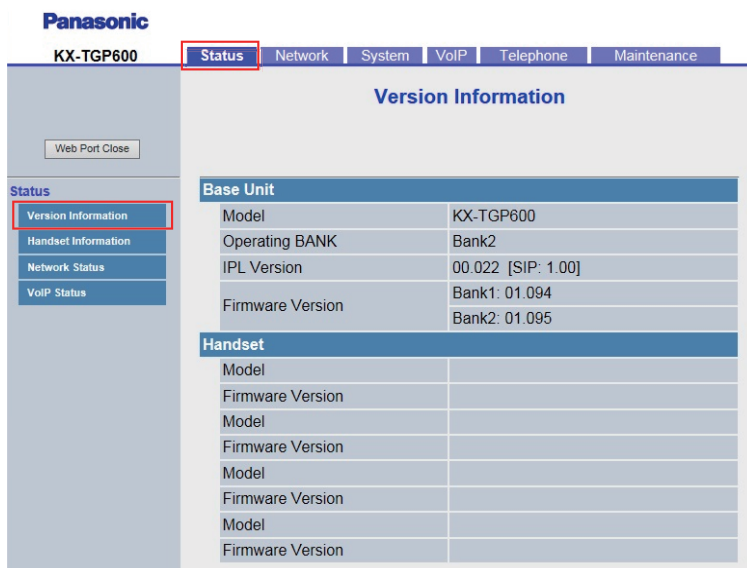
^{*2} This setting can also be configured through configuration file programming.

4.2 Status

This section provides detailed descriptions about all the settings classified under the **[Status]** tab.

4.2.1 Version Information

This screen allows you to view the current version information such as the model number and the firmware version of the unit.



4.2.1.1 Base Unit

Model

Description	Indicates the model number of the unit (reference only).
Value Range	Model number

Operating Bank

Description	Indicates the storage area of the firmware that is currently operating (reference only).
Value Range	• Bank1 • Bank2

IPL Version

Description	Indicates the version of the IPL (Initial Program Load) that runs when starting the unit and the SIP software version of the unit (reference only).
Value Range	IPL version ("nn.nnn" [n=0–9]) SIP software version ("[SIP: n.nn]" [n=0–9])

Firmware Version

Description	Indicates the version of the firmware that is currently installed on the unit (reference only).
Value Range	Bank1 (Bank2): Firmware version ("nn.nnn" [n=0–9])

4.2.1.2 Handset

Model

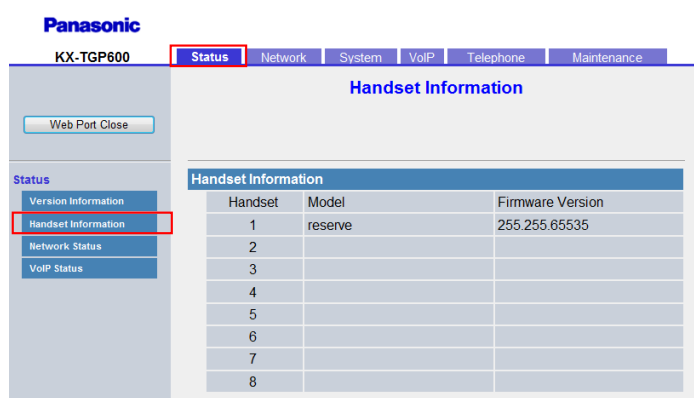
Description	Indicates the model number of the handset (reference only).
Value Range	Model number

Firmware Version

Description	Indicates the version of the firmware that is currently installed on the Handset (reference only).
Value Range	Model Name Firmware version ("nn.nnn" [n=0–9])

4.2.2 Handset Information

This screen allows you to view the current version information such as the model number and the firmware of the Linked Handset.



4.2.2.1 Handset Information

Handset 1–8 (Model)

Description	Indicates the model number of the handset (reference only).
Value Range	Model number

Handset 1–8 (Firmware Version)

Description	Indicates the version of the firmware that is currently installed on the Handset (reference only).
Value Range	nn.nn.nnn

4.2.3 Network Status

This screen allows you to view the current network information of the unit, such as the MAC address, IP address, Ethernet port status, etc.

Clicking **[Refresh]** updates the information displayed on the screen.



4.2.3.1 Network Common

MAC Address

Description	Indicates the MAC address of the unit (reference only).
Value Range	Not applicable.

Ethernet Link Status

Description	Indicates the current connection status of the Ethernet LAN port (reference only).
Value Range	Connected

IP Address Mode

Description	Indicates the current IP Address Mode.
Value Range	- IPv4 - IPv6 - IPv4&IPv6

4.2.3.2 IPv4

Connection Mode

Description	Indicates whether the IP address of the unit is assigned automatically (DHCP) or manually (static) (reference only).
Value Range	• DHCP • Static

IP Address

Description	Indicates the currently assigned IP address of the unit (reference only).
Value Range	IP address

Subnet Mask

Description	Indicates the specified subnet mask for the unit (reference only).
Value Range	Subnet mask

Default Gateway

Description	Indicates the specified IP address of the default gateway for the network (reference only). Note • If the default gateway address is not specified, this field will be left blank.
Value Range	IP address of the default gateway

DNS1

Description	Indicates the specified IP address of the primary DNS server (reference only). Note • If the primary DNS server address is not specified, this field will be left blank.
Value Range	IP address of the primary DNS server

DNS2

Description	Indicates the specified IP address of the secondary DNS server (reference only). Note • If the secondary DNS server address is not specified, this field will be left blank.
Value Range	IP address of the secondary DNS server

4.2.3.3 IPv6

Connection Mode

Description	Indicates whether the IP address of the unit is assigned automatically (DHCP) or manually (static) (reference only).
Value Range	• Static • DHCP • Stateless Autoconfiguration (RA)

IP Address

Description	Indicates the currently assigned IP address of the unit (reference only).
Value Range	IP address

Prefix

Description	Indicates the prefix for IPv6.
Value Range	0–128

Default Gateway

Description	Indicates the specified IP address of the default gateway for the network (reference only). Note • If the default gateway address is not specified, this field will be left blank.
Value Range	IP address of the default gateway

DNS1

Description	Indicates the specified IP address of the primary DNS server (reference only). Note • If the primary DNS server address is not specified, this field will be left blank.
Value Range	IP address of the primary DNS server

DNS2

Description	Indicates the specified IP address of the secondary DNS server (reference only). Note • If the secondary DNS server address is not specified, this field will be left blank.
Value Range	IP address of the secondary DNS server

4.2.3.4 VLAN

Setting Mode

Description	Indicates the specified VLAN feature (reference only).
Value Range	• Disable • LLDP • CDP • LLDP/CDP • Manual

VLAN ID

Description	Indicates the VLAN ID (reference only).
Value Range	0–4094

VLAN Priority

Description	Indicates the priority number (reference only).
Value Range	0–7

4.2.4 VoIP Status

This screen allows you to view the current VoIP status of each line's unit. Clicking **[Refresh]** updates the information displayed on the screen.

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KX-TGP600

Web Port Close

Status | Network | System | VoIP | Telephone | Maintenance

VoIP Status Refresh

Line No.	Phone Number	VoIP Status
1	1000	Registered
2	2000	Registered
3	3000	Registered
4	4000	Registered
5	5000	Registering
6	6000	Registering
7		
8		

4.2.4.1 VoIP Status

Line No. (1–8)

Description	Indicates the line number to which a phone number is assigned (reference only).
Value Range	Line 1–Line 8

Phone Number

Description	Indicates the currently assigned phone numbers (reference only). Note The corresponding field is blank if a line has not yet been leased or if the unit has not been configured.
Value Range	Max. 32 digits

VoIP Status

Description	Indicates the current VoIP status of each line (reference only).
Value Range	- Registered: The unit has been registered to the SIP server, and the line can be used. - Registering: The unit is being registered to the SIP server, and the line cannot be used. - Blank: The line has not been leased, the unit has not been configured yet, or a SIP authentication failure has occurred. Note - Immediately after starting up the unit, the phone numbers of the lines will be displayed, but the status of the line may not be displayed because the unit is still being registered to the SIP server. To display the status, wait about 30 to 60 seconds, and then click [Refresh] to obtain updated status information.

4.3 Network

This section provides detailed descriptions about all the settings classified under the **[Network]** tab.

4.3.1 Basic Network Settings

This screen allows you to change basic network settings such as whether to use a DHCP server, and the IP address of the unit.

Note

- Changes to the settings on this screen are applied when the message "Complete" appears after clicking **[Save]**. Because the IP address of the unit will probably be changed if you change these settings, you will not be able to continue using the Web user interface. To continue configuring the unit from the Web user interface, log in to the Web user interface again after confirming the newly assigned IP address of the unit using the phone user interface. In addition, if the IP address of the PC from which you try to access the Web user interface has been changed, close the Web port once by selecting **Off** for **Embedded Web** on the unit (→ see **Opening/Closing the Web Port** in **1.1.6.3 Before Accessing the Web User Interface**).

Panasonic
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Status **Network** System VoIP Telephone Maintenance

Basic Network Settings

Web Port Close

Network

- Basic Network Settings**
- Ethernet Port Settings
- HTTP Client Settings
- STUN Settings
- Multicast Paging Settings
- LDAP Settings
- Extended Service Settings
- UC Settings
- XML Application Settings

IP Addressing Mode

IP Addressing Mode ☒ IPv4 ☐ IPv6 ☐ IPv4 & IPv6

IPv4

Connection Mode ☒ DHCP ☐ Static

DHCP Host Name {MODEL}

IP Address

Subnet Mask

Default Gateway

Auto DNS via DHCP ☒ Yes ☐ No

DNS1

DNS2

IPv6

Connection Mode ☒ DHCP ☐ Static ☐ Stateless Autoconfiguration

IP Address

Prefix 64

Default Gateway

Auto DNS via DHCP ☒ Yes ☐ No

DNS1

DNS2

Save Cancel

4.3.1.1 IP Addressing Mode

IP Addressing Mode

Description	Selects the IP addressing mode.
Value Range	- IPv4 - IPv6 - IPv4&IPv6
Default Value	IPv4
Configuration File Reference	IP_ADDR_MODE

4.3.1.2 IPv4

Connection Mode

Description	Selects the IP address setting mode for IPv4.
Value Range	- Static - DHCP
Default Value	DHCP
Configuration File Reference	CONNECTION_TYPE

DHCP Host Name

Description	Specifies the host name to option12 in DHCPv4 or option15 in DHCPv6. Note This setting is available only when [Connection Mode] is set to [DHCP].
Value Range	Max. 64 characters (except ", &, ', <, >, ., and space) Note - If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. - If "{MAC}" is included in this parameter, it will be replaced with the device's MAC address in uppercase letters. - If "{mac}" is included in this parameter, it will be replaced with the device's MAC address in lowercase letters.
Default Value	{MODEL}
Configuration File Reference	DHCP_HOST_NAME

IP Address

Description	Specifies the IP address for IPv4. Note This setting is available only when [Connection Mode] is set to [Static].
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Not stored.
Configuration File Reference	STATIC_IP_ADDRESS

Subnet Mask

Description	Specifies the subnet mask for IPv4. Note This setting is available only when [Connection Mode] is set to [Static].
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Not stored.
Configuration File Reference	STATIC_SUBNET

Default Gateway

Description	Specifies the default gateway for IPv4. Note This setting is available only when [Connection Mode] is set to [Static].
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Not stored.
Configuration File Reference	STATIC_GATEWAY

Auto DNS via DHCP

Description	Selects whether to enable or disable the DNS server obtained by DHCPv4. Note This setting is available only when [Connection Mode] is set to [DHCP].
Value Range	- Yes: Use DNS obtained by DHCPv4 - No: Not use (use static DNS)
Default Value	Yes
Configuration File Reference	DHCP_DNS_ENABLE

DNS1

Description	Specifies the IP address of primary DNS server for IPv4.
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Not stored.
Configuration File Reference	USER_DNS1_ADDR

DNS2

Description	Specifies the IP address of secondary DNS server for IPv4.
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Not stored.
Configuration File Reference	USER_DNS2_ADDR

4.3.1.3 IPv6

Connection Mode

Description	Selects the IP address setting mode for IPv6.
--------------------	---

4.3.1 Basic Network Settings

Value Range	• Static • DHCP • Stateless Autoconfiguration
Default Value	DHCP
Configuration File Reference	CONNECTION_TYPE_IPV6

IP Address

Description	Specifies the IP address for IPv6. Note • This setting is available only when [Connection Mode] is set to [Static].
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Not stored.
Configuration File Reference	STATIC_IP_ADDRESS_IPV6

Prefix

Description	Specifies the prefix for IPv6. Note • This setting is available only when [Connection Mode] is set to [Static].
Value Range	0–128
Default Value	64
Configuration File Reference	PREFIX_IPV6

Default Gateway

Description	Specifies the default gateway for IPv6. Note • This setting is available only when [Connection Mode] is set to [Static].
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Not stored.
Configuration File Reference	STATIC_GATEWAY_IPV6

Auto DNS via DHCP

Description	Selects whether to enable or disable the DNS server obtained by DHCPv6. Note This setting is available only when [Connection Mode] is set to [DHCP].
Value Range	- Yes: Use DNS obtained by DHCPv6 - No: Not use (use static DNS)
Default Value	Yes
Configuration File Reference	DHCP_DNS_ENABLE_IPV6

DNS1

Description	Specifies the IP address of primary DNS server for IPv6.
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Not stored.
Configuration File Reference	USER_DNS1_ADDR_IPV6

DNS2

Description	Specifies the IP address of secondary DNS server for IPv6.
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Not stored.
Configuration File Reference	USER_DNS2_ADDR_IPV6

4.3.2 Ethernet Port Settings

This screen allows you to change the connection mode of the Ethernet ports, LLDP and the VLAN settings.

Note

- When you change the settings on this screen and click **[Save]**, after the message "Complete" has been displayed, the unit will restart automatically with the new settings applied. If a unit is on a call when "Complete" has been displayed, the unit will restart after the unit returns to idle.

4.3.2 Ethernet Port Settings

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Status **Network** System VoIP Telephone Maintenance

Logout
Web Port Close

Network

- Basic Network Settings
- Ethernet Port Settings**
- HTTP Client Settings
- STUN Settings
- Multicast Paging Settings
- LDAP Settings
- Extended Service Settings
- UC Settings
- XML Application Settings
- TWAMP Settings

Ethernet Port Settings

Link Speed/Duplex Mode

LAN Port: Auto Negotiation

LLDP

Enable LLDP: ☒ Yes ☐ No
Packet Interval: 30 seconds [1-3600]

CDP

Enable CDP: ☐ Yes ☒ No
Packet Interval: 30 seconds [1-3600]

VLAN

Enable VLAN: ☐ Yes ☒ No
VLAN ID: 2 [0-4094]
Priority: 7

The phone reboots automatically if you change the settings on this screen.

Save Cancel

4.3.2.1 Link Speed/Duplex Mode

LAN Port

Description	Selects the connection mode (link speed and duplex mode) of the LAN port.
Value Range	• Auto Negotiation • 100Mbps/Full Duplex • 100Mbps/Half Duplex • 10Mbps/Full Duplex • 10Mbps/Half Duplex
Default Value	Auto Negotiation
Configuration File Reference	PHY_MODE_LAN

4.3.2.2 LLDP

Enable LLDP

Description	Selects whether to enable or disable the LLDP-MED feature. Note • You should specify "Yes" for only one of "Enable LLDP", or "Enable VLAN". • If "Yes" is specified for two or more of the parameters above, the settings are prioritized as follows: "Enable VLAN" > "Enable LLDP". Therefore, if "Yes" is specified for both "Enable VLAN" and "Enable LLDP", the VLAN-related settings are used.
Value Range	• Yes • No

Default Value	Yes
Configuration File Reference	LLDP_ENABLE

Packet Interval

Description	Specifies the interval, in seconds, between sending each LLDP frame.
Value Range	1–3600
Default Value	30
Configuration File Reference	LLDP_INTERVAL

4.3.2.3 CDP

Enable CDP

Description	Selects whether to enable the CDP feature.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	CDP_ENABLE

Packet Interval

Description	Specifies the interval, in seconds, between sending CDP frames.
Value Range	1-3600
Default Value	30
Configuration File Reference	CDP_INTERVAL

4.3.2.4 VLAN

Enable VLAN

Description	Selects whether to use the VLAN feature to perform VoIP communication securely. Note • You should specify "Yes" for only one of "Enable LLDP", or "Enable VLAN". • If "Yes" is specified for two or more of the parameters above, the settings are prioritized as follows: "Enable VLAN" > "Enable LLDP". Therefore, if "Yes" is specified for both "Enable VLAN" and "Enable LLDP", the VLAN-related settings are used.
Value Range	• Yes • No
Default Value	No

4.3.3 HTTP Client Settings

Configuration File Reference	VLAN_ENABLE
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VLAN ID

Description	Specifies the VLAN ID.
Value Range	0–4094
Default Value	2
Configuration File Reference	VLAN_ID_IP_PHONE

Priority

Description	Selects the priority number.
Value Range	0–7
Default Value	7
Configuration File Reference	VLAN_PRI_IP_PHONE

4.3.3 HTTP Client Settings

This screen allows you to change the HTTP client settings for the unit in order to access the HTTP server of your phone system and download configuration files.

The screenshot shows the Panasonic KX-TGP600 web interface. The 'Network' tab is selected. The 'HTTP Client Settings' screen is displayed. The 'HTTP Client' section has 'HTTP Version' set to 'HTTP/1.0' and 'HTTP User Agent' set to 'Panasonic_{MODEL}/{fwver} ({mac})'. The 'Proxy Server' section has 'Enable Proxy' set to 'No', 'Proxy Server Address' as an empty field, and 'Proxy Server Port' set to '8080'. The 'Save' button is highlighted.

4.3.3.1 HTTP Client

HTTP Version

Description	Selects which version of the HTTP protocol to use for HTTP communication.
Value Range	• HTTP/1.0 • HTTP/1.1 Note • For this unit, it is strongly recommended that you select [HTTP/1.0]. However, if the HTTP server does not function well with HTTP/1.0, try changing the setting [HTTP/1.1].

Default Value	HTTP/1.0
Configuration File Reference	HTTP_VER

HTTP User Agent

Description	Specifies the text string to send as the user agent in the header of HTTP requests.
Value Range	Max. 64 characters Note • If "{mac}" is included in this parameter, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this parameter, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. • If "{fwver}" is included in this parameter, it will be replaced with the firmware version of the unit.
Default Value	Panasonic_{MODEL}/{fwver} ({mac})
Configuration File Reference	HTTP_USER_AGENT

Authentication ID

Description	Specifies the ID for the User account. If set, this name must be entered to access the Web user interface at the User access level.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	HTTP_AUTH_ID

Authentication Password

Description	Specifies the password for the User account. If set, this password must be entered to access the Web user interface at the User access level.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	HTTP_AUTH_PASS

4.3.3.2 Proxy Server

Enable Proxy

Description	Selects whether to enable or disable the HTTP proxy feature.
Value Range	• Yes • No
Default Value	No

4.3.4 STUN Settings

Configuration File Reference	HTTP_PROXY_ENABLE
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Proxy Server Address

Description	Specifies the IP address or FQDN of the proxy server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	HTTP_PROXY_ADDR

Proxy Server Port

Description	Specifies the port number of the proxy server.
Value Range	1–65535
Default Value	8080
Configuration File Reference	HTTP_PROXY_PORT

4.3.4 STUN Settings

This screen allows you to change the STUN Settings.

The screenshot shows the Panasonic KX-TGP600 web interface. The 'Network' tab is selected. In the left sidebar, 'STUN Settings' is highlighted. The main area displays the 'STUN Settings' configuration. It includes a 'Server Address' field, a 'Port' field with the value 3478 and a range of [1-65535], and a 'Binding Interval' field with the value 300 and a range of seconds [60-86400]. There are 'Save' and 'Cancel' buttons at the bottom.

4.3.4.1 STUN

STUN: Simple Traversal of UDP through NATs

Server Address

Description	Specifies the host name or IP address of the STUN server for the CPE to send Binding Requests.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	STUN_SERV_ADDR

Port

Description	Specifies the port number of the STUN server for the CPE to send Binding Requests.
Value Range	1–65535
Default Value	3478
Configuration File Reference	STUN_SERV_PORT

Binding Interval

Description	Specifies the interval of the sending binding request.
Value Range	60–86400
Default Value	300
Configuration File Reference	STUN_INTVL

4.3.5 Multicast Paging Settings

This screen allows you to change the Multicast Paging Settings for each channel Group.

Panasonic
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Status **Network** System VoIP Telephone Maintenance

Multicast Paging Settings

Web Port Close

Network

- Basic Network Settings
- Ethernet Port Settings
- HTTP Client Settings
- STUN Settings
- Multicast Paging Settings**
- LDAP Settings
- Extended Service Settings
- UC Settings
- XML Application Settings

Multicast Paging

Group 5	IPv4 Address	[224.0.0.0-239.255.255.255]
	IPv6 Address	[FF00::/8]
	Port	0 [0-65535, 0:Disable]
	Label	
	Enable Transmission	☐ Yes ☒ No
Group 4	IPv4 Address	[224.0.0.0-239.255.255.255]
	IPv6 Address	[FF00::/8]
	Port	0 [0-65535, 0:Disable]
	Label	
	Enable Transmission	☐ Yes ☒ No
Group 3	IPv4 Address	[224.0.0.0-239.255.255.255]
	IPv6 Address	[FF00::/8]
	Port	0 [0-65535, 0:Disable]
	Priority	5
	Label	
	IPv4 Address	[224.0.0.0-239.255.255.255]

4.3.5.1 Multicast Paging

IPv4 Address (Group 1–5)

Description	Specifies the address for multi-cast paging for each channel group. {Priority: Group 5 > Group 4 > Group 3, Group2, Group1 (depending on the configuration)}
--------------------	--

4.3.5 Multicast Paging Settings

Value Range	224.0.0.0–239.255.255.255
Default Value	Not stored.
Configuration File Reference	MPAGE_ADDRm

IPv6 Address (Group 1–5)

Description	Specifies the IPv6 address for multi-cast paging for each channel group. {Priority: Group 5 > Group 4 > Group 3, Group2, Group1 (depending on the configuration)}
Value Range	FF00::/8
Default Value	Not stored.
Configuration File Reference	MPAGE_IPV6_ADDRm

Port (Group 1–5)

Description	Specifies the port number for multi-cast paging for each channel group.
Value Range	0–65535 0: Disable
Default Value	0
Configuration File Reference	MPAGE_PORTm

Priority (Group 1–3)

Description	Selects the priority of the low priority channel group. The priority of multi-cast paging group1-3 is lower than the talking. Priority 4 is higher than Priority 5.
Value Range	4, 5
Default Value	5
Configuration File Reference	MPAGE_PRIORITYm

Label (Group 1–5)

Description	Specifies a label for each channel group.
Value Range	Max. 24 characters
Default Value	Not stored.
Configuration File Reference	MPAGE_LABELm

Enable Transmission (Group 1–5)

Description	Selects the sending multi-cast paging.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	MPAGE_SEND_ENABLEm

4.3.6 LDAP Settings

This screen allows you to change the LDAP Settings.

The screenshot shows the Panasonic KX-TGP600 web interface. At the top, there are tabs for Status, Network, System, VoIP, Telephone, and Maintenance. The 'Network' tab is selected. Below the tabs, there's a 'Web Port Close' button. On the left sidebar, under the 'Network' section, 'LDAP Settings' is highlighted. The main content area is titled 'LDAP Settings' and contains the following fields:

- Enable LDAP: Radio buttons for Yes (selected) and No.
- Server Address: Text input field.
- Port: Text input field with value 389 and a range [1-65535].
- User ID: Text input field.
- Password: Password input field with dots.
- Max Hits: Text input field with value 20 and a range [20-500].
- Name Filter: Text input field with value ((cn=*)(sn=*)).
- Number Filter: Text input field with value ((telephoneNumber=*)(mobile=*)(homePhone=*)).
- Name Attributes: Text input field with value cn,sn.
- Number Attributes: Text input field with value telephoneNumber,mobile,homePhone.
- Distinguished Name(Base DN): Text input field.
- Enable DNS SRV lookup: Radio buttons for Yes and No (selected).

At the bottom of the form, there are 'Save' and 'Cancel' buttons.

4.3.6.1 LDAP

Enable LDAP

Description	Selects whether to enable or disable the LDAP service.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	LDAP_ENABLE

Server Address

Description	Specifies the server host of LDAP.
Value Range	Max. 256 characters Note • The LDAP server address should start with "ldap://" or "ldaps://".
Default Value	Not stored.
Configuration File Reference	LDAP_SERVER

Port

Description	Specifies the port of server.
Value Range	1–65535
Default Value	389

Configuration File Reference	LDAP_SERVER_PORT
-------------------------------------	------------------

User ID

Description	Specifies the authentication ID required to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	LDAP_USERID

Password

Description	Specifies the authentication password required to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	LDAP_PASSWORD

Max Hits

Description	Specifies the maximum number of search results to be returned by the LDAP server.
Value Range	20–500
Default Value	20
Configuration File Reference	LDAP_MAXRECORD

Name Filter

Description	Specifies the name filter which is the search criteria for name look up.
Value Range	Max. 256 characters
Default Value	((cn=*)(sn=*))
Configuration File Reference	LDAP_NAME_FILTER

Number Filter

Description	Specifies the number filter which is the search criteria for number look up.
Value Range	Max. 256 characters
Default Value	((telephoneNumber=*)(mobile =*)(homePhone =*))
Configuration File Reference	LDAP_NUMB_FILTER

Name Attributes

Description	Specifies the name attributes of each record which are to be returned in the LDAP search result.
Value Range	Max. 256 characters
Default Value	cn,sn

Configuration File Reference	LDAP_NAME_ATTRIBUTE
-------------------------------------	---------------------

Number Attributes

Description	Specifies the number attributes of each record which are to be returned in the LDAP search result.
Value Range	Max. 256 characters
Default Value	telephoneNumber,mobile,homePhone
Configuration File Reference	LDAP_NUMB_ATTRIBUTE

Distinguished Name(Base DN)

Description	Specifies the entry information on the screen.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	LDAP_BASEDN

Enable DNS SRV lookup

Description	Selects whether to request the DNS server to translate domain names into IP addresses using the SRV record.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	LDAP_DNSSRV_ENABLE

4.3.7 Xtended Service Settings

This screen allows you to change the Xtended Service Settings.

4.3.7 Xtended Service Settings

4.3.7.1 Xtended Service

Enable Xtended Service

Description	Selects whether to enable or disable the Xsi service.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	XSI_ENABLE

Server Address

Description	Specifies the IP address or FQDN of the Xsi server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	XSI_SERVER

Port

Description	Specifies the port of the Xsi server.
Value Range	1–65535
Default Value	80
Configuration File Reference	XSI_SERVER_PORT

Protocol

Description	Selects the type of the Xsi server.
Value Range	HTTP, HTTPS
Default Value	HTTP
Configuration File Reference	XSI_SERVER_TYPE

SIP Credentials

Description	Selects whether to enable or disable the XSI SIP Credentials feature.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	XSI_SIP_CREDENTIALS_ENABLE

User ID (Line 1–8)

Description	Specifies the authentication ID required to access the Xsi server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XSI_USERID_n

Password (Line 1–8)

Description	Specifies the authentication password required to access the Xsi server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XSI_PASSWORD_n

Enable Phonebook (Line 1–8)

Description	Selects whether to enable or disable the Xsi phonebook service.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	XSI_PHONEBOOK_ENABLE_n

Phonebook Type (Line 1–8)

Description	Selects the type of Xsi phonebook.
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4.3.7 Xtended Service Settings

Value Range	• Group • GroupCommon • Enterprise • EnterpriseCommon • Personal
Default Value	Group
Configuration File Reference	XSI_PHONEBOOK_TYPE_n

Group

Description	Specifies whether to enable or disable the "Group" type for Xsi phonebooks.
Value Range	• Yes • No Note • This setting is available only when "BSD_MULTI_TYPE_ENABLE" is set to "Y".
Default Value	No
Configuration File Reference	BSD_GROUP_ENABLE_n

GroupCommon

Description	Specifies whether to enable or disable the "GroupCommon" type for Xsi phonebooks.
Value Range	• Yes • No Note • This setting is available only when "BSD_MULTI_TYPE_ENABLE" is set to "Y".
Default Value	No
Configuration File Reference	BSD_GROUPCOM_ENABLE_n

Enterprise

Description	Specifies whether to enable or disable the "Enterprise" type for Xsi phonebooks.
Value Range	• Yes • No Note • This setting is available only when "BSD_MULTI_TYPE_ENABLE" is set to "Y".
Default Value	No

Configuration File Reference	BSD_ENTERPRISE_ENABLE_n
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EnterpriseCommon

Description	Specifies whether to enable or disable the "EnterpriseCommon" type for Xsi phonebooks.
Value Range	• Yes • No Note • This setting is available only when "BSD_MULTI_TYPE_ENABLE" is set to "Y".
Default Value	No
Configuration File Reference	BSD_ENTERPRISECOM_ENABLE_n

Personal

Description	Specifies whether to enable or disable the "Personal" type for Xsi phonebooks.
Value Range	• Yes • No Note • This setting is available only when "BSD_MULTI_TYPE_ENABLE" is set to "Y".
Default Value	No
Configuration File Reference	BSD_PERSONAL_ENABLE_n

Enable Call Log (Line 1–8)

Description	Selects whether to enable or disable the Xsi call log service.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	XSI_CALLLOG_ENABLE_n

4.3.8 UC Settings

This screen allows you to change the UC Settings.

4.3.8 UC Settings

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Status **Network** System VoIP Telephone Maintenance

UC Settings

Web Port Close

Network

- Basic Network Settings
- Ethernet Port Settings
- HTTP Client Settings
- STUN Settings
- Multicast Paging Settings
- LDAP Settings
- Extended Service Settings
- UC Settings**
- XML Application Settings

Presence Feature

Enable UC ☐ Yes ☒ No

Server Address

Local XMPP Port 5222 [1-65535]

Handset 1

User ID

Password

Handset 2

User ID

Password

Handset 3

User ID

Password

Handset 4

User ID

Password

Handset 5

User ID

Password

Handset 6

User ID

Password

Handset 7

User ID

Password

Handset 8

User ID

Password

4.3.8.1 Presence Feature

Enable UC

Description	Selects whether to enable the UC service.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	UC_ENABLE

Server Address

Description	Specifies the IP address or FQDN of the XMPP server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	XMPP_SERVER

Local XMPP Port

Description	Specifies the local XMPP port.
Value Range	1–65535
Default Value	5222
Configuration File Reference	XMPP_PORT

Handset 1–8 (User ID)

Description	Specifies the authentication ID required to access the UC server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	UC_USERID_HSy

Handset 1–8 (Password)

Description	Specifies the authentication password required to access the UC server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	UC_PASSWORD_HSy

4.3.9 XML Application Settings

This screen allows you to configure the various URLs used with the XML application feature.

4.3.9.1 XML Application

Enable XMLAPP

Description	Selects whether to enable or disable the XML application feature.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	XMLAPP_ENABLE

User ID

Description	Specifies the authentication ID required to access the XML application server.
--------------------	--

4.3.9 XML Application Settings

Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_USERID

Password

Description	Specifies the authentication password used to access the XML application server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_USERPASS

Local XML Port

Description	Specifies the local HTTP port for XML application.
Value Range	1–65535
Default Value	6666
Configuration File Reference	XML_HTTPD_PORT

4.3.9.2 XML Phonebook

LDAP URL

Description	Specifies the URL that is accessed when the phonebook is accessed, to check for XML data.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_LDAP_URL

User ID

Description	Specifies the authentication ID required to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_LDAP_USERID

Password

Description	Specifies the authentication password used to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_LDAP_USERPASS

Max Hits

Description	Specifies the maximum number of search results to be returned by the LDAP server.
Value Range	20–500
Default Value	20
Configuration File Reference	XMLAPP_LDAP_MAXRECORD

4.3.10 TWAMP Settings

This screen allows you to change the TWAMP settings.

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Status **Network** System VoIP Telephone Maintenance

Logout
Web Port Close

Network

- Basic Network Settings
- Ethernet Port Settings
- HTTP Client Settings
- STUN Settings
- Multicast Paging Settings
- LDAP Settings
- Extended Service Settings
- UC Settings
- XML Application Settings
- TWAMP Settings**

TWAMP Settings

Enable TWAMP ☐ Yes ☒ No

Control Port [1-65535]

Test Port [1-65535]

Wait Time for Control seconds [1-65535]

Wait Time for Reflector seconds [1-65535]

Save Cancel

4.3.10.1 TWAMP

Enable TWAMP

Description	Selects whether to enable the TWAMP server function.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	TWAMP_ENABLE

Control Port

Description	Specifies the port for the TWAMP control session.
Value Range	1-65535
Default Value	862
Configuration File Reference	TWAMP_CONTROL_PORT

Test Port

Description	Specifies the port for the TWAMP test session.
Value Range	1-65535
Default Value	9000

4.4 System

Configuration File Reference	TWAMP_TEST_PORT
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Wait Time for Control

Description	Specifies the time, in seconds, for the TWAMP server to wait for incoming packets for maintaining the session.
Value Range	1-65535
Default Value	900
Configuration File Reference	TWAMP_SERVER_WAIT_TIME

Wait Time for Reflector

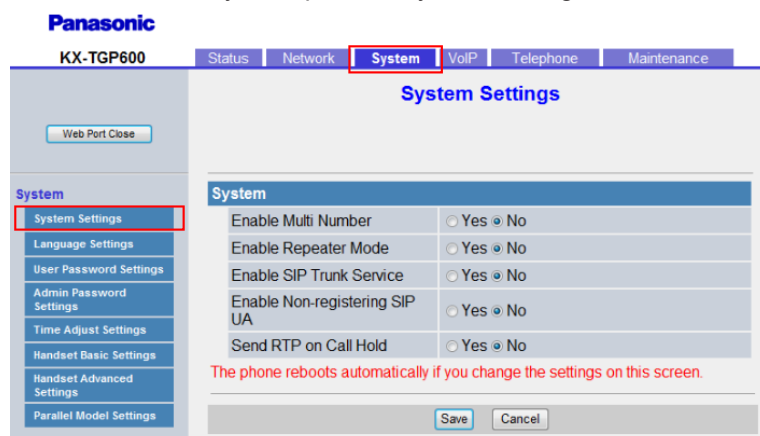
Description	Specifies the time, in seconds, for the TWAMP reflector to wait for incoming packets for maintaining the session.
Value Range	1-65535
Default Value	900
Configuration File Reference	TWAMP_REFLECTOR_WAIT_TIME

4.4 System

This section provides detailed descriptions about all the settings classified under the **[System]** tab.

4.4.1 System Settings

This screen allows you to perform system settings on IP terminals.



4.4.1.1 System

Enable Multi Number

Description	Specifies whether to enable or disable the multi number mode.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	MULTI_NUMBER_ENABLE

Enable Repeater Mode

Description	Specifies whether to turn the repeater mode on or off.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	REPEATER_MODE

Enable SIP Trunk Service

Description	Specifies whether you are using a SIP trunk service or not.
Value Range	• Yes • No Note If "Yes" is specified, the settings for Line 2 to Line 8 of the following items are disabled. • "Local SIP Port" in Web User Interface Programming • "SIP_SRC_PORT" in Configuration File Programming The settings will be the same as Line 1.
Default Value	No
Configuration File Reference	SIP_TRUNK_MODE_ENABLE

Enable Non-Registering SIP UA

Description	Specifies whether to enable or disable SIP UA registration.
	Note • This setting is available only when [Enable SIP Trunk Service] is set to [Yes].
Value Range	• Yes (Enable to work without registering SIP) • No
Default Value	No
Configuration File Reference	SIP_NON_REGISTER_ENABLE

Send RTP on Call Hold

Description	Specifies whether to enable or disable the continuous sending of RTP packets while a call is on hold.
	Note • This setting is available only when [Enable SIP Trunk Service] is set to [Yes].
Value Range	• Yes • No
Default Value	No

4.4.2 Language Settings

This screen allows you to select the language used for the Web user interface. The language setting is only applicable when you log in to the Web user interface as User.

Note

- If you change the language while logged in to the Web user interface with the User account, the language will be changed after the message "Complete" is displayed. If you are logged in with the Administrator account, the language will be changed when a user logs in to the Web user interface as User.
- The language used for the Web user interface for the Administrator account is always English.
- The language used for the unit remains unchanged even if the language for the Web user interface is changed.

Panasonic
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Status Network **System** VoIP Telephone Maintenance

Web Port Close

System

- System Settings
- Language Settings**
- User Password Settings
- Admin Password Settings
- Time Adjust Settings
- Handset Basic Settings
- Handset Advanced Settings
- Parallel Model Settings

Language Settings

Selectable Language

Handset	en,es,fr	RFC3066 code
Web	en,es,fr	RFC3066 code

Web Language

Web Language: en

Save Cancel

4.4.2.1 Selectable Language

Handset

Description	Specifies the selectable language on the handset. Up to 10 languages separated by commas can be registered. (e.g., "en,es,fr,de,it,nl,pt")
--------------------	---

Value Range	• en: English • es: Spanish • fr: French • de: German • it: Italian • da: Danish • nl: Dutch • sv: Swedish • fi: Finnish • el: Greek • hu: Hungarian • pt: Portuguese • pl: Polish • sk: Slovakian • cs: Czech • sh: Croatian • ru: Russian • uk: Ukrainian • tr: Turkish • no: Norwegian • ro: Romanian • ct: Custom • kk: Kazakh • me: Montenegrin
Default Value	Depends on the country or area.
Configuration File Reference	AVAILABLE_LANGUAGE_HS

Web

Description	Specifies the selectable language on the Web. Up to 10 languages separated by commas can be registered. (e.g., "en,es,fr,de,it,nl,pt")
--------------------	--

Value Range	• en: English • es: Spanish • fr: French • de: German • it: Italian • nl: Dutch • el: Greek • hu: Hungarian • pt: Portuguese • pl: Polish • sk: Slovakian • cs: Czech • sh: Croatian • ru: Russian • uk: Ukrainian • tr: Turkish • ro: Romanian • ct: Custom • kk: Kazakh • me: Montenegrin
Default Value	Depends on the country or area.
Configuration File Reference	AVAILABLE_LANGUAGE_WEB

4.4.2.2 Web Language

Web Language

Description	Selects the default language on the web. You can select a language from the languages set in Web in 4.4.2.1 Selectable Language .
--------------------	--

Value Range	• en: English • es: Spanish • fr: French • de: German • it: Italian • nl: Dutch • el: Greek • hu: Hungarian • pt: Portuguese • pl: Polish • sk: Slovakian • cs: Czech • sh: Croatian • ru: Russian • uk: Ukrainian • tr: Turkish • ro: Romanian • ct: Custom • kk: Kazakh • me: Montenegrin
Default Value	en
Configuration File Reference	WEB_LANGUAGE

4.4.3 User Password Settings

This screen allows you to change the password used to authenticate the User account when logging in to the Web user interface.

Note

- For security reasons, the characters entered for the password are masked by special characters, which differ depending on the Web browser.
- After you change the user password, the next time you access the Web user interface, the authentication dialog box appears. Three consecutive login failures will result in an error ("401Unauthorized"). This restriction only applies the first time you attempt to log in after changing the password. In all other circumstances, an error occurs after 3 unsuccessful login attempts.

4.4.4 Admin Password Settings

The screenshot shows the Panasonic KX-TGP600 web interface. The top navigation bar includes 'Status', 'Network', 'System' (highlighted), 'VoIP', 'Telephone', and 'Maintenance'. Below this, the 'User Password Settings' page is displayed. On the left, a sidebar lists various settings categories, with 'User Password Settings' highlighted. The main content area has a title 'User Password' and three input fields: 'Current Password', 'New Password' (with a '6-64 characters' hint), and 'Confirm New Password'. At the bottom of the form are 'Save' and 'Cancel' buttons.

4.4.3.1 User Password

Current Password

Description	Specifies the current password to use to authenticate the User account when logging in to the Web user interface.
Value Range	6–64 characters
Default Value	Not stored.

New Password

Description	Specifies the new password to use to authenticate the User account when logging in to the Web user interface.
Value Range	6–64 characters Note A hyphen (-) cannot be used as the first character.
Default Value	Not stored. Note When a user logs in to the Web user interface for the first time, after clicking OK on the authentication dialog box, the [Initial User Password Settings] screen is displayed automatically to make the user set a password.
Configuration File Reference	USER_PASS

Confirm New Password

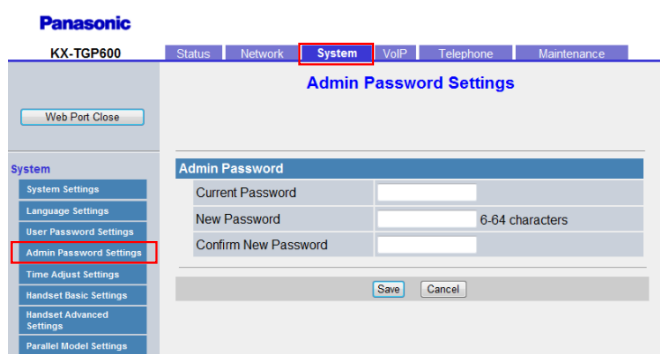
Description	Specifies the same password that you entered in [New Password] for confirmation.
Value Range	6–64 characters
Default Value	Not stored.

4.4.4 Admin Password Settings

This screen allows you to change the password used to authenticate the Administrator account when logging in to the Web user interface.

Note

- For security reasons, the characters entered for the password are masked by special characters, which differ depending on the Web browser.
- After you change the administrator password, the next time you access the Web user interface, the authentication dialog box appears. Three consecutive login failures will result in an error ("401Unauthorized"). This restriction only applies the first time you attempt to log in after changing the password. In all other circumstances, an error occurs after 3 unsuccessful login attempts.



4.4.4.1 Admin Password

Current Password

Description	Specifies the current password to use to authenticate the Administrator account when logging in to the Web user interface.
Value Range	6–64 characters
Default Value	adminpass

New Password

Description	Specifies the new password to use to authenticate the Administrator account when logging in to the Web user interface.
Value Range	6–64 characters Note • A hyphen (-) cannot be used as the first character.
Default Value	Not stored.
Configuration File Reference	ADMIN_PASS

Confirm New Password

Description	Specifies the same password that you entered in [New Password] for confirmation.
Value Range	6–64 characters
Default Value	Not stored.

4.4.5 Time Adjust Settings

This screen allows you to enable automatic clock adjustment using an NTP server and configure the settings for DST (Daylight Saving Time), also known as Summer Time.

4.4.5.1 Synchronization

Server Address

Description	Specifies the IP address or FQDN of NTP server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	NTP_ADDR

Synchronization Interval

Description	Specifies the interval, in seconds, between synchronizations with the NTP server.
Value Range	10–86400
Default Value	43200
Configuration File Reference	TIME_QUERY_INTVL

4.4.5.2 Time Zone

Time Zone

Description	Selects your time zone.
Value Range	GMT -12:00–GMT +13:00
Default Value	GMT

Configuration File Reference	TIME_ZONE
------------------------------	-----------

4.4.5.3 Daylight Saving Time (Summer Time)

Enable DST (Enable Summer Time)

Description	Selects whether to enable Daylight Saving Time (Summer Time).
Value Range	• Yes • No
Default Value	No
Configuration File Reference	DST_ENABLE

DST Offset (Summer Time Offset)

Description	Specifies the amount of time, in minutes, to change the time when "DST_ENABLE" is set to "Y".
Value Range	0–720 (min)
Default Value	60
Configuration File Reference	DST_OFFSET

4.4.5.4 Start Day and Time of DST (Start Day and Time of Summer Time)

Month

Description	Selects the month in which DST (Summer Time) starts.
Value Range	• January • February • March • April • May • June • July • August • September • October • November • December
Default Value	March
Configuration File Reference	DST_START_MONTH

Day of Week

Using the 2 following settings, specify on which day of the selected month DST (Summer Time) starts. For example, to specify the second Sunday, select **[Second]** and **[Sunday]**.

Description	Selects the number of the week on which DST (Summer Time) starts.
Value Range	• First • Second • Third • Fourth • Last
Default Value	Second
Configuration File Reference	DST_START_ORDINAL_DAY

Description	Selects the day of the week on which DST (Summer Time) starts.
Value Range	• Sunday • Monday • Tuesday • Wednesday • Thursday • Friday • Saturday
Default Value	Sunday
Configuration File Reference	DST_START_DAY_OF_WEEK

Time

Description	Specifies the start time of DST (Summer Time) in minutes after 12:00 AM.
Value Range	0–1439 (min)
Default Value	120
Configuration File Reference	DST_START_TIME

4.4.5.5 End Day and Time of DST (End Day and Time of Summer Time)

Month

Description	Selects the month in which DST (Summer Time) ends.
--------------------	--

Value Range	• January • February • March • April • May • June • July • August • September • October • November • December
Default Value	November
Configuration File Reference	DST_STOP_MONTH

Day of Week

Using the 2 following settings, specify on which day of the selected month DST (Summer Time) ends. For example, to specify the second Sunday, select **[Second]** and **[Sunday]**.

Description	Selects the number of the week on which DST (Summer Time) ends.
Value Range	• First • Second • Third • Fourth • Last
Default Value	First
Configuration File Reference	DST_STOP_ORDINAL_DAY

Description	Selects the day of the week on which DST (Summer Time) ends.
Value Range	• Sunday • Monday • Tuesday • Wednesday • Thursday • Friday • Saturday
Default Value	Sunday
Configuration File Reference	DST_STOP_DAY_OF_WEEK

4.4.6 Handset Basic Settings

Time

Description	Specifies the end time of DST (Summer Time) in minutes after 12:00 AM.
Value Range	0–1439 (min)
Default Value	120
Configuration File Reference	DST_STOP_TIME

4.4.6 Handset Basic Settings

This screen allows you to change the Handset Name and Language for each Handset.

