

## Network Cameras Firmware Release Note

**Important information:**

- \*1. WV-SC385/SW395 must be updated driver firmware to ver 1.38 (or newer) if the application firmware were updated.
- \*2. WV-SC386/SW396 must be updated driver firmware to ver 1.24 (or newer) if the application firmware were updated.
- \*3. WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.

**Priority Rank Level**

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- A: Recommend to apply (Major or serious update)
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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW152M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			

For the previous firmware version, please refer to another note in separate file.

Ver1.60 (4.10.02) Aug.,'12 *1	Ver1.60 (4.10.02) Aug.,'12 *2	Ver1.60 (4.10.02) Aug.,'12 *3	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12	Ver1.60 (4.10.02) Aug.,'12				x	-	-	For more details, please refer to "New functions and addendum (Firmware Ver. 1.60)".	Added a guide of face detection appears on live picture.	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	-	Ver1.60	Ver1.60	-	Ver1.60	-	Ver1.60	Ver1.60					x	-		-	Added playback function for contents in H.264 on SD memory card. Restrictions: - Unable to attach JPEG image on mail notification. - Max. bitrate for H.264 recording onto SD memory card is 2048Kbps. - Number of connectable users may be decreased than version 1.60 (or older). - Max. bitrate per client (such as viewing live picture) is 2048Kbps. - Transmission priority of streaming for recording, cannot be set to "Best Effort". - Refresh interval for recording cannot be set to "1s" or longer.
Added on May 24, 2013																			
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	-	Ver1.60	Ver1.60	-	Ver1.60	-	Ver1.60	Ver1.60					x	-		-	Added pre-alarm recording in JPEG on SD memory card.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Added a function to refresh images automatically on display of mobile phone.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Added Chinese language pages for mobile phone while selecting Chinese language.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Added a function to register self camera onto Camera 1 of multi-screen at factory default.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Supported multi-screen display on BB-HCMxxx series.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	-	Ver1.60	-	-	Ver1.60	-	Ver1.60	Ver1.60					x	-		-	Added polarity setting to select N.C./N.O. for alarm input terminals.
-	-	-	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Add a choice to send Panasonic alarm protocol notification for each VMD area.
already done	already done	already done	Ver1.60	already done	already done	already done	already done	already done	already done	already done					x	-		-	Added face matching function.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Added a choice of "Auto (Advanced)" at network settings and factory default setting at DNS server was changed to "Auto (Advanced)".
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-		-	Added choice "Default Gateway" in IPv6 network.

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											A	B	C	U			
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60				x	-	-	For more details, please refer to "New functions and addendum (Firmware Ver. 1.60)".
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60				x	-	-	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60				x	-	-	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60				x	-	-	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	-	Ver1.60	Ver1.60	-	Ver1.60	-	Ver1.60	Ver1.60				x	-	-	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-	Improved video transmission controls when setting "Best Effort" at Transmission priority mode for improving performance of transmission on narrowband or wireless network environment.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-	Supported Advanced mode on Viewnetcam.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-	Improved data transmission to transmit smoother when selecting "Frame rate" at "Transmission priority" in H.264.  *: This is effective when number of user for transmission is 1 (one).
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-	Improved live video smoother display (Buffering) on plug-in software.  *: Motion video (H.264/MPEG-4) is displayed with 2-sec accumulation if Internet mode (over HTTP) were "ON".
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60					x	-	Changed not to send "RSET" command to SMTP server when sending mail notification by Alarm/Diag. to improve connectivity with a certain SMTP server.
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	-	Ver1.60	Ver1.60	-	Ver1.60	-	Ver1.60	Ver1.60					x	-	Improved not to skip some frames of recording at around alarm if "Recording format" at alarm occurrence were set in "H.264" and "Pre alarm" is set in "Use".

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											A	B	C	U				
-	-	-	-	Ver1.60	-	-	-	-	-	-				x	Settings are initialized by updating firmware. (Occurrence frequency: High)	Update from Ver 1.0x to Ver 1.4x on SP30x/SF3xx.	Improved not to initialize settings even if updating from Ver 1.0x to 1.60 (or newer)  *: Previously, Ver 1.35 must be updated once before updating to Ver 1.4x.	
-	-	-	-	-	-	-	-	-	-	Ver1.60				x	Settings are initialized by updating firmware. (Occurrence frequency: High)	Update from Ver 1.10 or 1.20 to Ver 1.4x on NP502/NW502S.	Improved not to initialize settings even if updating from Ver 1.10 or 1.20 to 1.60 (or newer)  *: Previously, Ver 1.33 must be updated once before updating to Ver 1.4x.	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60	Ver1.60				x	Video may be delayed. (Occurrence frequency: Low)	In a case Smoother live video display (buffering) on plug-in software were set in "ON" under Windows XP SP3 and IE6 SP3.	Fixed not to delay video.	
Ver1.60 (4.10.02) Aug.,'12 *1	Ver1.60 (4.10.02) Aug.,'12 *2	Ver1.60 (4.10.02) Aug.,'12 *3	-	Ver1.60	Ver1.60	-	Ver1.60	-	Ver1.60	Ver1.60				x	Incorrect color at SD card recording in H.264 (wrong color or missing color). (Occurrence frequency: Low)	In a case the objects were changed significantly.	Fixed not to show incorrect color.	
-	-	-	Ver1.60	-	-	-	-	Ver1.60	-	-				x	Unable to get log after getting log by i-PRO system configuration tool (Ver3.7 or older). (Occurrence frequency: High)	Attempt to get log from cameras (Ver 1.4x) by i-PRO system configuration tool (Ver3.7 or older).	Fixed to work it properly.	
-	-	-	Ver 1.60	-	-	Ver 1.60	-	-	-	-				x	Unable to change rtsp port by cgi command "/cgi-bin/set_rtsp?rtsp_port=1035". (Occurrence frequency: High)	Attempt to change rtsp port by cgi command "/cgi-bin/set_rtsp?rtsp_port=1035".	Fixed to work the command properly.	
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	Ver 1.60	-	Ver 1.60	Ver 1.60	Ver 1.60	Ver 1.60	Ver 1.60	Ver 1.60				x	No way for making TCP connection. (Occurrence frequency: Low)	After attempting to send video for a certain FTP server (ex. Microsoft IIS).	Fixed to make TCP connection.	
Added on May 24, 2013																		
Ver1.60 *1	Ver1.60 *2	Ver1.60 *3	-	Ver 1.60	Ver 1.60	-	Ver 1.60	-	Ver 1.60	Ver 1.60				x	-	-	Made time adjustment function would not work if current time were shifted within 5 sec. than the time on NTP server to avoid adjusting frequently that might effect recording.	
Ver1.61 (4.10.02) Sept.,'12 *1	Ver1.61 (4.10.02) Sept.,'12 *2	Ver1.61 (4.10.02) Sept.,'12 *3	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12	Ver1.61 (4.10.02) Sept.,'12				x		In RTSP connection, opposing device does not include session parameters in RTSP packet of OPTIONS that is used in keep-alive.		
Ver1.61 *1	Ver1.61 *2	Ver1.61 *3	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61				x	Video streaming may be stopped.	In RTSP connection, opposing device sent RTSP packet for TEARDOWN.	Fixed not to stop the streaming.	
Ver1.61 *1	Ver1.61 *2	Ver1.61 *3	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61	Ver1.61				x		When camera attempt to start/end encoding for the video streaming.		