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Web Port Close

System

- System Settings
- Language Settings
- User Password Settings
- Admin Password Settings
- Time Adjust Settings
- Handset Basic Settings**
- Handset Advanced Settings
- Parallel Model Settings

Handset Basic Settings

Handset 1	
Handset Name	Handset 1
Language	en
Handset 2	
Handset Name	Handset 2
Language	en
Handset 3	
Handset Name	Handset 3
Language	en
Handset 4	
Handset Name	Handset 4
Language	en
Handset 5	
Handset Name	Handset 5
Language	en
Handset 6	
Handset Name	Handset 6
Language	en
Handset 7	
Handset Name	Handset 7
Language	en
Handset 8	

4.4.6.1 Handset 1–8

Handset Name

Description	Specifies the handset name.
Value Range	Max. 16 characters
Default Value	HANDSET_NAME_HS1="Handset 1" HANDSET_NAME_HS2="Handset 2" HANDSET_NAME_HS3="Handset 3" HANDSET_NAME_HS4="Handset 4" HANDSET_NAME_HS5="Handset 5" HANDSET_NAME_HS6="Handset 6" HANDSET_NAME_HS7="Handset 7" HANDSET_NAME_HS8="Handset 8"

Configuration File Reference	HANDSET_NAME_HSy
------------------------------	------------------

Language

Description	Selects the default language on the handset. You can select a language from the languages set in Handset in 4.4.2.1 Selectable Language.
Value Range	en, es, fr, de, it, da, nl, sv, fi, el, hu, pt, pl, sk, cs, sh, ru, uk, tr, no, ro, ct, kk → see Handset in 4.4.2.1 Selectable Language
Default Value	en
Configuration File Reference	DEFAULT_LANGUAGE_HSy

4.4.7 Handset Advanced Settings

This screen allows you to change the Soft Key function settings.

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Logout
Web Port Close

System

- System Settings
- Language Settings
- User Password Settings
- Admin Password Settings
- Time Adjust Settings
- Handset Basic Settings
- Handset Advanced Settings**
- Parallel Mode Settings
- Delete Handset

Handset Advanced Settings

Soft Key during IDLE Status

Soft Key A (Left)	Phonebook
Soft Key B (Center)	Menu
Soft Key C (Right)	Outgoing Call Log

Handset 1

Enable Admin Ability	☒ Yes ☐ No						
Enable Handset Lock	☐ Yes ☒ No						
Password for Unlocking	 [0000-9999]						
Missed Call Notification	<table> <tr> <td>Message</td> <td>☒ Yes ☐ No</td> </tr> <tr> <td>LED</td> <td>☒ Yes ☐ No</td> </tr> </table>	Message	☒ Yes ☐ No	LED	☒ Yes ☐ No		
Message	☒ Yes ☐ No						
LED	☒ Yes ☐ No						
Voice Message Notification	<table> <tr> <td>Message</td> <td>☒ Yes ☐ No</td> </tr> <tr> <td>LED</td> <td>☒ Yes ☐ No</td> </tr> <tr> <td>Alarm</td> <td>☒ Yes ☐ No</td> </tr> </table>	Message	☒ Yes ☐ No	LED	☒ Yes ☐ No	Alarm	☒ Yes ☐ No
Message	☒ Yes ☐ No						
LED	☒ Yes ☐ No						
Alarm	☒ Yes ☐ No						

Handset 2

Enable Admin Ability	☒ Yes ☐ No						
Enable Handset Lock	☐ Yes ☒ No						
Password for Unlocking	 [0000-9999]						
Missed Call Notification	<table> <tr> <td>Message</td> <td>☒ Yes ☐ No</td> </tr> <tr> <td>LED</td> <td>☒ Yes ☐ No</td> </tr> </table>	Message	☒ Yes ☐ No	LED	☒ Yes ☐ No		
Message	☒ Yes ☐ No						
LED	☒ Yes ☐ No						
Voice Message Notification	<table> <tr> <td>Message</td> <td>☒ Yes ☐ No</td> </tr> <tr> <td>LED</td> <td>☒ Yes ☐ No</td> </tr> <tr> <td>Alarm</td> <td>☒ Yes ☐ No</td> </tr> </table>	Message	☒ Yes ☐ No	LED	☒ Yes ☐ No	Alarm	☒ Yes ☐ No
Message	☒ Yes ☐ No						
LED	☒ Yes ☐ No						
Alarm	☒ Yes ☐ No						

4.4.7.1 Soft Key during IDLE Status

Soft Key A (Left)

Description	Selects soft key (A) during IDLE state.
-------------	---

Value Range	• Phonebook • Menu • Outgoing Call Log • Incoming Call Log • Redial • Page (Used when performing Multicast Paging)
Default Value	Phonebook
Configuration File Reference	IDLE_SOFT_KEY_A

Soft Key B (Center)

Description	Selects soft key (B) during IDLE state.
Value Range	• Phonebook • Menu • Outgoing Call Log • Incoming Call Log • Redial • Page (Used when performing Multicast Paging)
Default Value	Menu
Configuration File Reference	IDLE_SOFT_KEY_B

Soft Key C (Right)

Description	Selects soft key (C) during IDLE state.
Value Range	• Phonebook • Menu • Outgoing Call Log • Incoming Call Log • Redial • Page (Used when performing Multicast Paging)
Default Value	Outgoing Call Log
Configuration File Reference	IDLE_SOFT_KEY_C

4.4.7.2 Soft Key during IDLE Status for KX-TPA70/73

Soft Key A (Left)

Description	Selects soft key (A) during IDLE state for KX-TPA70/KX-TPA73.
--------------------	---

Value Range	• Phonebook • Menu • Outgoing Call Log • Incoming Call Log • Call History • Redial • Page • Intercom Call Note • The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	Phonebook
Configuration File Reference	IDLE_SOFT_KEY_A_UX1 (For KX-TPA70/KX-TPA73)

Soft Key B (Center)

Description	Selects soft key (B) during IDLE state for KX-TPA70/KX-TPA73.
Value Range	• Phonebook • Menu • Outgoing Call Log • Incoming Call Log • Call History • Redial • Page • Intercom Call Note • The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	Menu
Configuration File Reference	IDLE_SOFT_KEY_B_UX1 (For KX-TPA70/KX-TPA73)

Soft Key C (Right)

Description	Selects soft key (C) during IDLE state for KX-TPA70/KX-TPA73.
--------------------	---

4.4.7 Handset Advanced Settings

Value Range	• Phonebook • Menu • Outgoing Call Log • Incoming Call Log • Call History • Redial • Page • Intercom Call Note • The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	Outgoing Call Log
Configuration File Reference	IDLE_SOFT_KEY_C_UX1 (For KX-TPA70/KX-TPA73)

4.4.7.3 Handset 1–8

Enable Admin Ability

Description	Selects whether to enable admin rights for handset.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	ADMIN_ABILITY_ENABLE_HSy

Enable Handset Lock

Description	Selects whether to enable locking handset.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SYS_LOCK_ENABLE_HSy

Password for Unlocking

Description	Specifies the password for unlocking handset.
Value Range	Null, 4 digits (0–9)
Default Value	Not stored.
Configuration File Reference	SYS_LOCK_PASSWORD_HSy

Missed Call Notification - Message

Description	Selects whether to display 'Missed Calls' on the screen in standby mode. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Yes - No
Default Value	Yes
Configuration File Reference	NOTIFY_MISSEDCALL_ENABLE_HSy

Missed Call Notification - LED

Description	Selects whether the LED is used to indicate a missed call. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Yes - No
Default Value	Yes
Configuration File Reference	NOTIFY_MISSEDCALL_LED_ENABLE_HSy

Voice Message Notification - Message

Description	Selects whether to display 'Voice MSG' on the screen in standby mode. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Yes - No
Default Value	Yes
Configuration File Reference	NOTIFY_VOICEMAIL_ENABLE_HSy

Voice Message Notification - LED

Description	Selects whether the LED is used to indicate a new voice message. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Yes - No

4.4.8 Parallel Mode Settings

Default Value	Yes
Configuration File Reference	NOTIFY_VOICEMAIL_LED_ENABLE_HSy

Voice Message Notification - Alarm

Description	Selects whether an alarm sound is used to indicate a new voice message. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Yes - No
Default Value	Yes
Configuration File Reference	NOTIFY_VOICEMAIL_ALARM_ENABLE_HSy

Shortcut Key Function

Description	Selects the function assigned to the shortcut key.
Value Range	- None - Hot Key Dial
Default Value	Hot Key Dial
Configuration File Reference	SHORTCUT_KEY_TYPE_HSy (For KX-TPA70/KX-TPA73)

4.4.8 Parallel Mode Settings

This screen allows you to change the Parallel Mode settings that are Linking the desk phone and handset due to have the relation with master and slave. (→ see 6.6 Pairing (Parallel Mode))

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Web Port Close

System

- System Settings
- Language Settings
- User Password Settings
- Admin Password Settings
- Time Adjust Settings
- Handset Basic Settings
- Handset Advanced Settings
- Parallel Mode Settings**

Parallel Mode Settings

Linking the desk phone and handset due to have the relation with master and slave.

Master Desk Phone Number	Slave Handset Number	Mode
1	-	Take Over Call
2	-	Take Over Call
3	-	Take Over Call
4	-	Take Over Call
5	-	Take Over Call
6	-	Take Over Call
7	-	Take Over Call
8	-	Take Over Call

Save Cancel

4.4.8.1 Parallel Mode

Slave Handset Number (Master Desk Phone Number 1–8)

Description	Selects handset number for the cordless desktop handset (KX-TPA65/KX-TPA68) when paired handsets are connected in parallel.
Value Range	-: Off, Handset 1–8
Default Value	-
Configuration File Reference	PARALLEL_HSNom

Mode (Master Desk Phone Number 1–8)

Description	Selects the behavior of paired extensions when going off-hook during a call.
Value Range	• Busy • Take Over Call
Default Value	Take Over Call
Configuration File Reference	PARALLEL_MODEm

4.4.9 Delete Handset

This screen allows you to confirm and delete registered handsets from the base unit. Registered handsets are indicated by enabled check boxes in "Registration Number". Grayed out check boxes indicate handset numbers that are not registered on the base unit. To delete handsets, select the check boxes of the handsets you want to delete, and then click [Execute]. The check boxes that were selected will become grayed out. The base unit will restart automatically, and registration of the handsets whose check boxes were selected will be deleted.

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Web Port Close

System

- System Settings
- Language Settings
- User Password Settings
- Admin Password Settings
- Time Adjust Settings
- Handset Basic Settings
- Handset Advanced Settings
- Parallel Model Settings
- Delete Handset**

Delete Handset

Delete Handset Registration

Handset	Registration Number							
	1	2	3	4	5	6	7	8
	☒	☐	☒	☐	☐	☐	☐	☐

The phone reboots automatically if you change the settings on this screen.

Execute

4.4.9.1 Delete Handset Registration

Registration Number (1–8)

Description	Indicates which handsets (1–8) are registered to the base unit. Handset registration can be deleted from the base unit by selecting the check boxes.
Value Range	Selected, not selected
Default Value	Not applicable.

4.5 VoIP

This section provides detailed descriptions about all the settings classified under the **[VoIP]** tab.

4.5.1 SIP Settings

This screen allows you to change the SIP settings that are common to all lines.

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Status | Network | System | **VoIP** | Telephone | Maintenance

SIP Settings

Web Port Close

VoIP

SIP Settings

- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
- Line 8

VoIP Settings

- Line 1

User Agent

User Agent: Panasonic-{MODEL}/{fwver} ({mac})

NAT Identity

Enable Rport (RFC 3581): ☐ Yes ☒ No

Enable Port Punching for SIP: 0 seconds [10-300, 0: Disable]

Enable Port Punching for RTP: 0 seconds [10-300, 0: Disable]

Advanced

TLS Port random: ☒ Yes ☐ No

UDP Port random: ☐ Yes ☒ No

Save Cancel

4.5.1.1 User Agent

User Agent

Description	Specifies the text string to send as the user agent in the headers of SIP messages.
--------------------	---

Value Range	Max. 64 characters Note • If "{mac}" is included in this field, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this field, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this field, it will be replaced with the unit's model name. • If "{fwver}" is included in this field, it will be replaced with the firmware version of the unit. • If "{sipver}" is included in this parameter, it will be replaced with the SIP software version of the unit.
Default Value	Panasonic-{MODEL}/{fwver} ({mac})
Configuration File Reference	SIP_USER_AGENT

4.5.1.2 NAT Identity

Enable Rport (RFC 3581)

Description	Selects whether to add the 'rport' parameter to the top Via header field value of requests generated.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SIP_ADD_RPORT

Enable Port Punching for SIP

Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet in order to maintain the NAT binding information for SIP packet.
Value Range	0, 10–300 0: Disable
Default Value	0
Configuration File Reference	PORT_PUNCH_INTVL

Enable Port Punching for RTP

Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet in order to maintain the NAT binding information for RTP packet.
Value Range	0, 10–300 0: Disable
Default Value	0
Configuration File Reference	RTP_PORT_PUNCH_INTVL

4.5.1.3 Advanced

TLS Port Random

Description	Selects whether to assign a source port number randomly (ephemeral port) or to use a static source port number when using SIP-TLS. Note • This parameter applies to all lines that use SIP-TLS. • UDP/TCP ports are completely unaffected by this parameter.
Value Range	• Yes (Assign a source port number randomly) • No (Use a static source port number (Refer to SIP_SRC_PORT_n))
Default Value	Yes
Configuration File Reference	SIP_TLS_RANDOM_PORT

UDP Port Random

Description	Selects whether to assign a source port number randomly (ephemeral port) or to use a static source port number when using UDP. Note • This parameter applies to all lines that use UDP.
Value Range	• Yes (Assign a source port number randomly) • No (Use a static source port number (Refer to SIP_SRC_PORT_n))
Default Value	No
Configuration File Reference	SIP_UDP_RANDOM_PORT

4.5.2 SIP Settings [Line 1]–[Line 8]

This screen allows you to change the SIP settings that are specific to each line.

4.5.2.1 Basic

Phone Number

Description	Specifies the phone number to use as the user ID required for registration to the SIP registrar server. Note When registering using a user ID that is not a phone number, you should use the [SIP URI] setting.
Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	PHONE_NUMBER_n

Registrar Server Address

Description	Specifies the IP address or FQDN of the SIP registrar server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	SIP_RGSTR_ADDR_n

Registrar Server Port

Description	Specifies the port number to use for communication with the SIP registrar server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_RGSTR_PORT_n

Proxy Server Address

Description	Specifies the IP address or FQDN of the SIP proxy server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	SIP_PRXY_ADDR_n

Proxy Server Port

Description	Specifies the port number to use for communication with the SIP proxy server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_PRXY_PORT_n

Presence Server Address

Description	Specifies the IP address or FQDN of the SIP presence server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	SIP_PRSNC_ADDR_n

Presence Server Port

Description	Specifies the port number to use for communication with the SIP presence server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_PRSNC_PORT_n

Outbound Proxy Server Address

Description	Specifies the IP address or FQDN of the SIP outbound proxy server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	SIP_OUTPROXY_ADDR_n

Outbound Proxy Server Port

Description	Specifies the port number to use for communication with the SIP outbound proxy server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_OUTPROXY_PORT_n

Service Domain

Description	Specifies the domain name provided by your phone system dealer/ service provider. The domain name is the part of the SIP URI that comes after the "@" symbol.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	SIP_SVCDOMAIN_n

Authentication ID

Description	Specifies the authentication ID required to access the SIP server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	SIP_AUTHID_n

Authentication Password

Description	Specifies the authentication password used to access the SIP server.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	SIP_PASS_n

4.5.2.2 Advanced

SIP Packet QoS (DSCP)

Description	Specifies the DSCP (Differentiated Services Code Point) level of DiffServ applied to SIP packets.
Value Range	0–63
Default Value	0
Configuration File Reference	DSCP_SIP_n

Enable DNS SRV lookup

Description	Selects whether to request the DNS server to translate domain names into IP addresses using the SRV record.
--------------------	---

Value Range	• Yes • No Note • If you select [Yes], the unit will perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server. If you select [No], the unit will not perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server.
Default Value	Yes
Configuration File Reference	SIP_DNSSRV_ENA_n

SRV lookup Prefix for UDP

Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using UDP. Note • This setting is available only when [Enable DNS SRV lookup] is set to [Yes].
Value Range	Max. 32 characters
Default Value	_sip._udp.
Configuration File Reference	SIP_UDP_SRV_PREFIX_n

SRV lookup Prefix for TCP

Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TCP. Note • This setting is available only when [Enable DNS SRV lookup] is set to [Yes].
Value Range	Max. 32 characters
Default Value	_sip._tcp.
Configuration File Reference	SIP_TCP_SRV_PREFIX_n

SRV lookup Prefix for TLS

Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TLS. Note • This setting is available only when [Enable DNS SRV lookup] is set to [Yes].
Value Range	Max. 32 characters
Default Value	_sips._tls.

Configuration File Reference	SIP_TLS_SRV_PREFIX_n
-------------------------------------	----------------------

Local SIP Port

Description	Specifies the source port number used by the unit for SIP communication.
Value Range	1024–49151 Note If "Enable SIP Trunk Service" is set to "Yes" or "SIP_TRUNK_MODE_ENABLE" is set to "Y", the settings for Line 2 to Line 8 are disabled. The settings will be same as Line 1.
Default Value	5060 (for Line 1) 5070 (for Line 2) 5080 (for Line 3) 5090 (for Line 4) 5100 (for Line 5) 5110 (for Line 6) 5120 (for Line 7) 5130 (for Line 8)
Configuration File Reference	SIP_SRC_PORT_n

SIP URI

Description	Specifies the unique ID used by the SIP registrar server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:user@example.com", "2405551111_1". Note - When registering using a user ID that is not a phone number, you should use this setting. - In a SIP URI, the user part ("user" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 316 characters.
Value Range	Max. 384 characters
Default Value	Not stored.
Configuration File Reference	SIP_URI_n

T1 Timer

Description	Specifies the default interval, in milliseconds, between transmissions of SIP messages.
Value Range	250 500 1000 2000 4000

Default Value	500
Configuration File Reference	SIP_TIMER_T1_n

T2 Timer

Description	Specifies the maximum interval, in seconds, between transmissions of SIP messages.
Value Range	• 2 • 4 • 8 • 16 • 32
Default Value	4
Configuration File Reference	SIP_TIMER_T2_n

REGISTER Expires Timer

Description	Specifies the length of time, in seconds, that the registration remains valid. This value is set in the "Expires" header of the REGISTER request.
Value Range	1–4294967295
Default Value	3600
Configuration File Reference	REG_EXPIRE_TIME_n

Enable Session Timer (RFC 4028)

Description	Specifies the length of time, in seconds, that the unit waits before terminating SIP sessions when no reply to repeated requests is received.
Value Range	0, 60–65535
Default Value	0
Configuration File Reference	SIP_SESSION_TIME_n

Session Timer Method

Description	Selects the refreshing method of SIP sessions.
Value Range	• INVITE • UPDATE • INVITE/UPDATE
Default Value	INVITE
Configuration File Reference	SIP_SESSION_METHOD_n

Enable 100rel (RFC 3262)

Description	Specifies whether to add the option tag 100rel to the "Supported" header of the INVITE message.
--------------------	---

Value Range	• Yes • No Note • If you select [Yes], the Reliability of Provisional Responses function will be enabled. The option tag 100rel will be added to the "Supported" header of the INVITE message and to the "Require" header of the "1xx" provisional message. If you select [No], the option tag 100rel will not be used.
Default Value	Yes
Configuration File Reference	SIP_100REL_ENABLE_n

Enable SSAF (SIP Source Address Filter)

Description	Selects whether to enable SSAF for the SIP servers (registrar server, proxy server, and presence server).
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SIP_DETECT_SSAF_n

Enable c=0.0.0.0 Hold (RFC 2543)

Description	Selects whether to enable the RFC 2543 Call Hold feature on this line.
Value Range	• Yes • No Note • If you select [Yes], the "c=0.0.0.0" syntax will be set in SDP when sending a re-INVITE message to hold the call. If you select [No], the "c=x.x.x.x" syntax will be set in SDP.
Default Value	Yes
Configuration File Reference	RFC2543_HOLD_ENABLE_n

Transport Protocol

Description	Selects which transport layer protocol to use for sending SIP packets.
Value Range	• UDP • TCP • TLS Note • If "SIP_DNSSRV_ENA_NAPTR_n" is set to "Y", match the protocol of NAPTR with the setting for "Transport Protocol" or "SIP_TRANSPORT_n".

4.5.3 VoIP Settings

Default Value	UDP
Configuration File Reference	SIP_TRANSPORT_n

TLS Mode

Description	Select the secure SIP protocol.
Value Range	• SIPS • SIP-TLS
Default Value	SIPS
Configuration File Reference	SIP_TLS_MODE_n

4.5.3 VoIP Settings

This screen allows you to change the VoIP settings that are common to all lines.

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VoIP

SIP Settings
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- Line 5
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VoIP Settings
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- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
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VoIP Settings

RTP

RTP Packet Time: 20 milliseconds
Minimum RTP Port Number: 16000 [1024-48750: Even Number Only]
Maximum RTP Port Number: 20000 [1424-49150: Even Number Only]
Telephone-event Payload Type: 101 [96-127]

Voice Quality Report

Server Address:
Port: 5060 [1-65535]
Enable PUBLISH: Disable
Alert Report Trigger: ☒ Warning ☐ Critical
Threshold MOS-LQ (Critical): 20 [15-40]
Threshold MOS-LQ (Warning): 20 [15-40]
Threshold Delay (Critical): 0 milliseconds [10-2000]
Threshold Delay (Warning): 0 milliseconds [10-2000]

Save Cancel

4.5.3.1 RTP

RTP Packet Time

Description	Selects the interval, in milliseconds, between transmissions of RTP packets.
Value Range	• 20 • 30 • 40 • 60
Default Value	20
Configuration File Reference	RTP_PTIME

Minimum RTP Port Number

Description	Specifies the lowest port number that the unit will use for RTP packets.
Value Range	1024–59598 (even number only)
Default Value	16000
Configuration File Reference	RTP_PORT_MIN

Maximum RTP Port Number

Description	Specifies the highest port number that the unit will use for RTP packets.
Value Range	1424–59998 (even number only)
Default Value	20000
Configuration File Reference	RTP_PORT_MAX

Telephone-event Payload Type

Description	Specifies the RFC 2833 payload type for DTMF tones. Note This setting is available only when [DTMF Type] is set to [RFC2833].
Value Range	96–127
Default Value	101
Configuration File Reference	TELEVENT_PAYLOAD

4.5.3.2 Voice Quality Report

Server Address

Description	Specifies the IP address or FQDN of the collector server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	VQREPORT_COLLECTOR_ADDRESS

Port

Description	Specifies the port of the collector server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	VQREPORT_COLLECTOR_PORT

Enable PUBLISH

Description	Selects the sending type of the VQ report using PUBLISH.
--------------------	--

Value Range	• Disable • End of Session Report Using PUBLISH • Interval report Using PUBLISH • Alert Report Using PUBLISH
Default Value	Disable
Configuration File Reference	VQREPORT_SEND

Alert Report Trigger

Description	Selects the trigger to notify the VQ report.
Value Range	• Warning • Critical
Default Value	Warning
Configuration File Reference	ALERT_REPORT_TRIGGER

Threshold MOS-LQ (Critical)

Description	Specifies the criteria (critical) to send the VQ report when the MOSQ occurs.
Value Range	0–40
Default Value	0
Configuration File Reference	ALERT_REPORT_MOSQ_CRITICAL

Threshold MOS-LQ (Warning)

Description	Specifies the criteria (warning) to send the VQ report when the MOSQ occurs.
Value Range	0–40
Default Value	0
Configuration File Reference	ALERT_REPORT_MOSQ_WARNING

Threshold Delay (Critical)

Description	Specifies the criteria (critical) to send the VQ report when a delay occurs.
Value Range	0–2000
Default Value	0
Configuration File Reference	ALERT_REPORT_DELAY_CRITICAL

Threshold Delay (Warning)

Description	Specifies the criteria (warning) to send the VQ report when a delay occurs.
Value Range	0–2000
Default Value	0

Configuration File Reference

ALERT_REPORT_DELAY_WARNING

4.5.4 VoIP Settings [Line 1]–[Line 8]

This screen allows you to change the VoIP settings that are specific to each line.

G.722 is available only when "WIDEBAND_AUDIO_ENABLE"="Y" is set. G.722.2 (AMR-WB) is available only when "WIDEBAND_AUDIO_ENABLE"="Y" and "CODEC_G722AMR_ENABLE"="Y" are both set. (→ see 5.3.1 System Settings).

4.5.4.1 Basic

G.722 (Enable)

Description	Selects whether to enable the G.722 codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLEx_n

G.722 (Priority)

Description	Specifies the numerical order usage priority for the G.722 codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITYx_n

PCMA (Enable)

Description	Selects whether to enable the PCMA codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLEx_n

PCMA (Priority)

Description	Specifies the numerical order usage priority for the PCMA codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITYx_n

G.722.2 (AMR-WB) (Enable)

Description	Selects whether to enable the G.722.2 (AMR-WB) codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLEx_n

G.722.2 (AMR-WB) (Priority)

Description	Specifies the numerical order usage priority for the G.722.2 (AMR-WB) codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITYx_n

G.729A (Enable)

Description	Selects whether to enable the G.729A codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLEx_n

G.729A (Priority)

Description	Specifies the numerical order usage priority for the G.729A codec.
Value Range	1–255

Default Value	1
Configuration File Reference	CODEC_PRIORITYx_n

PCMU (Enable)

Description	Selects whether to enable the PCMU codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLEx_n

PCMU (Priority)

Description	Specifies the numerical order usage priority for the PCMU codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITYx_n

DTMF Type

Description	Selects the method for transmitting DTMF (Dual Tone Multi-Frequency) tones.
Value Range	• RFC2833 • Inband • SIP INFO Note • RFC2833 refers to Outband DTMF. • Inband refers to Inband DTMF.
Default Value	RFC2833
Configuration File Reference	DTMF_METHOD_n

4.5.4.2 Advanced

RTP Packet QoS (DSCP)

Description	Specifies the DSCP level of DiffServ applied to RTP packets.
Value Range	0–63
Default Value	0
Configuration File Reference	DSCP_RTP_n

RTCP Packet QoS (DSCP)

Description	Specifies the DSCP level of DiffServ applied to RTCP/RTCP-XR packets.
-------------	---

4.5.4 VoIP Settings [Line 1]–[Line 8]

Value Range	0–63
Default Value	0
Configuration File Reference	DSCP_RTCP_n

Enable RTCP

Description	Selects whether to enable or disable RTCP.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	RTCP_ENABLE_n

Enable RTCP-XR

Description	Selects whether to enable or disable RTCP-XR.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	RTCPXR_ENABLE_n

RTCP&RTCP-XR Interval

Description	Specifies the interval, in seconds, between RTCP/RTCP-XR packets.
Value Range	5–65535
Default Value	5
Configuration File Reference	RTCP_INTVL_n

SRTP Mode

Description	Selects the mode of SRTP feature.
--------------------	-----------------------------------

Value Range	• 0: SRTP • 1: RTP/SRTP • 2: Panasonic Original • 3: SRTP/RTP Note • 0: SRTP Use only SRTP for outgoing and incoming calls. • 1: RTP/SRTP Use only RTP for outgoing calls, and RTP or SRTP for incoming calls. • 2: Panasonic Original Use RTP or SRTP for both outgoing and incoming calls. This value is valid only when the unit is connected to a Panasonic PBX. "SRTP_MIX_TRANSFER_ENABLE_n" must also be set to "Y". • 3: SRTP/RTP If you are using "RTP/AVP" and append "a=crypto", and the response message includes "a=crypto", the conversation will be established with SRTP. If "a=crypto" is not included, the conversation will be established with RTP.
Default Value	1: RTP/SRTP
Configuration File Reference	SRTP_CONNECT_MODE_n

Enable Mixed SRTP & RTP by Conference

Description	Selects whether to allow conferences where each participant can use either SRTP or RTP.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SRTP_MIX_CONFERENCE_ENABLE_n

Enable Mixed SRTP & RTP by Transfer

Description	Selects whether to allow call transfers between a user who is using SRTP and a user who is using RTP.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SRTP_MIX_TRANSFER_ENABLE_n

4.6 Telephone

This section provides detailed descriptions about all the settings classified under the **[Telephone]** tab.

4.6.1 Multi Number Settings

This screen allows you to assign phone numbers for incoming and outgoing calls to the base unit and handsets. A maximum of 8 phone numbers can be assigned for each unit. A maximum of 8 handsets can be registered to the base unit. For details, see 6.1 Line Settings.

This setting is available only when "**MULTI_NUMBER_ENABLE**"="Y" is set (see 5.3.1 System Settings).

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Hotline Settings

Tone Settings

Import Phonebook

Export Phonebook

Group Handset / Handset select for receiving call

Line	Phone Number	Handset Number								Paging
		1	2	3	4	5	6	7	8	
1	160	☒	☐	☐	☐	☐	☐	☐	☐	HS1 ▾
2	161	☐	☒	☐	☐	☐	☐	☐	☐	HS1 ▾
3		☐	☐	☒	☐	☐	☐	☐	☐	HS1 ▾
4		☐	☐	☐	☒	☐	☐	☐	☐	HS1 ▾
5		☐	☐	☐	☐	☒	☐	☐	☐	HS1 ▾
6		☐	☐	☐	☐	☐	☒	☐	☐	HS1 ▾
7		☐	☐	☐	☐	☐	☐	☒	☐	HS1 ▾
8		☐	☐	☐	☐	☐	☐	☐	☒	HS1 ▾

Handset and Line Number select for making call

Handset	Line Number								Default
	1	2	3	4	5	6	7	8	
1	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
2	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
3	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
4	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
5	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
6	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
7	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾
8	☒	☒	☒	☒	☒	☒	☒	☒	1 ▾

Save Cancel

4.6.1.1 Group Handset / Handset select for receiving call

Line (1–8)

Description	Indicates the line number (1–8) to which a phone number is assigned (reference only).
Value Range	Line 1–Line 8
Default Value	Not applicable.
Configuration File Reference	INCOMING_CALL_GROUP_n

Phone Number

Description	Indicates the currently assigned phone numbers (reference only).
Value Range	Max. 32 digits
Default Value	Not applicable.
Configuration File Reference	INCOMING_CALL_GROUP_n

Handset Number (1–8)

Description	Selects the handsets (1–8) that calls will arrive at for each line.
Value Range	Selected, Not selected
Default Value	Selected (all)
Configuration File Reference	INCOMING_CALL_GROUP_n

Paging

Description	Selects the handsets (1–8) that calls will arrive (auto answer) at for each line.
Value Range	HS1–HS8
Default Value	HS1
Configuration File Reference	PAGING_ENABLE_HANDSET_n

4.6.1.2 Handset and Line Number select for making call

Handset

Description	Indicates the handsets (1–8) that can be used to make a call (reference only).
Value Range	Handset 1 – Handset 8
Default Value	Not applicable.

Line Number

Description	Selects which lines (1–8) can be seized when going off-hook to make a call for the base unit and each handset.
Value Range	Selected, Not selected
Default Value	Selected (all)
Configuration File Reference	OUTGOING_CALL_LINE_HSy

Default

Description	Selects which line to seize automatically when going off-hook to make a call for the base unit and each handset.
Value Range	1–8
Default Value	1
Configuration File Reference	DEFAULT_LINE_SELECT_HSy

4.6.2 Call Control

This screen allows you to configure various call features that are common to all lines.

4.6.2 Call Control

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Call Control

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Call Control

Send SUBSCRIBE to Voice Mail Server ☐ Yes ☒ No

Conference Server URI

First-digit Timeout 30 seconds [1-600]

Inter-digit Timeout 5 seconds [1-15]

Timer for Dial Plan 5 seconds [1-15]

Enable # Key as delimiter ☒ Yes ☐ No

International Call Prefix

Country Calling Code

National Access Code

Call Park Number

Enable Call Park Key ☐ Yes ☒ No

Park Retrieve Number

Park Retrieve Soft Key Not Use

Emergency Call Phone Numbers

1.		2.	
3.		4.	
5.			

Save Cancel

4.6.2.1 Call Control

Send SUBSCRIBE to Voice Mail Server

Description	Selects whether to send the SUBSCRIBE request to a voice mail server. Note Your phone system must support voice mail.
Value Range	- Yes - No
Default Value	No
Configuration File Reference	VM_SUBSCRIBE_ENABLE

Conference Server URI

Description	Specifies the URI for a conference server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:conference@example.com". Note Availability depends on your phone system.
Value Range	Max. 256 characters
Default Value	Not stored.

Configuration File Reference	CONFERENCE_SERVER_URI
-------------------------------------	-----------------------

First-digit Timeout

Description	Specifies the length of time, in seconds, within which the first digits of a dial number must be dialed.
Value Range	1–600 (s)
Default Value	30
Configuration File Reference	FIRSTDIGIT_TIM

Inter-digit Timeout

Description	Specifies the length of time, in seconds, within which subsequent digits of a dial number must be dialed.
Value Range	1–15 (s)
Default Value	5
Configuration File Reference	INTDIGIT_TIM

Timer for Dial Plan

Description	Specifies the length of time, in seconds, that the unit waits when a "T" or "t" has been entered in the dial plan.
Value Range	1–15 (s)
Default Value	5
Configuration File Reference	MACRODIGIT_TIM

Enable # Key as delimiter

Description	Selects whether the # key is treated as a regular dialed digit or a delimiter, when dialed as or after the second digit.
Value Range	- Yes: # is treated as the end of dialing delimiter. - No: # is treated as a regular dialed digit.
Default Value	Yes
Configuration File Reference	POUND_KEY_DELIMITER_ENABLE

International Call Prefix

Description	Specifies the number to be shown in the place of the first "+" symbol when the phone number for incoming international calls contains "+".
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Not stored.
Configuration File Reference	INTERNATIONAL_ACCESS_CODE

Country Calling Code

Description	Specifies the country/area calling code to be used for comparative purposes when dialing a number from the incoming call log that contains a "+" symbol.
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Not stored.
Configuration File Reference	COUNTRY_CALLING_CODE

National Access Code

Description	When dialing a number from the incoming call log that contains a "+" symbol and the country calling code matches, the country calling code is removed and the national access code is added.
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Not stored.
Configuration File Reference	NATIONAL_ACCESS_CODE

Call Park Number

Description	Specifies the call parking number.
Value Range	0–4 digits (0–9, *, #)
Default Value	Not stored.
Configuration File Reference	NUM_PLAN_PARKING

Enable Call Park Key

Description	Selects whether to display "Call Park" in the Call Parking Func menu.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	CALLPARK_KEY_ENABLE

Park Retrieve Number

Description	Specifies the call park retrieve number.
Value Range	0–4 digits (0–9, *, #)
Default Value	Not stored.
Configuration File Reference	NUM_PLAN_PARK_RETRIEVING

Park Retrieve Soft Key

Description	Selects whether to have soft key for the call park retrieving. Note This feature is available only when [Enable Call Park Notification] is set to [Yes], and [Park Retrieve Number] is set (see Enable Call Park Notification, Park Retrieve Number).
Value Range	- Not Use - Soft Key A (Left) - Soft Key B (Center) - Soft Key C (Right)
Default Value	Not Use
Configuration File Reference	IDLE_SOFT_KEY_PARK_RETRIEVING

Group Call Pickup

Description	Specifies the feature number for performing "Group Pickup".
Value Range	0–4 digits (0–9, *, #)
Default Value	Not stored.
Configuration File Reference	NUM_PLAN_PICKUP_GROUP

Private Hold

Description	Selects whether to enable or disable "Private Hold".
Value Range	- Yes - No Note (For KX-TPA60/KX-TPA65) If set to "Yes", "Private Hold" is displayed on Soft Key C.
Default Value	No
Configuration File Reference	PRIVATE_HOLD_ENABLE

4.6.2.2 Emergency Call Phone Numbers

1–5

Description	Specifies the phone numbers used for making emergency calls. A user can dial any of the specified phone numbers at any time regardless of any restrictions imposed on the unit. A maximum of 5 phone numbers can be specified.
Value Range	Max. 32 characters (except &, ", ' , : , ; , < , >)
Default Value	Not stored.
Configuration File Reference	EMERGENCY_CALLx

4.6.3 Call Control [Line 1]–[Line 8]

This screen allows you to configure various call features that are specific to each line.

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Call Control [Line 1]

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Call Features

Display Name	
Voice Mail Access Number	
Enable Anonymous Call	☐ Yes ☒ No
Enable Block Anonymous Call	☐ Yes ☒ No
Enable Do Not Disturb	☐ Yes ☒ No
Enable Call Waiting	☒ Yes ☐ No
Enable Call Forwarding Always	☐ Yes ☒ No
Forwarding Number (Always)	
Enable Call Forwarding Busy	☐ Yes ☒ No
Forwarding Number (Busy)	
Enable Call Forwarding No Answer	☐ Yes ☒ No
Forwarding Number (No Answer)	
Ring Counts (No Answer)	3 counts [0, 2-20]
Enable Shared Call	☐ Yes ☒ No
Enable Key Synchronization	☐ Yes ☒ No
Enable Call Park Notification	☐ Yes ☒ No
Enable Click to Call	☐ Yes ☒ No

4.6.3.1 Call Features

Display Name

Description	Specifies the name to display as the caller on the other party's phone when you make a call.
Value Range	Max. 24 characters Note You can use Unicode characters for this setting.
Default Value	Not stored.
Configuration File Reference	DISPLAY_NAME_n

Voice Mail Access Number

Description	Specifies the phone number used to access the voice mail server. Note Your phone system must support voice mail.
--------------------	--

Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	VM_NUMBER_n

Enable Anonymous Call

Description	Selects whether to make calls without transmitting the phone number to the called party.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	ANONYMOUS_CALL_ENABLE_n

Enable Block Anonymous Call

Description	Selects whether to accept or reject the incoming call without the called party's phone number.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	BLOCK_ANONYMOUS_CALL_ENABLE_n

Enable Do Not Disturb

Description	Selects whether to reject the all incoming calls.
Value Range	• Yes • No
Default Value	No

Enable Call Waiting

Description	Selects whether to enable Call Waiting.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CW_ENABLE_n

Enable Call Forwarding Always

Description	Selects whether to forward all incoming calls to a specified destination.
Value Range	• Yes • No
Default Value	No

Forwarding Number (Always)

Description	Specifies the phone number of the destination to forward all incoming calls to.
Value Range	Max. 32 characters
Default Value	Not stored.

Enable Call Forwarding Busy

Description	Selects whether to forward incoming calls to a specified destination when the line is in use.
Value Range	• Yes • No
Default Value	No

Forwarding Number (Busy)

Description	Specifies the phone number of the destination to forward calls to when the line is in use.
Value Range	Max. 32 characters
Default Value	Not stored.

Enable Call Forwarding No Answer

Description	Selects whether to forward incoming calls to a specified destination when a call is not answered after it has rung a specified number of times.
Value Range	• Yes • No
Default Value	No

Forwarding Number (No Answer)

Description	Specifies the phone number of the destination to forward calls to when a call is not answered after it has rung a specified number of times.
Value Range	Max. 32 characters
Default Value	Not stored.

Ring Counts (No Answer)

Description	Specifies the number of times that an incoming call rings until the call is forwarded.
Value Range	0, 2–20
Default Value	3

Enable Shared Call

Description	Selects whether to enable the Shared Call feature of the SIP server, which is used to share one line among the units. Note Availability depends on your phone system.
Value Range	- Yes - No Note - If you select [Yes], the SIP server will control the line by using a shared-call signaling method. If you select [No], the SIP server will control the line by using a standard signaling method.
Default Value	No
Configuration File Reference	SHARED_CALL_ENABLE_n

Enable Key Synchronization

Description	Selects whether to synchronize the Do Not Disturb and Call Forward settings. Note Even if you select [Yes], this feature may not function properly if your phone system does not support it. Before you configure this setting, consult your phone system dealer/service provider.
Value Range	- Yes - No
Default Value	No
Configuration File Reference	FWD_DND_SYNCHRO_ENABLE_n

Enable Call Park Notification

Description	Selects whether to respond to call park notifications from the server.
Value Range	- Yes - No
Default Value	No
Configuration File Reference	CALLPARK_NOTIFICATION_ENABLE_n

Enable Click to Call

Description	Selects whether to enable Click to Dial/Answer/Hold functions.
Value Range	- Yes - No
Default Value	No

Configuration File Reference	CLICKTO_ENABLE_n
------------------------------	------------------

MoH Server URI

Description	Specifies MoH server URI for each line.
Value Range	Max. 384 characters
Default Value	Not stored.
Configuration File Reference	MOH_SERVER_URI_n

4.6.3.2 Dial Plan

Dial Plan (max 1000 columns)

Description	Specifies a dial format, such as specific phone numbers, that control which numbers can be dialed or how to handle the call when making a call. For details, see 6.3 Dial Plan .
Value Range	Max. 1000 characters
Default Value	Not stored.
Configuration File Reference	DIAL_PLAN_n

Call Even If Dial Plan Does Not Match

Description	Selects whether to make a call even if the dialed number does not match any of the dial formats specified in [Dial Plan] .
Value Range	• Yes • No Note • If you select [Yes], calls will be made even if the dialed number does not match the dial formats specified in [Dial Plan] (i.e., dial plan filtering is disabled). If you select [No], calls will not be made if the dialed number does not match one of the dial formats specified in [Dial Plan] (i.e., dial plan filtering is enabled).
Default Value	Yes
Configuration File Reference	DIAL_PLAN_NOT_MATCH_ENABLE_n

4.6.3.3 Call Rejection Phone Numbers

1–20

Description	Specifies the phone numbers to reject incoming calls from. A maximum of 20 phone numbers can be specified.
Value Range	Max. 32 characters (except &, ", ', :, ;, <, >)
Default Value	Not stored.
Configuration File Reference	CALL_REJECTIONx_n

4.6.4 Hotline Settings

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Hotline

Handset 1	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 2	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 3	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 4	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 5	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 6	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 7	Enable	☐ Yes ☒ No
	Hotline Number	
Handset 8	Enable	☐ Yes ☒ No
	Hotline Number	
Hotline Delay	2 seconds [0-10]	

Save Cancel

4.6.4.1 Hotline

Handset 1–8 (Enable)

Description	Selects whether to enable or disable the Hot line feature.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	HOTLINE_ENABLE_HSy

Handset 1–8 (Hotline Number)

Description	Specifies the Hot line number.
Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	HOTLINE_NUMBER_HSy

Hotline Delay

Description	Specifies a time after off hook for Hot line.
Value Range	0–10 (s)
Default Value	2
Configuration File Reference	HOTLINE_TIM

4.6.5 Tone Settings

This screen allows you to configure the dual-tone frequencies and ringtone patterns of each tone.

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- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
- Line 8
- Hotline Settings
- Tone Settings**
- Import Phonebook
- Export Phonebook

Tone Settings

Dial Tone	
Tone Frequencies	350,440
Tone Timings	0,0,0,0

Busy Tone	
Tone Frequencies	480,620
Tone Timings	500,500,500,500

Ringing Tone	
Tone Frequencies	440,480
Tone Timings	2000,4000,2000,4000

Stutter Tone	
Tone Frequencies	350,440
Tone Timings	100,100,100,100,100,100,100,100,100,100,100,1

Reorder Tone	
Tone Frequencies	0,0
Tone Timings	0,0,0,0,0,0,0,0

Save Cancel

4.6.5.1 Dial Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of dial tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone) Note If the value for this setting is "350,440", the unit will use a mixed signal of a 350 Hz tone and a 440 Hz tone.
Default Value	350,440
Configuration File Reference	DIAL_TONE1_FRQ

Tone Timings

Description	Specifies the pattern, in milliseconds, of dial tones using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note - The unit will not play the tone for the duration of the first value, play it for the duration of the second value, stop it for the duration of the third value, play it again for the duration of the fourth value, and so on. The whole sequence will then repeat. For example, if the value for this setting is "100,100,100,0", the unit will not play the tone for 100 ms, play it for 100 ms, stop it for 100 ms, and then play it continuously. - It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (0: Infinite time) Note Avoid setting 1–50 for any of the values.
Default Value	60,0
Configuration File Reference	DIAL_TONE1_TIMING

4.6.5.2 Busy Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of busy tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone) Note If the value for this setting is "480,620", the unit will use a mixed signal of a 480 Hz tone and a 620 Hz tone.
Default Value	480,620
Configuration File Reference	BUSY_TONE_FRQ

Tone Timings

Description	Specifies the pattern, in milliseconds, of busy tones using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas.
Value Range	0–16000 (0: Infinite time) Note Avoid setting 1–50 for any of the values.
Default Value	60,500,440
Configuration File Reference	BUSY_TONE_TIMING

4.6.5.3 Ringing Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of ringback tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone) Note If the value for this setting is "440,480", the unit will use a mixed signal of a 440 Hz tone and a 480 Hz tone.
Default Value	440,480
Configuration File Reference	RINGBACK_TONE_FRQ

Tone Timings

Description	Specifies the pattern, in milliseconds, of ringback tones using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (0: Infinite time) Note Avoid setting 1–50 for any of the values.
Default Value	60,2000,3940
Configuration File Reference	RINGBACK_TONE_TIMING

4.6.5.4 Stutter Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of stutter dial tones to notify that a voice mail is waiting, using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone) Note If the value for this setting is "350,440", the unit will use a mixed signal of a 350 Hz tone and a 440 Hz tone.
Default Value	350,440
Configuration File Reference	DIAL_TONE4_FRQ

Tone Timings

[illegible]

4.6.5.5 Reorder Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of reorder tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone) Note If the value for this setting is "480,620", the unit will use a mixed signal of a 480 Hz tone and a 620 Hz tone.
Default Value	480,620
Configuration File Reference	REORDER_TONE_FRQ

Tone Timings

Description	Specifies the pattern, in milliseconds, of reorder tones using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (0: Infinite time)
Default Value	60,250,190 Note Avoid setting 1–50 for any of the values.
Configuration File Reference	REORDER_TONE_TIMING

4.6.6 Import Phonebook

This screen allows you to import phonebook data from a PC to the specified unit. For details, see **6.2.1 Import/Export Operation**.

Note

- If the existing phonebook data has an entry with the same name and phone number as an imported entry, the imported entry is not added as a new entry.
- When you begin transferring the phonebook data, the "Now Processing File Data" screen is displayed, and the screen is periodically reloaded. Depending on your Web browser, the screen might not reload automatically, and you will need to click the text "HERE" before the timer expires in order for the import operation to function properly.

The screenshot shows the Panasonic KX-TGP600 web interface. The top navigation bar includes 'Status', 'Network', 'System', 'VoIP', 'Telephone' (highlighted), and 'Maintenance'. The left sidebar under 'Telephone' lists 'Multi Number Settings', 'Call Control', 'Line 1' through 'Line 8', 'Hotline Settings', 'Tone Settings', 'Import Phonebook' (highlighted with a red box), and 'Export Phonebook'. The main content area is titled 'Import Phonebook' and contains a form with 'Handset Number' (a dropdown menu showing 'Handset 1') and 'File Name' (a text input field). An 'Import' button is located at the bottom of the form.

4.6.6.1 Import Phonebook

Handset Number

Description	Selects the handset to import the phonebook entries to.
Value Range	• Handset 1 • Handset 2 • Handset 3 • Handset 4 • Handset 5 • Handset 6 • Handset 7 • Handset 8
Default Value	Handset 1

File Name

Description	Specifies the path of the TSV (Tab-separated Value) file to import from the PC.
-------------	---

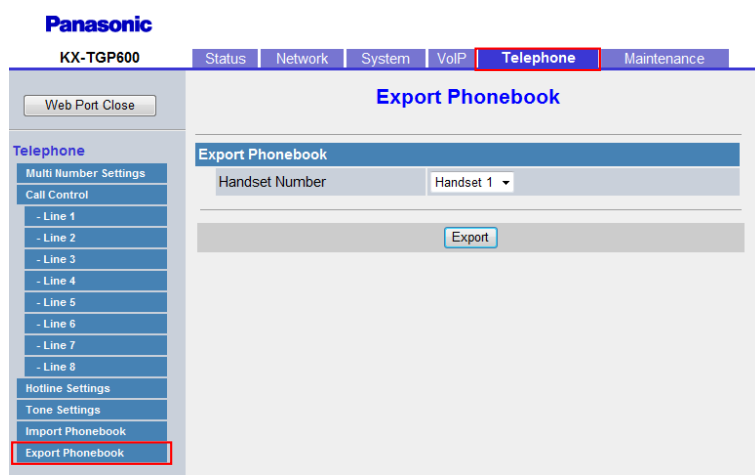
Value Range	No limitation Note There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used: longer paths may cause longer data transfer times and result in an internal error.
Default Value	Not stored.

4.6.7 Export Phonebook

This screen allows you to save the phonebook data stored in the unit as a TSV file on a PC. For details, see **6.2.1 Import/Export Operation**.

Note

- When you begin transferring the phonebook data, the "Now Processing File Data" screen is displayed, and the screen is periodically reloaded. Click the text "HERE" in the message to display the **[Export Phonebook]** screen again. If you do not, the "Now Processing File Data" screen remains displayed even if the export is complete. Depending on your Web browser, the screen might not reload automatically, and you will need to click the text "HERE" before the timer expires in order for the export operation to function properly.
- Depending on the security settings of your Web browser, pop-up menus might be blocked at the time of export. The security warning window may be displayed on another screen even if the Pop-up Blocker settings are set to enable, and the file may not be exported successfully. In this case, try the export operation again or disable the Pop-up Blocker feature of your Web browser.



4.6.7.1 Export Phonebook

Handset Number

Description	Selects which handset to export phonebook data from.
--------------------	--

4.6.8 Flexible Key Settings for KX-TPA68

Value Range	• Handset 1 • Handset 2 • Handset 3 • Handset 4 • Handset 5 • Handset 6 • Handset 7 • Handset 8
Default Value	Handset 1

4.6.8 Flexible Key Settings for KX-TPA68

Panasonic
KX-TGP600

Status | Network | System | VoIP | **Telephone** | Maintenance

Log out
Web Port Close

Telephone
Multi Number Settings
Import Phonebook
Export Phonebook

KX-TPA68
Flexible Key Settings
Handset 1
Handset 2
Handset 3
Handset 4
Handset 5
Handset 6
Handset 7
Handset 8

Flexible Key Settings

No.	Type	Parameter	Label Name
1	▼		
2	▼		
3	▼		
4	▼		
5	▼		
6	▼		
7	▼		
8	▼		
9	▼		
10	▼		
11	▼		
12	▼		

Save Cancel

4.6.8.1 Flexible Key Settings for KX-TPA68 (No1–12)

Type

Description	Selects which feature to assign to each flexible key on page 2 and page 3.
-------------	--

Value Range	• None • Line Notification • Handset Notification • One Touch Dial • Directed Call Pickup • Call Park • Park Retrieve • Group Pickup • Paging • Presence • My Phone • Memo Alarm • Intercom Note If "HS_STATUS_MONITOR_ENABLE" is set "Y", "Handset Notification" will appear. If "HS_STATUS_MONITOR_ENABLE" is set "N", "Line Notification" will appear.
Default Value	Not stored.
Configuration File Reference	FLEX_BUTTON_FACILITY_HSy_ACTx (For KX-TPA68)

Parameter

Description	Specifies the necessary parameters for the features assigned to the flexible keys.
Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	FLEX_BUTTON_FACILITY_HSy_ARGx (For KX-TPA68)

Label Name

Description	Specifies the message to display on the screen when a flexible key on page 2 and page 3 is pressed.
Value Range	Max. 20 characters
Default Value	Not stored.
Configuration File Reference	FLEX_BUTTON_FACILITY_HSy_LABELx (For KX-TPA68)

4.7 Maintenance

This section provides detailed descriptions about all the settings classified under the **[Maintenance]** tab.

4.7.1 Provisioning Maintenance

This screen allows you to change the provisioning setup to download the configuration files from the provisioning server of your phone system.

Panasonic
KX-TGP600

Status | Network | System | VoIP | Telephone | **Maintenance**

Web Port Close

Provisioning Maintenance

Maintenance

- Provisioning Maintenance**
- Firmware Maintenance
- Upgrade Firmware
- Import Wallpaper
- Export Logging File
- Reset to Defaults
- Restart

Provisioning Maintenance

Standard File URL	
Product File URL	
Master File URL	
Cyclic Auto Resync	☐ Yes ☒ No
Resync Interval	10080 minutes [1-40320]
Time Resync	[00:00-23:59, NULL: Disable]
Header Value for Resync Event	check-sync

Save Cancel

4.7.1.1 Provisioning Maintenance

Standard File URL

Description	Specifies the URL of the standard configuration file, which is used when every unit needs different settings.
Value Range	Max. 384 characters
	Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Not stored.
Configuration File Reference	CFG_STANDARD_FILE_PATH

Product File URL

Description	Specifies the URL of the product configuration file, which is used when all units with the same model number need the same settings.
Value Range	Max. 384 characters
	Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Not stored.
Configuration File Reference	CFG_PRODUCT_FILE_PATH

Master File URL

Description	Specifies the URL of the master configuration file, which is used when all units need the same settings.
--------------------	--

Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Not stored.
Configuration File Reference	CFG_MASTER_FILE_PATH

Cyclic Auto Resync

Description	Selects whether the unit periodically checks for updates of configuration files.
Value Range	- Yes - No
Default Value	No
Configuration File Reference	CFG_CYCLIC

Resync Interval

Description	Specifies the interval, in minutes, between periodic checks for updates of the configuration files.
Value Range	1–40320
Default Value	10080
Configuration File Reference	CFG_CYCLIC_INTVL

Time Resync

Description	Specifies the time (hour:minute) that the unit checks for updates of configuration files.
Value Range	00:00–23:59
Default Value	Not stored.
Configuration File Reference	CFG_RESYNC_TIME

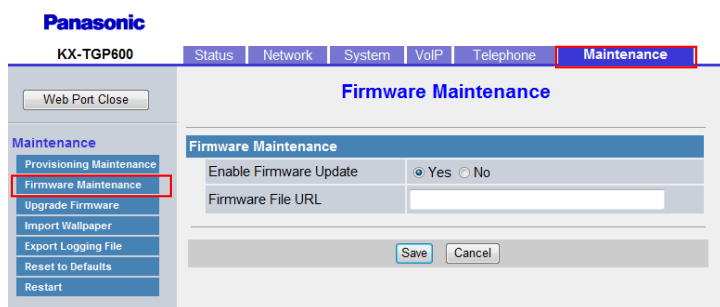
Header Value for Resync Event

Description	Specifies the value of the "Event" header sent from the SIP server to the unit so that the unit can access the configuration files on the provisioning server.
Value Range	Max. 15 characters
Default Value	check-sync
Configuration File Reference	CFG_RESYNC_FROM_SIP

4.7.2 Firmware Maintenance

This screen allows you to perform firmware updates automatically or manually.

4.7.3 Upgrade Firmware



4.7.2.1 Firmware Maintenance

Enable Firmware Update

Description	Selects whether to perform firmware updates when the unit detects a newer version of firmware. Note - Local firmware updates from the Web user interface (→ see 4.7.3 Upgrade Firmware) can be performed regardless of this setting. - Firmware updates using TR-069 can be performed regardless of this setting.
Value Range	- Yes - No
Default Value	Yes
Configuration File Reference	FIRM_UPGRADE_ENABLE

Firmware File URL

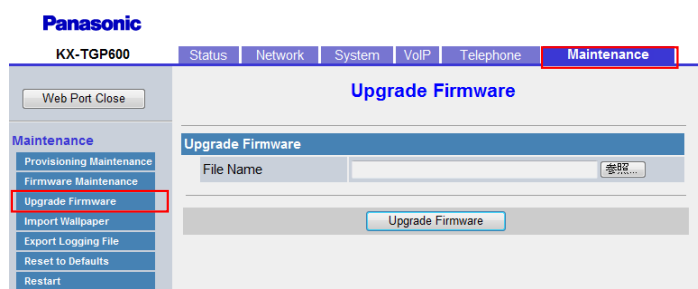
Description	Specifies the URI where the firmware file is stored. Note This setting is available only when [Enable Firmware Update] is set to [Yes].
Value Range	Max. 384 characters Note If "{fwver}" is included in this parameter, it will be replaced with the value specified in [Firmware Version]. For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Not stored.
Configuration File Reference	FIRM_FILE_PATH

4.7.3 Upgrade Firmware

This screen allows you to download the Upgrade Firmware data from a PC.

Note

- After the firmware has been successfully updated, the unit will restart automatically.



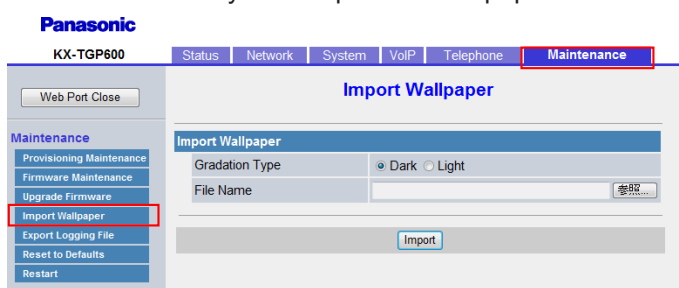
4.7.3.1 Upgrade Firmware

File Name

Description	Specifies the path of the firmware file to be imported.
Value Range	No limitation Note There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used: longer paths may cause longer data transfer times and result in an internal error.
Default Value	Not stored.

4.7.4 Import Wallpaper (KX-TPA60/KX-TPA65)

This screen allows you to import the Wallpaper data from a PC.



4.7.4.1 Import Wallpaper

Gradation Type

Description	Selects the Gradation Type setting.
Value Range	- Dark - Light
Default Value	Dark

File Name

Description	Specifies the path of the Wallpaper file to import from the PC.
Value Range	No limitation Note There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used: longer paths may cause longer data transfer times and result in an internal error.
Default Value	Not stored.

4.7.5 Import Wallpaper for KX-TPA68

This screen allows you to import the Wallpaper data from a PC.

The screenshot shows the Panasonic KX-TGP600 web interface. The top navigation bar includes tabs for Status, Network, System, VoIP, Telephone, and Maintenance (which is highlighted). The left sidebar lists various maintenance options, with 'Import Wallpaper for KX-TPA68' highlighted. The main content area displays the 'Import Wallpaper for KX-TPA68' screen, which includes a title bar, a 'File Name' input field, a '参照...' button, and an 'Import' button.

4.7.5.1 Import Wallpaper for KX-TPA68

File Name

Description	Specifies the path of the wallpaper file to import from the PC.
--------------------	---

Value Range	No limitation Note There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used. Longer paths may cause longer data transfer times or result in an internal error.
Default Value	Not stored.

4.7.6 Import Wallpaper for KX-TPA70/73

Gradation Type

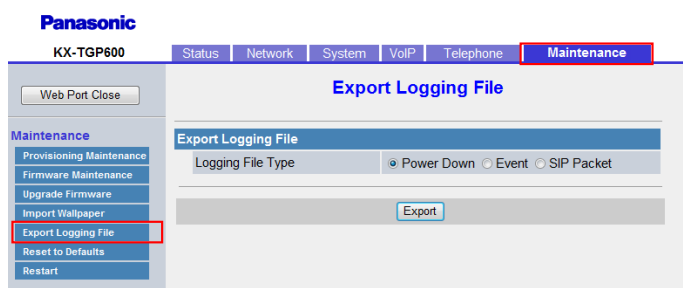
Description	Selects the Gradation Type setting.
Value Range	- Dark - Light
Default Value	Dark

File Name

Description	Specifies the path of the Wallpaper file to import from the PC.
Value Range	No limitation Note There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used: longer paths may cause longer data transfer times and result in an internal error.
Default Value	Not stored.

4.7.7 Export Logging File

This screen allows you to specify the Logging File to export when logging.



4.7.7.1 Export Logging File

Logging File Type

Description	Selects the Logging File Type setting.
--------------------	--

4.7.8 Reset to Defaults

Value Range	• Power Down • Event • SIP Packet Note • The line break code for the log file is <LF>. • If a file is exported when Power Down is selected, the saved file is power.log. • If a file is exported when Event is selected, the saved file is event_log.txt. • If a file is exported when SIP Packet is selected, the saved file is sip_trace_log.txt.
Default Value	Power Down

4.7.8 Reset to Defaults

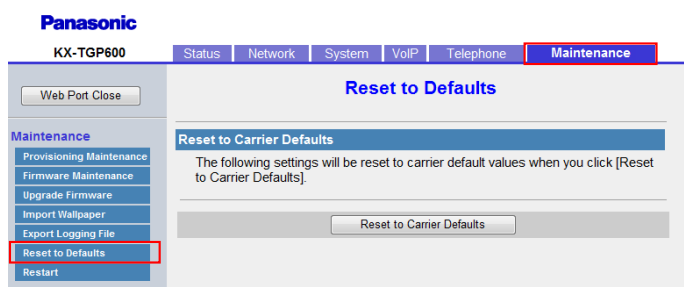
This screen allows you to reset the carrier default settings made through the Web user interface to their default values by clicking **[Reset to Carrier Defaults]**. After you click this button, a dialog box is displayed, asking whether you want to reset the settings. Click **OK** to reset, or **Cancel** not to.

Notice

- After resetting the settings, the unit will restart even if it is being accessed through the phone user interface, or on calls.

Note

- You can specify carrier default using configuration parameter extensions. Those parameters will be reset to the specified carrier default values (see **Parameter Extensions**).

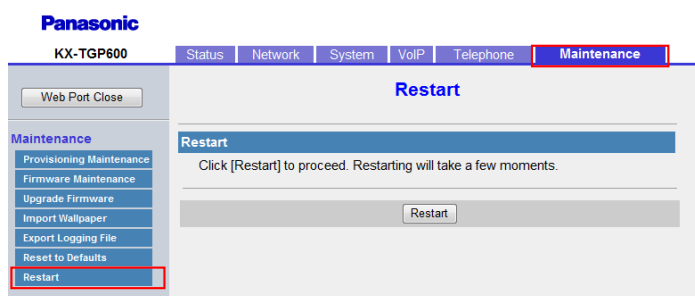


4.7.9 Restart

This screen allows you to restart the unit by clicking **[Restart]**. After you click this button, a dialog box is displayed, asking whether you want to restart the unit. Click **OK** to perform a restart, or **Cancel** not to.

Notice

- The unit will restart even if it is being accessed through the phone user interface, or on calls.



4.7.9.1 Restart

Notice

- The unit will restart even if it is being accessed through the phone user interface, or on calls.

4.7.9.2 Restart (Graceful)

Notice

- The unit will not restart if it is being accessed through the phone user interface, or on calls. If it is busy, phone waits to become idle then restarts.

Note

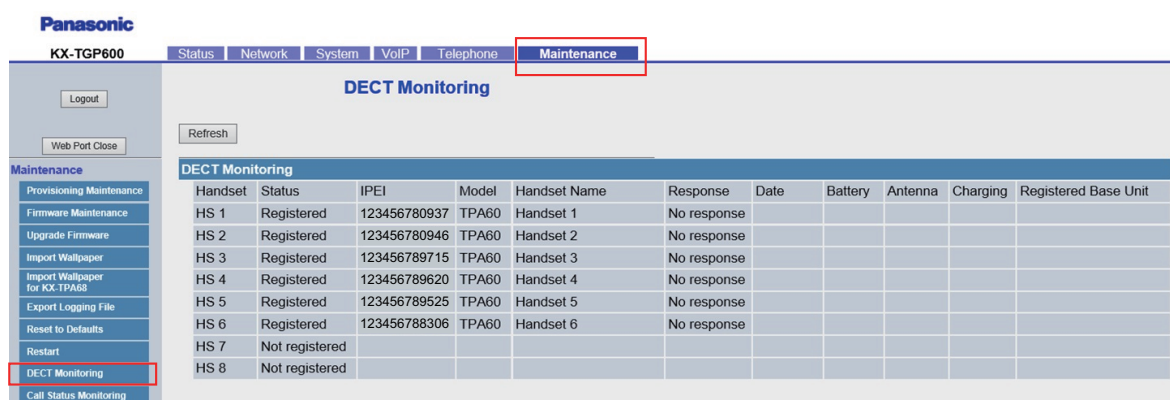
- This feature is available only when logging in to the Web user interface with the administrator account.

4.7.10 DECT Monitoring

This screen displays the results of DECT monitoring when DECT monitoring is executed.

Note

- This feature is available only when logging in to the Web user interface with the administrator account.

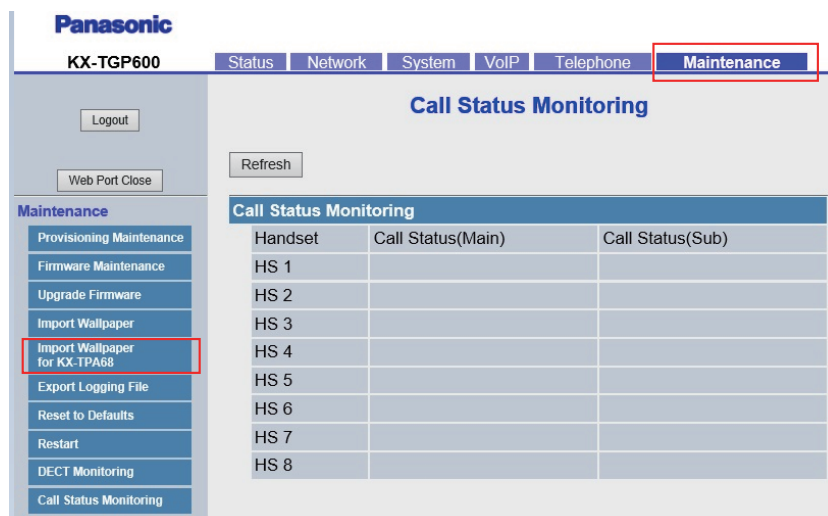


4.7.11 Call Status Monitoring

This screen displays the status of each handset.

Clicking **[Refresh]** updates the information displayed on the screen.

4.7.11 Call Status Monitoring



Description	Indicates the call status of each handset that is registered to the base unit (reference only). If there are two calls, the statuses are indicated in "Call Status(Main)" and "Call Status(Sub)". Note • This function is available when you are logged in as "Administrator".
Value Range	• DIAL_TONE • OUTGOING • INCOMING • TALK • HOLD • BUSYREORDER • INTERCOM Note • "DIAL_TONE" is displayed when a user has gone off-hook to make a call. • "BUSYREORDER" is displayed when a busy tone or a reorder tone is being received.

Section 5

Configuration File Programming

This section provides information about the configuration parameters used in the configuration files.

5.1 Configuration File Parameter List

The following tables show all the parameters that can be programmed using configuration file programming. For details about each parameter, see the reference pages listed.

For details about configuration file specifications, see **2.4 Configuration File Specifications**.

System Settings

Parameter Name	Ref.
MULTI_NUMBER_ENABLE	page 184
WIDEBAND_AUDIO_ENABLE	page 184
CODEC_G722AMR_ENABLE	page 184
FACTORY_RESET_ENABLE	page 184
SIP_TRUNK_MODE_ENABLE ^{*1}	page 184
SIP_NON_REGISTER_ENABLE ^{*1}	page 185
RTP_KEEP_ENABLE ^{*1}	page 185
FWD_DND_MENU_ENABLE	page 185
BLOCK_ANONY_MENU_ENABLE	page 186
ANONY_CALL_MENU_ENABLE	page 186
TIME_ZONE_SET_ENABLE	page 186
AUTO_INPUT_KEY_TIME	page 186
CALL_SETTINGS_MENU_ENABLE	page 186
DISCLOSE_FUNCTION_ENABLE	page 187
VM_FUNCTION_ENABLE	page 187
DELAY_RING_TIME_n	page 187
OFF_HOOK_MONITOR_ENABLE	page 187
PRIVATE_HOLD_ENABLE ^{*1}	page 188
CONF_OWNER_OUT_ENABLE	page 188
PCAP_ENABLE	page 188
PCAP_REMOTE_ID	page 188
PCAP_REMOTE_PASS	page 188
PCAP_REMOTE_PORT	page 189
DTMF_OUT_ENABLE	page 189
CANCEL_OPERATION_MODE	page 189
RANGE_ALARM_ENABLE	page 189
NOTIFICATION_MENU_ENABLE	page 189
NOTIFY_MISSEDCALL_ENABLE_HSY ^{*2}	page 190
NOTIFY_VOICEMAIL_ENABLE_HSY ^{*2}	page 190
NOTIFY_MISSEDCALL_LED_ENABLE_HSY ^{*2}	page 190

Parameter Name	Ref.
NOTIFY_VOICEMAIL_LED_ENABLE_HSy ²	page 191
NOTIFY_VOICEMAIL_ALARM_ENABLE_HSy ²	page 191
NOTIFICATION_ALARM_TYPE	page 191
BOOTLOG_SERVER_URI	page 192
NOISE_SUPPRESSOR_ENABLE	page 192
CODEC_VAD_CNG_ENABLE	page 192
ERROR_AUTO_REBOOT_TIME	page 192
BLOCK_CID_MENU_ENABLE	page 192
LCD_BACKLIGHT_STBY_MENU_ENABLE	page 193
BOOTLOG_CYCLIC_INTVL	page 193
AUTO_FOCUS_INCOMING_ENABLE	page 193
FULL_CHARGE_LED_ON_ENABLE	page 193
POWER_ON_ENABLE	page 194
EQUALIZER_TYPE	page 194
HOME_DISPLAY_PAGE_HSy	page 194
HOME_DISPLAY_AUTO_HSy	page 194
HOME_DISPLAY_AUTO_MODE_HSy	page 195
LINE_STATUS_PRIORITY_MODE	page 195
MULTI_LINE_RING_SPLASH_ENABLE	page 195
SHOW_FWD_ICON_ALL_SETTING	page 195
KEY_OPTION_MENU_ENABLE	page 195
PROGRAM_KEY_MENU_ENABLE	page 196
SOFT_KEY_EDIT_MENU_ENABLE	page 196
CARRIER_RST_CERT_CLR_ENABLE	page 196
PHONE_NUM_DIGITS_ON_LIK	page 196
BOOTLOG_FORMAT	page 196
SIMPLE_OPERATION_SOFTKEY	page 197
HS_STATUS_MONITOR_ENABLE	page 197
HS_STATUS_IDLE_COLOR	page 197
HS_STATUS_HOLD_COLOR	page 198
HS_STATUS_PRIORITY_MODE	page 198
HS_STATUS_UNAVAILABLE_ENABLE	page 198

Handset Registration Settings

Parameter Name	Ref.
IPEI_HSy	page 199
IPEI_AUTOREGMODE_ENABLE	page 199
IPEI_RESTRICTION_ENABLE	page 199
NEXT_REGISTERED_HS_NUMBER	page 199
IPEI_CHANGE_HS_ENABLE	page 200

Basic Network Settings

Parameter Name	Ref.
IP_ADDR_MODE ^{*2}	page 200
CONNECTION_TYPE ^{*2}	page 200
STATIC_IP_ADDRESS ^{*2}	page 200
STATIC_SUBNET ^{*2}	page 201
STATIC_GATEWAY ^{*2}	page 201
USER_DNS1_ADDR ^{*2}	page 201
USER_DNS2_ADDR ^{*2}	page 202
DHCP_DNS_ENABLE ^{*2}	page 202
DHCP_HOST_NAME ^{*1}	page 202
DHCP_VENDOR_CLASS	page 202
CONNECTION_TYPE_IPV6 ^{*2}	page 203
STATIC_IP_ADDRESS_IPV6 ^{*2}	page 203
PREFIX_IPV6 ^{*2}	page 203
STATIC_GATEWAY_IPV6 ^{*2}	page 203
USER_DNS1_ADDR_IPV6 ^{*2}	page 203
USER_DNS2_ADDR_IPV6 ^{*2}	page 204
DHCP_DNS_ENABLE_IPV6 ^{*2}	page 204
NW_TEST_COUNT	page 204
NW_TEST_TIMER	page 204
DHCPD_RECOVERY_TIME	page 204
DHCP_OPTION100_ENABLE	page 205

Ethernet Port Settings

Parameter Name	Ref.
PHY_MODE_LAN ^{*2}	page 205
VLAN_ENABLE ^{*2}	page 206

Parameter Name	Ref.
VLAN_ID_IP_PHONE ²	page 206
VLAN_PRI_IP_PHONE ²	page 206
LLDP_ENABLE ²	page 206
LLDP_INTERVAL ¹	page 207
CDP_ENABLE ²	page 207
CDP_INTERVAL ²	page 207

Pre-Provisioning Settings

Parameter Name	Ref.
SIPPNP_PROV_ENABLE	page 207
OPTION66_ENABLE	page 208
OPTION159_PROV_ENABLE	page 208
OPTION160_PROV_ENABLE	page 208
DHCPV6_OPTION17_PROV_ENABLE	page 208

Provisioning Settings

Parameter Name	Ref.
CFG_STANDARD_FILE_PATH ¹	page 208
CFG_PRODUCT_FILE_PATH ¹	page 209
CFG_MASTER_FILE_PATH ¹	page 209
CFG_CYCLIC ¹	page 210
CFG_CYCLIC_INTVL ¹	page 210
CFG_RESYNC_TIME ¹	page 210
CFG_RTRY_INTVL	page 210
CFG_RESYNC_FROM_SIP ¹	page 211
CFG_RESYNC_ACTION	page 211
CFG_FILE_KEY2	page 211
CFG_FILE_KEY3	page 211
CFG_FILE_KEY_LENGTH	page 212
CFG_ROOT_CERTIFICATE_PATH	page 212
CFG_CLIENT_CERT_PATH	page 212
CFG_PKEY_PATH	page 212
HTTP_SSL_VERIFY	page 213
CFG_RESYNC_DURATION	page 213
CFG_BOOTUP_DURATION_ENABLE	page 213

5.1 Configuration File Parameter List

Parameter Name	Ref.
HTTP_SSL_TIME_ASYNC_VERIFY	page 214
SETTING_PRIORITY_OPTION	page 214
CFG_RTRY_INTVL_MODE	page 214
CFG_RTRY_TIMES	page 215
CFG_RTRY_TM	page 215
CFG_DL_WEEKLY_INTERVAL	page 215
CFG_DL_WEEKLY_DAY_OF_WEEK	page 216

Firmware Update Settings

Parameter Name	Ref.
FIRM_UPGRADE_ENABLE ^{*1}	page 216
FIRM_FILE_PATH ^{*1}	page 216
FIRM_VERSION	page 217
FWDL_RANDOM_DURATION	page 217

HTTP Settings

Parameter Name	Ref.
HTTP_VER ^{*1}	page 217
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CONFERENCE_SERVER_URI ¹	page 344
PRIVACY_MODE_n	page 344
PARALLEL_HSNOM ²	page 345
PARALLEL_MODEm ²	page 345
FWD_SYNCHRO_FORCE_DISABLE_n	page 345

Parameter Name	Ref.
CONF_SERVER_HOLD_ENABLE	page 346
DIALPLAN_REPLACE_LOG_ENABLE	page 346
DIALPLAN_MEMORY_DIAL_ENABLE	page 346
SIGNALING_AUTO_ANS_ENABLE_n	page 346
TALKING_SOFT_KEY_A	page 346
TALKING_SOFT_KEY_B	page 347
TALKING_SOFT_KEY_C	page 348
TALKING_SOFT_KEY_A_UX1	page 349
TALKING_SOFT_KEY_B_UX1	page 350
TALKING_SOFT_KEY_C_UX1	page 351
DISPLAY_VM_WITH_NUMBER	page 352
FWD_DND_MISSEDLOG_ENABLE	page 352
RETRIVE_TRANS_HOLD_OPER_CHANGE	page 353
REMOVE_PREFIX_ENABLE	page 353
RECVBACK_RESCODE_OUTOFRANGE	page 353

Logging Settings

Parameter Name	Ref.
SYSLOG_ADDR	page 353
SYSLOG_PORT	page 353
LOGGING_LEVEL_DNS	page 354
LOGGING_LEVEL_NW1	page 354
LOGGING_LEVEL_FILE	page 354
LOGGING_LEVEL_SIP	page 354
LOGGING_LEVEL_TR069	page 354
LOGGING_LEVEL_STUN	page 354
LOGGING_LEVEL_NW2	page 355
LOGGING_LEVEL_CFGPARSE	page 355
SYSLOG_OUT_START	page 355
SYSLOG_TRANSPORT	page 355
SYSLOG_TLS_VERIFY	page 355
SYSLOG_ROOT_CERT_PATH	page 355
SYSLOG_CLIENT_CERT_PATH	page 356
SYSLOG_PKEY_PATH	page 356
DECT_MONITORING_CYCLIC_INTVL	page 356

5.2 General Information on the Configuration Files

Parameter Name	Ref.
DECT_MONITORING_OUTPUT	page 356
DECT_MONITORING_OPTION	page 356

TWAMP Settings

Parameter Name	Ref.
TWAMP_ENABLE ^{*1}	page 357
TWAMP_CONTROL_PORT ^{*1}	page 357
TWAMP_TEST_PORT ^{*1}	page 357
TWAMP_SERVER_WAIT_TIME ^{*1}	page 357
TWAMP_REFLECTOR_WAIT_TIME ^{*1}	page 358
TWAMP_PADDING_ZERO	page 358

^{*1} This setting can also be configured through the Web user interface.

^{*2} This setting can also be configured through other programming methods (phone user interface programming or Web user interface programming).

^{*3} This setting can also be configured through the Phone user interface programming.

5.2 General Information on the Configuration Files

5.2.1 Configuration File Parameters

The information on each parameter that can be written in a configuration file is shown in the tables below. The information includes parameter name (as the title of the table), value format, description, permitted value range, default value of each parameter, phone user interface reference, and Web user interface reference.

Parameter Name

This is the system-predefined parameter name and cannot be changed.

Note

- Certain parameter names end with "_n". This signifies that these settings can be made to each line individually. The number of lines available varies depending on the phone being used, as follows:

— KX-TGP600: 1–8

Examples of setting the line (phone number) for accessing a voice mail server.

Parameter Name Examples are as follows :

VM_NUMBER_1, VM_NUMBER_2, ..., VM_NUMBER_8

Value Format

Each parameter value is categorized into Integer, Boolean, or String. Some parameters require a composite form such as "Comma-separated Integer" or "Comma-separated String".

- Integer:** a numerical value, described as a sequence of numerical characters, optionally preceded by a "-" (minus)
An empty string is not allowed.
- Boolean:** "Y" or "N"
- String:** sequence of alphanumerical characters

For details about available characters, see **5.2.2 Characters Available for String Values**.

- **Comma-separated Integer:** a list of integers, separated by commas
No space characters are allowed.
- **Comma-separated String:** a list of strings, separated by commas
No space characters are allowed.
- **IPADDR:** IPv4 address format.
- **IPADDR-V6:** IPv6 address format (can be abbreviated).

Description

Describes the details of the parameter.

Value Range

Indicates the permitted value range of the parameter.

Default Value

Indicates the factory default value of the parameter.

Actual default values may vary depending on your phone system dealer/service provider.

Phone User Interface Reference

Provides the reference page of the corresponding parameter in phone user interface programming.

Web User Interface Reference

Provides the reference page of the corresponding parameter in Web user interface programming.

5.2.2 Characters Available for String Values

Unless noted otherwise in "Value Range", only ASCII characters can be used for parameter values. Unicode characters can also be used in some parameter values.

Available ASCII characters are shown on a white background in the following table:

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
20	SP	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
60	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70	p	q	r	s	t	u	v	w	x	y	z	{		}	~	

5.3 System Settings

5.3.1 System Settings

MULTI_NUMBER_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the multi number mode.
Value Range	- Y: Enable multi number mode. - N: Disable (1 to 1 mode)
Default Value	N

WIDEBAND_AUDIO_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the wide band audio. If you set "Y", wide band audio and 4 simultaneous call are available. If you set "N", only narrow band audio and 8 simultaneous call are available.
Value Range	- Y: Enable WB (simultaneous call is Max. 4) - N: Disable (only NB, simultaneous call is Max. 8)
Default Value	N

CODEC_G722AMR_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the G.722.2 AMR-WB.
Value Range	- Y: Enable G.722.2 AMR - N: Disable
Default Value	N

FACTORY_RESET_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the operation of factory default and carrier default.
Value Range	- Y: Enable factory reset operation - N: Disable
Default Value	Y

SIP_TRUNK_MODE_ENABLE

Value Format	BOOLEAN
Description	Specifies whether you are using a SIP trunk service or not.

Value Range	• Y: Enable the usage of a SIP trunk service • N: Disable Note If "Y" is specified, the settings for Line 2 to Line 8 of the following items are disabled. • "Local SIP Port" in Web User Interface Programming • "SIP_SRC_PORT" in Configuration File Programming The settings will be the same as Line 1.
Default Value	N
Web User Interface Reference	Enable SIP Trunk Service

SIP_NON_REGISTER_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable operation without registering the SIP UA (user agent).
	Note • This setting is available only when [SIP_TRUNK_MODE_ENABLE] is set to [Y].
Value Range	• Y: Enable operation without registering the SIP UA • N: Disable
Default Value	N
Web User Interface Reference	Enable Non-Registering SIP UA

RTP_KEEP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the continuous sending of RTP packets while a call is on hold.
	Note • This setting is available only when [SIP_TRUNK_MODE_ENABLE] is set to [Y].
Value Range	• Y: Enable the continuous sending of RTP packets while a call is on hold • N: Disable
Default Value	N
Web User Interface Reference	Send RTP on Call Hold

FWD_DND_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the "FWD/DND" setting is displayed in MENU.

Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

BLOCK_ANONY_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the "Block Anonymous" setting is displayed in MENU.
Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

ANONY_CALL_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the "Anonymous Call" setting is displayed in MENU.
Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

TIME_ZONE_SET_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the "Time Zone" setting is displayed in MENU.
Value Range	• Y: Displayed • N: Not displayed
Default Value	N

AUTO_INPUT_KEY_TIME

Value Format	INTEGER
Description	Specifies the number of seconds after which the cursor automatically moves to the next position during character input.
Value Range	0–3 [0: off]
Default Value	0

CALL_SETTINGS_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the "Call Settings" setting is displayed in MENU.

Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

DISCLOSE_FUNCTION_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to use as a normal telephone or as a hotel telephone.
Value Range	• Y: Normal telephone • N: Hotel telephone Note • If "N" is specified, some functions and keys are limited.
Default Value	Y

VM_FUNCTION_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the Voice Mail function is enabled.
Value Range	• Y: Enable the Voice Mail function • N: Disable
Default Value	Y

DELAY_RING_TIME_n

Parameter Name Example	For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters
Value Format	INTEGER
Description	Specifies the length of time, in seconds, until the unit rings.
Value Range	0–30 0: Disable
Default Value	0

OFF_HOOK_MONITOR_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the Off-hook Monitor function. (KX-TPA65/KX-TPA68)
Value Range	• Y: Enable Off-hook Monitor • N: Disable
Default Value	Y

PRIVATE_HOLD_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable "Private Hold".
Value Range	• Y: Enable private hold • N: Disable Note • (For KX-TPA60/KX-TPA65) If set to "Y" and TALKING_SOFT_KEY_C="0" and BLIND_TRANSFER_ENABLE="Y", "Private Hold" is displayed on Soft Key C.
Default Value	N
Web User Interface Reference	Private Hold

CONF_OWNER_OUT_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to allow the remaining two parties in a three-party conference to continue the conversation if the conference originator leaves the conference call (Unattended Conference).
Value Range	• Y: Enable Unattended Conference • N: Disable
Default Value	N

PCAP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable packet capturing using the Wireshark utility (PCAP Remote).
Value Range	• Y: Enable PCAP Remote • N: Disable
Default Value	N

PCAP_REMOTE_ID

Value Format	STRING
Description	Specifies the ID of the IP phone whose packets will be captured using the Wireshark utility (PCAP Remote).
Value Range	1–16 characters
Default Value	Empty string

PCAP_REMOTE_PASS

Value Format	STRING
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Description	Specifies the password of the IP phone whose packets will be captured using the Wireshark utility (PCAP Remote).
Value Range	0, 6–64 characters
Default Value	Empty string

PCAP_REMOTE_PORT

Value Format	INTEGER
Description	Specifies the port of the IP phone to use for capturing packets using the Wireshark utility (PCAP Remote).
Value Range	1–65535
Default Value	2002

DTMF_OUT_ENABLE

Value Format	BOOLEAN
Description	Specifies whether received outband DTMF signals are output audibly.
Value Range	- Y: Enable audible outband DTMF - N: Disable
Default Value	Y

CANCEL_OPERATION_MODE

Value Format	INTEGER
Description	Specifies the operation of the [CANCEL] button when a line is in use.
Value Range	0: Cancel the current operation 1: Return to standby mode
Default Value	0

RANGE_ALARM_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the range alarm.
Value Range	- Y: Enable the range alarm - N: Disable
Default Value	N

NOTIFICATION_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to display the notification settings under MENU.
Value Range	- Y: Display the notification settings - N: Do not display
Default Value	Y

NOTIFY_MISSEDCALL_ENABLE_HSy

Parameter Name Example	NOTIFY_MISSEDCALL_ENABLE_HS1, NOTIFY_MISSEDCALL_ENABLE_HS2, ..., NOTIFY_MISSEDCALL_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether to display "Missed Calls" on the screen in standby mode. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Y: Enable displaying "Missed Calls" in standby mode. - N: Disable
Default Value	Y
Web User Interface Reference	Missed Call Notification - Message

NOTIFY_VOICEMAIL_ENABLE_HSy

Parameter Name Example	NOTIFY_VOICEMAIL_ENABLE_HS1, NOTIFY_VOICEMAIL_ENABLE_HS2, ..., NOTIFY_VOICEMAIL_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether to display "Voice MSG" on the screen in standby mode. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	- Y: Enable displaying "Voice MSG" in standby mode. - N: Disable
Default Value	Y
Web User Interface Reference	Voice Message Notification - Message

NOTIFY_MISSEDCALL_LED_ENABLE_HSy

Parameter Name Example	NOTIFY_MISSEDCALL_LED_ENABLE_HS1, NOTIFY_MISSEDCALL_LED_ENABLE_HS2, ..., NOTIFY_MISSEDCALL_LED_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether the LED is used to indicate a missed call. Note This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".

Value Range	• Y: Enable LED indication for a missed call. • N: Disable
Default Value	Y
Web User Interface Reference	Missed Call Notification - LED

NOTIFY_VOICEMAIL_LED_ENABLE_HSy

Parameter Name Example	NOTIFY_VOICEMAIL_LED_ENABLE_HS1, NOTIFY_VOICEMAIL_LED_ENABLE_HS2, ..., NOTIFY_VOICEMAIL_LED_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether the LED is used to indicate a new voice message. Note • This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	• Y: Enable LED indication for voice messages. • N: Disable
Default Value	Y
Web User Interface Reference	Voice Message Notification - LED

NOTIFY_VOICEMAIL_ALARM_ENABLE_HSy

Parameter Name Example	NOTIFY_VOICEMAIL_ALARM_ENABLE_HS1, NOTIFY_VOICEMAIL_ALARM_ENABLE_HS2, ..., NOTIFY_VOICEMAIL_ALARM_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether an alarm sound is used to indicate a new voice message. Note • This setting is available only when "NOTIFICATION_MENU_ENABLE" is set to "Y".
Value Range	• Y: Enable alarms for voice messages. • N: Disable
Default Value	Y
Web User Interface Reference	Voice Message Notification - Alarm

NOTIFICATION_ALARM_TYPE

Value Format	INTEGER
Description	Specifies whether a voice mail alarm notification is used only the first time or every time.