This document describes i-pro cameras' firmware upgrade (Application Firmware) Information.  
 1. Release version: 2.44  
 2. Release Note Reference Number: ipro\_025

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											A	B	C	U				
Ver1.65 (4.10.02) Dec., '12	Ver1.65 (4.10.02) Dec., '12 *5	Ver1.65 (4.10.02) Dec., '12	-	Ver1.65 (4.10.02) Dec., '12	Ver1.65 (4.10.02) Dec., '12	-	Ver1.65 (4.10.02) Dec., '12	-	Ver1.65 (4.10.02) Dec., '12	Ver1.65 (4.10.02) Dec., '12				x	On ASM200, receive an error when attempting to receive recording log list from cameras. (Occurrence frequency: High)	Recording compression format is set in either H.264(1) or H.264(2).	Fixed to get the list, properly.	
-	-	Ver1.65	Ver1.65 (4.10.02) Dec., '12	Ver1.65	Ver1.65	Ver1.65 (4.10.02) Dec., '12	Ver1.65	Ver1.65 (4.10.02) Dec., '12	Ver1.65	-				x	Back Light Compensation (BLC) does not work well as expected. (Occurrence frequency: Low)	On firmware version 1.64.	Improved BLC to work well.	
Ver1.65	Ver1.65 *5	Ver1.65	Ver1.65	Ver1.65	Ver1.65	Ver1.65	Ver1.65	Ver1.65	Ver1.65	Ver1.65				x	-	-	Improved reliability for video streaming not to stop streaming.	
Ver1.66 (4.10.02) Jan., '13	Ver1.66 (4.10.02) Jan., '13	Ver1.66 (4.10.02) Jan., '13	-	Ver1.66 (4.10.02) Jan., '13	Ver1.66 (4.10.02) Jan., '13	-	Ver1.66 (4.10.02) Jan., '13	-	Ver1.66 (4.10.02) Jan., '13	Ver1.66 (4.10.02) Jan., '13					x	-	-	Added new Panasonic Alarm Notifications about life time of SD memory card. To activate, choose ALARM - NOTIFICATION - Panasonic Alarm Notification and turn Diag to be ON. 1. A message will be sent after a year. 2. A message to recommend replacing the SD memory card after 6 years. 3. Messages over-written every 200 times. 4. A message to recommend replacing the SD memory card after over-written 2000 times.

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 2. Release Note Reference Number: ipro\_025

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Ver1.66	Ver1.66	Ver1.66	-	Ver1.66	Ver1.66	-	Ver1.66	-	Ver1.66	Ver1.66				x	-	-	In cases of use with Panasonic alarm notifications, the following new Panasonic Alarm Notifications will be sent by e-mail; 1. Message after a year: SD memory card is used for long-term. (over 1 years) (*% of the estimated life). 2. After 6 years, the message recommend to replace the card: It is time to replace the SD memory card as it is used long-term. (over * years). Or, it may be a cause of deterioration. 3. Messages when usage time exceeds 50% and 70% of estimated life time: Usage counter of SD memory card exceeded *% of estimated life. 4. Messages when usage time exceeds 90% of estimated life time: Usage counter of SD memory card exceeded *% of estimated life. Replacing the SD memory card is recommended, shortly. 5. Message to recommend the card when usage time reached estimated life time: It is time to replace the SD memory card as usage counter reached its estimated life. Or, it may be a cause of deterioration.
Ver1.66	Ver1.66	Ver1.66	Ver1.66 (4.10.02) Jan., '13	Ver1.66	Ver1.66	Ver1.66 (4.10.02) Jan., '13	Ver1.66	Ver1.66 (4.10.02) Jan., '13	Ver1.66	Ver1.66				x	-	-	Supported the cgi commands as follows; - /Set,Get?Func=ImageTransfer to set alarm notifications and to receive setting values - /Get?Func=Pan,Tilt to receive available Pan/Tilt ranges - /Set?Func=Network to set network - /Set,Get?Func=Upnp to set Upnp and to receive setting values - /ImageViewer - /Set?Func=Network to add dns parameters

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Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66				x	-	-	Added cgi commands to receive the capability information as follows from camera: 1. Aspect ration of image sensor 2. Possibility of SSL 3. Capable ranges to set Pan and Tilt by absolute degree. 4. Possibility of Super Dynamic Range/Wide Dynamic Range
Ver1.66	Ver1.66	Ver1.66	-	-	-	-	-	-	-	-				x	-	-	Added parameters with the cgi command "/cgi-bin/camposiset" so that responses of cgi registration can be simplified.
Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66				x	-	-	Supported available to call "Image adjust" setup menu by URL directly.
Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66	Ver1.66				x	-	-	More improved live picture to be smoothed.
-	-	Ver1.66	-	-	-	-	-	-	-	Ver1.66			x	Minimum intervals between VMD alarms to be 10 sec., unexpectedly. (Occurrence frequency: High)	On firmware version 1.60.	-	Fixed to be 5 sec.
Ver1.66	Ver1.66	Ver1.66	-	Ver1.66	Ver1.66	-	Ver1.66	-	Ver1.66	Ver1.66				x	-	-	Revised how to give time-stamp while re-streaming SD recorded data in double-speed.
Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13	Ver1.80 (4.17.01) Jul., '13				x	-	-	Added "Advanced VBR" to the "Transmission priority" of H.264.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Changed to an optional function of "Face detection outline display" and "Advanced func." effective from newly production units in July, 2013. This is effective from newly production units only and nothing influences existing units (which the function is already usable) even if the firmware version 1.80 (and newer) would be installed.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added a message of "Time past from the date of manufacture" in the page of Upgrade (Maintenance).
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added "Auto" as choice in language selection.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Changed the settings about "Time zone" and "Summer time" from NTP (Server) to Basic (Basic).

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- \*2: WV-SC386/SW396 must be updated driver firmware to ver 1.24 (or newer) if the application firmware were updated.
- \*3: WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.
- \*5: WV-SC386, SW396 must be updated driver firmware to ver 1.26 (or newer) if the application firmware were updated.
- \*8: WV-SW316L only.

**Priority Rank Level**

- Priority Rank Level  
A: Recommend to apply (Major or serious update)  
B: When issue happened  
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U: Function /Performance improvement (Not Necessary to update)

**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	-	-	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added setting for "Monitor out" (NTSC/PAL switching) onto Basic (Basic).
-	-	-	-	Ver 1.80	-	-	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added "PAL" monitor switch input to the "Terminal" settings of Alarm.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added "Area" selection to the "DDNS" setting.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added "HTTP alarm notification".
Ver1.80	Ver 1.80	Ver 1.80	-	-	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	-				x	-	-	Supported SSL Mail Server.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added "Forcible black & white mode", "Forcible Super Dynamic" and "Forcible WDR" to the schedule.
Ver1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	-	Ver 1.80	Ver 1.80	Ver 1.80	-				x	-	-	Added "Fog compensation" settings.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Supported case of missing "/" (slash) at the end of "HTTP" in path or header "Host:".
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	-	-	Added displaying the "Log" in live and "Permission level of viewing logs" settings.
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	-	-	Changed the label of "List" button on the "Live" page to "List/Play".
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added "Initial display stream on the browser" setting.
Ver1.80	Ver 1.80	Ver 1.80	-	-	-	-	-	-	-	-				x	-	-	Added "Focus distance" at Focus settings.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added Internet function.
-	-	-	-	-	-	-	Ver 1.80 *8	-	-	-				x	-	-	Added "Intensity control" to the "IR LED Light".
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Added the following returned values of CGI that is to receive built-in functions of the camera; 1) Type of license for Key Management System. 2) Advanced VBR. 3) Fog compensation.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Removed the version information of Onvif from the CGI to receive status of built-in function.

Correction on Jan.20, 2016

This document describes i-pro cameras' firmware upgrade (Application Firmware) Information.  
 1. Release version: 2.44  
 2. Release Note Reference Number: ipro\_025

## Network Cameras Firmware Release Note

**Important information:**

- \*1: WV-SC385/SW395 must be updated driver firmware to ver 1.38 (or newer) if the application firmware were updated.
- \*2: WV-SC386/SW396 must be updated driver firmware to ver 1.24 (or newer) if the application firmware were updated.
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**Priority Rank Level**

- Priority Rank Level  
 A: Recommend to apply (Major or serious update)  
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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	-	-	Improved speed of retrieving data for playing back H.264 video recorded on SD memory card.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	-				x	-	-	Improved response time for HTTPS access.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Supported the combination of Windows 8 and Internet Explorer 10.
-	-	-	-	-	-	-	-	-	Ver 1.80	-				x	-	-	Clarified white balance with other models.
Ver1.80	-	-	-	-	-	-	-	-	-	-				x	Setting of "Upside-down" may be switched from "Off(ceiling)" to "On (desktop)", unexpectedly.	-	Fixed not to switch it, unexpectedly.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Improved that Authentication error took some time while connecting with Digest Authentication.
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	-	-	Fixed an issue that Cancel may not be accepted while downloading video from the page of playing back video on IE9.
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	Schedule recording may not be started even if "Use" were selected at setting of SD Memory Card.	Switching it to "Use" within scheduled period.	Fixed to start recording, properly.
Ver1.66	Ver1.66	Ver1.66	-	Ver1.66	Ver1.66	-	Ver1.66	-	Ver1.66	Ver1.66				x	Changing Frame rate may not become effective.	Changing frame rate while "H.264(1)/H.264(2)" is selected at "Recording format".	Fixed to become effective, properly.
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	Backup recording may be made onto SD memory card without network connection failure.	In a case, H.264 backup recording onto SD memory card were set while connecting with WJ-ND400.	Fixed not to record, unexpectedly.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	Unable to access the camera.	In a case UPnP is set to "ON".	Fixed to access the camera, properly.
-	-	-	-	-	-	-	Ver 1.80 *8	-	-	-				x	Effectiveness of mask-area is not enough.	When IR-LED is ON.	Improved the effectiveness.
-	-	-	-	-	-	-	Ver 1.80 *8	-	-	-				x	Intensity of IR-LED is controlled incorrectly by peak-detection even if it were in mattes (black bars) area of video graphic.	When video is set in 16:9.	Improved it works properly.