Value Range	• 0: First time only • 1: Every time
Default Value	0

BOOTLOG_SERVER_URI

Value Format	STRING
Description	Specifies the URI for a boot logging server.
Value Range	Max. 256 characters
Default Value	Empty string

NOISE_SUPPRESSOR_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the noise suppressor.
Value Range	• $\mathcal{Y}$: Enable the noise suppressor. • $\mathcal{N}$: Disable
Default Value	$\mathcal{N}$

CODEC_VAD_CNG_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the VAD and CNG functions. (VAD: Voice Activity Detector, CNG: Comfort Noise Generator)
Value Range	• $\mathcal{Y}$: Enable the VAD and CNG functions • $\mathcal{N}$: Disable
Default Value	$\mathcal{N}$

ERROR_AUTO_REBOOT_TIME

Value Format	INTEGER
Description	Specifies the amount of time, in hours, until the unit automatically reboots when the SIP registration has been removed for all accounts.
Value Range	0, 1-72 (0: Disable)
Default Value	0

BLOCK_CID_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable displaying the "Block Caller ID" setting on the phone screen and in the Web user interface.
Value Range	• $\mathcal{Y}$: Enable • $\mathcal{N}$: Disable
Default Value	$\mathcal{Y}$

LCD_BACKLIGHT_STBY_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the "Standby" setting in the "Backlight" settings of the phone menu.
Value Range	- Y: Enable - N: Disable
Default Value	N

BOOTLOG_CYCLIC_INTVL

Value Format	INTEGER
Description	Specifies the interval, in hours, that the unit will send the boot log. Note - The URI of the boot logging server needs to be specified in <code>BOOTLOG_SERVER_URI</code>. - When <code>BOOTLOG_CYCLIC_INTVL="0"</code>, the boot log is sent only at startup.
Value Range	0–24
Default Value	6

AUTO_FOCUS_INCOMING_ENABLE (For KX-TPA68)

Value Format	BOOLEAN
Description	Specifies whether to move the focus automatically to a new incoming call on the line display or combined display.
Value Range	- Y: Enable - N: Disable Note - Even if "N" is specified, the focus moves to an incoming call automatically when there are no active calls and a call is incoming on the same line.
Default Value	N

FULL_CHARGE_LED_ON_ENABLE (For KX-TPA60/KX-TPA70/KX-TPA73)

Value Format	BOOLEAN
Description	Specifies whether the charge indicator turns on when the batteries are fully charged and the handset is placed in the charger.
Value Range	- Y: The charge indicator turns on. - N: The charge indicator turns off.
Default Value	N

POWER_ON_ENABLE (For KX-TPA60/KX-TPA70/KX-TPA73)

Value Format	BOOLEAN
Description	Specifies whether the handset power will turn on when the batteries are inserted and the handset is placed in the charger while the power is off.
Value Range	• Y: The handset power will turn on. • N: The handset power remains off.
Default Value	N

EQUALIZER_TYPE (For KX-TPA68/KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the initial voice quality.
Value Range	• 0: Normal • 1: Treble
Default Value	0

HOME_DISPLAY_PAGE_HSy (For KX-TPA68)

Parameter Name Example	HOME_DISPLAY_PAGE_HS1, HOME_DISPLAY_PAGE_HS2, ..., HOME_DISPLAY_PAGE_HS8
Value Format	INTEGER
Description	Specifies the page to display on startup. y=1–8 (Handset No.)
Value Range	• 1: The first page • 2: The second page • 3: The third page
Default Value	1

HOME_DISPLAY_AUTO_HSy (For KX-TPA68)

Parameter Name Example	HOME_DISPLAY_AUTO_HS1, HOME_DISPLAY_AUTO_HS2, ..., HOME_DISPLAY_AUTO_HS8
Value Format	BOOLEAN
Description	Specifies whether to automatically switch the displayed screen when a call begins or changes.
Value Range	• Y: Enable • N: Disable If "Y" is specified, the setting "HOME_DISPLAY_AUTO_MODE_HSy" determines which page is displayed.
Default Value	Y

HOME_DISPLAY_AUTO_MODE_HSy (For KX-TPA68)

Parameter Name Example	HOME_DISPLAY_AUTO_MODE_HS1, HOME_DISPLAY_AUTO_MODE_HS2, ..., HOME_DISPLAY_AUTO_MODE_HS8
Value Format	INTEGER
Description	Specifies which screen (page) the display is automatically switched to when a call begins or changes.
Value Range	1: Switch to page 1 2: Switch to the page specified in "HOME_DISPLAY_PAGE_HSy"
Default Value	1

LINE_STATUS_PRIORITY_MODE (For KX-TPA68)

Value Format	INTEGER
Description	Specifies the order of priority of the items displayed on the Line Notification screen.
Value Range	1: Prioritize the user's phone Order of priority: Incoming call [your phone] → On a call [your phone] → Call hold [your phone] → Incoming call [other phone] → Call hold [other phone] → On a call [other phone] 2: Prioritize incoming calls Order of priority: Incoming call [your phone] → Incoming call [other phone] → Call hold [your phone] → On a call [your phone] → Call hold [other phone] → On a call [other phone]
Default Value	1

MULTI_LINE_RING_SPLASH_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the "Ring Splash" feature when "MULTI_NUMBER_ENABLE"="Y" is set.
Value Range	- Y: Enable - N: Disable
Default Value	N

SHOW_FWD_ICON_ALL_SETTING

Value Format	BOOLEAN
Description	Specifies the type of FWD icon to display.
Value Range	- Y: Display the FWD icon when any FWD is set. - N: Display the FWD icon only when "FWD ALL" is set.
Default Value	Y

KEY_OPTION_MENU_ENABLE

Value Format	BOOLEAN
---------------------	---------

Description	Specifies whether to display "Key Option" setting in "Setting Handset" MENU.
Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

PROGRAM_KEY_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to display "Program Key" setting in "Key Option" MENU.
Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

SOFT_KEY_EDIT_MENU_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to display "Soft Key Edit" and "Soft Key Name" settings in "Key Option" MENU.
Value Range	• Y: Displayed • N: Not displayed
Default Value	Y

CARRIER_RST_CERT_CLR_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to delete downloaded certification or not when "Carrier Defaults" is done.
Value Range	• Y: Delete • N: Do not delete
Default Value	Y

PHONE_NUM_DIGITS_ON_LIK

Value Format	INTEGER
Description	Specifies the maximum displaying digits of the phone number (PHONE_NUMBER_n) on the Line Information Key.
Value Range	0–32 0: No display. 1–32: Phone number digits to display.
Default Value	32

BOOTLOG_FORMAT

Value Format	INTEGER
---------------------	---------

Description	Specifies the boot log format.
Value Range	0: Plain text 1: JSON
Default Value	0

SIMPLE_OPERATION_SOFTKEY

Value Format	INTEGER
Description	Selects the display mode for softkey whether to "Normal" or "Simple".
Value Range	0: Normal 1: Simple Note When this item is set to "1", the soft key constitution will be simplified to make it easier to control the call.
Default Value	0

HS_STATUS_MONITOR_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the Handset Notification Key feature.
Value Range	- Y: Enables Handset Notification Key feature. - N: Disable
Default Value	N

HS_STATUS_IDLE_COLOR

Value Format	INTEGER
Description	Specifies the color of LED on idle status of other handsets. Note If "HS_STATUS_MONITOR_ENABLE" is set "N", this setting is not available. The LED image on the LCD as below: 
Value Range	0: Gray 1: Green
Default Value	0

HS_STATUS_HOLD_COLOR

Value Format	INTEGER
Description	Specifies the color of LED on hold status of other handsets. Note If "HS_STATUS_MONITOR_ENABLE" is set "N", this setting is not available. The LED image on the LCD as below: 
Value Range	• 0: Red • 1: Amber
Default Value	0

HS_STATUS_PRIORITY_MODE

Value Format	INTEGER
Description	Specifies the priority to display the other handset status on the Handset Notification Key.
Value Range	• 0: Incoming Call > Talking > Holding • 1: Talking > Incoming Call > Holding Note If "HS_STATUS_MONITOR_ENABLE" is set "N", this setting is not available.
Default Value	0

HS_STATUS_UNAVAILABLE_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to display the "Unavailable" status on the Handset Notification Key.
Value Range	• Y: Enable to display the "Unavailable" status on the Handset Notification Key. • N: Disable to display the "Unavailable" status on the Handset Notification Key. Note If "HS_STATUS_MONITOR_ENABLE" is set "N", this setting is not available.
Default Value	Y

5.3.2 Handset Registration Settings

IPEI_HSy

Parameter Name Example	IPEI_HS1, IPEI_HS2, ..., IPEI_HS8
Value Format	STRING
Description	Specifies the handset's IPEI, which is used registering the handset to the base unit.
Value Range	12 Digits, Decimal
Default Value	Empty string

IPEI_AUTOREGMODE_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to perform the HS registration mode automatically after IPEI was set.
Value Range	- Y: Enable automatically registration - N: Disable
Default Value	N

IPEI_RESTRICTION_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to perform the HS registration limit after IPEI was set.
Value Range	- Y: Enable registration limit - N: Disable
Default Value	N

NEXT_REGISTERED_HS_NUMBER

Value Format	INTEGER
Description	Specifies the handset number to register or deregister. 0: The handset number will be registered in order starting with the lowest available number. (1 to 8) 1–8: If the specified handset number is already registered, it will be deregistered. If the specified handset number is not registered, it will be registered. Note - If the handset IPEI parameters are registered on a base unit, this setting is invalid.
Value Range	0–8 (0: Normal order, 1: handset 1, 2: handset 2, ..., 8: handset 8)
Default Value	0

IPEI_CHANGE_HS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the ability to change handset registration with IPEI.
Value Range	• Y: Enable changing • N: Disable
Default Value	N

5.3.3 Basic Network Settings**IP_ADDR_MODE**

Value Format	INTEGER
Description	Specifies the IP addressing mode.
Value Range	• 0: IPv4 • 1: IPv6 • 2: IPv4&IPv6
Default Value	0
Web User Interface Reference	IP Addressing Mode

CONNECTION_TYPE

Value Format	INTEGER
Description	Specifies whether to assign the IP address automatically (DHCP) or manually (static) for IPv4.
Value Range	• 0: Static • 1: DHCP
Default Value	1
Web User Interface Reference	Connection Mode

STATIC_IP_ADDRESS

Value Format	IPADDR
Description	Specifies the IP address for the unit for IPv4. Note • This setting is available only when "CONNECTION_TYPE" is set to "0". • When you specify this parameter, you must specify "STATIC_SUBNET" together in a configuration file.
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Empty string

Web User Interface Reference	IP Address
------------------------------	------------

STATIC_SUBNET

Value Format	IPADDR
Description	Specifies the subnet mask for IPv4. Note - This setting is available only when "CONNECTION_TYPE" is set to "0". - When you specify this parameter, you must specify "STATIC_IP_ADDRESS" together in a configuration file.
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Empty string
Web User Interface Reference	Subnet Mask

STATIC_GATEWAY

Value Format	IPADDR
Description	Specifies the IP address of the default gateway for the IPv4 network where the unit is connected. Note - This setting is available only when "CONNECTION_TYPE" is set to "0". - When you specify this parameter, you must specify "STATIC_IP_ADDRESS" and "STATIC_SUBNET " together in a configuration file.
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Empty string
Web User Interface Reference	Default Gateway

USER_DNS1_ADDR

Value Format	IPADDR
Description	Specifies the IP address of the primary DNS server for IPv4. Note This setting is available only when "CONNECTION_TYPE" is set to "0".
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Empty string
Web User Interface Reference	DNS1

USER_DNS2_ADDR

Value Format	IPADDR
Description	Specifies the IP address of the secondary DNS server for IPv4. Note This setting is available only when "CONNECTION_TYPE" is set to "0".
Value Range	Max. 15 characters n.n.n.n [n=0–255]
Default Value	Empty string
Web User Interface Reference	DNS2

DHCP_DNS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable using the DNS server obtained by DHCPv4. Note This setting is available only when "CONNECTION_TYPE" is set to "1".
Value Range	⌘: Not use (use static DNS) Ⓝ: Use DNS obtained by DHCPv4
Default Value	Ⓝ
Web User Interface Reference	Auto DNS via DHCP

DHCP_HOST_NAME

Value Format	STRING
Description	Specifies the host name to option12 in DHCPv4 or option15 in DHCPv6.
Value Range	Max. 64 characters (except ", &, ', <, >, ., and space) Note - If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. - If "{MAC}" is included in this parameter, it will be replaced with the device's MAC address in uppercase letters. - If "{mac}" is included in this parameter, it will be replaced with the device's MAC address in lowercase letters.
Default Value	{MODEL}
Web User Interface Reference	DHCP Host Name

DHCP_VENDOR_CLASS

Value Format	STRING
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Description	Specifies the vendor class to option60 in DHCPv4 or option16 in DHCPv6.
Value Range	Max. 64 characters
Default Value	Panasonic

CONNECTION_TYPE_IPV6

Value Format	INTEGER
Description	Specifies the IP address setting mode for IPv6.
Value Range	• 0: Static • 1: DHCP • 2: Stateless Autoconfiguration
Default Value	1
Web User Interface Reference	Connection Mode

STATIC_IP_ADDRESS_IPV6

Value Format	IPADDR-V6
Description	Specifies the IP address for IPv6.
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Empty string
Web User Interface Reference	IP Address

PREFIX_IPV6

Value Format	INTEGER
Description	Specifies the prefix for IPv6.
Value Range	0–128
Default Value	64
Web User Interface Reference	Prefix

STATIC_GATEWAY_IPV6

Value Format	IPADDR-V6
Description	Specifies the default gateway for IPv6.
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Empty string
Web User Interface Reference	Default Gateway

USER_DNS1_ADDR_IPV6

Value Format	IPADDR-V6
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Description	Specifies the IP address of primary DNS server for IPv6.
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Empty string
Web User Interface Reference	DNS1

USER_DNS2_ADDR_IPV6

Value Format	IPADDR-V6
Description	Specifies the IP address of secondary DNS server for IPv6.
Value Range	Max. 39 characters n:n:n:n:n:n:n [n=0-FFFF, abbreviation available]
Default Value	Empty string
Web User Interface Reference	DNS2

DHCP_DNS_ENABLE_IPV6

Value Format	BOOLEAN
Description	Specifies whether to enable or disable using the DNS server obtained by DHCPv6.
Value Range	⌘: Not use (use static DNS) Ⓝ: Use DNS obtained by DHCPv6
Default Value	Ⓝ
Web User Interface Reference	Auto DNS via DHCP

NW_TEST_COUNT

Value Format	INTEGER
Description	Specifies the number trials for a PING network test.
Value Range	1–16
Default Value	4

NW_TEST_TIMER

Value Format	BOOLEAN
Description	Specifies the length of time, in seconds, for a PING network test timeout.
Value Range	1–10
Default Value	5

DHCPD_RECOVERY_TIME

Value Format	INTEGER
Description	Specifies the time, in seconds, for DHCP recovery. When this parameter is set to "0", the recovery process is not performed.

Value Range	0, 30–3600
Default Value	0

DHCP_OPTION100_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to use DHCP option 100 to get the settings for Time Zone and Daylight Saving Time.
Value Range	• Y: Enable • N: Disable Note • If "Y" is specified, the settings for Time Zone and Daylight Saving Time are retrieved as IEEE 1003.1 POSIX. • If "Y" is specified, the following settings are disabled. – Phone User Interface: Menu - System Settings - System Settings - Time Zone – Web User Interface: System - Time Adjust Settings - TimeZone Web User Interface: System - Time Adjust Settings - Daylight Saving Time Web User Interface: System - Time Adjust Settings - Start Day and Time of DST Web User Interface: System - Time Adjust Settings - End Day and Time of DST – Configuration File Parameter: TIME_ZONE, DST_ENABLE, DST_OFFSET, DST_START_MONTH, DST_START_ORDINAL_DAY, DST_START_TIME, DST_START_DAY_OF_WEEK, DST_STOP_MONTH, DST_STOP_TIME, DST_STOP_ORDINAL_DAY, DST_STOP_DAY_OF_WEEK.
Default Value	N

5.3.4 Ethernet Port Settings

PHY_MODE_LAN

Value Format	INTEGER
Description	Specifies the link speed and duplex mode of the LAN port.
Value Range	• 1: Auto Negotiation • 2: 100Mbps/Full Duplex • 3: 100Mbps/Half Duplex • 4: 10Mbps/Full Duplex • 5: 10Mbps/Half Duplex
Default Value	1
Web User Interface Reference	LAN Port

VLAN_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to use the VLAN feature to perform VoIP communication securely. Note You should specify "Y" for only one of "LLDP_ENABLE" or "VLAN_ENABLE". If "Y" is specified for two or more of the parameters above, the settings are prioritized as follows: "VLAN_ENABLE" > "LLDP_ENABLE". Therefore, if "Y" is specified for both "VLAN_ENABLE" and "LLDP_ENABLE", the VLAN-related settings are used.
Value Range	- Y: Enable - N: Disable
Default Value	N
Web User Interface Reference	Enable VLAN

VLAN_ID_IP_PHONE

Value Format	INTEGER
Description	Specifies the VLAN ID for this unit.
Value Range	0–4094
Default Value	2
Web User Interface Reference	VLAN ID

VLAN_PRI_IP_PHONE

Value Format	INTEGER
Description	Specifies the priority number for the unit.
Value Range	0–7
Default Value	7
Web User Interface Reference	Priority

LLDP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the LLDP-MED feature. Note You should specify "Y" for only one of "LLDP_ENABLE", or "VLAN_ENABLE". If "Y" is specified for two or more of the parameters above, the settings are prioritized as follows: VLAN_ENABLE > LLDP_ENABLE. Therefore, if "Y" is specified for both "VLAN_ENABLE" and "LLDP_ENABLE", the VLAN-related settings are used.

Value Range	• Y: Enable LLDP-MED • N: Disable
Default Value	Y
Web User Interface Reference	Enable LLDP

LLDP_INTERVAL

Value Format	INTEGER
Description	Specifies the interval, in seconds, between sending each LLDP frame.
Value Range	1–3600
Default Value	30
Web User Interface Reference	Packet Interval

CDP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the CDP feature.
Value Range	• Y: Enable CDP • N: Disable
Default Value	N
Web User Interface Reference	Enable CDP

CDP_INTERVAL

Value Format	INTEGER
Description	Specifies the interval, in seconds, between sending each CDP frames.
Value Range	1–3600
Default Value	30
Web User Interface Reference	Packet Interval

5.3.5 Pre-Provisioning Settings

SIPPNP_PROV_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the SIP PNP provisioning.
Value Range	• Y: Enable SIP PnP provisioning • N: Disable
Default Value	Y

OPTION66_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the DHCP option 66 provisioning. Note The unit will try to download configuration files through the TFTP server, the IP address or FQDN of which is specified in the option number 66 field.
Value Range	- Y: Enable DHCP option66 provisioning - N: Disable
Default Value	Y

OPTION159_PROV_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the DHCP option159 provisioning.
Value Range	- Y: Enable DHCP option159 provisioning - N: Disable
Default Value	Y

OPTION160_PROV_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the DHCP option160 provisioning.
Value Range	- Y: Enable DHCP option160 provisioning - N: Disable
Default Value	Y

DHCPV6_OPTION17_PROV_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable DHCPv6 option17 provisioning.
Value Range	- Y: Enable DHCPv6 option17 provisioning - N: Disable
Default Value	Y

5.3.6 Provisioning Settings**CFG_STANDARD_FILE_PATH**

Value Format	STRING
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Description	Specifies the URL of the standard configuration file, which is used when every unit needs different settings.
Value Range	Max. 384 characters Note - If this URL ends with "/" (slash), "<code>Config{mac}.cfg</code>" is automatically added at the end of the URL. For example, <code>CFG_STANDARD_FILE_PATH="http:// host/dir/"</code> becomes <code>CFG_STANDARD_FILE_PATH="http://host/dir/Config{mac}.cfg"</code>. - For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string
Web User Interface Reference	Standard File URL

CFG_PRODUCT_FILE_PATH

Value Format	STRING
Description	Specifies the URL of the product configuration file, which is used when all units with the same model number need the same settings.
Value Range	Max. 384 characters Note - If this URL ends with "/" (slash), "<code>{MODEL}.cfg</code>" is automatically added at the end of the URL. For example, <code>CFG_PRODUCT_FILE_PATH="http://host/ dir/"</code> becomes <code>CFG_PRODUCT_FILE_PATH="http:// host/dir/{MODEL}.cfg"</code>. - For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string
Web User Interface Reference	Product File URL

CFG_MASTER_FILE_PATH

Value Format	STRING
Description	Specifies the URL of the master configuration file, which is used when all units need the same settings.
Value Range	Max. 384 characters Note - If this URL ends with "/" (slash), "<code>sip.cfg</code>" is automatically added at the end of the URL. For example, <code>CFG_MASTER_FILE_PATH="http://host/ dir/"</code> becomes <code>CFG_MASTER_FILE_PATH="http:// host/dir/sip.cfg"</code>. - For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

Web User Interface Reference	Master File URL
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CFG_CYCLIC

Value Format	BOOLEAN
Description	Specifies whether the unit periodically checks for updates of configuration files.
Value Range	- Y: Enable periodic synchronization - N: Disable
Default Value	N
Web User Interface Reference	Cyclic Auto Resync

CFG_CYCLIC_INTVL

Value Format	INTEGER
Description	Specifies the interval, in minutes, between periodic checks for updates of the configuration files.
Value Range	1–40320
Default Value	10080
Web User Interface Reference	Resync Interval

CFG_RESYNC_TIME

Value Format	STRING
Description	Specifies the time (hour:minute) that the unit checks for updates of configuration files.
Value Range	00:00–23:59 Note - If the value for this setting is any valid value other than an empty string, the unit downloads the configuration files at the fixed time, and the settings specified in "CFG_CYCLIC", "CFG_CYCLIC_INTVL", and "CFG_RTRY_INTVL" are disabled. - If the value for this setting is an empty string, downloading the configuration files at the fixed time are disabled.
Default Value	Empty string
Web User Interface Reference	Time Resync

CFG_RTRY_INTVL

Value Format	INTEGER
Description	Specifies the period of time, in minutes, that the unit will retry checking for an update of the configuration files after a configuration file access error has occurred.
Value Range	1–1440
Default Value	30

CFG_RESYNC_FROM_SIP

Value Format	STRING
Description	Specifies the value of the "Event" header sent from the SIP server to the unit so that the unit can access the configuration files on the provisioning server.
Value Range	Max. 15 characters
Default Value	check-sync
Web User Interface Reference	Header Value for Resync Event

CFG_RESYNC_ACTION

Value Format	INTEGER
Description	Specifies the value of the action after received resync NOTIFY.
Value Range	• 0: Provisioning • 1: TR-069 Inform • 2: Reboot
Default Value	0

CFG_FILE_KEY2

Value Format	STRING
Description	Specifies the encryption key (password) used to decrypt configuration files. Note • If the extension of the configuration file is ".e2c", the configuration file will be decrypted using this key.
Value Range	32 characters Note • If an empty string is set for this parameter, decryption with this value is disabled.
Default Value	Empty string

CFG_FILE_KEY3

Value Format	STRING
Description	Specifies the encryption key (password) used to decrypt configuration files. Note • If the extension of the configuration file is ".e3c", the configuration file will be decrypted using this key.

Value Range	32 characters Note If an empty string is set for this parameter, decryption with this value is disabled.
Default Value	Empty string

CFG_FILE_KEY_LENGTH

Value Format	INTEGER
Description	Specifies the key lengths in bits used to decrypt configuration files.
Value Range	128, 192, 256
Default Value	192

CFG_ROOT_CERTIFICATE_PATH

Value Format	STRING
Description	Specifies the URI where the root certificate is stored. Note Changing this setting may require restarting the unit.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

CFG_CLIENT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the client certificate is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

CFG_PKEY_PATH

Value Format	STRING
Description	Specifies the URI where the private key is stored.

Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

HTTP_SSL_VERIFY

Value Format	INTEGER
Description	Specifies whether to enable the verification of the root certificate.
Value Range	0: No verification of root certificate 1: Simple verification of root certificate 2: Precise verification of root certificate Note - If set to "0", the verification of the root certificate is disabled. - If set to "1", the verification of the root certificate is enabled. In this case, the validity of the certificate's date, certificate's chain, and the confirmation of the root certificate will be verified. - If set to "2", precise certificate verification is enabled. In this case, the validity of the server name will be verified in addition to the items verified when "1" is set. - If the unit has not obtained the current time and "HTTP_SSL_TIME_ASYNC_VERIFY" is set to "Y", verification will be performed.
Default Value	0

CFG_RESYNC_DURATION

Value Format	INTEGER
Description	Specifies, in minutes, a time range during which connected units can access the server. Units will download configuration files at a random time within this range.
Value Range	0–1439
Default Value	0

CFG_BOOTUP_DURATION_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable "CFG_RESYNC_TIME" and "CFG_RESYNC_DURATION" at startup.
Value Range	- Y: Enable - N: Disable
Default Value	Y

HTTP_SSL_TIME_ASYNC_VERIFY

Value Format	BOOLEAN
Description	Specifies whether to enable verification of the root certificate when the unit has not obtained the current time from the NTP server. Note If set to "Y", verification will be performed according to the value set for "HTTP_SSL_VERIFY".
Value Range	- Y: Enable - N: Disable
Default Value	N

SETTING_PRIORITY_OPTION

Value Format	INTEGER
Description	Specifies whether allow settings to be changed with the configuration file after the user has specified settings through the phone interface or the Web interface.
Value Range	0: Allow settings that have been specified through the phone interface or the Web interface to be changed by any type of configuration file (Standard, Product, or Master). 1: Do not allow settings that have been specified through the phone interface or the Web interface to be changed by the Master configuration file. 2: Do not allow settings that have been specified through the phone interface or the Web interface to be changed by any type of configuration file (Standard, Product, or Master).
Default Value	0

CFG_RTRY_INTVL_MODE

Value Format	INTEGER
Description	Specifies the mode when downloading the configuration file is retried.
Value Range	0: Retries according to the setting of "CFG_RTRY_INTVL". The retry interval time is constant. 1: Retries according to the settings of "CFG_RTRY_INTVL", "CFG_RTRY_TIMES" and "CFG_RTRY_TM". The retry interval time is variable. Note If set to "1", the use of "CFG_RESYNC_TIME" is recommended, because the configuration file is not downloaded after retrying ends.
Default Value	0

CFG_RTRY_TIMES

Value Format	INTEGER
Description	Specifies the number of retries. Note This setting is available only when "CFG_RTRY_INTVL_MODE" is set to "1".
Value Range	1–10
Default Value	5

CFG_RTRY_TM

Value Format	INTEGER
Description	Specifies the multiplier for the retry interval time. Note - The next retry interval time is determined by multiplying the previous retry interval time by this parameter. [Example] If "CFG_RTRY_INTVL_MODE"="1", "CFG_RTRY_INTVL"="2", "CFG_RTRY_TIMES"="5", and "CFG_RTRY_TM"="3" the retry intervals are as follows. First retry interval: 2 minutes Second retry interval: 6 minutes (first retry interval: 2 min × "CFG_RTRY_TM": 3) Third retry interval: 18 minutes (second retry interval: 6 min × "CFG_RTRY_TM": 3) - This setting is available only when "CFG_RTRY_INTVL_MODE" is set to "1".
Value Range	1–10
Default Value	1

CFG_DL_WEEKLY_INTERVAL

Value Format	INTEGER
Description	Specifies the interval number of weeks to download the configuration file.
Value Range	0–8 Note - If this setting is set "0", configuration file is downloaded every day as below: - Set a time by specifying "CFG_RESYNC_TIME". - Set a duration by specifying "CFG_RESYNC_DURATION".
Default Value	0

CFG_DL_WEEKLY_DAY_OF_WEEK

Value Format	INTEGER
Description	Specifies the day of week to download the configuration file.
Value Range	0–6 • 0: Sunday • 1: Monday • 2: Tuesday • 3: Wednesday • 4: Thursday • 5: Friday • 6: Saturday
Default Value	0

5.3.7 Firmware Update Settings**FIRM_UPGRADE_ENABLE**

Value Format	BOOLEAN
Description	Specifies whether to perform firmware updates when the unit detects a newer version of firmware. Note • Local firmware updates from the Web user interface (→ see 4.7.3 Upgrade Firmware) can be performed regardless of this setting. • Firmware updates using TR-069 can be performed regardless of this setting.
Value Range	• Y: Enable firmware updates • N: Disable firmware updates
Default Value	Y
Web User Interface Reference	Enable Firmware Update

FIRM_FILE_PATH

Value Format	STRING
Description	Specifies the URL where the firmware file is stored. Note • This setting is available only when "FIRM_UPGRADE_ENABLE" is set to "Y".

Value Range	Max. 384 characters Note If "{fwver}" is included in this parameter, it will be replaced with the value specified in [Firmware Version]. For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string
Web User Interface Reference	Firmware File URL

FIRM_VERSION

Value Format	STRING
Description	Specifies the firmware version of the unit.
Value Range	Max. 32 characters
Default Value	Empty string

FWDL_RANDOM_DURATION

Value Format	INTEGER
Description	Specifies, in minutes, a time range during which connected units can access the server. Units will download the firmware file at a random time within this range.
Value Range	0–1439
Default Value	0

5.3.8 HTTP Settings

HTTP_VER

Value Format	INTEGER
Description	Specifies which version of the HTTP protocol to use for HTTP communication.
Value Range	1: Use HTTP/1.0 0: Use HTTP/1.1 Note - For this unit, it is strongly recommended that you specify "1" for this setting. However, if the HTTP server does not function well with HTTP/1.0, try changing the setting "0".
Default Value	1
Web User Interface Reference	HTTP Version

HTTP_USER_AGENT

Value Format	STRING
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Description	Specifies the text string to send as the user agent in the header of HTTP requests.
Value Range	Max. 64 characters Note • If "{mac}" is included in this parameter, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this parameter, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. • If "{fwver}" is included in this parameter, it will be replaced with the firmware version of the unit.
Default Value	Panasonic_{MODEL}/{fwver} ({mac})
Web User Interface Reference	HTTP User Agent

HTTP_AUTH_ID

Value Format	STRING
Description	Specifies the authentication ID required to access the HTTP server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Authentication ID

HTTP_AUTH_PASS

Value Format	STRING
Description	Specifies the authentication password required to access the HTTP server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Authentication Password

HTTP_PROXY_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the HTTP proxy feature.
Value Range	• Y: Enable HTTP proxy connect • N: Disable
Default Value	N
Web User Interface Reference	Enable Proxy

HTTP_PROXY_ADDR

Value Format	STRING
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Description	Specifies the IP address or FQDN of the proxy server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Proxy Server Address

HTTP_PROXY_PORT

Value Format	INTEGER
Description	Specifies the port of the proxy server.
Value Range	1–65535
Default Value	8080
Web User Interface Reference	Proxy Server Port

HTTP_PROXY_ID

Value Format	STRING
Description	Specifies the user ID for connecting HTTP proxy.
Value Range	Max. 128 characters
Default Value	Empty string

HTTP_PROXY_PASS

Value Format	STRING
Description	Specifies the password for connecting HTTP proxy.
Value Range	Max. 128 characters
Default Value	Empty string

5.3.9 HTTPD/WEB Settings

HTTPD_LISTEN_PORT

Value Format	INTEGER
Description	Specifies the port number of own HTTP server.
Value Range	80, 1024–49151
Default Value	80

HTTPD_PORTOPEN_AUTO

Value Format	BOOLEAN
Description	Specifies whether the unit's Web port is always open.

Value Range	• Y: Web port is always open • N: Web port is closed [can be opened temporarily through phone user interface programming] Notice • If you want to set to "Y", please fully recognize the possibility of unauthorized access to the unit through the Web user interface and change this setting at your own risk. In addition, please take full security measures for connecting to an external network and control all passwords for logging in to the Web user interface.
Default Value	N

HTTPD_PORTCLOSE_TM

Value Format	INTEGER
Description	Specifies port close time when keeping the no action.
Value Range	1–1440
Default Value	30

USER_ID

Value Format	STRING
Description	Specifies the account ID used to access the Web user interface with the User account.
Value Range	Max. 16 characters (except !, ", #, \$, %, &, ', (,), @, *, +, ,, /, :, ;, <, =, >, ?, [,], ^, `, {, , }, ~, \ and space) Note • An empty string is not allowed. • A hyphen (-) cannot be used as the first character.
Default Value	user

USER_PASS

Value Format	STRING
Description	Specifies the password to use to authenticate the User account when logging in to the Web user interface.
Value Range	6–64 characters Note • A hyphen (-) cannot be used as the first character.
Default Value	Empty string (only before a user accesses the Web user interface for the first time)
Web User Interface Reference	New Password

ADMIN_ID

Value Format	STRING
Description	Specifies the account ID used to access the Web user interface with the Admin account.
Value Range	Max. 16 characters (except !, ", #, \$, %, &, ', (,), @, *, +, ,, /, :, ;, <, =, >, ?, [,], ^, \, {, , }, ~, \ and space) Note • An empty string is not allowed. • A hyphen (-) cannot be used as the first character.
Default Value	admin

ADMIN_PASS

Value Format	STRING
Description	Specifies the password to use to authenticate the Administrator account when logging in to the Web user interface.
Value Range	6–64 characters Note • A hyphen (-) cannot be used as the first character.
Default Value	adminpass
Web User Interface Reference	New Password

5.3.10 TR-069 Settings

ACS_URL

Value Format	STRING
Description	Specifies the URL of the Auto-Configuration Server for using TR-069. Note • This parameter must be in the form of a valid HTTP or HTTPS URL, as defined in RFC 3986.
Value Range	Max. 256 characters
Default Value	Empty string

ACS_USER_ID

Value Format	STRING
Description	Specifies the user ID for the Auto-Configuration Server for using TR-069.
Value Range	Max. 256 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string

ACS_PASS

Value Format	STRING
Description	Specifies the user password for the Auto-Configuration Server for using TR-069.
Value Range	Max. 256 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string

PERIODIC_INFORM_ENABLE

Value Format	BOOLEAN
Description	Specifies whether or not the CPE (Customer Premises Equipment) must periodically send CPE information to the ACS (Auto-Configuration Server) using the Inform method call.
Value Range	• Y: Enable • N: Disable
Default Value	N

PERIODIC_INFORM_INTERVAL

Value Format	INTEGER
Description	Specifies the interval length, in seconds, when the CPE must attempt to connect with the ACS and call the Inform method. Note • This setting is available only when "PERIODIC_INFORM_ENABLE" is set to "Y".
Value Range	30–2419200
Default Value	86400

PERIODIC_INFORM_TIME

Value Format	STRING
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Description	Specifies the time (UTC) to determine when the CPE will initiate the periodic Inform method calls. Note - Each Inform call must occur at this reference time plus or minus an integer multiple of the "PERIODIC_INFORM_INTERVAL". This "PERIODIC_INFORM_TIME" parameter is used only to set the "phase" of the periodic Informs. The actual value can be arbitrarily set far into the past or future. For example, if "PERIODIC_INFORM_INTERVAL" is set to 86400 (one day) and if "PERIODIC_INFORM_TIME" is set to midnight on a certain day, then periodic Informs will occur every day at midnight, starting from the set date. - If the time is set to "unknown time", the start time depends on the CPE's settings. However, the "PERIODIC_INFORM_INTERVAL" must still be adhered to. If absolute time is not available to the CPE, its periodic Inform behavior must be the same as if the "PERIODIC_INFORM_TIME" parameter was set to the "unknown time". - Time zones other than UTC are not supported.
Value Range	4–32 characters date and time format
Default Value	0001-01-01T00:00:00Z

CON_REQ_USER_ID

Value Format	STRING
Description	Specifies the user name used to authenticate an ACS making a Connection Request to the CPE.
Value Range	Max. 256 characters
Default Value	Empty string

CON_REQ_PASS

Value Format	STRING
Description	Specifies the password used to authenticate an ACS making a Connection Request to the CPE. Note When the "CON_REQ_USER_ID" parameter is specified, an empty string for this parameter is not allowed.
Value Range	Max. 256 characters
Default Value	Empty string

ANNEX_G_STUN_ENABLE

Value Format	BOOLEAN
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Description	Specifies whether or not the CPE can use STUN. This applies only to the use of STUN in association with the ACS to allow UDP Connection Requests.
Value Range	• Y: Enable • N: Disable
Default Value	N

ANNEX_G_STUN_SERV_ADDR

Value Format	STRING
Description	Specifies the host name or IP address of the STUN server for the CPE to send Binding Requests. Note • This setting is available only when "ANNEX_G_STUN_ENABLE" is set to "Y". • If the value for this setting is an empty string and "ANNEX_G_STUN_ENABLE" is set to "Y", the CPE must use the address of the ACS extracted from the host portion of the ACS URL.
Value Range	Max. 256 characters
Default Value	Empty string

ANNEX_G_STUN_SERV_PORT

Value Format	INTEGER
Description	Specifies the port number of the STUN server for the CPE to send Binding Requests. Note • This setting is available only when "ANNEX_G_STUN_ENABLE" is set to "Y".
Value Range	1–65535
Default Value	3478

ANNEX_G_STUN_USER_ID

Value Format	STRING
Description	Specifies the STUN user name to be used in Binding Requests (only if message integrity has been requested by the STUN server). Note • If the value for this setting is an empty string, the CPE must not send STUN Binding Requests with message integrity.
Value Range	Max. 256 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string

ANNEX_G_STUN_PASS

Value Format	STRING
Description	Specifies the STUN password to be used in computing the MESSAGE-INTEGRITY attribute used in Binding Requests (only if message integrity has been requested by the STUN server). When read, this parameter returns an empty string, regardless of the actual value.
Value Range	Max. 256 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string

ANNEX_G_STUN_MAX_KEEP_ALIVE

Value Format	INTEGER
Description	Specifies the maximum period, in seconds, that STUN Binding Requests must be sent by the CPE for the purpose of maintaining the binding in the Gateway. This applies specifically to Binding Requests sent from the UDP Connection Request address and port. Note This setting is available only when "ANNEX_G_STUN_ENABLE" is set to "Y".
Value Range	1–3600
Default Value	300

ANNEX_G_STUN_MIN_KEEP_ALIVE

Value Format	INTEGER
Description	Specifies the minimum period, in seconds, that STUN Binding Requests can be sent by the CPE for the purpose of maintaining the binding in the Gateway. This limit applies only to Binding Requests sent from the UDP Connection Request address and port, and only those that do not contain the BINDING-CHANGE attribute. Note This setting is available only when "ANNEX_G_STUN_ENABLE" is set to "Y".
Value Range	1–3600
Default Value	30

UDP_CON_REQ_ADDR_NOTIFY_LIMIT

Value Format	INTEGER
Description	Specifies the minimum time, in seconds, between Active Notifications resulting from changes to the "UDPConnectionRequestAddress" (if Active Notification is enabled).
Value Range	0–65535
Default Value	0

DEVICE_PROVISIONING_CODE

Value Format	STRING
Description	Specifies the device provisioning code for use with TR-106 parameters.
Value Range	Max. 64 characters
Default Value	Empty string

TR069_REGISTERING

Value Format	STRING
Description	Specifies the line status that TR-069 outputs while the line is being registered.
Value Range	Max.16 characters
Default Value	Error

TR069_REGISTERED

Value Format	STRING
Description	Specifies the line status that TR-069 outputs when the line has been registered.
Value Range	Max.16 characters
Default Value	Registering

5.3.11 XML Settings**XMLAPP_ENABLE**

Value Format	BOOLEAN
Description	Specifies whether to enable the XML application feature.
Value Range	• x: Enable XML application • N: Disable
Default Value	N
Web User Interface Reference	Enable XMLAPP

XMLAPP_USERID

Value Format	STRING
Description	Specifies the authentication ID required to access the XML application server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	User ID

XMLAPP_USERPASS

Value Format	STRING
Description	Specifies the authentication password used to access the XML application server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Password

XMLAPP_LDAP_URL

Value Format	STRING
Description	Specifies the URL that is accessed when the phonebook is accessed, to check for XML data.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	LDAP URL

XMLAPP_LDAP_USERID

Value Format	STRING
Description	Specifies the authentication ID required to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	User ID

XMLAPP_LDAP_USERPASS

Value Format	STRING
Description	Specifies the authentication password used to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Password

XMLAPP_NPB_SEARCH_TIMER

Value Format	INTEGER
Description	Specifies the time which is for searching XML phonebook.
Value Range	1–65535
Default Value	30

XMLAPP_LDAP_MAXRECORD

Value Format	INTEGER
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Description	Specifies the maximum number of search results to be returned by the LDAP server.
Value Range	20–500
Default Value	20
Web User Interface Reference	Max Hits

XML_HTTPD_PORT

Value Format	INTEGER
Description	Specifies the local HTTP port for XML application.
Value Range	1–65535
Default Value	6666
Web User Interface Reference	Local XML Port

XML_ERROR_INFORMATION

Value Format	BOOLEAN
Description	Specifies whether to display an error information when an error occurs.
Value Range	• y: Error information is displayed • n: Error information is not displayed
Default Value	y

XML_PHONEBOOK_URL

Value Format	STRING
Description	Specifies the URL to download the XML phonebook file from.
Value Range	Max.256 characters
Default Value	Empty string

XML_PHONEBOOK_CYCLIC_INTVL

Value Format	INTEGER
Description	Specifies the interval, in minutes, between periodic checks for updates to the XML phonebook. If this parameter is set to "0", the timing is the same as that for updating the configuration files.
Value Range	0, 1–40320
Default Value	0

XMLAPP_SELECT_HS_PB

Value Format	BOOLEAN
Description	Specifies whether to download an individual XML phonebook for each handset.

Value Range	- Y: Enable individual phonebooks - N: Disable
Default Value	N

XMLAPP_RCV_IP_ADDRESSx

Value Format	IPADDR
Description	X=1-20 Specifies the IP addresses from which XML (POST) may be received. Note If no IP addresses are specified, XML (POST) can be received from any IP address
Value Range	Max. 15 characters n.n.n.n [n=0-255]
Default Value	Empty string

XMLAPP_RCV_DOMAIN_NAMEx

Value Format	STRING
Description	x=1-2 Specifies the domain name from which XML (POST) may be received.
Value Range	Max. 256 characters
Default Value	Empty string

5.3.12 XSI Settings

XSI_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the Xsi service.
Value Range	- Y: Enable Xsi service - N: Disable
Default Value	N
Web User Interface Reference	Enable Xtended Service

XSI_SERVER

Value Format	STRING
Description	Specifies the IP address or FQDN of the Xsi server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Server Address

XSI_SERVER_TYPE

Value Format	STRING
Description	Specifies the type of the Xsi server.
Value Range	• HTTP • HTTPS
Default Value	HTTP
Web User Interface Reference	Protocol

XSI_SERVER_PORT

Value Format	INTEGER
Description	Specifies the port of the Xsi server.
Value Range	1–65535
Default Value	80
Web User Interface Reference	Port

XSI_USERID_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the authentication ID required to access the Xsi server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	User ID (Line 1–8)

XSI_PASSWORD_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the authentication password required to access the Xsi server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Password (Line 1–8)

XSI_PHONEBOOK_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the Xsi phonebook service.
Value Range	• y: Enable Xsi phonebook • n: Disable

Default Value	N
Web User Interface Reference	Enable Phonebook (Line 1–8)

XSI_PHONEBOOK_CYCLIC_INTVL

Value Format	INTEGER
Description	Specifies the interval, in minutes, between periodic checks for updates of the Xsi Directory (Phonebook) files. If this parameter is set to "0", the timing is the same as updating the configuration files.
Value Range	0–40320
Default Value	0

XSI_PHONEBOOK_RESYNC_DURATION

Value Format	INTEGER
Description	Specifies the time range, in minutes, during which connected units can access the server. Xsi Directory (Phonebook) files will be downloaded at a random time within this range.
Value Range	0–1439
Default Value	0

XSI_PHONEBOOK_TYPE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the type of Xsi phonebook.
Value Range	1: Group 2: GroupCommon 3: Enterprise 4: EnterpriseCommon 5: Personal
Default Value	1
Web User Interface Reference	Phonebook Type (Line 1–8)

XSI_CALLLOG_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the Xsi call log service.
Value Range	- Y: Enable Xsi call log - N: Disable
Default Value	N
Web User Interface Reference	Enable Call Log (Line 1–8)

XSI_SIP_CREDENTIALS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the XSI SIP Credentials feature.
Value Range	• Y: Enable XSI SIP Credentials • N: Disable
Default Value	N
Web User Interface Reference	SIP Credentials

BSD_GROUP_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the "Group" type for Xsi phonebooks.
Value Range	• Y : Enable • N : Disable
Default Value	N
Web User Interface Reference	Group

BSD_GROUPCOM_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the "GroupCommon" type for Xsi phonebooks.
Value Range	• Y : Enable • N : Disable
Default Value	N
Web User Interface Reference	GroupCommon

BSD_ENTERPRISE_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the "Enterprise" type for Xsi phonebooks.
Value Range	• Y : Enable • N : Disable
Default Value	N
Web User Interface Reference	Enterprise

BSD_ENTERPRISECOM_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the "EnterpriseCommon" type for Xsi phonebooks.
Value Range	• Y : Enable • N : Disable
Default Value	N
Web User Interface Reference	EnterpriseCommon

BSD_PERSONAL_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the "Personal" type for Xsi phonebooks.
Value Range	• Y : Enable • N : Disable
Default Value	N
Web User Interface Reference	Personal

BSD_MULTI_TYPE_ENABLE

Value Format	BOOLEAN
Description	Specifies whether you can select the type of Xsi phonebook.
Value Range	• Y: Enable • N: Disable
Default Value	N

XSI_ACTION_URL

Value Format	STRING
Description	Specifies a part of the XSI-Action URL.
Value Range	Max. 256 characters
Default Value	com.broadsoft.xsi-actions/v2.0/user

XSI_NAME_REPLACE_RULE

Value Format	STRING
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5.3.13 XMPP (UC-ONE) Settings

Description	Specifies the characters to make the name of the XSI Call Log the empty string. For example, if this parameter is set to "Unavailable" and the name in the XSI Call Log is "Unavailable", the name becomes the empty string. • KX-TPA60/KX-TPA65 If this setting is the same as the name in the XSI Call Log, the phone number is displayed instead of the name.
Value Range	Max. 24 characters
Default Value	Empty string

5.3.13 XMPP (UC-ONE) Settings

UC_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the UC service.
Value Range	• Y: Enable UC service • N: Disable
Default Value	N
Web User Interface Reference	Enable UC

UC_USERID_HSy

Parameter Name Example	UC_USERID_HS1, UC_USERID_HS2, ..., UC_USERID_HS8
Value Format	STRING
Description	Specifies the authentication ID required to access the UC server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Handset 1–8 (User ID)

UC_PASSWORD_HSy

Parameter Name Example	UC_PASSWORD_HS1, UC_PASSWORD_HS2, ..., UC_PASSWORD_HS8
Value Format	STRING
Description	Specifies the authentication password required to access the UC server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	Handset 1–8 (Password)

XMPP_SERVER

Value Format	STRING
Description	Specifies the IP address or FQDN of the XMPP server.

Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Server Address

XMPP_PORT

Value Format	INTEGER
Description	Specifies the local XMPP port.
Value Range	1–65535
Default Value	5222
Web User Interface Reference	Local XMPP Port

XMPP_TLS_VERIFY

Value Format	INTEGER
Description	Specifies whether to enable the verification of the root certificate.
Value Range	0: No verification 1: Simple verification 2: Precise verification
Default Value	0

XMPP_ROOT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the root certificate is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

XMPP_CLIENT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the client certificate is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

XMPP_PKEY_PATH

Value Format	STRING
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Description	Specifies the URI where the private key is stored.
Value Range	Max. 384 characters Note • For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

UC_DNSSRV_ENA

Value Format	BOOLEAN
Description	Specifies whether to request the DNS server to translate domain names into IP addresses using the SRV record.
Value Range	• Y: Enable DNS SRV lookup • N: Disable
Default Value	N

UC_TCP_SRV_PREFIX

Value Format	STRING
Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TCP.
Value Range	Max. 32 characters
Default Value	_xmpp-client._tcp.