## Network Cameras Firmware Release Note

**Important information:**

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- \*3. WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.
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- \*8. WV-SW316L only.

**Priority Rank Level**

**Priority Rank Level**

- A: Recommend to apply (Major or serious update)
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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver1.80	Ver 1.80	Ver 1.80	-	-	-	-	-	-	-	-				x	Link and Access indicators light up by opening live screen, unexpectedly.	In a case, Access Indicator is set to ON.	Fixed not to light up, unexpectedly.
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	FTP image transmission does not work.	In a case, "SD memory card" is set in "Not use" and "Alarm trigger" is set in either "Alarm input" or "Manual".	Fixed it works, properly.
Ver1.80	Ver 1.80	Ver 1.80	-	Ver 1.80	Ver 1.80	-	Ver 1.80	-	Ver 1.80	Ver 1.80				x	The "log_delete" of PS-API does not erase the log of SD memory card recording (H.264).	Attempting to send "log_delete" for erasing it from PS-API.	Fixed to delete the log, properly.
Ver1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	-	-	Changed archive file format for installation file from executable file to cabinet file that is to install ActiveX upon accessing browser.
Added on Nov. 12, 2013				-	-	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80	Ver 1.80				x	Picture may look halation. (Occurrence frequency: Low)	while setting of slow shutter is in active.	Fixed.
Added on Dec. 26, 2013				-	-	-	-	Ver1.80	Ver1.80	Ver1.80				x	Video looks greenish.	Under both fluorescent and mercury lamps.	Fixed not to be greenish.
1.81 (4.17.01) Aug.,'13	1.81 (4.17.01) Aug.,'13	1.81 (4.17.01) Aug.,'13	-	1.81 (4.17.01) Aug.,'13	1.81 (4.17.01) Aug.,'13	-	1.81 (4.17.01) Aug.,'13	-	1.81 (4.17.01) Aug.,'13	1.81 (4.17.01) Aug.,'13				x	Recording onto SD memory card may be stopped even if overwrite were in effective.	Using with SD memory card (for Industrial Use) on firmware version 1.66 and 1.80.	Fixed not to stop recording, unexpectedly.
1.81	1.81	1.81	-	-	-	-	-	-	-	-				x	Concerning with "Auto mode" operation, "script error" is shown by selecting either "360 map shot" or "Preset map shot" and click "Stop" without clicking "Start".	In live picture.	Fixed not to be error.
1.81	1.81	1.81	-	1.81	1.81	-	1.81	-	1.81	1.81				x	Playback on WJ-ND400 may be collapsed.	While connecting with WJ-ND400 and recording H.264 onto SD memory card as backup.	Fixed.
1.81	1.81	1.81	1.81 (4.17.01) Aug.,'13	1.81	1.81	1.81 (4.17.01) Aug.,'13	1.81	1.81	1.81	1.81				x	Transmission may be stopped by sending the CGI (get_io) to obtain the status of alarm terminals and VMD.	In a case, sending the CGI (get_io) to obtain the status of Alarm terminals and VMD repeatedly.	Fixed not to stop transmission.

Added on Sept. 11, 2013

**Important Information to upgrade/downgrade the firmware.**

You can install any firmware version for the products manufactured prior to July 2013.

But only firmware version 1.80 and newer can be installed for the products manufactured in July 2013 and after (Serial Number "MGxxxx", "MHxxxx", "MIxxxx" and so on).

Added on Oct. 7, 2013

The firmware version 1.46Z (that is mentioned in the older release note, separate file ) is for the products manufactured in July 2013 and after (Serial Number "MGxxxx", "MHxxxx", "MIxxxx" and so on) only. Please DO NOT install it for the products manufactured prior to July 2013.

This document describes i-pro cameras' firmware upgrade (Application Firmware) Information.  
 1. Release version: 2.44  
 2. Release Note Reference Number: ipro\_025

## Network Cameras Firmware Release Note

**Important information:**  
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### Priority Rank Level

Priority Rank Level  
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### Applicable Models