UC_USERID_CASE_SENSITIVE

Value Format	BOOLEAN
Description	Specifies whether the authentication ID is case-sensitive when accessing the UC server.
Value Range	• Y : Enable • N : Disable
Default Value	N

PRESENCE_MYPHONE_STATUS

Value Format	INTEGER
Description	Specifies the default status of "My Phone" when "Presence" starts up.
Value Range	0-4 — 0: Available — 1: Away — 2: Busy — 3: Offline — 4: Invisible

Default Value	0
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PRESENCE_INVISIBLE_ENABLE

Value Format	BOOLEAN
Description	Specifies which operation to use when the status of "My Phone" is set to "Invisible" using the phone.
Value Range	- Y: Invisible - N: Offline
Default Value	N

5.3.14 LDAP Settings

LDAP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the LDAP service.
Value Range	- Y: Enable LDAP service - N: Disable
Default Value	N
Web User Interface Reference	Enable LDAP

LDAP_DNSSRV_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to request the DNS server to translate domain names into IP addresses using the SRV record.
Value Range	- Y: Enable DNS SRV lookup - N: Disable
Default Value	N
Web User Interface Reference	Enable DNS SRV lookup

LDAP_SERVER

Value Format	STRING
Description	Specifies the server host of LDAP.
Value Range	Max. 256 characters Note The LDAP server address should start with "ldap://" or "ldaps://".
Default Value	Empty string
Web User Interface Reference	Server Address

LDAP_SERVER_PORT

Value Format	INTEGER
Description	Specifies the port of the LDAP server.
Value Range	1–65535
Default Value	389
Web User Interface Reference	Port

LDAP_MAXRECORD

Value Format	INTEGER
Description	Specifies the maximum number of search results to be returned by the LDAP server.
Value Range	20–500
Default Value	20
Web User Interface Reference	Max Hits

LDAP_NUMB_SEARCH_TIMER

Value Format	INTEGER
Description	Specifies the timer for searching telephone number.
Value Range	1–65535
Default Value	30

LDAP_NAME_SEARCH_TIMER

Value Format	INTEGER
Description	Specifies the timer for searching name.
Value Range	1–65535
Default Value	5

LDAP_USERID

Value Format	STRING
Description	Specifies the authentication ID required to access the LDAP server.
Value Range	Max. 128 characters
Default Value	Empty string
Web User Interface Reference	User ID

LDAP_PASSWORD

Value Format	STRING
Description	Specifies the authentication password required to access the LDAP server.
Value Range	Max. 128 characters

Default Value	Empty string
Web User Interface Reference	Password

LDAP_NAME_FILTER

Value Format	STRING
Description	Specifies the name filter which is the search criteria for name look up.
Value Range	Max. 256 characters
Default Value	((cn=%)(sn=%))
Web User Interface Reference	Name Filter

LDAP_NUMB_FILTER

Value Format	STRING
Description	Specifies the number filter which is the search criteria for number look up.
Value Range	Max. 256 characters
Default Value	((telephoneNumber=%)(mobile=%)(homePhone=%))
Web User Interface Reference	Number Filter

LDAP_NAME_ATTRIBUTE

Value Format	STRING
Description	Specifies the name attributes of each record which are to be returned in the LDAP search result.
Value Range	Max. 256 characters
Default Value	cn,sn
Web User Interface Reference	Name Attributes

LDAP_NUMB_ATTRIBUTE

Value Format	STRING
Description	Specifies the number attributes of each record which are to be returned in the LDAP search result.
Value Range	Max. 256 characters
Default Value	telephoneNumber,mobile,homePhone
Web User Interface Reference	Number Attributes

LDAP_BASEDN

Value Format	STRING
Description	Specifies the entry information on the screen.
Value Range	Max. 256 characters
Default Value	Empty string

Web User Interface Reference	Distinguished Name(Base DN)
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LDAP_SSL_VERIFY

Value Format	INTEGER
Description	Specifies whether to enable the verification of the root certificate.
Value Range	0: No verification 1: Simple verification 2: Precise verification
Default Value	0

LDAP_ROOT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the root certificate is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

LDAP_CLIENT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the client certificate is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

LDAP_PKEY_PATH

Value Format	STRING
Description	Specifies the URI where the private key is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

LDAP_DISPLAY_FORMAT

Value Format	STRING
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Description	Specifies the display format by using the attribute (e.g., cn, sn) specified in LDAP_NAME_ATTRIBUTE and connecting punctuation (e.g., space, hyphen, comma).
Value Range	Max. 256 characters Note • "%cn %sn" is used if this setting is NULL. • For example, if cn=John, sn=Doe, and LDAP_DISPLAY_FORMAT="%sn, %cn", then "Doe, John" is displayed.
Default Value	Empty string

5.3.15 SNMP Settings

Note

- Changing SNMP setting may require restarting the unit.

SNMP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable SNMP feature.
Value Range	• Y: Enable SNMP • N: Disable
Default Value	N

SNMP_TRUST_IP

Value Format	STRING
Description	Specifies the IP address or FQDN of the trusted SNMP server.
Value Range	Max. 256 characters
Default Value	Empty string

SNMP_TRUST_PORT

Value Format	INTEGER
Description	Specifies the port of the trusted SNMP server.
Value Range	1–65535
Default Value	161

SNMP_RO_COMMUNITY_STRING

Value Format	STRING
Description	Specifies the community name for read-only.
Value Range	Max. 32 characters
Default Value	Empty string

SNMP_SECURITY_TYPE

Value Format	INTEGER
Description	Specifies the security type of SNMPv3.
Value Range	0: noAuthNoPriv 1: AuthNoPriv 2: AuthPriv
Default Value	0

SNMP_SECURITY_USER

Value Format	STRING
Description	Specifies the security user ID for authentication and encryption of SNMPv3.
Value Range	Max. 32 characters
Default Value	Empty string

SNMP_AUTH_TYPE

Value Format	INTEGER
Description	Specifies the authentication type of SNMPv3.
Value Range	0: MD5 1: SHA
Default Value	0

SNMP_AUTH_PASSWORD

Value Format	STRING
Description	Specifies the authentication password of SNMPv3.
Value Range	0, 8–64 characters
Default Value	Empty string

SNMP_ENCRYPT_TYPE

Value Format	INTEGER
Description	Specifies the encryption type of SNMPv3.
Value Range	0: DES 1: AES
Default Value	1

SNMP_ENCRYPT_PASSWORD

Value Format	STRING
Description	Specifies the encryption password of SNMPv3.
Value Range	0, 8–64 characters
Default Value	Empty string

5.3.16 Multicast Paging Settings

MPAGE_ADDRm

Parameter Name Example	MPAGE_ADDR1, MPAGE_ADDR2, ..., MPAGE_ADDR5
Value Format	IPADDR
Description	Specifies the address for multi-cast paging for each channel group. (m=1–5, the channel group) {Priority: 5 > 4 > 3, 2, 1 (depending on the configuration)}
Value Range	224.0.0.0–239.255.255.255
Default Value	Empty string
Web User Interface Reference	IPv4 Address (Group 1–5)

MPAGE_IPV6_ADDRm

Parameter Name Example	MPAGE_IPV6_ADDR1, MPAGE_IPV6_ADDR2, ..., MPAGE_IPV6_ADDR5
Value Format	IPADDR-V6
Description	Specifies the IPv6 address for multi-cast paging for each channel group. (m=1–5, the channel group) {Priority: 5 > 4 > 3, 2, 1 (depending on the configuration)}
Value Range	FF00::/8
Default Value	Empty string
Web User Interface Reference	IPv6 Address (Group 1–5)

MPAGE_PORTm

Parameter Name Example	MPAGE_PORT1, MPAGE_PORT2, ..., MPAGE_PORT5
Value Format	INTEGER
Description	Specifies the port number for multi-cast paging for each channel group. (m=1–5, the channel group)
Value Range	0–65535 (0: not used)
Default Value	0
Web User Interface Reference	Port (Group 1–5)

MPAGE_PRIORITYm

Parameter Name Example	MPAGE_PRIORITY1, MPAGE_PRIORITY2, MPAGE_PRIORITY3
Value Format	INTEGER
Description	Specifies the priority of the low priority channel group. (m=1–3) The priority of multi-cast paging group1–3 is lower than the talking. Priority 4 is higher than priority 5.
Value Range	4,5 (Talk > 4 > 5)

Default Value	5
Web User Interface Reference	Priority (Group 1–3)

MPAGE_LABELm

Parameter Name Example	MPAGE_LABEL1, MPAGE_LABEL2, ..., MPAGE_LABEL5
Value Format	STRING
Description	Specifies a label for each channel group. (m=1–5, the channel group)
Value Range	Max. 24 characters
Default Value	Empty string
Web User Interface Reference	Label (Group 1–5)

MPAGE_SEND_ENABLEm

Parameter Name Example	MPAGE_SEND_ENABLE1, MPAGE_SEND_ENABLE2, ..., MPAGE_SEND_ENABLE5
Value Format	BOOLEAN
Description	Specifies the sending multi-cast paging. (m=1–5, the channel group)
Value Range	• $\mathcal{Y}$: Enable • $\mathcal{N}$: Disable
Default Value	$\mathcal{N}$
Web User Interface Reference	Enable Transmission (Group 1–5)

MPAGE_CODEC

Value Format	INTEGER
Description	Specifies the codec for multi-cast paging.
Value Range	0 : "G722" 1 : "PCMA" 2 : – 3 : "G729A" 4 : "PCMU"
Default Value	0

MPAGE_SP_VOL_EMERGENCY (For KX-TPA60/KX-TPA65)

Value Format	INTEGER
Description	Specifies the speaker level for new received multi-cast paging (emergency channel).
Value Range	0–6 0: No control
Default Value	0

MPAGE_SP_VOL_EMERGENCY2 (For KX-TPA68)

Value Format	INTEGER
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Description	Specifies the speaker level for new received multi-cast paging (emergency channel).
Value Range	0–8 0: No control
Default Value	0

MPAGE_SP_VOL_PRIORITY (For KX-TPA60/KX-TPA65)

Value Format	INTEGER
Description	Specifies the speaker level for new received multi-cast paging (priority channel).
Value Range	0–6 0: No control
Default Value	0

MPAGE_SP_VOL_PRIORITY2 (For KX-TPA68)

Value Format	INTEGER
Description	Specifies the speaker level for new received multi-cast paging (priority channel).
Value Range	0–8 0: No control
Default Value	0

MPAGE_DND_ENABLE_HSy

Parameter Name Example	MPAGE_DND_ENABLE_HS1, MPAGE_DND_ENABLE_HS2, ..., MPAGE_DND_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies the DND setting (on/off) for multi-cast paging.
Value Range	• Y: Enable DND for Multi-cast paging • N: Disable DND for Multi-cast paging
Default Value	N

MPAGE_FUNCKEY_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable the multicast paging key in function menu.
Value Range	• Y: Enable • N: Disable
Default Value	N

5.3.17 NTP Settings

NTP_ADDR

Value Format	STRING
Description	Specifies the IP address or FQDN of NTP server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Server Address

TIME_SYNC_INTVL

Value Format	INTEGER
Description	Specifies the interval, in seconds, to resynchronize after having detected no reply from the NTP server.
Value Range	10–86400
Default Value	60

TIME_QUERY_INTVL

Value Format	INTEGER
Description	Specifies the interval, in seconds, between synchronizations with the NTP server.
Value Range	10–86400
Default Value	43200
Web User Interface Reference	Synchronization Interval

5.3.18 Time Settings

LOCAL_TIME_ZONE_POSIX

Value Format	STRING
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Description	Specifies a IEEE 1003.1 (POSIX)-compliant local time zone definition (e.g., "EST+5 EDT,M4.1.0/2,M10.5.0/2"). Note - If this parameter is specified, the following parameters are disabled, and operation will be based on this parameter. – <code>TIME_ZONE</code> – <code>DST_ENABLE</code> – <code>DST_OFFSET</code> – <code>DST_START_MONTH</code> – <code>DST_START_ORDINAL_DAY</code> – <code>DST_START_DAY_OF_WEEK</code> – <code>DST_START_TIME</code> – <code>DST_STOP_MONTH</code> – <code>DST_STOP_ORDINAL_DAY</code> – <code>DST_STOP_DAY_OF_WEEK</code> – <code>DST_STOP_TIME</code>
Value Range	Max. 70 characters
Default Value	Empty string

TIME_ZONE

Value Format	INTEGER
Description	Specifies the offset of local standard time from UTC (GMT), in minutes.

Value Range	-720–780 Note - Only the following values are available: -720 (GMT -12:00), -660 (GMT -11:00), -600 (GMT -10:00), -540 (GMT -09:00), -480 (GMT -08:00), -420 (GMT -07:00), -360 (GMT -06:00), -300 (GMT -05:00), -240 (GMT -04:00), -210 (GMT -03:30), -180 (GMT -03:00), -120 (GMT -02:00), -60 (GMT -01:00), 0 (GMT), 60 (GMT +01:00), 120 (GMT +02:00), 180 (GMT +03:00), 210 (GMT +03:30), 240 (GMT +04:00), 270 (GMT +04:30), 300 (GMT +05:00), 330 (GMT +05:30), 345 (GMT +05:45), 360 (GMT +06:00), 390 (GMT +06:30), 420 (GMT +07:00), 480 (GMT +08:00), 540 (GMT +09:00), 570 (GMT +09:30), 600 (GMT +10:00), 660 (GMT +11:00), 720 (GMT +12:00), 780 (GMT +13:00) - If your location is west of Greenwich (0 [GMT]), the value should be minus. For example, the value for New York City, U.S.A. is "-300" (Eastern Standard Time being 5 hours behind GMT). - This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Default Value	0
Web User Interface Reference	Time Zone

DST_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable DST (Summer Time). Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	Y (Enable DST [Summer Time]) N (Disable DST [Summer Time])
Default Value	N
Web User Interface Reference	Enable DST (Enable Summer Time)

DST_OFFSET

Value Format	INTEGER
Description	Specifies the amount of time, in minutes, to change the time when "DST_ENABLE" is set to "Y". Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.

Value Range	0–720 Note This parameter is usually set to "60".
Default Value	60
Web User Interface Reference	DST Offset (Summer Time Offset)

DST_START_MONTH

Value Format	INTEGER
Description	Specifies the month in which DST (Summer Time) starts. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	1–12
Default Value	3
Web User Interface Reference	Month

DST_START_ORDINAL_DAY

Value Format	INTEGER
Description	Specifies the number of the week on which DST (Summer Time) starts. The actual start day is specified in "DST_START_DAY_OF_WEEK". For example, to specify the second Sunday, specify "2" in this parameter, and "0" in the next parameter. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	1–5 – 1: the first week of the month – 2: the second week of the month – 3: the third week of the month – 4: the fourth week of the month – 5: the last week of the month
Default Value	2
Web User Interface Reference	Day of Week

DST_START_DAY_OF_WEEK

Value Format	INTEGER
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Description	Specifies the day of the week on which DST (Summer Time) starts. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	0–6 – 0: Sunday – 1: Monday – 2: Tuesday – 3: Wednesday – 4: Thursday – 5: Friday – 6: Saturday
Default Value	0
Web User Interface Reference	Day of Week

DST_START_TIME

Value Format	INTEGER
Description	Specifies the start time of DST (Summer Time) in minutes after 12:00 AM. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	0–1439
Default Value	120
Web User Interface Reference	Time

DST_STOP_MONTH

Value Format	INTEGER
Description	Specifies the month in which DST (Summer Time) ends. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	1–12
Default Value	11
Web User Interface Reference	Month

DST_STOP_ORDINAL_DAY

Value Format	INTEGER
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Description	Specifies the number of the week on which DST (Summer Time) ends. The actual end day is specified in "DST_STOP_DAY_OF_WEEK". For example, to specify the second Sunday, specify "2" in this parameter, and "0" in the next parameter. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	1–5 – 1: the first week of the month – 2: the second week of the month – 3: the third week of the month – 4: the fourth week of the month – 5: the last week of the month
Default Value	1
Web User Interface Reference	Day of Week

DST_STOP_DAY_OF_WEEK

Value Format	INTEGER
Description	Specifies the day of the week on which DST (Summer Time) ends. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	0–6 – 0: Sunday – 1: Monday – 2: Tuesday – 3: Wednesday – 4: Thursday – 5: Friday – 6: Saturday
Default Value	0
Web User Interface Reference	Day of Week

DST_STOP_TIME

Value Format	INTEGER
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Description	Specifies the end time of DST (Summer Time) in minutes after 12:00 AM. Note This parameter is disabled when the "LOCAL_TIME_ZONE_POSIX" parameter is specified.
Value Range	0–1439
Default Value	120
Web User Interface Reference	Time

5.3.19 Network Phonebook (Common)

ONLY_NPB_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to be available the handset phonebook when the network phonebook is enabled.
Value Range	- Y: Not use handset phonebook - N: Use handset phonebook
Default Value	N

NETWORK_SEARCH_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to perform the phonebook search at the time of the receiving the incoming or the searching the received log.
Value Range	- Y: Enable phonebook search - N: Disable
Default Value	N

NW_PHONEBOOK_ADVANCED_SEARCH

Value Format	BOOLEAN
Description	Specifies whether to perform a narrowing search with the LDAP phonebook.
Value Range	- Y: Enable - N: Disable
Default Value	N

5.3.20 Language Settings

AVAILABLE_LANGUAGE_HS

Value Format	STRING
Description	Specifies the selectable language on the handset.

Value Range	en, es, fr, de, it, da, nl, sv, fi, el, hu, pt, pl, sk, cs, sh, ru, uk, tr, no, ro, ct, kk, me → see 4.4.2.1 Selectable Language
Web User Interface Reference	Handset

DEFAULT_LANGUAGE_HSy

Parameter Name Example	DEFAULT_LANGUAGE_HS1, DEFAULT_LANGUAGE_HS2, ..., DEFAULT_LANGUAGE_HS8
Value Format	STRING
Description	Specifies the default language on the handset.
Value Range	en, es, fr, de, it, da, nl, sv, fi, el, hu, pt, pl, sk, cs, sh, ru, uk, tr, no, ro, ct, kk, me → see 4.4.2.1 Selectable Language
Default Value	en
Web User Interface Reference	Language

HS_LANGUAGE_PATHx

Parameter Name Example	HS_LANGUAGE_PATH1, HS_LANGUAGE_PATH2, ..., HS_LANGUAGE_PATH10
Value Format	STRING
Description	Specifies the URI of the language file. x=1–10
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

HS_LANGUAGE_VERx

Parameter Name Example	HS_LANGUAGE_VER1, HS_LANGUAGE_VER2, ..., HS_LANGUAGE_VER10
Value Format	STRING
Description	Specifies the version of the language file. x=1–10
Value Range	"00.000.000"–"15.999.999"
Default Value	Empty string

HS_LANGUAGE_UX1_PATHx (For KX-TPA70/KX-TPA73)

Parameter Name Example	HS_LANGUAGE_UX1_PATH1, HS_LANGUAGE_UX1_PATH2, ..., HS_LANGUAGE_UX1_PATH10
Value Format	STRING
Description	Specifies the URI of the language file for KX-TPA70/KX-TPA73. x=1–10

Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

HS_LANGUAGE_UX1_VERx (For KX-TPA70/KX-TPA73)

Parameter Name Example	HS_LANGUAGE_UX1_VER1, HS_LANGUAGE_UX1_VER2, ..., HS_LANGUAGE_UX1_VER10
Value Format	STRING
Description	Specifies the version of the language file for KX-TPA70/KX-TPA73. x=1–10
Value Range	"00.000.000"–"15.999.999"
Default Value	Empty string

AVAILABLE_LANGUAGE_WEB

Value Format	STRING
Description	Specifies the selectable language on the Web.
Value Range	en, es, fr, de, it, nl, el, hu, pt, pl, sk, cs, sh, ru, uk, tr, ro, ct, kk, me → see 4.4.2.1 Selectable Language
Web User Interface Reference	Web

WEB_LANGUAGE

Value Format	STRING
Description	Specifies the default language on the handset.
Value Range	en, es, fr, de, it, nl, el, hu, pt, pl, sk, cs, sh, ru, uk, tr, ro, ct, kk, me → see 4.4.2.1 Selectable Language
Default Value	en
Web User Interface Reference	Web Language

WEB_LANGUAGE_PATHx

Parameter Name Example	WEB_LANGUAGE_PATH1, WEB_LANGUAGE_PATH2, ..., WEB_LANGUAGE_PATH10
Value Format	STRING
Description	Specifies the URI of the language file. x=1–10
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.

Default Value	Empty string
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WEB_LANGUAGE_VERx

Parameter Name Example	WEB_LANGUAGE_VER1, WEB_LANGUAGE_VER2, ..., WEB_LANGUAGE_VER10
Value Format	STRING
Description	Specifies the version of the language file. x=1–10
Value Range	"00.000.000"–"15.999.999"
Default Value	Empty string

5.3.21 NAT Settings

STUN_SERV_ADDR

Value Format	STRING
Description	Specifies the IP address or FQDN of the primary STUN server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Server Address

STUN_SERV_PORT

Value Format	INTEGER
Description	Specifies the port of the primary STUN server.
Value Range	1–65535
Default Value	3478
Web User Interface Reference	Port

STUN_2NDSERV_ADDR

Value Format	STRING
Description	Specifies the IP address or FQDN of the secondary STUN server.
Value Range	Max. 256 characters
Default Value	Empty string

STUN_2NDSERV_PORT

Value Format	INTEGER
Description	Specifies the port number of the secondary STUN server.
Value Range	1–65535
Default Value	3478

STUN_INTVL

Value Format	INTEGER
Description	Specifies the interval of the sending binding request.
Value Range	60–86400
Default Value	300
Web User Interface Reference	Binding Interval

SIP_ADD_RPORT

Value Format	BOOLEAN
Description	Specifies whether to add the 'rport' parameter to the top Via header field value of requests generated.
Value Range	• Y: Enable Rport • N: Disable
Default Value	N
Web User Interface Reference	Enable Rport (RFC 3581)

PORT_PUNCH_INTVL

Value Format	INTEGER
Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet in order to maintain the NAT binding information for SIP packet.
Value Range	0, 10–300 0: Disable
Default Value	0
Web User Interface Reference	Enable Port Punching for SIP

RTP_PORT_PUNCH_INTVL

Value Format	INTEGER
Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet in order to maintain the NAT binding information for RTP packet.
Value Range	0, 10–300 0: Disable
Default Value	0
Web User Interface Reference	Enable Port Punching for RTP

EXTERNAL_RTP_PORTx

Value Format	INTEGER
Description	x=1–10 Specifies the port number of the router in Static NAT status.

Value Range	• 0, 1024–59998 (only even ports) • 0: Disable
Default Value	0

5.3.22 SIP Settings

SIP_USER_AGENT

Value Format	STRING
Description	Specifies the text string to send as the user agent in the headers of SIP messages.
Value Range	Max. 64 characters Note • If "{mac}" is included in this parameter, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this parameter, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. • If "{fwver}" is included in this parameter, it will be replaced with the firmware version of the unit. • If "{sipver}" is included in this parameter, it will be replaced with the SIP software version of the unit.
Default Value	Panasonic-{MODEL}/{fwver} ({mac})
Web User Interface Reference	User Agent

PHONE_NUMBER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the phone number to use as the user ID required for registration to the SIP registrar server. Note • When registering using a user ID that is not a phone number, you should use the "SIP_URI_n" setting.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Phone Number

SIP_URI_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING

Description	Specifies the unique ID used by the SIP registrar server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:user@example.com", "2405551111_1". Note - When registering using a user ID that is not a phone number, you should use this setting. - In a SIP URI, the user part ("user" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters.
Value Range	Max. 384 characters
Default Value	Empty string
Web User Interface Reference	SIP URI

SIP_RGSTR_ADDR_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the IP address or FQDN of the SIP registrar server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Registrar Server Address

SIP_RGSTR_PORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the port number to use for communication with the SIP registrar server.
Value Range	1–65535
Default Value	5060
Web User Interface Reference	Registrar Server Port

SIP_PRXY_ADDR_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the IP address or FQDN of the SIP proxy server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Proxy Server Address

SIP_PRXY_PORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
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Value Format	INTEGER
Description	Specifies the port number to use for communication with the SIP proxy server.
Value Range	1–65535
Default Value	5060
Web User Interface Reference	Proxy Server Port

SIP_PRSNC_ADDR_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the IP address or FQDN of the SIP presence server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Presence Server Address

SIP_PRSNC_PORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the port number to use for communication with the SIP presence server.
Value Range	1–65535
Default Value	5060
Web User Interface Reference	Presence Server Port

SIP_OUTPROXY_ADDR_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the IP address or FQDN of the SIP outbound proxy server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Outbound Proxy Server Address

SIP_OUTPROXY_PORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the port number to use for communication with the SIP outbound proxy server.
Value Range	1–65535
Default Value	5060

Web User Interface Reference	Outbound Proxy Server Port
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SIP_SVCDOMAIN_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the domain name provided by your phone system dealer/ service provider. The domain name is the part of the SIP URI that comes after the "@" symbol.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Service Domain

SIP_AUTHID_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the authentication ID required to access the SIP server.
Value Range	Max. 128 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Authentication ID

SIP_PASS_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the authentication password used to access the SIP server.
Value Range	Max. 128 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Authentication Password

SIP_SRC_PORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the source port number used by the unit for SIP communication.
Value Range	1024–49151 Note - The SIP port number for each line must be unique. - If "Enable SIP Trunk Service" is set to "Yes" or "SIP_TRUNK_MODE_ENABLE" is set to "Y", the settings for "SIP_SRC_PORT_2" to "SIP_SRC_PORT_8" are disabled. The settings will be the same as "SIP_SRC_PORT_1".

Default Value	SIP_SRC_PORT_1="5060" SIP_SRC_PORT_2="5070" SIP_SRC_PORT_3="5080" SIP_SRC_PORT_4="5090" SIP_SRC_PORT_5="5100" SIP_SRC_PORT_6="5110" SIP_SRC_PORT_7="5120" SIP_SRC_PORT_8="5130"
Web User Interface Reference	Local SIP Port

DSCP_SIP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the DSCP level of DiffServ applied to SIP packets.
Value Range	0–63
Default Value	0
Web User Interface Reference	SIP Packet QoS (DSCP)

SIP_DNSSRV_ENA_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to request the DNS server to translate domain names into IP addresses using the SRV record.
Value Range	Y: Enable DNS SRV lookup N: Disable DNS SRV lookup Note - If set to "Y", the unit will perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server. - If set to "N", the unit will not perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server.
Default Value	Y
Web User Interface Reference	Enable DNS SRV lookup

SIP_UDP_SRV_PREFIX_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING

Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using UDP. Note This setting is available only when "SIP_DNSSRV_ENA_n" is set to "Y".
Value Range	Max. 32 characters
Default Value	_sip._udp.
Web User Interface Reference	SRV lookup Prefix for UDP

SIP_TCP_SRV_PREFIX_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TCP. Note This setting is available only when "SIP_DNSSRV_ENA_n" is set to "Y".
Value Range	Max. 32 characters
Default Value	_sip._tcp.
Web User Interface Reference	SRV lookup Prefix for TCP

REG_EXPIRE_TIME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the length of time, in seconds, that the registration remains valid. This value is set in the "Expires" header of the REGISTER request.
Value Range	1–4294967295
Default Value	3600
Web User Interface Reference	REGISTER Expires Timer

REG_INTERVAL_RATE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the percentage of the "expires" value after which to refresh registration by sending a new REGISTER message in the same dialog.
Value Range	1–100
Default Value	50

REG_RTX_INTVL_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the interval, in seconds, between transmissions of the REGISTER request when a registration results in failure (server no reply or error reply).
Value Range	1–86400
Default Value	10

USE_DEL_REG_OPEN_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable cancelation before registration when, for example, the unit is turned on.
Value Range	• Y: Send un-REGISTER • N: Does not send
Default Value	N

USE_DEL_REG_CLOSE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable the cancelation of registration before the SIP function shuts down when, for example, the configuration has changed.
Value Range	• Y: Send un-REGISTER • N: Does not send
Default Value	N

SIP_SESSION_TIME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the length of time, in seconds, that the unit waits before terminating SIP sessions when no reply to repeated requests is received. For details, refer to RFC 4028.
Value Range	0, 60–65535 (0: Disable)
Default Value	0
Web User Interface Reference	Enable Session Timer (RFC 4028)

SIP_SESSION_METHOD_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
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Value Format	INTEGER
Description	Specifies the refreshing method of SIP sessions.
Value Range	0–2 – 0: reINVITE – 1: UPDATE – 2: AUTO
Default Value	0
Web User Interface Reference	Session Timer Method

SIP_TIMER_T1_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the default interval, in milliseconds, between transmissions of SIP messages. For details, refer to RFC 3261.
Value Range	• 250 • 500 • 1000 • 2000 • 4000
Default Value	500
Web User Interface Reference	T1 Timer

SIP_TIMER_T2_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the maximum interval, in seconds, between transmissions of SIP messages. For details, refer to RFC 3261.
Value Range	• 2 • 4 • 8 • 16 • 32
Default Value	4
Web User Interface Reference	T2 Timer

SIP_TIMER_T4_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER

Description	Specifies the maximum period, in seconds, that a message can remain on the network.
Value Range	• 0 • 1 • 2 • 3 • 4 • 5
Default Value	5

SIP_TIMER_B_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the value of SIP timer B (INVITE transaction timeout timer), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000

SIP_TIMER_D_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the value of SIP timer D (wait time for answer resending), in milliseconds. For details, refer to RFC 3261.
Value Range	0, 250–64000
Default Value	5000

SIP_TIMER_F_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the value of SIP timer F (non-INVITE transaction timeout timer), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000

SIP_TIMER_H_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the value of SIP timer H (wait time for ACK reception), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000

Default Value	32000
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SIP_TIMER_J_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the value of SIP timer J (wait time for non-INVITE request resending), in milliseconds. For details, refer to RFC 3261.
Value Range	0, 250–64000
Default Value	5000

SIP_100REL_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add the option tag 100rel to the "Supported" header of the INVITE message. For details, refer to RFC 3262.
Value Range	• Y: Enable 100rel function • N: Disable 100rel function Note • If set to "Y", the Reliability of Provisional Responses function will be enabled. The option tag 100rel will be added to the "Supported" header of the INVITE message and to the "Require" header of the "1xx" provisional message. • If set to "N", the option tag 100rel will not be used.
Default Value	Y
Web User Interface Reference	Enable 100rel (RFC 3262)

SIP_18X_RTX_INTVL_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the retransmission interval, in seconds, for "18x" responses.
Value Range	0, 1–600 (0: Disable)
Default Value	0

SIP_SUBS_EXPIRE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the length of time, in seconds, that the subscription remains valid. This value is set in the "Expires" header of the SUBSCRIBE request.
Value Range	1–4294967295

Default Value	3600
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SUB_INTERVAL_RATE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the percentage of the "expires" value after which to refresh subscriptions by sending a new SUBSCRIBE message in the same dialog.
Value Range	1–100
Default Value	50

SUB_RTX_INTVL_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the interval, in seconds, between transmissions of SUBSCRIBE requests when a subscription results in failure (server no reply or error reply).
Value Range	1–86400
Default Value	10

SIP_P_PREFERRED_ID_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add the "P-Preferred-Identity" header to SIP messages.
Value Range	Y: Add the "P-Preferred-Identity" header N: Do not add the "P-Preferred-Identity" header
Default Value	N

SIP_PRIVACY_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add the "Privacy" header to SIP messages.
Value Range	Y: Add the "Privacy" header N: Do not add the "Privacy" header
Default Value	N

ADD_USER_PHONE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN

Description	Specifies whether to add "user=phone" to the SIP URI in SIP messages.
Value Range	• Y: Add "user=phone" • N: Do not add "user=phone" Note • SIP URI example: – "sip:1111@tokyo.example.com;user=phone", when set to "Y" – "sip:1111@tokyo.example.com", when set to "N"
Default Value	N

SIP_ANM_DISPNAME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the text string to set as the display name in the "From" header when making anonymous calls.
Value Range	• 0: Use normal display name • 1: Use "Anonymous" for display name • 2: Do not send a display name
Default Value	1

SIP_ANM_USERNAME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the text string to set as the user name in the "From" header when making anonymous calls.
Value Range	• 0: Use normal user name • 1: Use "anonymous" for user name • 2: Do not send a user name
Default Value	0

SIP_ANM_HOSTNAME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to set an anonymous host name in the "From" header when making anonymous calls.
Value Range	• Y: Use "anonymous.invalid" for host name • N: Use normal host name
Default Value	N

SIP_DETECT_SSAF_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable SSAF for the SIP servers (registrar server, proxy server, and presence server).
Value Range	• Y: Enable SSAF • N: Disable SSAF Note • If set to "Y", the unit receives SIP messages only from the source addresses stored in the SIP servers (registrar server, proxy server, and presence server), and not from other addresses. However, if "SIP_OUTPROXY_ADDR_n" in 5.3.22 SIP Settings is specified, the unit also receives SIP messages from the source address stored in the SIP outbound proxy server.
Default Value	N
Web User Interface Reference	Enable SSAF (SIP Source Address Filter)

SIP_RCV_DET_HEADER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to check the user name part of the SIP URI in the "To" header when receiving the INVITE message with an incorrect target SIP URI.
Value Range	• Y: Enable username check • N: Disable username check Note • If set to "Y", the unit will return an error reply when it receives the INVITE message with an incorrect target SIP URI. • If set to "N", the unit will not check the user name part of the SIP URI in the "To" header.
Default Value	N

SIP_RCV_DET_REQURI_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to check ReqURI that is the part of SIP URI in "To" header when INVITE with wrong target SIP URI is received.
Value Range	• Y • N

Default Value	N
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SIP_CONTACT_ON_ACK_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add the "Contact" header to SIP ACK message.
Value Range	- Y: Add the "Contact" header - N: Do not add the "Contact" header
Default Value	N

VOICE_MESSAGE_AVAILABLE

Value Format	BOOLEAN
Description	Specifies how the existence of voice messages is determined when a "Messages-Waiting: yes" message is received.
Value Range	- Y: Determines that voice messages exist when "Messages-Waiting: yes" is received with a "Voice-Message" line included. - N: Determines that voice messages exist when "Messages-Waiting: yes" is received even without a "Voice-Message" line included.
Default Value	Y

SIP_INVITE_EXPIRE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the period, in seconds, in which the INVITE message will expire.
Value Range	0, 60–65535 (0: Disable)
Default Value	0

SIP_FOVR_NORSP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to perform the fail-over process when the unit detects that the SIP server is not replying to SIP message.
Value Range	- Y: Enable fail-over - N: Disable fail-over Note - If set to "Y", the unit will try to use the other SIP servers via the DNS SRV and A records. - If set to "N", the unit will not try to use the other SIP servers.

Default Value	Y
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SIP_FOVR_MAX_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the maximum number of servers (including the first [normal] server) used in the fail-over process.
Value Range	1–6
Default Value	2

SIP_FOVR_MODE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether INVITE/SUBSCRIBE will also follow the REGISTER Failover result.
Value Range	- Y: INVITE/SUBSCRIBE will follow the REGISTER Failover result. - N: INVITE/SUBSCRIBE will not follow the REGISTER Failover result.
Default Value	N

SIP_FOVR_DURATION_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the number of transmission times for the REGISTER method at the Failover destination.
Value Range	0–255
Default Value	0

SIP_ADD_ROUTE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether or not to add Route headers when setting OutBoundProxy. Note Route headers are not added when OutBoundProxy and other server settings are the same.
Value Range	- Y: Route headers are added - N: Route headers are not added
Default Value	Y

SIP_REQUIRE_PORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add the port parameter to the Request-Line in the initial SIP request.
Value Range	• Y: Add the port parameter • N: Do not add the port parameter Note • Request URI in REGISTER example: – If set to "Y", the port parameter is added to the Request-Line, as follows: Request-Line: REGISTER sip:192.168.0.10:5060 SIP/2.0 – If set to "N", the port parameter is not added to the Request-Line, as follows: Request-Line: REGISTER sip:192.168.0.10 SIP/2.0
Default Value	Y

ADD_EXPIRES_HEADER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add an "Expires" header to REGISTER (adds an "expires" parameter to the "Contact" header).
Value Range	• Y: Add Expires Header • N: Do not add Expires Header
Default Value	N

ADD_TRANSPORT_UDP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to add the attribute "transport=udp" to the SIP header URI.
Value Range	• Y: Add Transport UDP • N: Do not add Transport UDP
Default Value	N

SIP_ADD_DIVERSION_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to add Diversion header information.

Value Range	0–2 – 0: Do not add Diversion header information – 1: Use own diversion information only for the Diversion header – 2: Add diversion information to existing Diversion header
Default Value	0

TRANSFER_RECALL_TIM

Value Format	INTEGER
Description	Specifies the time, in seconds, in which a transferred call will recall when the SIP server does not reply to SIP REFER message.
Value Range	0, 1–240
Default Value	0

SIGNAL_COMPRESSION_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to use signal compression. When using signal compression, select Required or Supported.
Value Range	• 0: Disable • 1: Enable (Required) • 2: Enable (Supported)
Default Value	0

MAX_BREADTH_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the Max Breadth that is max Fork number at Proxy.
Value Range	0–99 (0: Not add max-breadth header)
Default Value	60

RINGTONE_183_180_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to ring the local ringback tone when 180 is received after receiving 183 Early media.
Value Range	• Y: Performs ringback tone after early media • N: Does not perform
Default Value	N

SIP_403_REG_SUB_RTX_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether or not to send a request when a 403 Forbidden reply is received from the server in response to a REGISTER or SUBSCRIBE.
Value Range	• Y: Send • N: Do not send
Default Value	N

SIP_FORK_MODE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to use SIP Fork.
Value Range	• Y: Use SIP Fork • N: Not use SIP Fork
Default Value	Y

RFC2543_HOLD_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable the RFC 2543 Call Hold feature on this line.
Value Range	• Y: Enable RFC 2543 Call Hold • N: Disable RFC 2543 Call Hold Note • If set to "Y", the "c=0.0.0.0" syntax will be set in SDP when sending a re-INVITE message to hold the call. • If set to "N", the "c=x.x.x.x" syntax will be set in SDP.
Default Value	Y
Web User Interface Reference	Enable c=0.0.0.0 Hold (RFC 2543)

SIP_HOLD_ATTRIBUTE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to set "a=inactive " or not when the call is on hold.
Value Range	• 0: send only • 1: inactive

Default Value	0
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SDP_USER_ID_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the user ID used in the "o=" line field of SDP.
Value Range	Max. 32 characters
Default Value	Empty string

TELEVENT_PAYLOAD

Value Format	INTEGER
Description	Specifies the RFC 2833 payload type for DTMF tones. Note This setting is available only when "DTMF_METHOD_n" is set to "0".
Value Range	96–127
Default Value	101
Web User Interface Reference	Telephone-event Payload Type

HOLD_SOUND_PATH_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether the unit's hold tone or the network server's hold tone (Music on hold) is played when a party is put on hold. Note - It is necessary to set the following parameters to play the unit's hold tone. - HOLD_TONE_FRQ - HOLD_TONE_GAIN
Value Range	0–1 0: The unit's hold tone is played. 1: The network server's hold tone (Music on hold) is played.
Default Value	0

KEEP_EARLYMEDIA_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN

Description	Specifies whether to continue Early Media call or not when 18x without SDP is received after Early Media connection is established while making a call.
Value Range	• Y: Continues • N: Does not continue (Switch to ringback tone)
Default Value	N

RFC3327_SUPPORT_PATH

Value Format	BOOLEAN
Description	Specifies whether to add "supported: path" to support Path header.
Value Range	• Y: Adds supported: path • N: Does not add
Default Value	Y

RFC6947_DRAFT08_ALTC

Value Format	BOOLEAN
Description	Specifies whether to support RFC6947 draft08 when the attvalue is not attached after altc.
Value Range	• Y: Performs ALTC by Draft08 • N: Performs ALTC by RFC6947
Default Value	Y

ESCAPECODE_CONVERSION

Value Format	BOOLEAN
Description	Specifies whether to convert "#" code to "%23".
Value Range	• Y: Convert "#" code to "%23" • N: Does not convert
Default Value	Y

SIP_REPLACE_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to use "Replaces" Header.
Value Range	• Y: Use "Replaces" Header • N: Do not use "Replaces" Header
Default Value	Y

SEND_180_ALERT_ENABLE

Value Format	BOOLEAN
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Description	Specifies whether to send 180 before an alert.
Value Range	• Y: Send 180 • N: Do not send 180
Default Value	N

SIP_INC_INVITE_RTP_MODE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to send RTP after receiving a second INVITE.
Value Range	• 0: Start receiving RTP after receiving a second INVITE • 1: Start sending/receiving RTP after receiving a second INVITE
Default Value	0

SIP_183_TALK_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the unit's state is "Talking" or "Calling" when it receives a SIP 183 message.
Value Range	• Y: Talking • N: Calling
Default Value	N

SIP_DNSSRV_ENA_NAPTR_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable the use of the NAPTR sequence.
Value Range	• Y: Enable • N: Disable Note • If this setting is set to "Y", match the protocol of NAPTR with the setting for "Transport Protocol" or "SIP_TRANSPORT_n".
Default Value	N

SIP_REFRESHER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to add the refresher parameter for Session Expire in SIP INVITE.

Value Range	0–2 – 0: Do not add the refresher parameter – 1: Add the refresher parameter with the value "UAS" – 2: Add the refresher parameter with the value "UAC"
Default Value	0

ENH_FOVR_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable Enhanced Failover mode.
Value Range	• Y: Enable • N: Disable
Default Value	N

ENH_FOVR_RANDOM_TIMER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether the retry timer is a fixed value or a random value when the unit re-sends a REGISTER request when a failover failure has occurred. Note • This setting is available only when "ENH_FOVR_ENABLE_n" is set to "Y". • For the fixed value setting, see REG_RTX_INTVL_n, page 263.
Value Range	• Y: Use a random value • N: Use a fixed value
Default Value	N

ENH_FOVR_RANDOM_MAX_TIME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the maximum value, in seconds, of the retry timer, which determines the interval for re-sending REGISTER requests, when the retry timer is set to be a random value. Note • This setting is available only when "ENH_FOVR_RANDOM_TIMER_n" is set to "Y".
Value Range	10-86400
Default Value	15

ENH_FOVR_RANDOM_MIN_TIME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the minimum value, in seconds, of the retry timer, which determines the interval for re-sending REGISTER requests, when the retry timer is set to be a random value. Note This setting is available only when "ENH_FOVR_RANDOM_TIMER_n" is set to "Y".
Value Range	10-86400
Default Value	10

INVITE_403_REGSEND_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable sending a REGISTER request to the SIP server after receiving 403 error in response to an INVITE request.
Value Range	Y: Enable N: Disable
Default Value	N

ESCAPECODE_CONVERSION_RFC3986

Value Format	BOOLEAN
Description	Specifies whether to comply with RFC2396 or RFC3986 for reserved characters.
Value Range	Y: RFC3986 compliant N: RFC2396 compliant
Default Value	N

ENH_FOVR_RESPONSE_CODE

Value Format	STRING
Description	Specifies the error code for failover. Note The available error codes are: 403, 404, 406, 408, 480, 488, 500, 502, 503, 504, 600, 603, 604, 606 Example: ENH_FOVR_RESPONSE_CODE="408, 603"
Value Range	Max. 256 characters
Default Value	Empty string

ENH_FOVR_REGISTER_ENABLE_n

For details about parameter names end with "_n", see "5.2.1 Configuration File Parameters" in Administrator Guide.

Value Format	BOOLEAN
Description	Specifies whether to enable failover when the response to a REGISTER request is the error code set for ENH_FOVR_RESPONSE_CODE.
Value Range	• Y: Enable • N: Disable
Default Value	Y

ENH_FOVR_INVITE_ENABLE_n

For details about parameter names end with "_n", see "5.2.1 Configuration File Parameters" in Administrator Guide.

Value Format	BOOLEAN
Description	Specifies whether to enable failover when the response to an INVITE request is the error code set for ENH_FOVR_RESPONSE_CODE.
Value Range	• Y: Enable • N: Disable
Default Value	Y

ENH_FOVR_SUBSCRIBE_ENABLE_n

For details about parameter names end with "_n", see "5.2.1 Configuration File Parameters" in Administrator Guide.

Value Format	BOOLEAN
Description	Specifies whether to enable failover when the response to a SUBSCRIBE request is the error code set for ENH_FOVR_RESPONSE_CODE.
Value Range	• Y: Enable • N: Disable
Default Value	Y

ENH_FOVR_BYE_ENABLE_n

For details about parameter names end with "_n", see "5.2.1 Configuration File Parameters" in Administrator Guide.

Value Format	BOOLEAN
Description	Specifies whether to enable failover when the response to a BYE request is the error code set for ENH_FOVR_RESPONSE_CODE.
Value Range	• Y: Enable • N: Disable
Default Value	Y

SUBSCRIBE_403_REGSEND_ENABLE_n

For details about parameter names end with "_n", see "5.2.1 Configuration File Parameters" in Administrator Guide.

Value Format	BOOLEAN
Description	Specifies whether to send a REGISTER request when "403" is received as the response to a SUBSCRIBE request.
Value Range	• Y: Send • N: Do not send
Default Value	N

SIP_UDP_RANDOM_PORT

Value Format	BOOLEAN
Description	Specifies whether to assign a source port number randomly (ephemeral port) or to use a static source port number when using UDP. Note • This parameter applies to all lines that use UDP.
Value Range	• Y: Assign a source port number randomly • N: Use a static source port number (Refer to SIP_SRC_PORT_n)
Default Value	N
Web User Interface Reference	UDP Port Random

ADD_PORT_FROM_AND_TO_HEADER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters

Value Format	BOOLEAN
Description	Specifies whether to add the SIP port number to the "From" and "To" headers.
Value Range	• Y: Add • N: Do not add Note Operation if set to "Y": • If the phone receives a message with a SIP port number to the "From" / "To" headers from the server, the phone adds the SIP port number in the transactions that follow in the same dialog. • The phone does not add the SIP port number to the "From" / "To" headers in the initial INVITE when it makes a call. • The phone does not add the SIP port number in SIP methods other than the incoming call dialog (e.g., REGISTER, SUBSCRIBE).

Default Value	N
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NAPTR_WITH_OUTPROXY_ENABLE_n

Value Format	BOOLEAN
Description	Specifies whether to enable sending NAPTR even when Outbound Proxy Server Address or SIP_OUTPROXY_ADDR_n is set.
Value Range	- Y: Enable - N: Disable Note - This setting is available only when "SIP_DNSSRV_ENA_NAPTR_n" is set to "Y".
Default Value	N

SIP_TRANSPORT_NAPTR_ENABLE_n

Value Format	BOOLEAN
Description	Specifies whether to enable to select the protocol (UDT,TCP or TLS) for SIP by the NAPTR response. At the same time specifies whether to enable to select the secure protocol (SIPS or TLS) for SIP by the NAPTR response.
Value Range	- Y: Enable - N: Disable Note If "Y" is specified, the following settings will be invalid. - Web User Interface Programming Transport Protocol, TLS Mode - Configuration File Programming SIP_TRANSPORT_n, SIP_TLS_MODE_n
Default Value	N

SRTP_CONNECT_MODE_NAPTR_ENABLE_n

Value Format	BOOLEAN
Description	Specifies whether to enable to select the type of RTP (RTP or SRTP) by the NAPTR response.
Value Range	- Y: Enable - N: Disable Note If "Y" is specified, the following settings will be invalid. - Web User Interface Programming SRTP Mode - Configuration File Programming SRTP_CONNECT_MODE_n
Default Value	N

SEND_182_QUEUED_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enhance failover with shared line or not.
Value Range	- Y: Enable to send protocol "182" before replying (200 OK) from handset - N: Disable
Default Value	N

SIP_FOVR_FAILBACK_ENABLE_n

Value Format	BOOLEAN
Description	Specifies whether performs failback. When this parameter is disabled, TGP600 does not perform failback after the once failover performed.
Value Range	- Y: Enable - N: Disable
Default Value	Y

PRIVACY_FLEXIBLE_MODE_n (For KX-TPA68)

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to force the display and key control of the Line Notification function to depend on the setting of "OUTGOING_CALL_LINE_HSy".
Value Range	- Y: Force dependency - N: Do not force dependency Note - If "PRIVACY_MODE_n" is set to "N" If this setting is set to "Y", the Line Notification function is enabled for lines where "OUTGOING_CALL_LINE_HSy" is set to "1". If this setting is set to "N", the Line Notification function is enabled regardless of the "OUTGOING_CALL_LINE_HSy" setting. - If "PRIVACY_MODE_n" is set to "Y" The Line notification functions is disabled, regardless of any other settings.
Default Value	N

PRIVACY_LEVEL_n (For KX-TPA68)

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	Comma-separated Integer

Description	Specifies the level of display and key control for the Line Notification function for each line.
Value Range	Specify this setting for 8 handsets, regardless of the actual registration status of the handsets. For example: PRIVACY_LEVEL_1=x,x,x,x,x,x,x,x (From the left, each x indicates the function level for handsets 1, 2, 3, 4, 5, 6, 7, and 8 respectively. Function level: 1–3 (Y: enabled, N: disabled) • 1 = Y,N,N,N,N (only display is enabled) • 2 = Y,Y,Y,Y,N (all functions except barge-in are enabled) • 3 = Y,Y,Y,Y,Y (all functions are enabled) The functions enabled/disabled in each function level correspond, from the left, to a,b,c,d,e below. • a: Display • b: Make a call • c: Call pickup • d: Call hold retrieve • e: Barge-in
Default Value	3,3,3,3,3,3,3,3

5.3.23 SIP-TLS Settings

SIP_TRANSPORT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies which transport layer protocol to use for sending SIP packets.
Value Range	• 0: UDP • 1: TCP • 2: TLS Note • If "SIP_DNSSRV_ENA_NAPTR_n" is set to "Y", match the protocol of NAPTR with the setting for "Transport Protocol" or "SIP_TRANSPORT_n".
Default Value	0
Web User Interface Reference	Transport Protocol

SIP_TLS_MODE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the secure SIP protocol.

Value Range	• 0: SIPS • 1: SIP-TLS
Default Value	0
Web User Interface Reference	TLS Mode

SIP_TLS_RECONNECT_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to perform TLS reconnect after TLS session is disconnected.
Value Range	• y: Performs TLS connection automatically • n: Does not perform
Default Value	y

SIP_TLS_SRV_PREFIX_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TLS.
Value Range	Max. 32 characters
Default Value	_sips._tcp.
Web User Interface Reference	SRV lookup Prefix for TLS

SIP_TLS_VERIFY_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to enable the verification of the root certificate.
Value Range	• 0: No verification • 1: Simple verification • 2: Precise verification • 3: Precise verification with CN check.
Default Value	0

SIP_TLS_ROOT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the root certificate is stored.

Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

SIP_TLS_CLIENT_CERT_PATH

Value Format	STRING
Description	Specifies the URI where the client certificate is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

SIP_TLS_PKEY_PATH

Value Format	STRING
Description	Specifies the URI where the private key is stored.
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

SIP_TLS_RANDOM_PORT

Value Format	BOOLEAN
Description	Specifies whether to assign a random port (ephemeral port) number or a static port number. Note - All lines that use SIP-TLS are defined by this parameter. - UDP/TCP ports are unaffected by this parameter.
Value Range	- Y: Assign a random TLS port number - N: Assign a static TLS port number (Refer to SIP_SRC_PORT_n)
Default Value	Y

5.3.24 CODEC Settings**CODEC_G729_PARAM_n**

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters

Value Format	INTEGER
Description	Specifies whether to add an attribute line, "a=fmtp:18 annexb=no", to SDP when the codec is set to "G729A".
Value Range	0: Do not add "a=fmtp:18 annexb=no" 1: Add "a=fmtp:18 annexb=no"
Default Value	0

CODEC_ENABLEx_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable the codec specified in the parameter list. Note - The "x" character in the parameter title should be changed to one of the following numbers, according to the codec to be changed. 0: G.722 1: PCMA 2: G.722.2 (AMR-WB) 3: G.729A 4: PCMU - For codec setting examples, see 2.5.1 Examples of Codec Settings.
Value Range	- Y: Enable - N: Disable
Default Value	Y
Web User Interface Reference	- G.722 (Enable) - PCMA (Enable) - G.722.2 (AMR-WB) (Enable) - G.729A (Enable) - PCMU (Enable)

CODEC_PRIORITYx_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER

Description	Specifies the priority order for the codec. Note - The "x" character in the parameter title should be changed to one of the following numbers, according to the codec to be changed. 0: G.722 1: PCMA 2: G.722.2 (AMR-WB) 3: G.729A 4: PCMU - For codec setting examples, see 2.5.1 Examples of Codec Settings.
Value Range	1–255
Default Value	1
Web User Interface Reference	- G.722 (Priority) - PCMA (Priority) - G.722.2 (AMR-WB) (Enable) - G.729A (Priority) - PCMU (Priority)

CODEC_PAYLOAD2

Value Format	INTEGER
Description	Specifies the payload type for the codec (G.722.2).
Value Range	96–127
Default Value	99

CODEC_G711_REQ

Value Format	INTEGER
Description	Specifies whether to automatically select "PCMU" as the codec when a codec other than "PCMU" is selected.
Value Range	0: Do not set "PCMU" 1: Set "PCMU"
Default Value	1

5.3.25 DTMF Settings

DTMF_METHOD_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER

Description	Specifies the method to notify the DTMF.
Value Range	• 0: RFC2833 • 1: Inband • 2: SIP INFO • 3: RFC2833 & SIP INFO Note • RFC2833 refers to Outband DTMF. • Inband refers to Inband DTMF.
Default Value	0
Web User Interface Reference	DTMF Type

OUTBANDDTMF_VOL

Value Format	INTEGER
Description	Specifies the volume (in decibels [dB]) of the DTMF tone using RFC 2833.
Value Range	-63–0
Default Value	-5

INBANDDTMF_VOL

Value Format	INTEGER
Description	Specifies the volume (in decibels [dB]) of in-band DTMF tones.
Value Range	-46–0
Default Value	-5

DTMF_SIGNAL_LEN

Value Format	INTEGER
Description	Specifies the length of the DTMF signal, in milliseconds.
Value Range	60–200
Default Value	180

DTMF_INTDIGIT_TIM

Value Format	INTEGER
Description	Specifies the interval, in milliseconds, between DTMF signals.
Value Range	60–200
Default Value	90

5.3.26 RTP/RTCP/RTCP-XR Settings

DSCP_RTP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the DSCP level of DiffServ applied to RTP packets.
Value Range	0–63
Default Value	0
Web User Interface Reference	RTP Packet QoS (DSCP)

DSCP_RTCP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the DSCP level of DiffServ applied to RTCP/RTCP-XR packets.
Value Range	0–63
Default Value	0
Web User Interface Reference	RTCP Packet QoS (DSCP)

MAX_DELAY_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the maximum delay, in 10-millisecond units, of the jitter buffer.
Value Range	3–50 (× 10 ms) Note - This setting is subject to the following conditions: – This value must be greater than "NOM_DELAY" – This value must be greater than "MIN_DELAY"
Default Value	20

MIN_DELAY_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the minimum delay, in 10-millisecond units, of the jitter buffer.

Value Range	1 or 2 (× 10 ms) Note - This setting is subject to the following conditions: - This value must be less than "MAX_DELAY"
Default Value	2

NOM_DELAY_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the initial delay, in 10-millisecond units, of the jitter buffer.
Value Range	1–7 (× 10 ms) Note - This setting is subject to the following conditions: - This value must be less than "MAX_DELAY"
Default Value	1

RTP_PORT_MIN

Value Format	INTEGER
Description	Specifies the lowest port number that the unit will use for RTP packets.
Value Range	1024–59598 (only even)
Default Value	16000
Web User Interface Reference	Minimum RTP Port Number

RTP_PORT_MAX

Value Format	INTEGER
Description	Specifies the highest port number that the unit will use for RTP packets.
Value Range	1424–59998 (only even)
Default Value	20000
Web User Interface Reference	Maximum RTP Port Number

RTP_PTIME

Value Format	INTEGER
Description	Specifies the interval, in milliseconds, between transmissions of RTP packets.

Value Range	• 20 • 30 • 40 • 60
Default Value	20
Web User Interface Reference	RTP Packet Time

RTCP_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable RTCP (Real-Time Transport Control Protocol). For details, refer to RFC 3550.
Value Range	• y: Enable RTCP • n: Disable RTCP
Default Value	n
Web User Interface Reference	Enable RTCP

RTCP_INTVL_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the interval, in seconds, between RTCP/RTCP-XR packets.
Value Range	5–65535
Default Value	5
Web User Interface Reference	RTCP&RTCP-XR Interval

RTCP_SEND_BY_SDP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies whether to send RTCP signals by SDP (Session Description Protocol).
Value Range	0–1 – 0: Send RTCP signals using the value specified in "RTCP_INTVL_n", if the "RTCP_ENABLE_n" parameter is enabled. – 1: Send RTCP signals using the value specified in the SDP attribute "a=rtcp".
Default Value	0

RTP_CLOSE_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
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Value Format	BOOLEAN
Description	Specifies whether to enable processing to close held RTP sockets.
Value Range	• Y: Enable RTP Close • N: Disable RTP Close
Default Value	N

RTCPXR_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable RTCP-XR.
Value Range	• Y: Enable RTCP-XR • N: Disable
Default Value	N
Web User Interface Reference	Enable RTCP-XR

5.3.27 SRTP Settings

SRTP_CONNECT_MODE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Specifies the mode of SRTP feature.
Value Range	• 0: SRTP • 1: RTP/SRTP • 2: Panasonic Original • 3: SRTP/RTP Note • 0: Use only SRTP for outgoing and incoming calls. • 1: Use only RTP for outgoing calls, and RTP or SRTP for incoming calls. • 2: Use RTP or SRTP for both outgoing and incoming calls. This value is valid only when the unit is connected to a Panasonic PBX. "SRTP_MIX_TRANSFER_ENABLE_n" must also be set to "Y". • 3: If you are using "RTP/AVP" and append "a=crypto", and the response message includes "a=crypto", the conversation will be established with SRTP. If "a=crypto" is not included, the conversation will be established with RTP.
Default Value	1
Web User Interface Reference	SRTP Mode

SRTP_MIX_CONFERENCE_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to allow conferences where each participant can use either SRTP or RTP.
Value Range	• Y: Enable • N: Disable
Default Value	N
Web User Interface Reference	Enable Mixed SRTP & RTP by Conference

SRTP_MIX_TRANSFER_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to allow call transfers between a user who is using SRTP and a user who is using RTP.
Value Range	• Y: Enable • N: Disable
Default Value	N
Web User Interface Reference	Enable Mixed SRTP & RTP by Transfer

SRTP_HELD_CALL_RTP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to allow playing the melody on hold over RTP on a call that is using SRTP.
Value Range	• Y: Enable • N: Disable
Default Value	Y

DISPLAY_SRTP_CALL_ENABLE

Value Format	BOOLEAN
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Description	Selects whether an icon is displayed when the unit is using encrypted call mode (SRTP). Note - If you enable displaying the encrypted call mode icon during SRTP calls, it is recommended that you set as below: - Set "DISPLAY_SECURITY_CALL_ENABLE" to "Y". To set the "TLS" condition for displaying the privacy icon during a conversation over SRTP. - Set "SIP_TRANSPORT_n" to "2". To send by TLS transport layer protocol. - Set "SIP_TLS_VERIFY_n" to "3". To do precise verification with CN check. - If "SIP_DNSSRV_ENA_NAPTR_n" is set to "Y", using SIP TLS for NAPTR is recommended.
Value Range	Y: Display an icon for encrypted calls N: Disable
Default Value	N

DISPLAY_SECURITY_CALL_ENABLE

Value Format	BOOLEAN
Description	Specifies the condition for displaying the privacy icon during a conversation over SRTP.
Value Range	Y: TLS N: UDP/TCP/TLS Note - This setting is available only when "DISPLAY_SRTP_CALL_ENABLE" is set to "Y".
Default Value	N

5.3.28 VQ Report by PUBLISH

VQREPORT_COLLECTOR_ADDRESS

Value Format	STRING
Description	Specifies the IP address or FQDN of the collector server.
Value Range	Max. 256 characters
Default Value	Empty string
Web User Interface Reference	Server Address

VQREPORT_COLLECTOR_PORT

Value Format	INTEGER
Description	Specifies the port of the collector server.

Value Range	1–65535
Default Value	5060
Web User Interface Reference	Port

VQREPORT_SEND

Value Format	INTEGER
Description	Specifies the sending type of the VQ report using PUBLISH.
Value Range	• 0: Disable • 1: End of Session Report Using PUBLISH • 2: Interval report Using PUBLISH • 3: Alert Report Using PUBLISH
Default Value	0
Web User Interface Reference	Enable PUBLISH

ALERT_REPORT_TRIGGER

Value Format	INTEGER
Description	Specifies the trigger to notify the VQ report.
Value Range	• 0: Warning • 1: Critical
Default Value	0
Web User Interface Reference	Alert Report Trigger

ALERT_REPORT_MOSQ_CRITICAL

Value Format	INTEGER
Description	Specifies the critical criteria to send VQ report at the time of occurring the MOSQ.
Value Range	0–40
Default Value	0
Web User Interface Reference	Threshold MOS-LQ (Critical)

ALERT_REPORT_MOSQ_WARNING

Value Format	INTEGER
Description	Specifies the warning criteria to send VQ report at the time of occurring the MOSQ.
Value Range	0–40
Default Value	0
Web User Interface Reference	Threshold MOS-LQ (Warning)

ALERT_REPORT_DELAY_CRITICAL

Value Format	INTEGER
Description	Specifies the critical criteria to send VQ report at the time of occurring the delay.
Value Range	0–2000
Default Value	0
Web User Interface Reference	Threshold Delay (Critical)

ALERT_REPORT_DELAY_WARNING

Value Format	INTEGER
Description	Specifies the warning criteria to send VQ report at the time of occurring the delay.
Value Range	0–2000
Default Value	0
Web User Interface Reference	Threshold Delay (Warning)

VQREPORT_SIGNAL_COMPRESSION

Value Format	BOOLEAN
Description	Specifies whether to use signal compression for sending VQ report.
Value Range	• Y: Enable • N: Disable
Default Value	N

VQREPORT_SEND_OPT_CODEC_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the sending of VQREPORT (SIP-PUBLISH) when the codec is changed.
Value Range	• Y: Send VQREPORT when a change of codec is detected • N: Send VQREPORT at the end of a conversation
Default Value	N

VQREPORT_SEND_OPT_NW_CHANGE

Value Format	INTEGER
Description	Specifies the number of consecutive times the MOS (Mean Opinion Score) value may fall below the threshold value specified by either ALERT_REPORT_MOSQ_CRITICAL or ALERT_REPORT_MOSQ_WARNING before the phone sends VQREPORT. The ALERT_REPORT_TRIGGER setting determines whether ALERT_REPORT_MOSQ_CRITICAL or ALERT_REPORT_MOSQ_WARNING is used as the threshold.

5.3.29 uaCSTA Settings

Value Range	0–5 (The number of consecutive times. 0:Disable) Example: • If "2" is specified and the MOS value falls within the threshold 2 consecutive times, VQREPORT is sent.
Default Value	0

VQREPORT_PACKET_LOSS_DETECTION

Value Format	BOOLEAN
Description	Specifies whether to enable improvement of the MOS value when accessing the Voice Mail Server. The MOS value is improved by changing the detection method for packet loss.
Value Range	• Y: Enable • N: Disable
Default Value	N

5.3.29 uaCSTA Settings

UACSTA_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the uaCSTA feature.
Value Range	• Y: Enable • N: Disable
Default Value	N

UACSTA_UNIQUE_ID

Value Format	STRING
Description	Specifies the SIP-URI for registering to CSTA server.
Value Range	Max. 64 characters
Default Value	Empty string

CSTA_PORT

Value Format	INTEGER
Description	Specifies the source port number used by the unit for uaCSTA communication.
Value Range	1–65535
Default Value	6060

CSTA_PRXY_ADDR

Value Format	STRING
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Description	Specifies the IP address or FQDN of the proxy server for CSTA.
Value Range	Max. 256 characters
Default Value	Empty string

CSTA_PRXY_PORT

Value Format	INTEGER
Description	Specifies the port of the proxy server for CSTA.
Value Range	1–65535
Default Value	5060

CSTA_RGSTR_ADDR

Value Format	STRING
Description	Specifies the IP address or FQDN of the registrar server for CSTA.
Value Range	Max. 256 characters
Default Value	Empty string

CSTA_RGSTR_PORT

Value Format	INTEGER
Description	Specifies the port of the registrar server for CSTA.
Value Range	1–65535
Default Value	5060

CSTA_REG_EXPIRE_TIME

Value Format	INTEGER
Description	Specifies the length of time, in seconds, that the registration remains valid. This value is set in the "Expires" header of the REGISTER request for CSTA.
Value Range	1–4294967295
Default Value	3600

CSTA_TRANSPORT

Value Format	INTEGER
Description	Specifies which transport layer protocol to use for sending SIP packets.
Value Range	• 0: UDP • 1: TCP • 2: TLS
Default Value	0

CSTA_RGSTR_AUTHID

Value Format	STRING
Description	Specifies the authentication ID for received REGISTER.
Value Range	Max. 128 characters
Default Value	Empty string

CSTA_RGSTR_PASS

Value Format	STRING
Description	Specifies the authentication password for received REGISTER.
Value Range	Max. 128 characters
Default Value	Empty string

5.3.30 Telephone Settings**POWER_ON_DISPLAY_LOGO_PATH (For KX-TPA60/KX-TPA65/KX-UDT121/KX-UDT131)**

Value Format	STRING
Description	Specifies URI for logo image file displayed when power is turned on. Size: 128 × 160 File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

DISPLAY_WALLPAPER_DARK_PATH (For KX-TPA60/KX-TPA65/KX-UDT121/KX-UDT131)

Value Format	STRING
Description	Specifies the URI of a wallpaper file to use in standby mode for the dark display setting. Size: 128 x 116 File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

DISPLAY_WALLPAPER_LIGHT_PATH (For KX-TPA60/KX-TPA65/KX-UDT121/KX-UDT131)

Value Format	STRING
Description	Specifies the URI of a wallpaper file to use in standby mode for the light display setting. Size: 128 x 116 File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

FIRSTDIGIT_TIM

Value Format	INTEGER
Description	Specifies the length of time, in seconds, within which the first digits of a dial number must be dialed.
Value Range	1–600 (s)
Default Value	30
Web User Interface Reference	First-digit Timeout

INTDIGIT_TIM

Value Format	INTEGER
Description	Specifies the length of time, in seconds, within which subsequent digits of a dial number must be dialed.
Value Range	1–15 (s)
Default Value	5
Web User Interface Reference	Inter-digit Timeout

POUND_KEY_DELIMITER_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the # key is treated as a regular dialed digit or a delimiter, when dialed as or after the second digit.
Value Range	Y: # is treated as the end of dialing delimiter N: # is treated as a regular dialed digit
Default Value	Y
Web User Interface Reference	Enable # Key as delimiter

POST_DIAL_TALK_ENABLE

Value Format	BOOLEAN
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Description	Specifies whether the Talk-key is treated as a calling button or as a switch for SP-phone mode during post dialing (KX-TPA60).
Value Range	• Y: The Talk-key is used to make the call. • N: The Talk-key is used as a switch for SP-phone mode.
Default Value	N

RINGTONE_SETTING_HSy_n

Parameter Name Example	RINGTONE_SETTING_HS1_1, RINGTONE_SETTING_HS1_2, ..., RINGTONE_SETTING_HS1_8, RINGTONE_SETTING_HS2_1, RINGTONE_SETTING_HS2_2, ..., RINGTONE_SETTING_HS2_8, RINGTONE_SETTING_HS8_1, RINGTONE_SETTING_HS8_2, ..., RINGTONE_SETTING_HS8_8
Value Format	INTEGER
Description	Specifies the ringtone to each line for a handset.
Value Range	1–32
Default Value	RINGTONE_SETTING_HS1_1=1, RINGTONE_SETTING_HS2_1=1, ..., RINGTONE_SETTING_HS8_1=1, RINGTONE_SETTING_HS1_2=2, RINGTONE_SETTING_HS2_2=2, ..., RINGTONE_SETTING_HS8_2=2, RINGTONE_SETTING_HS1_3=3, RINGTONE_SETTING_HS2_3=3, ..., RINGTONE_SETTING_HS8_3=3, RINGTONE_SETTING_HS1_4=4, RINGTONE_SETTING_HS2_4=4, ..., RINGTONE_SETTING_HS8_4=4, RINGTONE_SETTING_HS1_5=5, RINGTONE_SETTING_HS2_5=5, ..., RINGTONE_SETTING_HS8_5=5, RINGTONE_SETTING_HS1_6=6, RINGTONE_SETTING_HS2_6=6, ..., RINGTONE_SETTING_HS8_6=6, RINGTONE_SETTING_HS1_7=7, RINGTONE_SETTING_HS2_7=7, ..., RINGTONE_SETTING_HS8_7=7, RINGTONE_SETTING_HS1_8=8, RINGTONE_SETTING_HS2_8=8, ..., RINGTONE_SETTING_HS8_8=8

INTERCOM_RINGTONE_SETTING_HSy

Value Format	INTEGER
Description	Specifies the intercom ringtone to each handset.
Value Range	1–32
Default Value	9

DISPLAY_NAME_REPLACE

Value Format	BOOLEAN
Description	Specifies whether the name saved in the phonebook is used in place of the name display if a matching entry is found.
Value Range	• Y: Enable Display Name Replace • N: Disable Display Name Replace

Default Value	Y
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NUMBER_MATCHING_LOWER_DIGIT

Value Format	INTEGER
Description	Specifies the minimum number of digits with which to match a phonebook entry with an incoming call's caller ID.
Value Range	0–15
Default Value	7

NUMBER_MATCHING_UPPER_DIGIT

Value Format	INTEGER
Description	Specifies the maximum number of digits with which to match a phonebook entry with an incoming call's caller ID.
Value Range	0–15
Default Value	10

INCOMING_BUSY_ENABLE

Value Format	BOOLEAN
Description	Operation of a second incoming call on the same line when the device is using the radio broadcast. • Y: Busy Response • N: Receive incoming call (using a second radio broadcast.)
Value Range	• Y: Enable (Busy) • N: Disable (Broadcast)
Default Value	Y

FLASH_RECALL_TERMINATE

Value Format	BOOLEAN
Description	Specifies the function of the FLASH/RECALL button during a conversation.
Value Range	• Y: Terminate • N: EFA
Default Value	Y

FLASHHOOK_CONTENT_TYPE

Value Format	STRING
Description	Specifies the type of signal sent when sending a flash hook event.
Value Range	• Signal • flashhook
Default Value	Signal

NUM_PLAN_PARKING

Value Format	STRING
Description	Specifies the call parking number.
Value Range	0–4 digits (0–9, *, #)
Default Value	Empty string
Web User Interface Reference	Call Park Number

CALLPARK_KEY_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to display "Call Park" in the Call Parking Func menu.
Value Range	• Y: Enable • N: Disable
Default Value	N
Web User Interface Reference	Enable Call Park Key

NUM_PLAN_PARK_RETRIEVING

Value Format	STRING
Description	Specifies the park retrieve number.
Value Range	0–4 digits (0–9, *, #)
Default Value	Empty string
Web User Interface Reference	Park Retrieve Number

IDLE_SOFT_KEY_PARK_RETRIEVING

Value Format	INTEGER
Description	Specifies whether to have soft key for the park retrieving. Note • This feature is available only when "CALLPARK_NOTIFICATION_ENABLE_n" is set to "Y", and "NUM_PLAN_PARK_RETRIEVING" is set (see CALLPARK_NOTIFICATION_ENABLE_n, NUM_PLAN_PARK_RETRIEVING).
Value Range	• 0: no • 1: Soft Key (A) • 2: Soft Key (B) • 3: Soft Key (C)
Default Value	0
Web User Interface Reference	Park Retrieve Soft Key

HOLD_RECALL_TIM

Value Format	INTEGER
Description	Specifies the duration of the hold recall timer. If set to "0", the function is disabled.
Value Range	0–240 (0: Disable)
Default Value	60

HOLD_TRANSFER_OPERATION

Value Format	BOOLEAN
Description	Specifies whether to transfer a call by Hold button.
Value Range	• Y: Enable (Press the Hold button to transfer a call.) talk → hold → 2nd talk → Transfer (or on-hook) • N: Disable (Press the Transfer button to transfer a call.) talk → transfer → 2nd talk → transfer (or on-hook)
Default Value	N

XFER_KEY_OPERATION_MODE (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the behavior when the transfer button is pressed.
Value Range	0–3 • 0: Selectable (display a screen) • 1: Blind Transfer^{*1} • 2: Attended Transfer • 3: Intercom Transfer^{*2} ^{*1} This setting is available only when "BLIND_TRANSFER_ENABLE"="Y". ^{*2} This setting is available only when "INTERCOM_ENABLE"="Y".
Default Value	0

ONHOOK_TRANSFER_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable on hook transfer when HOLD_TRANSFER_OPERATION ="N".
Value Range	• Y: Enable On-hook Transfer • N: Disable On-hook Transfer
Default Value	Y

ONHOOK_HOLD_TRNS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable on hook transfer when HOLD_TRANSFER_OPERATION ="Y".

Value Range	• Y: Enable On-hook Transfer • N: Disable On-hook Transfer
Default Value	N

BLIND_TRANSFER_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable blind transfer.
Value Range	• Y: Enable • N: Disable Note • (For KX-TPA60/KX-TPA65) If set to "Y" and TALKING_SOFT_KEY_C="0" and PRIVATE_HOLD_ENABLE="N", "Blind" is displayed on Soft Key C.
Default Value	Y

REPEATER_MODE

Value Format	BOOLEAN
Description	Specifies whether to turn the repeater mode on or off.
Value Range	• Y: Repeater on • N: Repeater off
Default Value	N
Web User Interface Reference	Enable Repeater Mode

SYS_LOCK_ENABLE_HSy

Parameter Name Example	SYS_LOCK_ENABLE_HS1, SYS_LOCK_ENABLE_HS2, ..., SYS_LOCK_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether to enable locking handset.
Value Range	• Y: Enable • N: Disable
Default Value	N
Web User Interface Reference	Enable Handset Lock

SYS_LOCK_PASSWORD_HSy

Parameter Name Example	SYS_LOCK_PASSWORD_HS1, SYS_LOCK_PASSWORD_HS2, ..., SYS_LOCK_PASSWORD_HS8
Value Format	STRING
Description	Specifies the password for unlocking handset.

Value Range	Null, 4 digits (0–9)
Default Value	Empty string
Web User Interface Reference	Password for Unlocking

INTERCOM_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable intercom menu.
Value Range	• Y: Enable • N: Disable
Default Value	Y

PAUSE_INPUT_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable or disable pause input.
Value Range	• Y: Enable • N: Disable
Default Value	N

REGISTRATION_PIN

Value Format	STRING
Description	Specifies the base unit PIN, which is used to register the handset to the base unit.
Value Range	4 Digits, Decimal
Default Value	1234

CUSTOM_TIME_DISPLAY

Value Format	INTEGER
Description	Specifies where on the LCD the date and time are displayed.
Value Range	• 0: Normal • 1: 2nd line • 2: 3rd line • 3: 4th line • 4: 5th line
Default Value	0

CNIP_FROM_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to use the 'FROM' header or the 'PAI' header in CNIP (Calling Number Identification Presentation).

Value Range	• Y: Use 'FROM' header • N: Use 'PAI' header
Default Value	N

HS_IDLE_DISPLAY_TYPE

Value Format	INTEGER
Description	Specifies what is shown on the display in standby mode.
Value Range	• 0: Off • 1: Phone Number • 2: Phone Number and Line Name • 3: Handset Name
Default Value	3

NOISE_REDUCTION_MODE_HSy

Parameter Name Example	<code>NOISE_REDUCTION_MODE_HS1, NOISE_REDUCTION_MODE_HS2, ..., NOISE_REDUCTION_MODE_HS8</code>
Value Format	INTEGER
Description	Specifies whether to enable the Noise Reduction feature of each handset.
Value Range	• 0: Disable Noise Reduction • 1: Enable Noise Reduction
Default Value	0

TALK_ON_CHARGE_MODE_HSy

Parameter Name Example	<code>TALK_ON_CHARGE_MODE_HS1, TALK_ON_CHARGE_MODE_HS2, ..., TALK_ON_CHARGE_MODE_HS8</code>
Value Format	INTEGER
Description	Specifies whether to enable the Talk On Charger feature of each handset.
Value Range	• 0: Disable Talk On Charger • 1: Enable Talk On Charger
Default Value	0

NUM_PLAN_PICKUP_GROUP

Value Format	STRING
Description	Specifies the feature number for performing "Group Pickup".
Value Range	0–4 digits (0–9, *, #)
Default Value	Empty string
Web User Interface Reference	Group Call Pickup

SOFT_KEY_LABELx

Value Format	STRING
Description	x=1-3 Specifies the text of the soft keys displayed on the screen for quick dialing. Note This setting is available only when "DISCLOSE_FUNCTION_ENABLE" is set to "N".
Value Range	Max. 5 characters
Default Value	SOFT_KEY_LABEL1: 1 SOFT_KEY_LABEL2: 2 SOFT_KEY_LABEL3: 3

SOFT_KEY_QUICK_DIALx

Value Format	STRING
Description	x=1-3 Specifies quick-dial numbers to assign to the soft keys. Note This setting is available only when "DISCLOSE_FUNCTION_ENABLE" is set to "N".
Value Range	Max. 32 characters
Default Value	Empty string

HANDSET_VOLUME_LEVEL (For KX-TPA60/KX-TPA65/KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the handset receiver's volume level.
Value Range	1–6
Default Value	2

HANDSET_VOLUME_LEVEL2 (For KX-TPA68)

Value Format	INTEGER
Description	Specifies the handset receiver's volume level.
Value Range	1–8
Default Value	4

HEADSET_VOLUME_LEVEL (For KX-TPA60/KX-TPA65/KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the headset receiver's volume level.
Value Range	1–6
Default Value	2

HEADSET_VOLUME_LEVEL2 (For KX-TPA68)

Value Format	INTEGER
Description	Specifies the headset receiver's volume level.
Value Range	1–8
Default Value	4

SPEAKER_VOLUME_LEVEL (For KX-TPA60/KX-TPA65/KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the speaker receiver's volume level.
Value Range	1–6
Default Value	3

SPEAKER_VOLUME_LEVEL2 (For KX-TPA68)

Value Format	INTEGER
Description	Specifies the speaker receiver's volume level.
Value Range	1–8
Default Value	4

RINGER_VOLUME_LEVEL (For KX-TPA60/KX-TPA65/KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the value of the ringer volume.
Value Range	1–6
Default Value	3

RINGER_VOLUME_LEVEL2 (For KX-TPA68)

Value Format	INTEGER
Description	Specifies the value of the ringer volume.
Value Range	0–8
Default Value	4

RINGER_VOL_OPERATION_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable ringer volume adjustment.
Value Range	- Y: Enable ringer volume adjustment - N: Disable
Default Value	Y

CNIP_CALL_PA_ENABLE

Value Format	BOOLEAN
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Description	Specifies whether to enable using the 'PAI' header in CNIP (Calling Number Identification Presentation) on the display when calling.
Value Range	• Y: Enable • N: Disable
Default Value	Y

EMBEDDED_WEB_PASS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to require password authentication when setting "Embedded Web" from the phone interface. Note • This password is same as the administrator password for logging in to Web User Interface Programming.
Value Range	• Y: Require password authentication • N: Do not require password authentication
Default Value	N

NETWORK_SETTINGS_PASS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to require password authentication when setting "Network Settings" from the phone interface. Note • This password is same as the administrator password for logging in to Web User Interface Programming.
Value Range	• Y: Require password authentication • N: Do not require password authentication
Default Value	N

HANDSET_NAME_PASS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to require password authentication when setting "Handset Name" from the phone interface. Note • This password is same as the administrator password for logging in to Web User Interface Programming.
Value Range	• Y: Require password authentication • N: Do not require password authentication
Default Value	N

CALLER_ID_DISP_PASS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to require password authentication when setting "Caller ID Disp" from the phone interface. Note • This password is same as the administrator password for logging in to Web User Interface Programing.
Value Range	• Y: Require password authentication • N: Do not require password authentication
Default Value	N

SYSTEM_OPTION_PASS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to require password authentication when setting "System Option" from the phone interface. Note • This password is same as the administrator password for logging in to Web User Interface Programing.
Value Range	• Y: Require password authentication • N: Do not require password authentication
Default Value	N

CHANGE_PASS_PASS_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to require password authentication when setting "Change Password" from the phone interface. Note • This password is same as the administrator password for logging in to Web User Interface Programing.
Value Range	• Y: Require password authentication • N: Do not require password authentication
Default Value	N

SYSTEM_SETTINGS_PASS_ENABLE

Value Format	BOOLEAN
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Description	Specifies whether to require password authentication when setting "System Settings" from the phone interface. Note This password is same as the administrator password for logging in to Web User Interface Programming.
Value Range	Y: Require password authentication N: Do not require password authentication
Default Value	N

PB_QUICK_SEARCH_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable using the Quick search operation when searching for an item in the phonebook.
Value Range	Y: Enable N: Disable
Default Value	N

DISPLAY_BARGE_IN_ENABLE

Value Format	BOOLEAN
Description	Specifies the display for on-line status when a shared line is in use.
Value Range	Y: "In Use/→)" is displayed N: "In Use" is displayed Note "Barge" is displayed instead of →)" for models in the USA.
Default Value	N

CW_DISPLAY_CONTINUATION_ENABLE

Value Format	BOOLEAN
Description	Specifies the display on the LCD during call waiting.
Value Range	Y: Show the call waiting screen continuously N: Switch between the call waiting screen and conversation screen
Default Value	N

POWER_ON_DISPLAY_TPA68_PATH (For KX-TPA68)

Value Format	STRING
Description	Specifies the URI of a logo image file to display when power is turned on. Size: 320 × 240 File type: BMP (1/4/8/24 bit)

Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

DISPLAY_WALLPAPER_TPA68_PATH (For KX-TPA68)

Value Format	STRING
Description	Specifies the URI of a wallpaper file to display in standby mode. Note Size: 320 × 184 File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

POWER_ON_DISP_W240H320_PATH (For KX-TPA70/KX-TPA73)

Value Format	STRING
Description	Specifies the URI of a logo image file to display when power is turned on. Size: 240 × 320 pixel File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

DISP_WPAPER_DARK_W240H232_PATH (For KX-TPA70/KX-TPA73)

Value Format	STRING
Description	Specifies the URI of a wallpaper file to use in standby mode for the dark display setting. Size: 240 × 232 pixel File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

DISP_WPAPER_LIGHT_W240H232_PATH (For KX-TPA70/KX-TPA73)

Value Format	STRING
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Description	Specifies the URI of a wallpaper file to use in standby mode for the dark display setting. Size: 240 × 232 pixel File type: BMP (1/4/8/24 bit)
Value Range	Max. 384 characters Note For details about the formats, see 2.1.3 Server Address Formats.
Default Value	Empty string

CALLWAITING_HOLDKEY_ENABLE (For KX-TPA68)

Value Format	BOOLEAN
Description	Specifies whether to enable answering an incoming call with HOLD key during call waiting.
Value Range	• Y: Enable • N: Disable
Default Value	N

TALKING_ALTERNATE_DISPLAY (For KX-TPA68)

Value Format	BOOLEAN
Description	Specifies whether to alternate the display between the talk time and the other party's information during a conversation.
Value Range	• Y: Enable the alternating display • N: Disable the alternating display
Default Value	N

REMOVE_HYPHEN_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to remove hyphens (-) from telephone numbers in the XSI phonebook. A hyphen (-) cannot be used as the first character.
Value Range	• Y: Enable (remove the hyphen) • N: Disable
Default Value	N

IDLE_CALL_SOFT_KEY_ENABLE (For KX-TPA65)

Value Format	BOOLEAN
Description	Specifies whether to enable making a call using the soft key when predialing in standby mode or off-hook.
Value Range	• Y: Enable • N: Disable

Default Value	N
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SHORTCUT_KEY_TYPE_HSy (For KX-TPA70/KX-TPA73)

Parameter Name Example	SHORTCUT_KEY_TYPE_HS1, SHORTCUT_KEY_TYPE_HS2, ..., SHORTCUT_KEY_TYPE_HS8
Value Format	INTEGER
Description	Specifies the type of function assigned to the shortcut Key.
Value Range	0–1 0: Do not assign 1: Hot Key Dial
Default Value	1
Web User Interface Reference	Shortcut Key Function

UDT_AUTH_MENU_ENABLE (For KX-UDT121/KX-UDT131)

Value Format	BOOLEAN
Description	Specifies whether to enable the authentication setting menu.
Value Range	- Y: Enable - N: Disable Note If "Y" is specified, "Authentication" is displayed on system settings menu.
Default Value	N

CLI_NAME_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to display "Name of CLI" on LCD.
Value Range	- Y: Displayed - N: Not displayed
Default Value	Y

KEY_LABEL_PHONEBOOK (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of "Contacts" softkey to be displayed on the LCD.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_RINGOFF (For KX-TPA68)

Value Format	STRING
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Description	Specifies the name of "Ringer off" softkey to be displayed on the LCD.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_RETRIEVE (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of "Retrieve" softkey to be displayed on the LCD.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_BLIND (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of "Blind" softkey to be displayed on the LCD.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_INTERCOM (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of "Intercom" softkey to be displayed on the LCD.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_TRANSFER_EXE (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of [OK] softkey to transfer an outside call, it is displayed at making an intercom call on holding on outside call.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_CANCEL (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of "Cancel" softkey to be displayed on the LCD.
Value Range	Max. 10 characters
Default Value	Not stored.

KEY_LABEL_NEWCALL (For KX-TPA68)

Value Format	STRING
Description	Specifies the name of "New Call" softkey to be displayed on the LCD.
Value Range	Max. 10 characters

Default Value	Not stored.
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CALLHISTORY_ON_HOME_HSy (For KX-TPA70/KX-TPA73)

Parameter Name Example	CALLHISTORY_ON_HOME_HS1, CALLHISTORY_ON_HOME_HS2, ..., CALLHISTORY_ON_HOME_HS8
Value Format	INTEGER
Description	Specifies how to display the call history on the idle home screen.
Value Range	0–2 • 0: Always display • 1: Do not display while key lock is active • 2: Never display
Default Value	0

HOTKEY_NAME_HSy_KEYx (For KX-TPA70/KX-TPA73)

Value Format	STRING
Description	x=1–9 (Key number), y=1–8 (Handset number) Specifies the name of Hot key dial to be displayed on the screen.
Value Range	Max. 24 characters.
Default Value	Empty string

HOTKEY_NAME_SCK_HSy (For KX-TPA70/KX-TPA73)

Value Format	STRING
Description	y=1–8 (Handset number) Specifies the name of Hot key dial for shortcut key to be displayed on the screen.
Value Range	Max. 24 characters.
Default Value	Empty string

HOTKEY_NUMBER_HSy_KEYx (For KX-TPA70/KX-TPA73)

Value Format	STRING
Description	x=1–9 (Key number), y=1–8 (Handset number) Specifies the number of Hot key dial to be displayed on the screen.
Value Range	Max. 32 characters.
Default Value	Empty string

HOTKEY_NUMBER_SCK_HSy (For KX-TPA70/KX-TPA73)

Value Format	STRING
Description	y=1–8 (Handset number) Specifies the number of Hot key dial for shortcut key to be displayed on the screen.
Value Range	Max. 32 characters.

Default Value	Empty string
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HOTKEY_TIME_HSy (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	y=1–8 (Handset number) Specifies the length of seconds for timer of Hot key dial.
Value Range	1–20 (seconds)
Default Value	2

HOTKEY_CALL_MODE_HSy (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	y=1–8 (Handset number) Specifies the calling mode of Hot key dial.
Value Range	0–1 0: Manual 1: Auto
Default Value	0

DISP_CORRECT_LOGO_ENABLE (For KX-TPA70/KX-TPA73)

Value Format	BOOLEAN
Description	Specifies whether to correct the color of the logo image.
Value Range	- Y: Enable - N: Disable Note This parameter will be applied to the Logo file with different file name imported after changed it.
Default Value	N

DISP_CORRECT_WPAPER_DARK_ENABLE (For KX-TPA70/KX-TPA73)

Value Format	BOOLEAN
Description	Specifies whether to correct the color of the wallpaper image of the dark scheme.
Value Range	- Y: Enable - N: Disable Note This parameter will be applied to the wallpaper file with different file name imported after changed it.
Default Value	N

DISP_CORRECT_WPAPER_LIGHT_ENABLE (For KX-TPA70/KX-TPA73)

Value Format	BOOLEAN
Description	Specifies whether to correct the color of the wallpaper image of the light scheme.
Value Range	- Y: Enable - N: Disable Note This parameter will be applied to the wallpaper file with different file name imported after changed it.
Default Value	N

5.3.31 Flexible Key Settings for KX-TPA68

For details, see 6.7 Flexible Key Setting for KX-TPA68.

FLEX_BUTTON_FACILITY_HSy_ACTx (For KX-TPA68)

Value Format	STRING
Description	x=1–12 (Flexible key No.), y=1–8 (Handset No.) Specifies a particular Facility Action for the flexible keys on page 2 and page 3. No Facility Action will be taken for the button if the string is empty or invalid.
Value Range	X_PANASONIC_IPTTEL_ONETOUCH X_PANASONIC_IPTTEL_CALLPARK X_PANASONIC_IPTTEL_PARKRETRIEVE X_PANASONIC_IPTTEL_GROUPPICKUP X_PANASONIC_IPTTEL_DIRECTPICKUP X_PANASONIC_IPTTEL_PAGING X_PANASONIC_IPTTEL_PRESENCE X_PANASONIC_IPTTEL_MYPHONE X_PANASONIC_IPTTEL_MEMOALARM X_PANASONIC_IPTTEL_INTERCOM X_PANASONIC_IPTTEL_LINE_NOTIFICATION X_PANASONIC_IPTTEL_HANDSET_NOTIFICATION
Default Value	Empty string
Web User Interface Reference	Type

FLEX_BUTTON_FACILITY_HSy_ARGx (For KX-TPA68)

Value Format	STRING
Description	x=1–12 (Flexible key No.), y=1–8 (Handset No.) Specifies an optional argument associated with the Facility Action specified for a flexible key on page 2 and page 3.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Parameter

FLEX_BUTTON_FACILITY_HSy_LABELx (For KX-TPA68)

Value Format	STRING
Description	x=1–12 (Flexible key No.), y=1–8 (Handset No.) Specifies the name to display on the screen for a flexible key on page 2 and page 3.
Value Range	Max. 20 characters
Default Value	Empty string
Web User Interface Reference	Label Name

FLEX_BUTTON_FACILITY_HSy_OPTx (For KX-TPA68)

Value Format	INTEGER
Description	x=1–12 (Flexible key No.), y=1–8 (Handset No.) Specifies the mode for flexible button.
Value Range	• 0: Mode 0 • 1: Mode 1 • 2: Mode 2 (Reserved) • 3: Mode 3 (Reserved) Note • Mode 0: When pressing the Line Notification Key assigned to other line that is idle, the line is seized. • Mode 1: When pressing the Line Notification Key assigned to other line that is idle, the extension call is made with phone number that is assigned to other line. In this mode, the handset icon is displayed. The condition is below: The line is assigned to Line Notification Key is not default line of the own terminal.
Default Value	0

FLEX_BUTTON_FWDDND_ICON (For KX-TPA68)

Value Format	BOOLEAN
Description	Specifies the display of FWD/DND for a flexible key.
Value Range	• Y: Display as the icon • N: Display as the text
Default Value	Y

FLEX_BUTTON_MISSED_ICON (For KX-TPA68)

Value Format	BOOLEAN
Description	Specifies whether "icon image" or "text" for flexible key. When "N: Disable (Text)" is selected, "Missed Calls" is displayed.

Value Range	- Y: Enable (ICON) - N: Disable (Text)
Default Value	Y

FLEX_BUTTON_MESSAGE_ICON (For KX-TPA68)

Value Format	BOOLEAN
Description	Specifies whether "icon image" or "text" for flexible key. When "N: Disable (Text)" is selected, "Voice MSG" is displayed.
Value Range	- Y: Enable (ICON) - N: Disable (Text)
Default Value	Y

5.3.32 Tone Settings

OUTSIDE_DIAL_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of Second Dial Tone using max. 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (Hz) (0=No tone)
Default Value	420

OUTSIDE_DIAL_TONE_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of Second Dial Tone
Value Range	-24–24 (dB)
Default Value	0

OUTSIDE_DIAL_TONE_RPT

Value Format	INTEGER
Description	Specifies whether Second Dial Tone is repeated.
Value Range	0: No Repeat 1: Repeat
Default Value	0

OUTSIDE_DIAL_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of Second Dial Tone using Max. 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas.
Value Range	0–16000 (msec) (0=Continuous)
Default Value	60,0

REORDER_TONE_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable reorder tone.
Value Range	• Y: Enable • N: Disable
Default Value	Y

TONE_LEN_DISCONNECT

Value Format	INTEGER
Description	Specifies the duration, in seconds, that a disconnect tone will be heard when the other party ends a call and the unit is being used.
Value Range	1–15 (s)
Default Value	3

DIAL_TONE1_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of Dial Tone 1 using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (Hz) (0: No tone)
Default Value	350,440
Web User Interface Reference	Tone Frequencies

DIAL_TONE1_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of Dial Tone 1.
Value Range	-24–24 (dB)
Default Value	0

DIAL_TONE1_RPT

Value Format	INTEGER
Description	Specifies whether Dial Tone 1 is repeated.
Value Range	0–1 – 0: No Repeat – 1: Repeat
Default Value	0

DIAL_TONE1_TIMING

Value Format	Comma-separated Integer
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Description	Specifies the pattern, in milliseconds, of Dial Tone 1 using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (msec) (0=Continuous) Note Avoid setting 1–50 for any of the values.
Default Value	60,0
Web User Interface Reference	Tone Timings

DIAL_TONE2_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of Dial Tone 2 using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (Hz) (0: No tone)
Default Value	350,440

DIAL_TONE2_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of Dial Tone 2.
Value Range	-24–24 (dB)
Default Value	0

DIAL_TONE2_RPT

Value Format	INTEGER
Description	Specifies whether Dial Tone 2 is repeated.
Value Range	0–1 – 0: No Repeat – 1: Repeat
Default Value	0

DIAL_TONE2_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of Dial Tone 2 using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).