### Contents

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver1.82 (4.17.01) Nov.'13 SC385 only	Ver1.82 (4.17.01) Nov.'13 SC386 only	Ver1.82 (4.17.01) Nov.'13	-	Ver1.82 (4.17.01) Nov.'13	-	-	Ver1.82 (4.17.01) Nov.'13	Ver1.82 (4.17.01) Nov.'13	Ver1.82 (4.17.01) Nov.'13	Ver1.82 (4.17.01) Nov.'13				x	-	-	Added a function for TV System to switch from NTSC to PAL by pressing RESET button within one second.
Ver1.82	Ver1.82	Ver1.82	Ver1.82 (4.17.01) Nov.'13	Ver1.82	Ver1.82 (4.17.01) Nov.'13	Ver1.82 (4.17.01) Nov.'13	Ver1.82	Ver1.82	Ver1.82	Ver1.82				x	-	-	Language of E-mail notification in Notification tab is selected to either Japanese (if language selection were Japanese) or English (if language selection were non Japanese) automatically.
Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82				x	-	-	Added Portuguese as a choice at [Select language] pull-down menu.
Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only	Ver1.82 PAL only				x	The browser showed "500 Internal Server Error".	<PAL models only> When setting 3fps in MOTION JPEG by CGI command.	Fixed.
Ver1.82	Ver1.82	Ver1.82	-	-	-	-	-	-	-	-				x	Incorrect PAN/TILT absolute angle values were returned.	When it was acquired by cgi command "get_capability" from VMS etc.	Fixed returning correct values.
Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82				x	Time difference between on-screen and NTP of RTCP was bigger and bigger.	-	Fixed.
Ver1.82	Ver1.82	Ver1.82	-	Ver1.82	Ver1.82	-	Ver1.82	-	Ver1.82	Ver1.82				x	Playback screen of System log may be closed and backed to live picture. (Occurrence frequency: High)	While using under Internet Explorer (IE) 10.	Fixed.
Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82				x	Camera moved into Safe mode. (Occurrence frequency: High)	In a case upgrading the driver firmware after registering ONVIF.	Fixed to start up, properly.
Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82	Ver1.82				x	The System log may showed incorrect reasons for errors at "Not found Panasonic alarm protocol notification".	-	Fixed.
-	-	-	-	Ver1.83 (4.17.01) Dec.'13	-	-	-	-	-	-				x	Unable to switch to black & white mode automatically even if light condition were low. (Occurrence frequency: High)	On firmware version 1.80, 1.81 or 1.82 only, the Day & Night is set in "Auto" and WDR(Wide dynamic range) is set in "On".	Fixed it switching, automatically.
Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14	Ver2.00 (4.17.01) Feb.,'14				x	-	-	Added FTP transmitting Pre alarm picture.
Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	-	-	Added hyper-link to the "Support Information on network camera (WV Series)" in the page of firmware upgrade.
-	Ver2.00	-	-	-	-	-	-	-	-	-				x	-	-	Changed the name of "Direction setting" to "Direction/Angle setting". Added "Panning 0-deg direction setting".

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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver2.00	Ver2.00	Ver2.00	-	Ver2.00	-	-	Ver2.00	-	Ver2.00	Ver2.00				x	-	-	Added Audio Output Duration setting so that various durations of audio transmission (such as 1/2/3/5/10/20/30/60min) can be set (instead of 5-min fixed).
Ver2.00	Ver2.00	-	-	Ver2.00	-	-	Ver2.00	Ver2.00	Ver2.00	-				x	-	-	Added "High Light Compensation (HLC)" function.
Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	-	-	Added "Alarm deactivation time" setting so that various deactivation time (such as 5s/10s/30s/1min/3min/5min/10min) can be set (instead of 5-sec fixed).
Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	-	-	Made possible to choose "BASELINE" or "HIGH" as H.264 Profile by CGI command.
-	-	-	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	-	-	Improved sensitivity for VMD by CGI command.
Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	-	-	Improved outputting frame rate while setting Max. bit rate were lower value in Advance Variable Bit Rate (AVBR).
Ver2.00	Ver2.00	Ver2.00	-	Ver2.00	Ver2.00	-	Ver2.00	-	Ver2.00	Ver2.00				x	-	-	E-mail notification can attach an image when recording video is in use.
Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	-	-	In ONVIF, supported Video Source Mode (Image Capture Mode) command.
Ver2.00	Ver2.00	Ver2.00	-	Ver2.00	-	-	Ver2.00	-	Ver2.00	Ver2.00				x	-	-	In ONVIF, supported Audio Back Channel over HTTP.
Ver2.00	Ver2.00	Ver2.00	-	Ver2.00	-	-	Ver2.00	-	Ver2.00	Ver2.00				x	By CGI command, unable to obtain the desired MP4 file(s) only but also all associated MP4 files will be obtained. (Occurrence frequency: High)	In a case, the subject were a certain specific brightness.	Fixed only desired MP4 file(s) to be obtained.
Ver2.00	Ver2.00	Ver2.00	-	Ver2.00	-	-	Ver2.00	-	Ver2.00	Ver2.00				x	Unable to set durations of pre-alarm and post-alarm recordings.	Set H.264(2) to "OFF" while recording H.264(1) onto SD memory card.	Fixed to set the durations.
Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00	Ver2.00				x	Time stamp information may not be on the stream. (Occurrence frequency: Low)	When error occurred at H.264 video transmission.	Fixed to the stream contains time stamp information.
Ver2.00	Ver2.00	Ver2.00	-	Ver2.00	-	-	Ver2.00	-	Ver2.00	Ver2.00				x	-	-	Improved the returning of CGI command (/cgi-bin/find_recording_seqs) would contain "Content-Length".