Value Range	0–16000 (msec) (0:Infinite time) Note • Avoid setting 1–50 for any of the values.
Default Value	60,0

DIAL_TONE4_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of Dial Tone 4 (stutter dial tones) to notify that a voice mail is waiting, using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (Hz) (0: No tone)
Default Value	350,440
Web User Interface Reference	Tone Frequencies

DIAL_TONE4_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of Dial Tone 4 (stutter-type dial tone).
Value Range	-24–24 (dB)
Default Value	0

DIAL_TONE4_RPT

Value Format	INTEGER
Description	Specifies whether Dial Tone 4 (stutter-type dial tone) is repeated.
Value Range	0–1 – 0: No Repeat – 1: Repeat
Default Value	0

DIAL_TONE4_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of Dial Tone 4 (stutter dial tones) to notify that a voice mail is waiting, using up to 22 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note • It is recommended that you set a value of 560 milliseconds or more for the first value (off 1).
Value Range	0–16000 (msec) (0: Continuous) Note • Avoid setting 1–50 for any of the values.

REORDER_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of reorder tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (Hz) (0: No tone)
Default Value	480,620
Web User Interface Reference	Tone Frequencies

REORDER_TONE_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of the reorder tone.
Value Range	-24–24 (dB)
Default Value	0

REORDER_TONE_RPT

Value Format	INTEGER
Description	Specifies whether the reorder tone is repeated.
Value Range	0–1 – 0: No Repeat – 1: Repeat
Default Value	1

REORDER_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of reorder tones using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (msec) (0: Continuous) Note Avoid setting 1–50 for any of the values.
Default Value	60,250,190
Web User Interface Reference	Tone Timings

RINGBACK_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of ringback tones using 2 whole numbers separated by a comma.

Value Range	0, 200–2000 (Hz) (0: No tone)
Default Value	440,480
Web User Interface Reference	Tone Frequencies

RINGBACK_TONE_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of the ringback tone.
Value Range	-24–24 (dB)
Default Value	0

RINGBACK_TONE_RPT

Value Format	INTEGER
Description	Specifies whether the ringback tone is repeated.
Value Range	0–1 – 0: No Repeat – 1: Repeat
Default Value	1

RINGBACK_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of ringback tones using up to 10 whole numbers (off 1, on 1, off 2, on 2...) separated by commas. Note It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (msec) (0: Continuous) Note Avoid setting 1–50 for any of the values.
Default Value	60,2000,3940
Web User Interface Reference	Tone Timings

CW_TONE1_FRQ

Value Format	INTEGER
Description	Specifies the frequency, in hertz, of call waiting tone 1.
Value Range	0 (0: No tone) 220,233,247,262,277,294,311,330,349,370,392,415,440,466,494, 523,554,587,622,659,698,740,784,831,880,932,988,1047,1109, 1175,1245,1319,1397,1480,1568,1661,1760,1865,1976 (Hz)
Default Value	392

HOLD_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of the hold tone using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (Hz) (0: No tone)
Default Value	425

HOLD_TONE_GAIN

Value Format	INTEGER
Description	Specifies the gain, in decibels, of the hold tone.
Value Range	-24–24 (dB)
Default Value	0

BELL_CORE_PATTERN1_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 1, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2...) separated by commas.
Value Range	0–5000 (msec) (0: Continuous) Note • Avoid setting 1–50 for any of the values.
Default Value	2000,4000

BELL_CORE_PATTERN2_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 2, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2...) separated by commas.
Value Range	0–5000 (msec) (0: Continuous) Note • Avoid setting 1–50 for any of the values.
Default Value	800,400,800,4000

BELL_CORE_PATTERN3_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 3, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2...) separated by commas.

Value Range	0–5000 (msec) (0: Continuous) Note • Avoid setting 1–50 for any of the values.
Default Value	400,200,400,200,800,4000

BELL_CORE_PATTERN4_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 4, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2...) separated by commas.
Value Range	0–5000 (msec) (0: Continuous) Note • Avoid setting 1–50 for any of the values.
Default Value	300,200,1000,200,300,4000

BELL_CORE_PATTERN5_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 5, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2...) separated by commas.
Value Range	0–5000 (msec) (0: Continuous) Note • Avoid setting 1–50 for any of the values.
Default Value	500

KEY_PAD_TONE_HSy

Parameter Name Example	KEY_PAD_TONE_HS1, KEY_PAD_TONE_HS2, ..., KEY_PAD_TONE_HS8
Value Format	INTEGER
Description	Specifies whether a tone is heard in response to key presses.
Value Range	• 0: Off • 1: On
Default Value	1

5.3.33 Call Control Settings

OUTGOING_CALL_LINE_HSy

Parameter Name Example	OUTGOING_CALL_LINE_HS1, OUTGOING_CALL_LINE_HS2, ..., OUTGOING_CALL_LINE_HS8
Value Format	Comma-separated Integer
Description	Specifies which lines (1–8) can be seized when going off-hook to make a call for each handset, using 8 whole numbers (0 or 1) separated by commas. This setting is available only when "MULTI_NUMBER_ENABLE" is set to enable.
Value Range	0: Disable 1: Enable The format must be "x,x,x,x,x,x,x,x" (x: line numbers 1 to 8 starting from the left).
Default Value	1,1,1,1,1,1,1,1
Web User Interface Reference	Line Number

DEFAULT_LINE_SELECT_HSy

Parameter Name Example	DEFAULT_LINE_SELECT_HS1, DEFAULT_LINE_SELECT_HS2, ..., DEFAULT_LINE_SELECT_HS8
Value Format	Comma-separated Integer
Description	Specifies which lines (1–8) to seize automatically when going off-hook to make a call for each handset, using 8 whole numbers (0 or 1) separated by commas. This setting is available only when "MULTI_NUMBER_ENABLE" is set to enable.
Value Range	0: Disable 1: Enable The format must be "x,x,x,x,x,x,x,x" (x: line numbers 1 to 8 starting from the left). "1" must be specified only once as a line that can be seized automatically when going off-hook in this format.
Default Value	1,0,0,0,0,0,0,0
Web User Interface Reference	Default

INCOMING_CALL_GROUP_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	Comma-separated Integer
Description	Select the handset (1–8) that calls will arrive at for each line. This setting is available only when "MULTI_NUMBER_ENABLE" is set to enable.

Value Range	0: Disable 1: Enable The format must be "x,x,x,x,x,x,x,x" (x: handset number 1 to 8 starting from the left).
Default Value	1,1,1,1,1,1,1,1
Web User Interface Reference	Line (1–8) Phone Number Handset Number (1–8)

PAGING_ENABLE_HANDSET_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	INTEGER
Description	Select the handset (1–8) that calls will arrive (auto answer) at for each line. - Paging - Click to xx
Value Range	1–8
Default Value	1
Web User Interface Reference	Paging

ANONYMOUS_CALL_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to make calls without transmitting the phone number to the called party.
Value Range	- Y: Enable anonymous call - N: Disable
Default Value	N
Web User Interface Reference	Enable Anonymous Call

BLOCK_ANONYMOUS_CALL_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to accept or reject the incoming call without the called party's phone number.
Value Range	- Y: Enable anonymous call block - N: Disable
Default Value	N
Web User Interface Reference	Enable Block Anonymous Call

HOTLINE_ENABLE_HSy

Parameter Name Example	HOTLINE_ENABLE_HS1, HOTLINE_ENABLE_HS2, ..., HOTLINE_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies whether to enable or disable the Hot line feature.
Value Range	- Y: Enable - N: Disable
Default Value	N
Web User Interface Reference	Handset 1–8 (Enable)

HOTLINE_NUMBER_HSy

Parameter Name Example	HOTLINE_NUMBER_HS1, HOTLINE_NUMBER_HS2, ..., HOTLINE_NUMBER_HS8
Value Format	STRING
Description	Specifies the Hot line number.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Handset 1–8 (Hotline Number)

HOTLINE_TIM

Value Format	INTEGER
Description	Specifies a time after off hook for Hot line.
Value Range	0–10 (s)
Default Value	2
Web User Interface Reference	Hotline Delay

DISPLAY_NAME_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the name to display as the caller on the other party's phone when you make a call.
Value Range	Max. 24 characters Note You can use Unicode characters for this setting.
Default Value	Empty string
Web User Interface Reference	Display Name

VM_SUBSCRIBE_ENABLE

Value Format	BOOLEAN
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Description	Specifies whether to send the SUBSCRIBE request to a voice mail server. Note Your phone system must support voice mail.
Value Range	x: Send the SUBSCRIBE request n: Do not send the SUBSCRIBE request
Default Value	n
Web User Interface Reference	Send SUBSCRIBE to Voice Mail Server

VM_NUMBER_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the defined name of a voice mail box. Note Your phone system must support voice mail.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Voice Mail Access Number

VM_SUBSCRIBE_SPECIFIC_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies the defined name of a voice mail box.
Value Range	Max. 32 characters
Default Value	Empty string

DIAL_PLAN_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies a dial format, such as specific phone numbers, that control which numbers can be dialed or how to handle the call when making a call. For details, see 6.3 Dial Plan .
Value Range	Max. 1000 characters
Default Value	Empty string
Web User Interface Reference	Dial Plan (max 1000 columns)

DIAL_PLAN_NOT_MATCH_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN

Description	Specifies whether to enable dial plan filtering so that a call is not made when the dialed number does not match any of the dial formats specified in "DIAL_PLAN_n".
Value Range	• Y: Enable dial plan filtering • N: Disable dial plan filtering Note • If set to "Y", the dialed number will not be sent to the line when the number dialed by the user does not match any of the dial formats specified in the dial plan. • If set to "N", the dialed number will be sent to the line, even if the number dialed by the user does not match any of the dial formats specified in the dial plan.
Default Value	N
Web User Interface Reference	Call Even If Dial Plan Does Not Match

MACRODIGIT_TIM

Value Format	INTEGER
Description	Specifies the length of time, in seconds, that the unit waits when a "T" or "t" has been entered in the dial plan.
Value Range	1–15
Default Value	5
Web User Interface Reference	Timer for Dial Plan

INTERNATIONAL_ACCESS_CODE

Value Format	STRING
Description	Specifies the number to be shown in the place of the first "+" symbol when the phone number for incoming international calls contains "+".
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
	Note • No other characters are allowed.
Default Value	Empty string
Web User Interface Reference	International Call Prefix

COUNTRY_CALLING_CODE

Value Format	STRING
Description	Specifies the country/area calling code to be used for comparative purposes when dialing a number from the incoming call log that contains a "+" symbol.
Value Range	Max. 8 characters (consisting of 0–9)
Default Value	Empty string

Web User Interface Reference	Country Calling Code
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NATIONAL_ACCESS_CODE

Value Format	STRING
Description	When dialing a number from the incoming call log that contains a "+" symbol and the country calling code matches, the country calling code is removed and the national access code is added.
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Empty string
Web User Interface Reference	National Access Code

IDLE_SOFT_KEY_A

Value Format	INTEGER
Description	Specifies the soft key (A) during IDLE state.
Value Range	• 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Redial • 6: Page • 7: Intercom Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	1
Web User Interface Reference	Soft Key A (Left)

IDLE_SOFT_KEY_B

Value Format	INTEGER
Description	Specifies the soft key (B) during IDLE state.

Value Range	• 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Redial • 6: Page • 7: Intercom Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	2
Web User Interface Reference	Soft Key B (Center)

IDLE_SOFT_KEY_C

Value Format	INTEGER
Description	Specifies the soft key (C) during IDLE state.
Value Range	• 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Redial • 6: Page • 7: Intercom Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	3
Web User Interface Reference	Soft Key C (Right)

IDLE_SOFT_KEY_D/E/F/G/H (KX-TPA68 only)

Value Format	INTEGER
Description	Specify the soft key (D to H) assigned the page 2 or page 3 of the LCD in IDLE state.

Value Range	0–8, 15 • 0: Original • 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Redial • 6: Page • 7: Intercom • 8: New Call • 15: None Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	0

IDLE_SOFT_KEY_A_UX1 (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the soft key (A) during IDLE state for KX-TPA70/KX-TPA73.
Value Range	1–8 • 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Call History • 6: Redial • 7: Page • 8: Intercom Call Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	1
Web User Interface Reference	Soft Key A (Left)

IDLE_SOFT_KEY_B_UX1 (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the soft key (B) during IDLE state for KX-TPA70/KX-TPA73.
Value Range	1–8 • 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Call History • 6: Redial • 7: Page • 8: Intercom Call Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE
Default Value	2
Web User Interface Reference	Soft Key B (Center)

IDLE_SOFT_KEY_C_UX1 (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Specifies the soft key (C) during IDLE state for KX-TPA70/KX-TPA73.
Value Range	1–8 • 1: Phonebook • 2: Menu • 3: Outgoing Call Log • 4: Incoming Call Log • 5: Call History • 6: Redial • 7: Page • 8: Intercom Call Note The following features are applied to the soft key only when the corresponding parameters are enabled. Otherwise, the soft key will remain in its original setting. – Page: MPAGE_FUNCKEY_ENABLE – Intercom: INTERCOM_ENABLE

Default Value	3
Web User Interface Reference	Soft Key C (Right)

ADMIN_ABILITY_ENABLE_HSy

Parameter Name Example	ADMIN_ABILITY_ENABLE_HS1, ADMIN_ABILITY_ENABLE_HS2, ..., ADMIN_ABILITY_ENABLE_HS8
Value Format	BOOLEAN
Description	Specifies admin rights for each handset. Note If you attempt to configure System Settings without enabling admin rights, an error will occur and configuration will not be possible.
Value Range	- Y: Admin - N: Non Admin
Default Value	Y
Web User Interface Reference	Enable Admin Ability

HANDSET_NAME_HSy

Parameter Name Example	HANDSET_NAME_HS1, HANDSET_NAME_HS2, ..., HANDSET_NAME_HS8
Value Format	STRING
Description	Specifies the handset name.
Value Range	Max. 16 characters
Default Value	HANDSET_NAME_HS1="Handset 1" HANDSET_NAME_HS2="Handset 2" HANDSET_NAME_HS3="Handset 3" HANDSET_NAME_HS4="Handset 4" HANDSET_NAME_HS5="Handset 5" HANDSET_NAME_HS6="Handset 6" HANDSET_NAME_HS7="Handset 7" HANDSET_NAME_HS8="Handset 8"
Web User Interface Reference	Handset Name

EMERGENCY_CALLx

Parameter Name Example	EMERGENCY_CALL1, EMERGENCY_CALL2, ..., EMERGENCY_CALL5
Value Format	STRING
Description	Specifies the emergency number. (Up to 5 emergency numbers)
Value Range	Max. 32 characters (except &, ", ', :, ;, <, >)
Default Value	Empty string
Web User Interface Reference	1–5

CALL_REJECTIONx_n

Parameter Name Example	CALL_REJECTION1_1, CALL_REJECTION2_1, ..., CALL_REJECTION20_1, CALL_REJECTION1_2, CALL_REJECTION2_2, ..., CALL_REJECTION20_2, ..., CALL_REJECTION1_8, CALL_REJECTION2_8, ..., CALL_REJECTION20_8
Value Format	STRING
Description	Specifies the rejected number per line. (Up to 20 rejected numbers)
Value Range	Max. 32 characters (except &, ", ', :, ;, <, >)
Default Value	Empty string
Web User Interface Reference	1–20

CLICKTO_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable or disable Click to Dial/Answer/Hold functions.
Value Range	- Y: Enable - N: Disable
Default Value	N
Web User Interface Reference	Enable Click to Call

CALLPARK_NOTIFICATION_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to respond to call park notifications from the server.
Value Range	- Y: Enable - N: Disable
Default Value	N
Web User Interface Reference	Enable Call Park Notification

SHARED_CALL_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable the Shared Call feature of the SIP server, which is used to share one line among the units. Note Availability depends on your phone system.

Value Range	• Y: Enable shared call • N: Disable shared call Note • If set to "Y", the SIP server will control the line by using a shared-call signaling method. • If set to "N", the SIP server will control the line by using a standard signaling method.
Default Value	N
Web User Interface Reference	Enable Shared Call

SHARED_STOP_LINE_SEIZE

Value Format	BOOLEAN
Description	Specifies whether to stop seizing the Shared Call line at the unit side.
Value Range	• Y: Stop seizing the line • N: Seize the line
Default Value	N

FWD_DND_SYNCHRO_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to synchronize the Do Not Disturb and Call Forward settings, configured via the Web user interface or phone user interface, between the unit and the portal server that is provided by your phone system dealer/service provider. Note • Even if you specify "Y", this feature may not function properly if your phone system does not support it. Before you configure this setting, consult your phone system dealer/service provider.
Value Range	• Y: Enable Do Not Disturb/Call Forward synchronization • N: Disable Do Not Disturb/Call Forward synchronization
Default Value	N
Web User Interface Reference	Enable Key Synchronization

MOH_SERVER_URI_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	STRING
Description	Specifies MoH server URI for each line.
Value Range	Max. 384 characters
Default Value	Empty string

Web User Interface Reference	MoH Server URI
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FWD_DND_CONTROL_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the telephone for FWD/DND.
Value Range	- Y: Enable - N: Disable
Default Value	Y

FWD_DND_SYNCHRO_MODE

Value Format	INTEGER
Description	Specifies the mode of FWD/DND synchronizing with server.
Value Range	1: as feature event 2: Panasonic original 3: Entel
Default Value	1

HOLD_AND_CALL_ENABLE

Value Format	BOOLEAN
Description	Specifies whether making new call after holding the call or not.
Value Range	- Y: Enable (Hold and Call) - N: Disable (Hold)
Default Value	N

AUTO_CALL_HOLD

Value Format	BOOLEAN
Description	Specifies whether calls are disconnected or held when another line is selected while having a conversation.
Value Range	- Y: Enable Auto Call Hold - N: Disable Auto Call Hold
Default Value	Y

SIP_RESPONSE_CODE_DND

Value Format	INTEGER
Description	Specifies the response code when a call is received in Do Not Disturb mode.
Value Range	400–699
Default Value	403

SIP_RESPONSE_CODE_CALL_REJECT

Value Format	INTEGER
Description	Specifies the response code when a call is rejected.
Value Range	400–699
Default Value	603

CW_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether automatic call waiting is enabled.
Value Range	• Y: Enable Call Waiting • N: Disable Call Waiting
Default Value	Y
Web User Interface Reference	Enable Call Waiting

RETURN_VOL_SET_DEFAULT_ENABLE

Value Format	BOOLEAN
Description	Specifies whether the volume is returned to its default setting after each call.
Value Range	• Y: Volume returns to the default setting after each call • N: Volume does not change after each call
Default Value	N

CONFERENCE_SERVER_URI

Value Format	STRING
Description	Specifies the URI for a conference server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:conference@example.com". Note • Availability depends on your phone system.
Value Range	Max. 256 characters (except ", &, ', :, ;, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Conference Server URI

PRIVACY_MODE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable privacy.

Value Range	• Y: Enable (privacy on) • N: Disable (privacy off) Note • If set to "N", allow call information to be shared with other handsets and barging in from other handsets.
Default Value	Y

PARALLEL_HSNOM

Parameter Name Example	PARALLEL_HSN01, PARALLEL_HSN02, ..., PARALLEL_HSN08
Value Format	INTEGER
Description	Specifies the handset number for the paired handset (KX-TPA60) when connected in parallel. "m" refers to the master handset (KX-TPA65/KX-TPA68). For details, see 6.6 Pairing (Parallel Mode). Note • Be sure to designate the KX-TPA65/KX-TPA68 as the master handset and the KX-TPA60 as the slave handset. Paired handsets cannot be configured for other pairings.
Value Range	0: Off, 1–8 (handset number)
Default Value	0
Web User Interface Reference	Slave Handset Number (Master Desk Phone Number 1–8)

PARALLEL_MODEm

Parameter Name Example	PARALLEL_MODE1, PARALLEL_MODE2, ..., PARALLEL_MODE8
Value Format	INTEGER
Description	Specifies the off-hook behavior of the other handset when one handset is in use. For details, see 6.6 Pairing (Parallel Mode).
Value Range	• 0: Busy • 1: Take over call
Default Value	1
Web User Interface Reference	Mode (Master Desk Phone Number 1–8)

FWD_SYNCHRO_FORCE_DISABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to synchronize the Call Forward settings in "FWD_DND_SYNCHRO_ENABLE_n".
Value Range	• Y: Do not synchronize • N: Synchronize

Default Value	N
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CONF_SERVER_HOLD_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to hold the call when connecting an N-party conference.
Value Range	- Y: Hold the call - N: Do not hold the call
Default Value	N

DIALPLAN_REPLACE_LOG_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to log the number after it was modified by the Dial Plan or the number as it was input.
Value Range	- Y: Log the number in the outgoing call log after it was modified by the Dial Plan - N: Log the number in the outgoing call log as it was input
Default Value	Y

DIALPLAN_MEMORY_DIAL_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable Dial Plan processing for memory dialing.
Value Range	- Y: Enable Dial Plan - N: Disable
Default Value	Y

SIGNALING_AUTO_ANS_ENABLE_n

For details about parameter names end with "_n", see 5.2.1 Configuration File Parameters	
Value Format	BOOLEAN
Description	Specifies whether to enable paging mode with "Click to Dial".
Value Range	- Y: Enable - N: Disable
Default Value	Y

TALKING_SOFT_KEY_A

Value Format	INTEGER
Description	Specifies the display icon of soft key A during a call.

Value Range	• 0: Original • 1: Mute • 2: Menu • 3: Blind^{*1} • 4: Redial • 5: Conference • 6: Flash/Recall • 7: Incoming Log • 8: Outgoing Log • 9: Phonebook • 10: Call Park^{*2} • 11: Intercom^{*3} • 12: Pause^{*4} • 13: Noise Reduction (KX-TPA60/KX-TPA68) • 14: Private Hold ^{*1} "Blind" is not displayed if BLIND_TRANSFER_ENABLE="N". If TALKING_SOFT_KEY_C is not configured and BLIND_TRANSFER_ENABLE="Y", "Blind" is displayed on Soft Key C. ^{*2} "Call Park" is not displayed if CALLPARK_KEY_ENABLE="N" ^{*3} "Intercom" is not displayed if INTERCOM_ENABLE="N" ^{*4} "Pause" is not displayed if PAUSE_INPUT_ENABLE="N"
Default Value	0

TALKING_SOFT_KEY_B

Value Format	INTEGER
Description	Specifies the display icon of soft key B during a call.

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Value Range	• 0: Original • 1: Mute • 2: Menu • 3: Blind^{*1} • 4: Redial • 5: Conference • 6: Flash/Recall • 7: Incoming Log • 8: Outgoing Log • 9: Phonebook • 10: Call Park^{*2} • 11: Intercom^{*3} • 12: Pause^{*4} • 13: Noise Reduction (KX-TPA60/KX-TPA68) • 14: Private Hold ^{*1} "Blind" is not displayed if BLIND_TRANSFER_ENABLE="N". If TALKING_SOFT_KEY_C is not configured and BLIND_TRANSFER_ENABLE="Y", "Blind" is displayed on Soft Key C. ^{*2} "Call Park" is not displayed if CALLPARK_KEY_ENABLE="N" ^{*3} "Intercom" is not displayed if INTERCOM_ENABLE="N" ^{*4} "Pause" is not displayed if PAUSE_INPUT_ENABLE="N"
Default Value	0

TALKING_SOFT_KEY_C

Value Format	INTEGER
Description	Specifies the display icon of soft key C during a call.

Value Range	• 0: Original • 1: Mute • 2: Menu • 3: Blind^{*1} • 4: Redial • 5: Conference • 6: Flash/Recall • 7: Incoming Log • 8: Outgoing Log • 9: Phonebook • 10: Call Park^{*2} • 11: Intercom^{*3} • 12: Pause^{*4} • 13: Noise Reduction (KX-TPA60/KX-TPA68) • 14: Private Hold^{*5} ^{*1} "Blind" is not displayed if BLIND_TRANSFER_ENABLE="N". If TALKING_SOFT_KEY_C is not configured and BLIND_TRANSFER_ENABLE="Y", "Blind" is displayed on Soft Key C. ^{*2} "Call Park" is not displayed if CALLPARK_KEY_ENABLE="N" ^{*3} "Intercom" is not displayed if INTERCOM_ENABLE="N" ^{*4} "Pause" is not displayed if PAUSE_INPUT_ENABLE="N" ^{*5} (For KX-TPA60/KX-TPA65) "Private Hold" is not displayed if PRIVATE_HOLD_ENABLE="N". If TALKING_SOFT_KEY_C is not configured and PRIVATE_HOLD_ENABLE="Y", "Private Hold" is displayed on Soft Key C. If TALKING_SOFT_KEY_C is not configured, BLIND_TRANSFER_ENABLE="Y" and PRIVATE_HOLD_ENABLE="Y", "Private Hold" is displayed on Soft Key C.
Default Value	0

TALKING_SOFT_KEY_A_UX1 (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Description Specifies the display icon of soft key A during a call for KX-TPA70/KX-TPA73.

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Value Range	0–16 • 0: Original • 1: Mute • 2: Menu • 3: Blind Transfer^{*1} • 4: Transfer • 5: Redial • 6: Conference • 7: Flash/Recall • 8: Incoming Log • 9: Outgoing Log • 10: Call History • 11: Phonebook • 11: Call Park^{*2} • 12: Intercom^{*3} • 13: Pause^{*4} • 15: Noise Reduction • 16: Private Hold^{*5} ^{*1} "Blind" is not displayed if BLIND_TRANSFER_ENABLE="N". If TALKING_SOFT_KEY_C_UX1 is not configured and BLIND_TRANSFER_ENABLE="Y", "Blind" is displayed on Soft Key C. ^{*2} "Call Park" is not displayed if CALLPARK_KEY_ENABLE="N" ^{*3} "Intercom" is not displayed if INTERCOM_ENABLE="N" ^{*4} "Pause" is not displayed if PAUSE_INPUT_ENABLE="N" ^{*5} "Private Hold" is not displayed if PRIVATE_HOLD_ENABLE="N"
Default Value	0

TALKING_SOFT_KEY_B_UX1 (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Description Specifies the display icon of soft key B during a call for KX-TPA70/KX-TPA73.

Value Range	0–16 • 0: Original • 1: Mute • 2: Menu • 3: Blind Transfer^{*1} • 4: Transfer • 5: Redial • 6: Conference • 7: Flash/Recall • 8: Incoming Log • 9: Outgoing Log • 10: Call History • 11: Phonebook • 11: Call Park^{*2} • 12: Intercom^{*3} • 13: Pause^{*4} • 15: Noise Reduction • 16: Private Hold^{*5} ^{*1} "Blind" is not displayed if BLIND_TRANSFER_ENABLE="N". If TALKING_SOFT_KEY_C_UX1 is not configured and BLIND_TRANSFER_ENABLE="Y", "Blind" is displayed on Soft Key C. ^{*2} "Call Park" is not displayed if CALLPARK_KEY_ENABLE="N" ^{*3} "Intercom" is not displayed if INTERCOM_ENABLE="N" ^{*4} "Pause" is not displayed if PAUSE_INPUT_ENABLE="N" ^{*5} "Private Hold" is not displayed if PRIVATE_HOLD_ENABLE="N"
Default Value	0

TALKING_SOFT_KEY_C_UX1 (For KX-TPA70/KX-TPA73)

Value Format	INTEGER
Description	Description Specifies the display icon of soft key C during a call for KX-TPA70/KX-TPA73.

Value Range	0–16 0: Original 1: Mute 2: Menu 3: Blind Transfer^{*1} 4: Transfer 5: Redial 6: Conference 7: Flash/Recall 8: Incoming Log 9: Outgoing Log 10: Call History 11: Phonebook 11: Call Park^{*2} 12: Intercom^{*3} 13: Pause^{*4} 15: Noise Reduction 16: Private Hold^{*5} ^{*1} "Blind" is not displayed if BLIND_TRANSFER_ENABLE="N". If TALKING_SOFT_KEY_C_UX1 is not configured and BLIND_TRANSFER_ENABLE="Y", "Blind" is displayed on Soft Key C. ^{*2} "Call Park" is not displayed if CALLPARK_KEY_ENABLE="N" ^{*3} "Intercom" is not displayed if INTERCOM_ENABLE="N" ^{*4} "Pause" is not displayed if PAUSE_INPUT_ENABLE="N" ^{*5} "Private Hold" is not displayed if PRIVATE_HOLD_ENABLE="N"
Default Value	0

DISPLAY_VM_WITH_NUMBER

Value Format	BOOLEAN
Description	Specifies whether to enable displaying the number of unread voice messages.
Value Range	- Y: Enable - N: Disable
Default Value	Y

FWD_DND_MISSEDLOG_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the unit to save forwarded calls and rejected calls on a Missed Call log when "FWD/DND" feature is activated.

Value Range	• Y: Enable • N: Disable
Default Value	Y

RETRIVE_TRANS_HOLD_OPER_CHANGE

Value Format	BOOLEAN
Description	Specifies the action for retrieving transfer-hold calls by pressing a Line key. Note • The action for retrieving conference call on hold by pressing a Line key in the conference call sequence also follows this setting.
Value Range	• Y: Disconnect the current call • N: Follow the "AUTO_CALL_HOLD" setting
Default Value	N

REMOVE_PREFIX_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable omitting "+" included in overseas telephone numbers when making or receiving a call.
Value Range	• Y: Enable • N: Disable
Default Value	N

RCVBACK_RESCODE_OUTOFRANGE

Value Format	INTEGER
Description	Specifies the response code when the handset is out of range.
Value Range	400–699
Default Value	404

5.3.34 Logging Settings

SYSLOG_ADDR

Value Format	STRING
Description	Specifies the IP address or FQDN of Syslog server.
Value Range	Max. 256 characters
Default Value	Empty string

SYSLOG_PORT

Value Format	INTEGER
--------------	---------

Description	Specifies the port of Syslog server.
Value Range	1–65535
Default Value	514

LOGGING_LEVEL_DNS

Value Format	INTEGER
Description	Specifies the log level of DNS.
Value Range	0–6
Default Value	0

LOGGING_LEVEL_NW1

Value Format	INTEGER
Description	Specifies the log level of SNTP.
Value Range	0–6
Default Value	0

LOGGING_LEVEL_FILE

Value Format	INTEGER
Description	Specifies the log level of FILE downloading.
Value Range	0–6
Default Value	6

LOGGING_LEVEL_SIP

Value Format	INTEGER
Description	Specifies the log level of SIP.
Value Range	0–6
Default Value	0

LOGGING_LEVEL_TR069

Value Format	INTEGER
Description	Specifies the log level of TR-069.
Value Range	0–6
Default Value	0

LOGGING_LEVEL_STUN

Value Format	INTEGER
Description	Specifies the log level of STUN.
Value Range	0–6
Default Value	0

LOGGING_LEVEL_NW2

Value Format	INTEGER
Description	Specifies the log level of Xsi, XML, XMPP, LDAP.
Value Range	0–6
Default Value	0

LOGGING_LEVEL_CFGPARSE

Value Format	INTEGER
Description	Specifies the log level of configuration parse.
Value Range	0–6
Default Value	0

SYSLOG_OUT_START

Value Format	BOOLEAN
Description	Specifies whether to enable or disable exporting of the Application Log.
Value Range	- Y: Enable export to syslog - N: Disable
Default Value	N

SYSLOG_TRANSPORT

Value Format	INTEGER
Description	Specifies the protocol for syslog.
Value Range	0: UDP 1: TLS
Default Value	0

SYSLOG_TLS_VERIFY

Value Format	INTEGER
Description	Specifies whether to verify the TLS certificate when "SYSLOG_TRANSPORT" is set to "1".
Value Range	0: Do not verify 1: Verify
Default Value	0

SYSLOG_ROOT_CERT_PATH

Value Format	STRING
Description	Specifies the URL where the root certificate is stored for authenticating the syslog server.

Value Range	Max. 384 characters
Default Value	Empty string

SYSLOG_CLIENT_CERT_PATH

Value Format	STRING
Description	Specifies the URL where the client certificate is stored for authenticating the syslog client.
Value Range	Max. 384 characters
Default Value	Empty string

SYSLOG_PKEY_PATH

Value Format	STRING
Description	Specifies the URL where the client certificate is stored for authenticating the syslog client.
Value Range	Max. 384 characters
Default Value	Empty string

DECT_MONITORING_CYCLIC_INTVL

Value Format	INTEGER
Description	Specifies the interval, in minutes, for monitoring the DECT status.
Value Range	0, 30-720 (0: Disable)
Default Value	0

DECT_MONITORING_OUTPUT

Value Format	BOOLEAN
Description	Specifies whether to enable outputting the result of DECT monitoring as Syslog.
Value Range	• $\mathbb{Y}$: Enable • $\mathbb{N}$: Disable
Default Value	$\mathbb{Y}$

DECT_MONITORING_OPTION

Value Format	INTEGER
Description	Specifies which DECT Monitoring option is output as the syslog.

Value Range	Format: X1,X2,X3,X4,X5,X6,X7,X8 (Comma-separated integer) X1: Option 1, X2: Option 2...X8: Option 8 (X1, X2...X8=0 or 1) Option 1: The number of the registered base unit, Option 2... Option 8: Reserved 0: Disable 1: Enable [Example] 1,0,0,0,0,0,0,0 In this setting, number of the registered base unit is added to the syslog of DECT Monitoring.
Default Value	0,0,0,0,0,0,0,0

5.3.35 TWAMP Settings

TWAMP_ENABLE

Value Format	BOOLEAN
Description	Specifies whether to enable the TWAMP server function.
Value Range	Y: Enable the TWAMP server function. N: Disable
Default Value	N
Web User Interface Reference	Enable TWAMP

TWAMP_CONTROL_PORT

Value Format	INTEGER
Description	Specifies the port for the TWAMP control session.
Value Range	1-65535
Default Value	862
Web User Interface Reference	Control Port

TWAMP_TEST_PORT

Value Format	INTEGER
Description	Specifies the port for the TWAMP test session.
Value Range	1-65535
Default Value	9000
Web User Interface Reference	Test Port

TWAMP_SERVER_WAIT_TIME

Value Format	INTEGER
Description	Specifies the time, in seconds, for the TWAMP server to wait for incoming packets for maintaining the session.
Value Range	1-65535

Default Value	900
Web User Interface Reference	Wait Time for Control

TWAMP_REFLECTOR_WAIT_TIME

Value Format	INTEGER
Description	Specifies the time, in seconds, for the TWAMP reflector to wait for incoming packets for maintaining the session.
Value Range	1-65535
Default Value	900
Web User Interface Reference	Wait Time for Reflector

TWAMP_PADDING_ZERO

Value Format	BOOLEAN
Description	Specifies the packet padding for the TWAMP test session.
Value Range	Y: All zeros N: Random
Default Value	N

Section 6

Useful Telephone Functions

This section explains phone number settings, dial plan settings, the phonebook import/export function, the Broadsoft XSI function, the BroadCloud (Presence) function and Pairing (Parallel Mode).

6.1 Line Settings

6.1.1 Multi Number Settings

A unit can be used with 8 handsets.

You can assign a maximum of 8 different phone numbers for handsets.

Each available phone number (line) can be assigned to handsets as desired to handle incoming and outgoing calls.

This feature is available only when "MULTI_NUMBER_ENABLE"="Y" is set.

When "MULTI_NUMBER_ENABLE"="N", each handset has exclusive use of the line it has been assigned to. (Handset 1 uses line 1, handset 2 uses line 2, ... handset 8 uses line 8.)

Programming Example 1

The following programming example shows a configuration where handsets have their own phone numbers, and handsets also share a common phone number.

You can program this table using Web user interface programming (→ see 4.6.1.1 Group Handset / Handset select for receiving call).

For details about configuring these settings by configuration file programming, see 5.3.33 Call Control Settings–INCOMING_CALL_GROUP_n.

[Grouping Handset / Handset selection for receiving calls]

Line No.	Phone Number	Handset No.								Paging
		1	2	3	4	5	6	7	8	
1	1111	✓								HS1
2	2222		✓							HS1
3	3333			✓						HS1
4	4444				✓					HS1
5	5555					✓				HS1
6	6666						✓			HS1
7	7777									HS1
8	8888	✓	✓	✓	✓	✓	✓			HS1

Case 1:

A call dialed to "1111" will be received by handset 1.

Case 2:

A call dialed to "2222" will be received by handset 2.

Case 3:

A call dialed to "8888" will be received by handsets 1–6.

When receiving a paging call, handset 1 will automatically answer the call.

Programming Example 2

The following programming example shows a configuration where handsets 1–3 dial with lines 1–3, respectively. Each handset uses the line set in **[Default]** by default.

You can program this table using Web user interface programming (→ see 4.6.1.2 Handset and Line Number select for making call).

For details about configuring these settings by configuration file programming, see 5.3.33 Call Control Settings–INCOMING_CALL_GROUP_n.

[Handset and Line No. selection for making calls]

Handset No.	Line No.								Default
	1	2	3	4	5	6	7	8	
1	✓	✓	✓						1
2	✓	✓	✓						2
3	✓	✓	✓						3
4									
5									
6									
7									
8									

Case 1:

When a user goes off-hook with handset 1, line 1 is seized and dialed by default. Line 2 and line 3 can also be seized and dialed.

Case 2:

When a user goes off-hook with handset 2, line 2 is seized and dialed by default. Line 1 and line 3 can also be seized and dialed.

Case 3:

When a user goes off-hook with handset 3, line 3 is seized and dialed by default. Line 1 and line 2 can also be seized and dialed.

Note

- You can make a call with one of the phone numbers other than the default phone number. For details about the operations, refer to the Operating Instructions on the Panasonic Web site (→ see Introduction).

6.2 Phonebook Import and Export

This section explains how to import and export phonebook data. Phonebook data of the cordless handset includes names and phone numbers.

(The description below uses the KX-TPA60 cordless handset as an example.)

Phonebook data on the cordless handset can be exported, edited with editor tools, and imported again. In addition, phonebook data created with other software can be imported into the cordless handset.

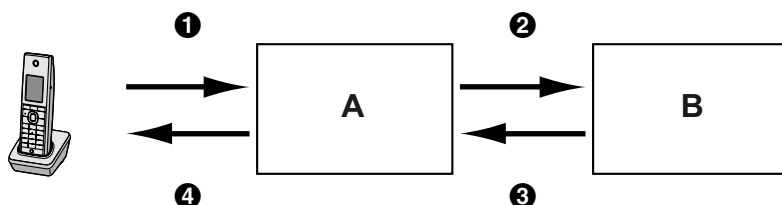
You can use the phonebook import and export functions as follows.

- A. Phonebook data
- B. Microsoft Excel
- C. Microsoft Outlook

Editing Phonebook Data on a PC

The phonebook data stored on the cordless handset can be edited using a program such as Microsoft Excel® spreadsheet software. For details about the operation, see **6.2.2 Editing with Microsoft Excel**.

You can export the phonebook data to the PC, edit the exported file using appropriate software, and then import it into the cordless handset.

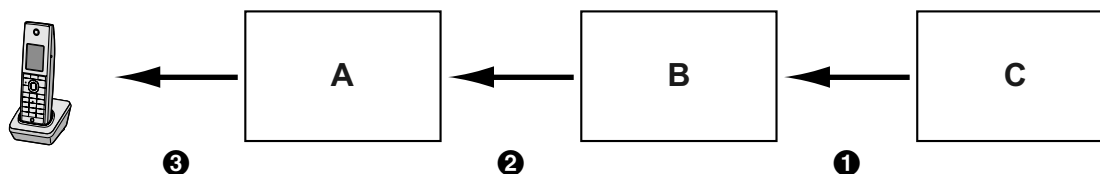


Importing Address Book Data from a PC

You can import address book data stored in programs, such as Microsoft Outlook® messaging and collaboration client, into the cordless handset.

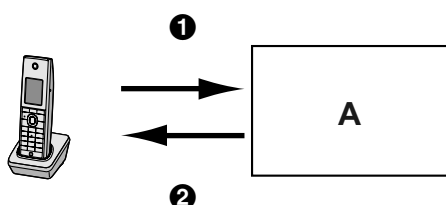
First, export address book data from the e-mail software to a program such as Microsoft Excel, edit it as necessary, and then import the exported data into the cordless handset.

For details about the operation, see **6.2.3 Exporting Data from Microsoft Outlook**.



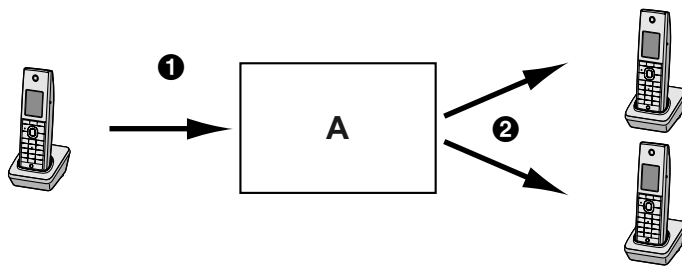
Backing up Phonebook Data

You can export the phonebook data from the cordless handset to a PC and keep the file as a backup in case of data loss or for use when exchanging the cordless handset.

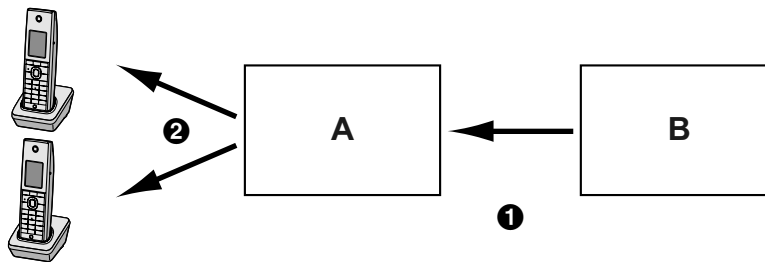


Importing the Same Phonebook Data to other Cordless handset

You can export the phonebook data created on a cordless handset to a PC, and then import it into other cordless handsets.



You can also import phonebook data created on a PC to other cordless handsets.



Import/Export File Format

The file format used for importing and exporting the phonebook data is "TSV". When importing or exporting using Microsoft Excel, "CSV (Comma-separated Value)" is generally used as the file format.

A phonebook entry in the cordless handset has 9 fields. An entry in the phonebook data is represented in text as "record ID <TAB> name <TAB> reserved <TAB> phone number <TAB> phone number <TAB> phone number <TAB> reserved <line break>".

The text data can be edited using any text editing software that supports UTF-16 encoding with a BOM and little endian byte ordering. When you save the text file, it must be saved using the same format, or the text might become garbled.

Phonebook Data in Text Format

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		Aaron MacDowel				501		1234001								
2		Barbara Nicolls				502		1234002								
3		Carl O'Brien				503		1234003								
4		Dorothy Parker						1234004								
...		...				...		...								
...		...				...		...								

- 1 Record ID (Unique ID: 1–500)
- 2 Tab
- 3 Name (up to 24 characters)
- 4 Tab
- 5 Reserved (up to 24 characters)
- 6 Tab
- 7 Phone number (up to 32 digits)
- 8 Tab
- 9 Phone number (up to 32 digits)
- 10 Tab
- 11 Phone number (up to 32 digits)
- 12 Tab
- 13 Phone number (up to 32 digits)
- 14 Tab
- 15 Phone number (up to 32 digits)
- 16 Tab
- 17 Reserved

6.2.1 Import/Export Operation

The following procedures explain how to import phonebook data to cordless handsets, and how to export phonebook data from cordless handsets to a PC through the Web user interface.

For details about the settings, see **4.6.6 Import Phonebook** or **4.6.7 Export Phonebook**.

To import phonebook data

1. Click the **[Telephone]** tab, and then click **[Import Phonebook]**.
2. Select the handset number using **[Handset Number]** pulldown Menu.
3. In **[File Name]**, enter the full path to the file that you want to import, or click **Browse** to select the phonebook data file that you want to import.
4. Click **[Import]**.

To export the phonebook data

1. Click the **[Telephone]** tab, and then click **[Export Phonebook]**.
2. Select the handset number using **[Handset Number]** pulldown Menu.
3. Click **[Export]**.
4. On the "Now Processing File Data" screen, click the text "HERE" in the displayed message, or wait until **File Download** window appears.

Note

- Depending on the security settings of your Web browser, pop-up menus might be blocked. If the file cannot be exported successfully, try the export operation again or change the security settings of your Web browser.

5. Click **Save** on **File Download** window.
6. On the **Save As** window, select a folder to save the exported phonebook data to, enter the file name in **File name**, select **TSV File** for **Save as type**, and click **Save**.
If the file is downloaded successfully, the **Download complete** window appears.
7. Click **Close**.
8. To exit the operation, click the text "HERE" in the displayed message.
The **[Export Phonebook]** screen returns.

Note

- Make sure that the import source or cordless handset is in standby mode.
- The import source or cordless handset must be specified at the time of import/export. The imported data is added to the existing phonebook data.
 - If the existing phonebook data has an entry with the same record ID as an imported entry, the entry is overwritten with the imported entry.
 - If the existing phonebook data has an entry with no record ID, it will be left in the phonebook.
 - If the imported phonebook data has an entry with no record ID, the imported entry is added as a new entry unless an existing entry with the same name and phone number is found.

Phonebook entries that are added via the cordless handset are not assigned record IDs. Therefore, it is recommended to export phonebook data from the cordless handset, assign record IDs manually and then re-import them. Doing so can help manage phonebook data.
- The phonebook for a cordless handset has the following limitations:
 - A maximum of 500 phonebook entries can be stored in the cordless handset. If the cordless handset already has phonebook data, it accepts up to the 500th entry, including the existing entries. The rest of the entries will not be imported, and the message "**Memory Full**" is displayed on the cordless handset.
 - The name can contain up to 24 characters.
 - The phone number can contain up to 32 digits.
 - Phonebook entries exceeding the characters or digits limits cannot be imported properly.
- If the export is interrupted by an operation on the cordless handset, only the data that has been successfully exported before the interruption is exported to a file.