## Network Cameras Firmware Release Note

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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
-	-	-	-	SP305 & SP306only Ver2.00	-	-	SW316only Ver2.00	-	-	-				x	-	-	Supported the followings at Best shot function; 1) Send first image when auto tracking has been established. 2) HTMLCGI for settings of face thumbnail image. 3) HTMLCGI for settings of face thumbnail detecting area.
Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14	Ver2.01 (4.17.01) Apr., '14				x	-	-	Added a recommendation for enabling Compatible View setting on IE10 and IE11 if it were NOT enabled.
Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01	Ver2.01				x	-	-	Added a hyper-link for the page of Support Information on title bar at the top of the Live picture.
Ver2.01 (SC385 only)	-	-	-	-	-	-	-	-	-	-				x	Unable to start up after turning power on.	-	Fixed to start up, properly.
-	-	-	-	Ver2.01 (SP306 only)	-	-	Ver2.01	-	Ver2.01	-				x	Switching from Black/White to Color was hard to work.	Light control mode: Outdoor scene Color/BW: Either AUTO1 or AUTO2 Objects: Whity objects like snow, saturated by IR LED, etc.	Improved.
Ver2.02 (4.17.0.1) Jun., 2014	Ver2.02 (4.17.0.1) Jun., 2014	Ver2.02 (4.17.0.1) Jun., 2014	-	Ver2.02 (4.17.0.1) Jun., 2014	Ver2.02 (4.17.0.1) Jun., 2014	-	Ver2.02 (4.17.0.1) Jun., 2014	-	Ver2.02 (4.17.0.1) Jun., 2014	Ver2.02 (4.17.0.1) Jun., 2014				x	SD memory card error indicator (or SD recording status indicator) may light red, unexpectedly. (Occurrence frequency: Low)	Power ON if SD Memory Card were in the slot.	Fixed.
-	-	-	-	-	-	-	Ver2.04 (4.17.0.1) Oct., 2014	Ver2.04 (4.17.0.1) Oct., 2014	Ver2.04 (4.17.0.1) Oct., 2014	-				x	Flicker in screen may be seen. (Occurrence frequency: Rare)	-	Fixed.
-	-	-	-	-	-	-	Ver2.05 (4.17.0.1) Nov., 2014	Ver2.05 (4.17.0.1) Nov., 2014	Ver2.05 (4.17.0.1) Nov., 2014	-				x	IP address and other configuration settings may be shifted unexpectedly by restarting the camera after using Super Dynamic Range.	On firmware version 2.04.	Fixed.
Ver2.10 (4.27.0.2) Nov., 2014	Ver2.10 (4.27.0.2) Nov., 2014	Ver2.10 (4.27.0.2) Nov., 2014	Ver2.10 (4.27.0.2) Nov., 2014	Ver2.10 (4.27.0.2) Nov., 2014	Ver2.11 (4.27.0.2) Nov., 2014	Ver2.11 (4.27.0.2) Nov., 2014	Ver2.11 (4.27.0.2) Nov., 2014	Ver2.11 (4.27.0.2) Nov., 2014	Ver2.11 (4.27.0.2) Nov., 2014	Ver2.15 (4.27.0.2) Nov., 2014				x	-	-	Supported displaying H.264/JPEG images on Safari (v5.1.7), Firefox (v32.0.3) and Google Chrome (v38.0.2125). Notes: there are some restrictions as follows; 1. To display H.264 images, required installing QuickTime plug-in (v7.7.6). 2. H.264 supports Unicast only and delays approx. 3 seconds. 3. Audio is available only in H.264 (is NOT available in JPEG) and supports G.711 only. Furthermore, it supports only "Audio reception" (receive audio from camera). 4. Full screen opens new window. So, it must be within the maximum number of concurrent access user.

## Network Cameras Firmware Release Note

**Important information:**

- \*1. WV-SC385/SW395 must be updated driver firmware to ver 1.38 (or newer) if the application firmware were updated.
- \*2. WV-SC386/SW396 must be updated driver firmware to ver 1.24 (or newer) if the application firmware were updated.
- \*3. WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.
- \*5. WV-SC386,SW396 must be updated driver firmware to ver 1.26 (or newer) if the application firmware were updated.
- \*8. WV-SW316L only.

**Priority Rank Level**

**Priority Rank Level**

- A: Recommend to apply (Major or serious update)
- B: When issue happened
- C: Maintenance timing
- U: Function /Performance improvement (Not Necessary to update)

**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x			Improved displaying live picture even if the setting of the Compatibility View on Internet Explorer11 were "Off".
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x			For SD memory card, added warning output, usage information and error information. Notes: 1. The model number of SD memory card is displayed according to the information retrieved from SD memory card. 2. The "Total use time" is Not updated real-time but is updated every 1-hour.
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x			Added "SD memory card warning output" at the "Alarm output terminal".
-	-	-	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	-				x			Supported time and camera title can be displayed by separation. Note: it must be sent a cgi command.
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x			Changed indication order of OnVIF Profile when obtaining them; Previous: Ascending order of resolution in JPEG New: Descending order of resolution in H.264
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x			Reviewed and updated the Time Zone values.
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x	Unable to download the Alarm log. (Occurrence frequency: High)	When "Not Use" is selected for SD memory card and either "H.264(1)" or "H.264(2)" (in gray) is selected for recording compression.	Fixed.
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x	By detecting interruption of a camera connection for 2 minutes and leaving message "Connection has been disconnected. Please confirm connection." more than 2 minutes, the message on another camera would be sent every 30 seconds.	In a case, two or more cameras were registered and selected multi-screen.	Fixed.
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x	In second alarm, FTP alarm notification sent post-alarm images without pre-alarm JPEG images. (Occurrence frequency: High)	In a case, the followings were set; - "Not Use" for SD memory card - JPEG recording (in gray). - Alarm (in gray)	Fixed.

This document describes i-pro cameras' firmware upgrade (Application Firmware) Information.  
 1. Release version: 2.44  
 2. Release Note Reference Number: ipro\_025

## Network Cameras Firmware Release Note

**Important information:**  
 \*1: WV-SC385/SW395 must be updated driver firmware to ver 1.38 (or newer) if the application firmware were updated.  
 \*2: WV-SC386/SW396 must be updated driver firmware to ver 1.24 (or newer) if the application firmware were updated.  
 \*3: WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.  
 \*5: WV-SC386,SW396 must be updated driver firmware to ver 1.26 (or newer) if the application firmware were updated.  
 \*8: WV-SW316L only.

### Priority Rank Level

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### Applicable Models

### Contents

WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x	In RTP over RTSP over HTTP, no replied to GET connection.	In a case, Method of POST connection became BASE64 and divided packets.	Fixed.
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x	GET Connection was disconnected before replying RTSP Error.	In a case, sending RTSP Method while disconnecting POST in RTP over RTSP over HTTP every time.	Fixed.
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x	Replied RTSP with a header of Speed. (Occurrence frequency: High)	When specifying "Rate-Control: no".	Fixed.
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x	-	-	In information range for GetRecordingOptions command, the responses of CompatibleSources was vary depends on job generation state.
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x	The following issues occurred; 1. E-mail notification: No images attached 2. FTP Periodic image transmission: Not sent 3. 1-shot image: Solid black. (Occurrence frequency: High)	In a case; - "Not Use" is selected for SD memory card - either "H.264(1)" or "H.264(2)" (in gray) is selected for recording compression. - No configuration settings related with video after restarting.	Fixed.
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x	Added unnecessary "0" at the end of POST connection of RTP over RTSP over HTTP.	-	Fixed.
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	Ver2.11	-	Ver2.11	-	Ver2.11	Ver2.15				x	Replied "500 Internal Server Error" by specifying a time that was out of recording to play.	While playing back on SD memory card.	Fixed to replay "404 Not Found".
Ver2.10 (SW395 only)	Ver2.10 (SW396 only)	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				*	- <div style="border: 1px solid black; padding: 2px; display: inline-block;">Deleted for correction on Jan.6,</div>	-	Moved the warning that appropriate power supply is not in use, from the screen to the System log tab in maintenance page.
Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.10	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.11	Ver2.15				x	FTP periodic image transmission did not send correct intervals; Example: 54-55 images per 60 sec although defining 1 image per 1 sec. (Occurrence frequency: High)	-	Fixed.

This document describes i-pro cameras' firmware upgrade (Application Firmware) Information.  
 1. Release version: 2.44  
 2. Release Note Reference Number: ipro\_025

## Network Cameras Firmware Release Note

**Important information:**  
 \*1. WV-SC385/SW395 must be updated driver firmware to ver 1.38 (or newer) if the application firmware were updated.  
 \*2. WV-SC386/SW396 must be updated driver firmware to ver 1.24 (or newer) if the application firmware were updated.  
 \*3: WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.  
 \*5: WV-SC386,SW396 must be updated driver firmware to ver 1.26 (or newer) if the application firmware were updated.  
 \*8: WV-SW316L only. \*9: WV-SW155/SW155M/SW155MA only, not for H models or SW151, SF135 or SF132.

Applicable Models											Priority Rank Level				Contents		
WV-SC385 WV-SW395	WV-SC386 WV-SW396	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	A	B	C	U	Issue (Phenomenon)	Occurrence condition	Correspondence
Ver2.10	Ver2.10	Ver2.10	-	Ver2.10	-	-	Ver2.11	-	Ver2.11	Ver2.15				x	The response by a cgi command as follow contains two "200 OK". /cgi-bin/terminal_default?input1=no&input2=no&input3=no (Occurrence frequency : High)	-	Deleted the redundant "HTTP/1.0 200 OK" from the response.
-	-	-	-	-	-	-	Ver2.11	Ver2.11	-	-				x	-	-	Became changeable threshold level for switching mercury lamp mode when Super Dynamic is ON.
-	-	-	-	-	Ver2.12 (4.27.0.2) Mar., 2015	Ver2.12 (4.27.0.2) Mar., 2015	-	-	-	-				x	H.264 streaming may stop transmitting. (Occurrence frequency : Very rare)	-	Fixed.
Ver2.13 (4.27.0.2) Aug., 2015	-	-	-	Ver2.13 (4.27.0.2) Aug., 2015	-	-	-	-	-	-				x	Recording onto recorder may stop or stop displaying live picture due to stop a certain streaming (either JPEG or H.264).	-	Fixed.
Ver2.13	-	-	-	Ver2.13	-	-	-	-	-	-				x	-	-	Supported Additional Business Intelligence Kit, Model WJ-NFV30.
-	-	-	-	-	Ver2.20 *9 (4.27.0.2) Nov., 2015	-	-	-	-	-				x	-	-	Added "VBR" to the "Transmission priority" of "H.264".
-	-	-	-	-	Ver2.20 *9	-	-	-	-	-				x	-	-	Added an OnVIF command to upgrade firmware.
-	-	-	Ver2.15 (4.27.0.2) Dec., 2015	-	-	-	-	-	-	-				x	Except Chinese market models (H models).	-	Updated for Japanese market models only.
Ver2.30 (4.27.0.2) Feb., 2016	-	-	-	-	-	-	-	-	-	-				x	-	-	Added "15s" and "25s" to the "Dwell time" of "Preset position". (Need to upgrade both the application and the driver firmware.)
Ver2.30	-	-	-	-	-	-	-	-	-	-				x	-	-	Added "0s", "1s", "2s", "3s", "4s", "15s" and "25s" to the "Dwell time" of "Auto pan". (Need to upgrade both the application and the driver firmware.)
Ver2.30	-	-	-	-	-	-	-	-	-	-				x	-	-	Added "Alarm area No." setting to the "Preset per sender". (Need to upgrade both the application and the driver firmware.)

## Network Cameras Firmware Release Note

**Important information:**

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- \*3. WV-SC384 must be updated driver firmware to ver 1.18 (or newer) if the application firmware were updated.
- \*5. WV-SC386,SW396 must be updated driver firmware to ver 1.26 (or newer) if the application firmware were updated.
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**Priority Rank Level**

Priority Rank Level

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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396 WV-SW396A	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver2.30	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016	Ver2.30 (4.27.0.2) Feb., 2016				x	-	-	Improved not to access unnecessary memory.  Changing configuration settings by CGI commands as follow for Capture size, Bit rate and Frame rate, will be stored onto Flash-ROM. But it will be done if the CGI command contains another parameter. Also, it will be done if the command contains 2 or more parameters.  /set_h264?nr_framerate /set_h264?nr_h264_quality /set_h264?nr_h264_resolution /set_h264?nr_h264_bandwidth /set_h264_2?nr_framerate /set_h264_2?nr_h264_quality /set_h264_2?nr_h264_resolution /set_h264_2?nr_h264_bandwidth /setdata?H264NRFRAMERATE /setdata?H264NRFRAMERATE_2
Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30				x	-	-	Added a notice for each screen that alarm notification will not be appeared while displaying VMD.
Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30	Ver2.30				x	-	-	Regarding the header (WS-Addressing) which is attached with ONVIF commands, supported WS-Addressing in August 2004, used to be the one in August 2005 only.
Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016	Ver2.40 (4.27.0.2) Apr., 2016				x	-	-	1. Changed factory default setting value at User Authentication from "OFF" to "ON". 2. Deleted pre-registered User name (admin), and Password (12345). 3. All users must register User name(s) and Password(s) at initial access. - User name: 1 to 32 characters - Password: 8 to 32 characters, two or more types of characters among alphabets, numbers and symbols.  Note: Currently registered User name(s) and Password(s) will NOT be deleted by upgrading firmware, however, you have to register them under the new policy (above "3") after initializing (default reset) by the INITIAL SET button or by the setup menu.