6.2.2 Editing with Microsoft Excel

You can edit exported phonebook data on a PC with software such as Microsoft Excel. You can then import the phonebook data into cordless handsets.

To open the phonebook data on a PC

1. Open Microsoft Excel.
2. Click **Office Button**, and then **Open**.

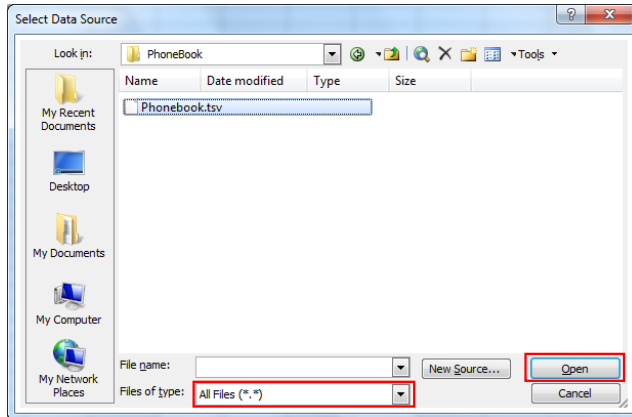
Note

- Make sure to open a TSV file in this procedure. If you change the extension of a TSV file to ".csv", the file will open by simply double-clicking it. However, the character encoding of the file might not

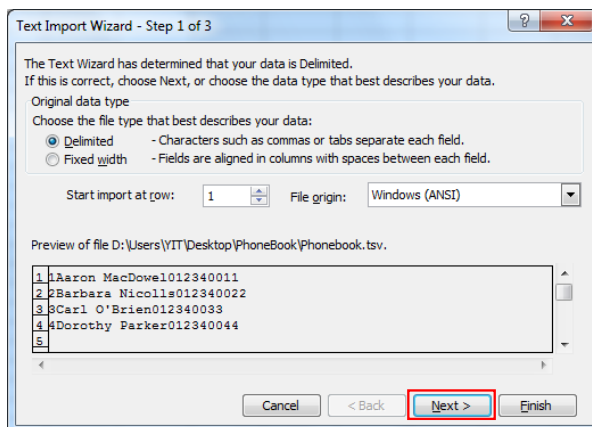
6.2.2 Editing with Microsoft Excel

be recognized properly, resulting in garbled characters, or the phone numbers might be recognized as numbers, resulting in data alteration.

3. Select **All Files** for the file type, select the exported phonebook data file, and click **Open**.



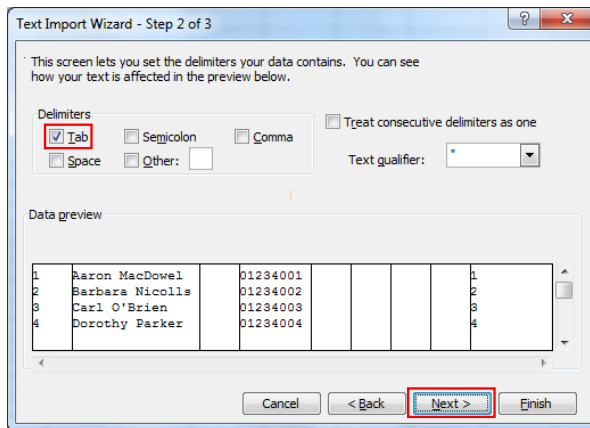
4. On the **Text Import Wizard - Step 1 of 3** window, click **Next**.



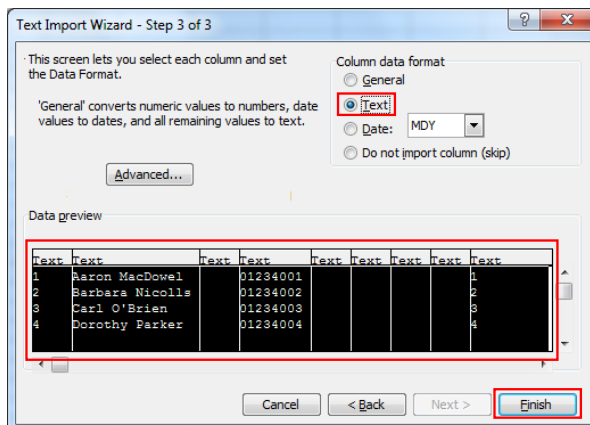
Note

- Regardless of what is selected for **File origin**, the file will be processed normally if the format is appropriate.

5. On the **Text Import Wizard - Step 2 of 3** window, select **Tab** for **Delimiters**, and then click **Next**.



6. On the **Text Import Wizard - Step 3 of 3** window, select all columns in **Data preview**, select **Text** in **Column data format**, and then click **Finish**.
The TSV file will be opened.



Note

- Phone numbers must be treated as text strings. Otherwise, a "0" at the beginning of a phone number might disappear when exported.

To save the phonebook data for importing to the cordless handset

- After editing the phonebook entries, click **Office Button**, and then **Save As**.
Assign record IDs manually before saving.
- Enter a file name in **File name**, and select **Unicode Text** in **Save as type**.
The file will be saved in UTF-16 little endian with a BOM. Fields will be separated by tabs.
- Click **Save**.
A message warning you about file compatibility will be displayed.
- Click **Yes**.
The file will be saved as a Unicode text file, with the fields separated by tabs.

Note

- The procedure may vary depending on the software version of Microsoft Excel. Therefore, files exported and imported between the cordless handset and Microsoft Excel are not always compatible with each other.

6.2.3 Exporting Data from Microsoft Outlook

You can export address book data stored in programs such as Microsoft Outlook, and then edit the exported data with a program such as Microsoft Excel in order to import it to the cordless handset.

To export the Microsoft Outlook address book data

1. In Microsoft Outlook, click **File**, and then click **Import and Export**.
2. Select **Export to a file**, and click **Next**.
3. Select **Tab Separated Values (Windows)**, and click **Next**.
4. Select **Contacts**, and click **Next**.
5. Click **Browse**, select a folder, and then enter the file name to export the data to.
6. Click **OK**.
7. On the **Export to a File** window, click **Next**.
8. Click **Map Custom Fields**.
9. Clear all items in the **To** list by clicking **Clear Map**. Then, drag only **Last Name** and **Business Phone** from the **From** list to the **To** list, and click **OK**.
10. On the **Export to a File** window, click **Finish**.
The data will be exported.

Note

- The procedure may vary depending on the software version of Microsoft Outlook.
- You can export data from Microsoft Outlook Express by using a similar procedure. It is also possible to export data from other applications that are compatible with Microsoft Excel.
- You can open the exported file in Microsoft Excel, and then import it to the cordless handset. For details, see **6.2.2 Editing with Microsoft Excel**.
- First and middle names are not exported using this procedure. You can export all necessary items and edit the entry before importing them to the cordless handset.
- In the file exported from Microsoft Outlook, fields are separated by tabs and encoded using the default character encoding for your operating system.

6.3 Dial Plan

The dial plan settings control how numbers dialed by the user are transmitted over the network. Dial plan settings can be configured on a per-line basis. These settings can be programmed either through the Web user interface (→ see **4.6.3.2 Dial Plan**) or by configuration file programming (→ see **5.3.33 Call Control Settings**).

6.3.1 Dial Plan Settings

To set Dial Plan

1. In the Web user interface, click the **[Telephone]** tab, and then click **[Call Control [Line 1]–[Line x]]**.
2. In **[Dial Plan]**, enter the desired dial format.
The dial plan settings can be configured for each line separately.
For details about available characters for the dial format, see **Available Values for the Dial Plan Field** in this section.
3. Select **[Yes]** or **[No]** for **[Call Even If Dial Plan Does Not Match]**.

- If you select **[Yes]**, the call will be made even if the user dials a phone number that does not match the dial format in **[Dial Plan]**.
- If you select **[No]**, the call will be made only if the user dials a phone number that matches the dial format in **[Dial Plan]**.

Note

- For details about configuring these settings by configuration file programming, see "**DIAL_PLAN_n**" and "**DIAL_PLAN_NOT_MATCH_ENABLE_n**" in **5.3.33 Call Control Settings**.

Available Values for the Dial Plan Field

The following table explains which characters you can use in the dial format, and what the characters mean.

Element	Available Value	Description
String	0–9, [, -,], <, >, *, #, !, S, s, T, t, X, x, ., , +	You can enter dial plan descriptions using a combination of the characters listed as available values.
Digit	0–9, *, #, +	Example: "123" If the dialed phone number is "123", the call is made immediately.
Wildcard	X, x	Example: "12xxxxx" If the dialed phone number is "12" followed by any 5-digit number, the call is made immediately.
Range	[]	Example: "[123]" If the dialed phone number is either one of "1", "2", or "3", the call is made immediately.
Subrange	-	Example: "[1-5]" If the dialed phone number is "1", "2", "3", "4", or "5", the call is made immediately. • A subrange is only valid for single-digit numbers. For example, "[4-9]" is valid, but "[12-21]" is invalid.
Repeat	.	Example: "1." If the dialed phone number is "1" followed by zero or more "1"s (e.g., "11", "111"), the call is made.
Substitution	<(before):(after)>	Example: "<101:9999>" If the dialed phone number is "101", "101" is replaced by "9999", and then the call is made immediately.
Timer	S, s (second)	Example: "1x.S2" If the dialed phone number begins with "1", the call is made after a lapse of 2 seconds. • The number (0–9) followed by "S" or "s" shows the duration in seconds until the call is made.
Macro Timer	T, t	Example: "1x.T" If the dialed phone number begins with "1", the call is made after a lapse of "T" seconds. • The value of "T" or "t" can be configured through the Web user interface (→ see [Timer for Dial Plan] in 4.6.2.1 Call Control).

Element	Available Value	Description
Reject	!	Example: "123xxx!" If the dialed phone number is "123" followed by 3 digits, the call is not made.
Alternation		Example: "1xxxx 2xxx" If the dialed phone number is "1" followed by 4 digits, or "2" followed by 3 digits, the call is made immediately. You can use this element to specify multiple numbers.
Comma	,	Example: "9,xxxxxxxxxx.T" If 9 is dialed, the second dial tone is heard, and then 11 digits are dialed, the call is made after waiting "T" seconds. * The dialing will include the initially dialed "9".

Note

- You can enter up to 1000 characters in **[Dial Plan]**.
- You can assign up to 100 dial plans separated by "|" in **[Dial Plan]**.
- You can assign up to 32 digits per dial plan in **[Dial Plan]**.
- You can assign up to 10 substitutions in **[Dial Plan]**.
- After the user completes dialing, the cordless handset immediately sends all the dialed digits if **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]** in the Web user interface or if "DIAL_PLAN_NOT_MATCH_ENABLE_n" is set to "N" in a configuration file. The cordless handset recognizes the end of dialing as follows:
 - The inter-digit timer expires (→ see **[Inter-digit Timeout]** in 4.6.2.1 **Call Control** in the Web user interface or "INTDIGIT_TIM" in 5.3.30 **Telephone Settings** in the configuration file).
 - The user presses **[ENTER]** or the # key.
 - The call is initiated after going off-hook (pre-dial).

Dial Plan Example

The following example shows dial plans containing character sequences separated by "|".

Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

Complete Match:

Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "211", "911" and so on, the call is made immediately.

Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "2123456789", "5987654321" and so on, the call is made immediately.

Partial Match (when the dial plan contains "."):

Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "01254", "012556" and so on, the call is made after the inter-digit timer expires.

Partial Match (when the dial plan does not contain "."):

Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "21", "91" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]**, the call is made after the inter-digit timer expires.

- If the dialed phone number is "21", "91" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[No]**, the call is denied after the inter-digit timer expires.

Example: "[2346789]11|01[2-9]x.[2-9]xxxxxxxx"

- If the dialed phone number is "21234567", "598765432" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]**, the call is made after the inter-digit timer expires.
- If the dialed phone number is "21234567", "598765432" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[No]**, the call is denied after the inter-digit timer expires.

No Match:

Example: "[2346789]11|01[2-9]x.[2-9]xxxxxxxx"

- If the dialed phone number is "0011", "1011" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]**, the call is made after the inter-digit timer expires.
- If the dialed phone number is "0011", "1011" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[No]**, the call is denied.

6.4 Broadsoft XSI (Xtended Services Interface)

6.4.1 Outline

BroadWorksXsi is an API library used to support the integration of Internet service-based BroadWorks functionality to create web applications and mashups (web application hybrids).

The KX-TGP600 uses the Broadsoft XSI (Xtended Services Interface) to run the following services.

1. Remote Office
2. AnyWhere
3. Simultaneous Ring Personal
4. Calling Line ID Delivery Blocking (Anonymous Call)
5. Call Forward
6. Do Not Disturb
7. Anonymous Call Rejection

(1) Remote Office

The Remote Office function allows you to use your home phone or cellular phone as your office phone. All incoming calls are forwarded from the IP phone (the KX-TGP600) to the Remote Office phone number.

(2) AnyWhere

The AnyWhere function is for remote users to easily access their IP phone's functions (such as making and receiving calls, and voicemail) from any phone.

(3) Simultaneous Ring Personal

The Simultaneous Ring Personal function enables up to 10 other phone numbers to ring at the same time an IP phone (the KX-TGP600) receives a call.

(4) Calling Line ID Delivery Blocking (Anonymous Call)

The Calling Line ID Delivery Blocking (Anonymous Call) function sets the caller information for calls made from an IP phone (the KX-TGP600) to "Anonymous Call".

(5) Call Forward

6.4.2 XSI Service Settings

The Call Forward function forwards incoming calls to an IP phone (the KX-TGP600) to a specified phone number.

* When Feature Key Synchronization is set (FWD_DND_SYNCHRO_ENABLE_n="Y", see page 342), the Call Forward function will not operate as an XSI function.

(6) Do Not Disturb

The Do Not Disturb function rejects incoming calls to the IP phone (the KX-TGP600).

* When Feature Key Synchronization is set (FWD_DND_SYNCHRO_ENABLE_n="Y", see page 342), the Do Not Disturb function will not operate as an XSI function.

(7) Anonymous Call Rejection

The Anonymous Call Rejection function rejects calls made to the IP phone (the KX-TGP600) as Anonymous Calls.

6.4.2 XSI Service Settings

Phone settings for using XSI services can be set using configuration parameters or the Web user interface (administrators only).

See **4.3.7 Xtended Service Settings** for making settings using the Web user interface.

The following parameter names will be displayed and can be set as needed.

Parameter Name	Description	Reference
XSI_ENABLE	Enables XSI services.	page 229
XSI_SERVER	Specifies the XSI server.	page 229
XSI_SERVER_TYPE	Specifies the communication method.	page 230
XSI_SERVER_PORT	Specifies the port used for communication with the XSI server.	page 230
XSI_USERID_n	Specifies the user name for each user (account) that will use XSI.	page 230
XSI_PASSWORD_n	Specifies the password for each user (account) that will use XSI.	page 230
XSI_PHONEBOOK_ENABLE_n	Specifies whether to enable or disable the Xsi phonebook service.	page 230
XSI_PHONEBOOK_CYCLIC_INTVL	Specifies the interval, in minutes, between periodic checks for updates of the Xsi Directory (Phonebook) files.	page 231
XSI_PHONEBOOK_RESYNC_DURATION	Specifies the time range, in minutes, during which units will access the server at a random time.	page 231
XSI_PHONEBOOK_TYPE_n	Specifies the type of Xsi phonebook.	page 231
XSI_CALLLOG_ENABLE_n	Specifies whether to enable or disable the Xsi call log service.	page 231
XSI_SIP_CREDENTIALS_ENABLE	Specifies whether to enable or disable the XSI SIP Credentials feature.	page 232
BSD_GROUP_ENABLE_n	Specifies whether to enable or disable the "Group" type for Xsi phonebooks.	page 232

Parameter Name	Description	Reference
BSD_GROUPCOM_ENABLE_n	Specifies whether to enable or disable the "GroupCommon" type for Xsi phonebooks.	page 232
BSD_ENTERPRISE_ENABLE_n	Specifies whether to enable or disable the "Enterprise" type for Xsi phonebooks.	page 232
BSD_ENTERPRISECOM_ENABLE_n	Specifies whether to enable or disable the "EnterpriseCommon" type for Xsi phonebooks.	page 233
BSD_PERSONAL_ENABLE_n	Specifies whether to enable or disable the "Personal" type for Xsi phonebooks.	page 233
BSD_MULTI_TYPE_ENABLE	Specifies whether you can select the type of Xsi phonebook.	page 233
XSI_ACTION_URL	Specifies a part of the XSI-Action URL.	page 233

Note

To change settings for the following XSI services using a handset, the parameter ADMIN_ABILITY_ENABLE_HSy="Y" (see page 340) must be set. (When ADMIN_ABILITY_ENABLE_HSy="N" is set, the settings can only be viewed.)

- Remote Office (Remote Office)
- AnyWhere (Anywhere)
- Simultaneous Ring Personal (SimultaneousRing)
- Calling Line ID Delivery Blocking (Anonymous Call)
- Anonymous Call Rejection (Block Anonymous)

Note

The text in parentheses are shown on the handset display.

Operations for accessing the above XSI services

1.  /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Call Settings" → **OK**
4. [▲]/[▼]: "Remote Office", "Anywhere", "SimultaneousRing", "Anonymous Call", or "Block Anonymous" → **OK**

6.5 BroadCloud (Presence)

6.5.1 Outline

The KX-TGP600 supports the following BroadCloud functions.

(1) BroadCloud Buddies

View the information of your Buddies.

6.5.2 BroadCloud (Presence) Function Settings

(2) BroadCloud Favorites

View the information of your Buddies that have been marked as Favorites.

(3) BroadCloud Presence

Shares presence statuses.

6.5.2 BroadCloud (Presence) Function Settings

Phone settings for using XMPP functions can be set using configuration parameters or the Web user interface (administrators only).

See **4.3.8 UC Settings** for making settings using the Web user interface.

The following parameter names will be displayed and can be set as needed.

Parameter Name	Description	Reference
UC_ENABLE	Enables BroadCloud services.	page 234
UC_USERID_HSy	Specifies user IDs for the BroadCloud server.	page 234
UC_PASSWORD_HSy	Specifies passwords for the BroadCloud server.	page 234
XMPP_SERVER	Specifies the IP address or FQDN of the XMPP server.	page 234
XMPP_PORT	Specifies the communication port for XMPP.	page 235
XMPP_TLS_VERIFY	Specifies the TLS (Transport Layer Security) certification validation type for protocol communication.	page 235
XMPP_ROOT_CERT_PATH	Specifies the path (URL) of the ROOT certificate for XMPP.	page 235
XMPP_CLIENT_CERT_PATH	Specifies the path (URL) of the Client certificate for XMPP.	page 235
XMPP_PKEY_PATH	Specifies the path (URL) of the private key for XMPP.	page 235

6.5.3 Handset Operation of BroadCloud (Presence) Functions

Operations for Viewing the Buddies List

1. [←]
2. [▲]/[▼]: "Buddies" → **OK**
3. The Buddies list is displayed.

Operations for Viewing the Favorites List

1. [→]
2. The Favorites list is displayed.

Operations to Change Your Handset's Presence

1. [←]
2. [▲]/[▼]: "My Phone" → **OK**
3. Press [▲] or [▼] to select the presence status to set (Available/Away/Busy/Offline/Invisible).
[▲]/[▼]: "Available", "Away", "Busy", "Offline" or "Invisible" → **OK**

Presence Status Icons

When Buddies or Favorites lists are displayed, presences are indicated by icons.

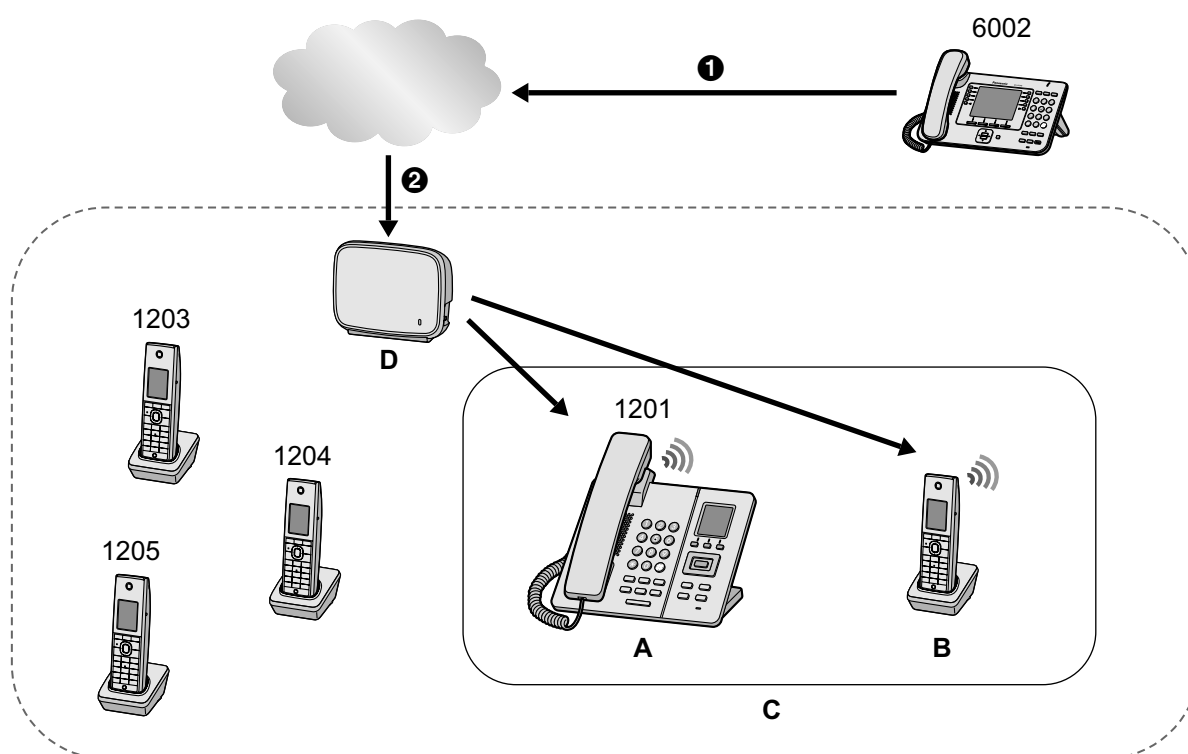
Lit/Flashing	Presence Status	Remarks
Off	Offline	Indicates user is offline.
Lit Green	Available	Indicates user is available.
Flashing Red	Away	Indicates user is away from their phone.
Lit Red	Busy	Indicates user is busy.

6.6 Pairing (Parallel Mode)

6.6.1 Outline

By using a cordless desktop phone (KX-TPA65/KX-TPA68) as a master desk phone, a wireless handset (KX-TPA60) can be set to be paired with it so that the phone number (account) of the master desk phone (KX-TPA65/KX-TPA68) is applied to the slave (paired) handset (KX-TPA60/KX-TPA70/KX-TPA73). With pairing settings, the desktop phone (KX-TPA65/KX-TPA68) can be used while you are sitting at your desk, and the slave handset (KX-TPA60/KX-TPA70/KX-TPA73) can be used while away from your desk to enhance your business activities.

1. Image of Pairing (Parallel Mode) Operation (Incoming Call)



- ① Call from 6002
- ② Call to 1201
- A. Master Desk Phone (KX-TPA65/KX-TPA68)
- B. Paired Handset (KX-TPA60/KX-TPA70/KX-TPA73)
- C. Paired Phones
- D. Base Unit (KX-TGP600)
- 📶: Call Rings

Operation Description

1. A call is made to Ext. 1201 from Phone C.
2. When the base unit (KX-TGP600) receives the call, Phone A and Phone B both ring.
3. The call can be answered from either Phone A or Phone B.

Note

- While pairing is set, the extension originally set for the paired handset is disabled.
- While pairing is set, calls made from the paired handset are handled as calls made from the master desk phone (in the example, 1201). (The caller information for such calls will be that of extension 1201.)
- While pairing is set and one of the paired phones is busy and the other paired phone goes off hook, a setting can be made for whether to continue the conversation with the phone that went off hook, or to send a busy signal to the phone that went off hook (prohibiting operation with that phone). The setting can be made using configuration parameters or the Web user interface (administrators only).

6.6.2 Pairing (Parallel Mode) Settings

Pairing (Parallel Mode) settings can be made using configuration parameters or the Web user interface (administrators only).

Up to 4 pairing settings can be made.

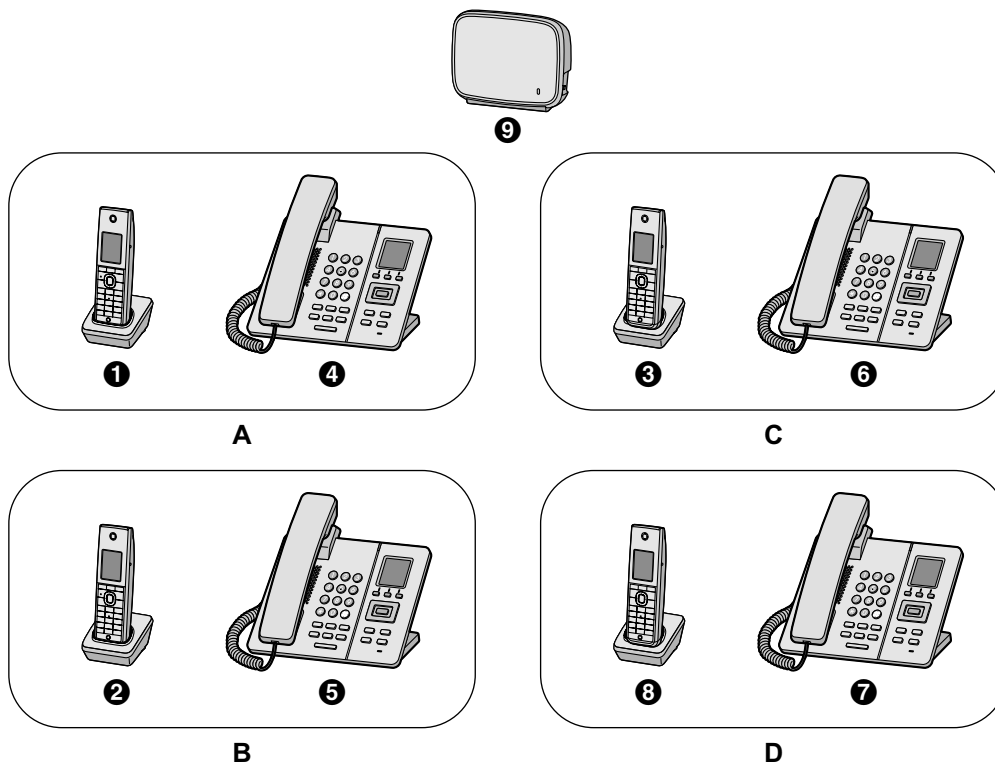
Note

- Only desktop phones (KX-TPA65/KX-TPA68) can be set as master desk phones
- Handsets that are already paired cannot be set as a pair with another phone. (Note that functionality with such settings cannot be guaranteed.)

Pairing Setting Example

As an example, 4 handsets (KX-TPA60/KX-TPA70/KX-TPA73) with a KX-TGP600 base unit, along with 4 desktop phones (KX-TPA65/KX-TPA68) are in use.

Here the maximum 4 pairing settings will be explained.



- ❶ Handset 1 (KX-TPA60/KX-TPA70/KX-TPA73)
- ❷ Handset 2 (KX-TPA60/KX-TPA70/KX-TPA73)
- ❸ Handset 3 (KX-TPA60/KX-TPA70/KX-TPA73)
- ❹ Handset 4 Master Desk Phone (KX-TPA65/KX-TPA68)
- ❺ Handset 5 Master Desk Phone (KX-TPA65/KX-TPA68)
- ❻ Handset 6 Master Desk Phone (KX-TPA65/KX-TPA68)
- ❼ Handset 7 Master Desk Phone (KX-TPA65/KX-TPA68)
- ❽ Handset 8 (KX-TPA60/KX-TPA70/KX-TPA73)
- ❾ Base Unit (KX-TGP600)
- A. Pairing Group 1
- B. Pairing Group 2
- C. Pairing Group 3
- D. Pairing Group 4

Phone	Model No.	ID Number	Master	Pairing Group
Handset 1	KX-TPA60/ KX-TPA70/ KX-TPA73	1		1
Handset 2	KX-TPA60/ KX-TPA70/ KX-TPA73	2		2
Handset 3	KX-TPA60/ KX-TPA70/ KX-TPA73	3		3
Handset 4	KX-TPA65/ KX-TPA68	4	✓	1

6.6.2 Pairing (Parallel Mode) Settings

Phone	Model No.	ID Number	Master	Pairing Group
Handset 5	KX-TPA65/ KX-TPA68	5	✓	2
Handset 6	KX-TPA65/ KX-TPA68	6	✓	3
Handset 7	KX-TPA65/ KX-TPA68	7	✓	4
Handset 8	KX-TPA60/ KX-TPA70/ KX-TPA73	8		4

Note

The handset's ID number is shown on the handset's standby display. (Ex.  1 ,  2 ...  8 .)

1. Configuration parameter setting examples

Parameter Name	Description	Reference
PARALLEL_HSNOM	Specifies the paired handset. Note For the paired handset, specify using the KX-TGP600's ID number.	page 345
PARALLEL_MODEM	Specifies the operation mode for when one paired handset is in a call and the other handset goes off hook.	page 345

Note

Specify the master desk phone's ID number for "m" in PARALLEL_HSNOM and PARALLEL_MODEM.

Specify the ID number of the handset to be paired for the value of PARALLEL_HSNOM. For configuration parameter details, see PARALLEL_HSNOM.

<Pairing Group 1 Settings>	Configuration Parameter Setting
Handset 4 is paired as the master desk phone together with Handset 1.	PARALLEL_HSNO4="1"
Operation Mode: Continue call	PARALLEL_MODE4="1"

Note

The ID number of the master desk phone is 4, so set PARALLEL_HSNO4 and PARALLEL_MODE4.

<Pairing Group 2 Settings>	Configuration Parameter Setting
Handset 5 is paired as the master desk phone together with Handset 2.	PARALLEL_HSNO5="2"
Operation Mode: Continue call	PARALLEL_MODE5="1"

Note

The ID number of the master desk phone is 5, so set PARALLEL_HSNO5 and PARALLEL_MODE5.

<Pairing Group 3 Settings>	Configuration Parameter Setting
Handset 6 is paired as the master desk phone together with Handset 3.	PARALLEL_HSNO6="3"
Operation mode: Busy	PARALLEL_MODE6="0"

Note

The ID number of the master desk phone is 6, so set PARALLEL_HSNO6 and PARALLEL_MODE6.

<Pairing Group 4 Settings>	Configuration Parameter Setting
Handset 7 is paired as the master desk phone together with Handset 8.	PARALLEL_HSNO7="8"
Operation mode: Busy	PARALLEL_MODE7="0"

Note

The ID number of the master desk phone is 7, so set PARALLEL_HSNO7 and PARALLEL_MODE7.

- Setting using the Web user interface (administrators only)
See 4.4.8 Parallel Mode Settings for making settings using the Web user interface.

Note

"Master Desk Phone Number" refers to the ID number of the master desk phone (KX-TPA65/KX-TPA68).

"Slave Handset Number" is set to the ID number of the slave handset (KX-TPA60/KX-TPA70/KX-TPA73).

6.7 Flexible Key Setting for KX-TPA68

You can customize the flexible keys on KX-TPA68. They can then be used to make or receive outside calls or as feature buttons. These settings can be programmed either through the Web user interface (→ see 4.6.8 Flexible Key Settings for KX-TPA68) or by configuration file programming (→ see 5.3.31 Flexible Key Settings for KX-TPA68).

The following table shows the settings.

Setting Name: Type/ FLEX_BUTTON_FACILITY _HSy_ACTx	Setting Value: Parameter/ FLEX_BUTTON_FACILITY_HSy_ARGx	Setting Value: Label Name/ FLEX_BUTTON_HSy_LAB ELx
One Touch Dial/ X_PANASONIC_IPTTEL_ON ETOUCH	Phone Number	Name or Phone number
Call Park/ X_PANASONIC_IPTTEL_CA LLPARK	Value of "NUM_PLAN_PARKING"	Name ("Call Park" is displayed if not set.)
Park Retrieve/ X_PANASONIC_IPTTEL_PA RKRETRIEVE	Value of "NUM_PLAN_PARKING_RETRIEVING"	Name ("Park Retrieve" is displayed if not set.)
Group Pickup/ X_PANASONIC_IPTTEL_GR OUPPICKUP	Value of "NUM_PLAN_PICKUP_GROUP"	Name ("Group Pickup" is displayed if not set.)

6.7 Flexible Key Setting for KX-TPA68

Setting Name: Type/ FLEX_BUTTON_FACILITY _HSy_ACTx	Setting Value: Parameter/ FLEX_BUTTON_FACILITY_HSy_ARGx	Setting Value: Label Name/ FLEX_BUTTON_HSy_LAB ELx
Directed Call Pickup/ X_PANASONIC_IPTTEL_DI RECTPICKUP	Specified Number	Name ("Directed Call Pickup" is displayed if not set.)
Paging/ X_PANASONIC_IPTTEL_PA GING	—	Name ("Paging" is displayed if not set.)
Presence/ X_PANASONIC_IPTTEL_PR ESENCE	—	Name ("Presence" is displayed if not set.)
My Phone/ X_PANASONIC_IPTTEL_MY PHONE	—	Name ("My Phone" is displayed if not set.)
Memo Alarm/ X_PANASONIC_IPTTEL_ME MOALARM	—	Name ("Memo Alarm" is displayed if not set.)
Intercom/ X_PANASONIC_IPTTEL_IN TERCOM	—	Name ("Intercom" is displayed if not set.)
Line Notification/ X_PANASONIC_IPTTEL_LIN E_NOTIFICATION	Line number	"Line " + line number
Handset Notification/ X_PANASONIC_IPTTEL_HA NDSET_NOTIFICATION	Handset number	"Handset " + handset number

Section 7

Firmware Update

This section explains how to update the firmware of the unit.

7.1 Firmware Server Setup

You can use an HTTP, HTTPS, FTP, or TFTP server as the firmware server by simply setting its URL.

Updating the firmware of handsets takes approximately 15 minutes and up to 4 unused handsets can be updated simultaneously. Updating 5 or more handsets simultaneously will take approximately 30 minutes to complete. While downloading, "Downloading xx%" (xx=01-99) is displayed on the handset. If the display does not change after several minutes, there may be a communication error; try moving the handset closer to the base unit.

Before performing the firmware update, make sure that the handset is turned on and is communicating with the base unit.

If the firmware update is started while the handset is on a call, the update will start after the call is completed. During the firmware update, the handset cannot be used to make calls (including emergency calls). Also, the firmware update cannot be canceled midway through the update.

Note

- To ensure that the update proceeds smoothly, it is recommended that the handset is placed on its charger for the duration of the update.
- It is recommended to select a time for updating in which the handset will not be used. (For details about the timing of updating configuration files, see 2.2.4 Downloading Configuration Files.)

7.2 Firmware Update Settings

Firmware updates are provided by the manufacturer when necessary.

The firmware update will be executed by setting the corresponding parameters using configuration file programming (→ see **5.3.7 Firmware Update Settings**) or Web user interface programming (→ see **4.7.2 Firmware Maintenance**). The following shows the parameters and the setting procedures:

Firmware Update Enable/Disable

- In a configuration file, add the line, **FIRM_UPGRADE_ENABLE="Y"**.
- In the Web user interface, click the **[Maintenance]** tab, click **[Firmware Maintenance]**, and then select **[Yes]** for **[Enable Firmware Update]**.

Firmware Version Number

- In a configuration file, specify the new version number in "**FIRM_VERSION**".

Firmware Server URL

- In a configuration file, specify the URL in "**FIRM_FILE_PATH**".
- In the Web user interface, click the **[Maintenance]** tab, click **[Firmware Maintenance]**, and then enter the URL in **[Firmware File URL]**.

Configuration Parameter Example

By setting the parameters as shown in the following example, the unit will automatically download the firmware file from the specified URL, "http://firm.example.com/firm/01.050.fw", and perform the update operation if the currently used firmware version is older than 01.050.

Example

```
FIRM_UPGRADE_ENABLE="Y"
FIRM_VERSION="01.050"
FIRM_FILE_PATH="http://firm.example.com/firm/01.050.fw"
```

7.3 Executing Firmware Update

After configuring the firmware update settings in the configuration file, the firmware will be updated when the configuration file is downloaded. The firmware update procedure is detailed below.

The firmware update process

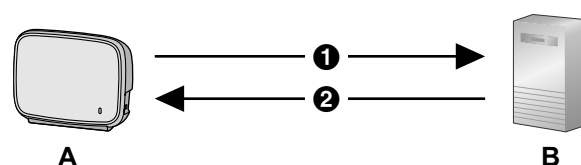
Note

- Downgrading the firmware is not recommended. Operation cannot be guaranteed after performing a downgrade.

Step 1

The unit downloads a configuration file from the provisioning server.

- For details about setting the timing of when configuration files are downloaded, see **2.2.4 Downloading Configuration Files**.



① Provisioning Server Address

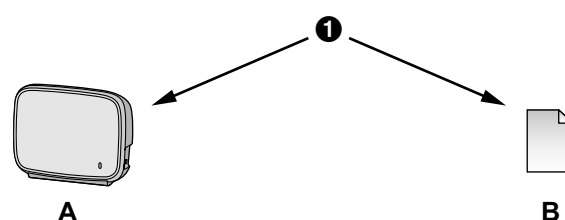
② Configuration File

A. KX-TGP600

B. Provisioning Server

Step 2

The unit compares the version number of the firmware in the configuration file to the unit's current firmware version.
(In this example, the unit is using version 01.000 and the configuration file specifies version 01.050.)



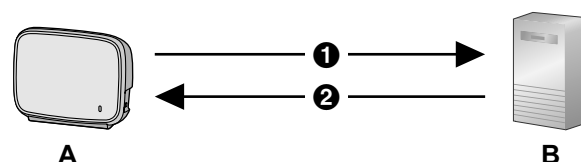
① Compare

A. KX-TGP600
Current Version 01.000

B. Provisioned Configuration File
FIRM_VERSION="01.050"

Step 3

When a newer firmware version is specified in the configuration file, the unit will download the firmware from the address specified under "FIRM_FILE_PATH" in the configuration file.



① <http://firm.example.com/firm/01.050.fw>

② 01.050.fw

A. KX-TGP600

B. Firmware Server

Step 4

Once the newer firmware is downloaded, it is applied to the unit and the unit automatically restarts.



A

Version 01.050 Updated

Step 5

After the base unit is updated, the update for the handsets [KX-TPA60, KX-TPA65, KX-TPA68, KX-UDT series (except for KX-UDT111)] is executed.

7.4 Upgrade Firmware

When an updated version of the firmware is provided on a Web site or other means, you can perform the firmware update manually using Web user interface programming.

For details about the local firmware update, see **4.7.3 Upgrade Firmware**.

Updating the firmware of handsets takes approximately 15 minutes and up to 4 unused handsets can be updated simultaneously. Updating 5 or more handsets simultaneously will take approximately 30 minutes to complete. While downloading, "Downloading xx%" (xx=01-99) is displayed on the handset. If the display does not change after several minutes, there may be a communication error; try moving the handset closer to the base unit.

Before performing the firmware update, make sure that the handset is turned on and is communicating with the base unit.

If the firmware update is started while the handset is on a call, the update will start after the call is completed. During the firmware update, the handset cannot be used to make calls (including emergency calls). Also, the firmware update cannot be canceled midway through the update.

Note

- To ensure that the update proceeds smoothly, it is recommended that the handset is placed on its charger for the duration of the update.
- It is recommended to select a time for updating in which the handset will not be used.

To manually update the firmware

1. In the Web user interface, click the **[Maintenance]** tab, and then click **[Upgrade Firmware]**.
2. Click **Browse**, select the folder where the firmware file is stored, and specify the firmware file on your PC.
3. Click **[Upgrade Firmware]**.

Section 8

Troubleshooting

This section provides information about troubleshooting.

8.1 Troubleshooting

If you still have difficulties after following the instructions in this section, disconnect the unit from the AC outlet, then connect the AC adaptor again. If using PoE, disconnect the LAN cable, then connect the LAN cable again.

General Use

Problem	Cause/Solution
I cannot hear a dial tone.	• Network settings may not be correct. • Many installation issues can be resolved by resetting all the equipment. First, shut down your modem, router, hub, unit, and PC. Then turn the devices back on, one at a time, in this order: modem, router, hub, unit, PC. • If you cannot access Internet Web pages using your PC, check to see if your phone system is having connection issues in your area. • Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see To check the setting status in the Web user interface in this section). • Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. • Check the firewall and port forwarding settings on the router. • For details about the settings, consult your network administrator or phone system dealer.

Base Unit STATUS Indicator

Problem	Cause/Solution
The STATUS indicator continues flashing in amber.	- An IP address may not have been acquired or the static IP address is not appropriate. Check the unit's IP address (see 1.1.3 Basic Network Setup). It is recommended to perform the following. - Network settings may not be correct. Check the unit's IP address (→ see 1.1.3 Basic Network Setup). - Many installation issues can be resolved by resetting all the equipment. First, shut down your modem, router, hub, base unit, and PC. Then turn the devices back on, one at a time, in this order: modem, router, hub, base unit, PC. - If you cannot access Internet Web pages using your PC, check to see if your phone system is having connection issues in your area. - Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see To check the setting status in the Web user interface in this section). - Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. - Check the firewall and port forwarding settings on the router. - For details about settings, consult your network administrator or phone system dealer.
The STATUS indicator continues flashing in amber rapidly.	Unplug the unit's AC adaptor to reset the unit, then reconnect the AC adaptor. If using PoE, disconnect the LAN cable, then connect the LAN cable again. If the STATUS indicate is still flashing in amber rapidly, there may be a problem with the base unit hardware. Contact your phone system dealer/service provider.
The STATUS indicator light is amber.	The unit's IP address may conflict with the IP address of other devices on your local network. Check the unit's static IP address (→ see 1.1.3 Basic Network Setup).
The STATUS indicator is off.	- The base unit power is off. - The Ethernet cable is not connected properly. Connect it.
The STATUS indicator continues flashing in green rapidly.	The unit is operating normally. The base unit's system is busy. Wait until the STATUS indicator is flashing or the indicator remains lit.
The STATUS indicator flashes quickly in the order of red → green → amber → off → red → green → amber → off	The unit is being returned to its factory default settings. Wait until it has finished.
The STATUS indicator flashes slowly in the order of red → green → amber → off → red → green → amber → off	When the STATUS indicator flashes in this way after the unit is turned on, the unit is in maintenance mode. Turn the unit off and back on again.

Making/Answering Calls, Intercom

Problem	Cause/Solution
The unit does not ring.	• Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see To check the setting status in the Web user interface in this section). • Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. • Check the firewall and port forwarding settings on the router. • Check [Call Control] for each line in the [Telephone] tab in the Web user interface. – If [Enable Do Not Disturb] is set to [Yes], the unit does not receive calls (→ see 4.6.3.1 Call Features). – If [Enable Call Forwarding No Answer] is set to [Yes], the unit does not receive calls (→ see 4.6.3.1 Call Features). – If [Enable Block Anonymous Call] is set to [Yes], the unit does not receive anonymous calls (→ see 4.6.3.1 Call Features). • Check that [Enable Do Not Disturb], [Enable Call Forwarding No Answer], and [Enable Block Anonymous Call] are not controlled by your phone system. • For details about settings, consult your network administrator or phone system dealer.
I cannot make a call.	• The handset is too far from the base unit. Move closer and try again. • Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see To check the setting status in the Web user interface in this section). • Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. • Check the firewall and port forwarding settings on the router. • For details about settings, consult your network administrator or phone system dealer.

Password for Web User Interface Programming

Problem	Cause/Solution
I have lost the login password of the Web user interface for the Administrator or User account.	Consult your network administrator or phone system dealer. For security reasons, it is recommended that the passwords are set again immediately (→ see 4.4.4 Admin Password Settings or 4.4.3 User Password Settings).

Time

Problem	Cause/Solution
The time is not correct.	- In the Web user interface, you can set NTP synchronization and DST (Summer Time) control to adjust the time automatically (→ see 4.4.5 Time Adjust Settings). - If the time is still incorrect even after setting NTP synchronization, check the firewall and port forwarding settings on the router.

Error Codes

When a system error occurs, when the handset accesses the base unit such as when pressing the [TALK] key, the error code is displayed on the handset's screen.

Error code	Probable Cause	Solution
Error:001	LAN disconnection detected	Check the LAN cables connections.
Error:002	Overlapping IP addresses	Check the IP addresses and re-set them. For making settings using a handset, see 1.1.3 Basic Network Setup.
Error:003	The REGISTER of the SIP server has not been registered.	Consult your network administrator or phone system dealer.

Error Message

Error Message	Probable Cause	Solution
Need Repair	Hardware failure	Consult your network administrator or phone system dealer.

Checking the Status of the Unit

You can check the status of the unit by using Web user interface programming (→ see **4.2.3 Network Status** and **4.2.4 VoIP Status**) or by looking at system logs (see **5.3.34 Logging Settings**) sent from the unit.

To check the setting status in the Web user interface

1. Click the **[Status]** tab, and then click **[Network Status]** to check the network settings.
2. Check the status displayed.
3. Click **[VoIP Status]** to check the VoIP settings.

4. Check the status displayed.

To check the setting status using the Cordless Handset

1.  /MENU/Menu
2. KX-TPA60/KX-TPA65:
[▲]/[▼]/[←]/[→]:  → **OK**
KX-TPA68:
[▲]/[▼]: "System Settings" → **OK**
3. [▲]/[▼]: "Status" → **OK**

Export Logging File

Export the log file using the Web user interface (see **4.7.7 Export Logging File**).

Section 9

Appendix

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