## Network Cameras Firmware Release Note

**Important information:**

\*4:WV-SC385/SW395 must be updated application firmware to ver 1.60 (or newer) if the driver firmware were updated.  
 \*6:WV-SC385/SW395 must be updated application firmware to ver 1.65 (or newer) if the driver firmware were updated.  
 \*7:WV-SC384 must be updated application firmware to ver 1.60 (or newer) if the driver firmware were updated.

**Priority Rank Level**

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For the previous firmware version, please refer to another note in separate file.

Ver 1.38 Aug., '12 *4	Ver 1.24 Aug., '12 *4	Ver 1.18 Aug., '12 *4	-	-	-	-	-	-	-	-				x	Too slow to focus.	In a case zooming were made by drag & zoom.	Fixed to focus.
-	Ver 1.24 *4	-	-	-	-	-	-	-	-	-				x	Video looks greenish.	Under mercury lamp.	Fixed not to be greenish.
Ver 1.39 Dec., '12 *6	-	Ver 1.19 Dec., '12 *7	-	-	-	-	-	-	-	-				x	Shifting tilt position, incorrectly.	By restarting camera while tilt position were at anywhere other than preset positions.	Fixed not to be shifting tilt position. After this update, at restarting the camera first time only, tilt position will be shifted while tilt position were at anywhere other than preset positions.
Added on Dec. 26, 2013	Ver 1.26 Dec., '12 *4	-	-	-	-	-	-	-	-	-				x	Video looks greenish (not enough on ver 1.24).	Under both fluorescent and mercury lamps.	Fixed not to be greenish.
Ver 1.42 Jul., '13	Ver 1.38 Jul., '13	-	-	-	-	-	-	-	-	-				x	-	-	Improved the effectiveness of Stabilizer.
-	Ver 1.38	-	-	-	-	-	-	-	-	-				x	Auto-focus may not work.	When making auto-pan if "Endless panning" were set in ON.	Fixed to work, properly.
-	Ver 1.38	-	-	-	-	-	-	-	-	-				x	In live, unable to tilt (move wrong way) from a certain position by clicking for centering.	In a case, by clicking video for centering after setting range of tilting in minus and tilt to minus position with digital-flip.	Fixed to work, properly.
-	Ver 1.38	-	-	-	-	-	-	-	-	-				x	Auto-pan may stop if time passes when change setting "Selfreturn" to "Off".	When the setting is changed from "Patrol" to "Off".	Fixed to work, properly.
-	Ver 1.47	-	-	-	-	-	-	-	-	-				x	-	-	Improved speed control among PAN/TILT preset positions.
Ver 1.52 Feb., '14	Ver 1.57 Feb., '14	Ver 1.26 Feb., '14	-	-	-	-	-	-	-	-				x	-	-	After restarting, it returns to the preset position before power off although it would be off-preset position. This is to avoid VMD does not work, unexpectedly.
-	Ver 1.59 Apr., '14	-	-	-	-	-	-	-	-	-				x	-	-	Tilt motor to be always excited to avoid drifting position by vibration etc.
Ver 1.53 Nov., '14 (SW395 only)	Ver 1.61 Nov., '14 (SW396 only)	-	-	-	-	-	-	-	-	-				x	-	-	Moved the warning that appropriate power supply is not in use, from the screen to the System log-tab in maintenance page.

Added for correction on Jan.6, 2015

## Network Cameras Firmware Release Note

**Important information:**

- \*4:WV-SC385/SW395 must be updated application firmware to ver 1.60 (or newer) if the driver firmware were updated.
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**Applicable Models**

**Contents**

WV-SC385 WV-SW395	WV-SC386 WV-SW396 WV-SW396A	WV-SC384	WV-SP102 WV-SP105	WV-SP302 WV-SP305 WV-SP306 WV-SF332 WV-SF335 WV-SF336 WV-SF342 WV-SF346	WV-SW155 WV-SW155M WV-SW152 WV-SW152M	WV-SF135 WV-SF132	WV-SW316 WV-SW316L	WV-SW314	WV-SW355 WV-SW352	WV-NP502 WV-NW502S	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
											A	B	C	U			
Ver 1.54 Apr., '15	-	Ver 1.27 Apr., '15	-	-	-	-	-	-	-	-				x	-	-	Suppressing the generation of noise due to resonance of the motor in PAN operation.
Ver 1.56 July, '15	-	Ver 1.28 July, '15	-	-	-	-	-	-	-	-				x	Due to factory reason.		
-	Ver 1.62 July, '15	-	-	-	-	-	-	-	-	-				x	-	-	Improved response of Pan/Tilt operation.
-	Ver 1.63 Sept, '15	-	-	-	-	-	-	-	-	-				x	-	-	Improved the color reproducibility as a red object is not visible in pink.
Ver 1.60 Feb., '16	-	Ver 1.31 Feb., '16	-	-	-	-	-	-	-	-				x	-	-	Improved showing "Total use time" correct in [Status] tab of the "maintenance" page.
Ver 1.61 Feb., '18	-	-	-	-	-	-	-	-	-	-				x	Appeared red vertical streak.	When setting "Auto slow shutter" in settings relating to image quality ("Image adjust" setup menu) to anything other than "Off(1/30s)".	Fixed.