

## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents				
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence		
Ver1.04 (4.50.08) Dec.,'16			-				First production.					
							Added on Oct. 3,2017					
-	Ver1.14 (4.50.08) Dec.,'16	Ver1.14 (4.50.08) Dec.,'16	-				First production. <b>Except WV-S1531LTN, WV-S2531LTN nor WV-S1531LNS.</b>					
Ver1.20 (4.50.09) Jan.,'17	Ver1.20 (4.50.09) Jan.,'17	Ver1.20 (4.50.09) Jan.,'17	C				x	-	-	Supported Simple Network Management Protocol ver3 (SNMPv3).		
							x	-	-	Supported IEEE 802.1X Authentication mechanism.		
							x	-	-	Added a function to display live picture on tablet computers.		
							x	-	-	Added image capture size "1280 x 720" for Stream (3).		
							x	-	-	Improved to reduce power consumption (such as reduce output power of IR LED) and to store log when the product temperature were higher than a certain level.		
									x	Choice of the image capture size for setting window of camera may blank.	While connecting with WJ-NV300.	Fixed.
									x	Improved visibility of the face during backlighting.	When "Super Dynamic(SD)" = "Off".	Fixed.
									x	The picture of the store looked whitish at night.	When "Super Dynamic(SD)" = "Off" and "Auto contrast adjust" = "On".	Fixed.
									x	The picture looked dark.	When "Super Dynamic(SD)" = "On" and its background color is whitish.	Fixed.
									x	-	-	Improved resolution feeling.
						x	Color looked too light.	When "Super Dynamic(SD)" = "On".	Fixed.			
						x	White balance becomes yellowish.	When the blue part of the subject becomes bigger.	Fixed.			
	Ver1.20 (4.50.09) Jan.,'17	Ver1.20 (4.50.09) Jan.,'17					x	-	-	Reduced afterimage feeling.		
Ver1.20 (4.50.09) Jan.,'17							x	-	-	Improved the sensitivity of motion detection for traveling vehicle in outdoor.		
							x	-	-	Clarified the threshold for switching to B/W (Black and White) mode.		
							x	IR-LED may light in a bright picture.	When Black & white = "On(IR Light On)".	Fixed.		
Ver1.40 (4.50.11) Mar.,'17	Ver1.40 (4.50.11) Mar.,'17	Ver1.41 (4.50.11) Mar.,'17	C				x	-	-	Supported data encryption for Stream(1), Stream(2), JPEG(1), JPEG(2), JPEG(3) and AAC-LC.		
							x	-	-	Changed at the page of HTTP settings; - allow both HTTP and HTTPS while selecting HTTP. - allow HTTPS only while selecting HTTPS.		
							x	-	-	Added an input field at "Max bit rate (per client)" so that allow inputting desired value.		

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2434	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver1.40 (4.50.11) Mar.,'17	Ver1.40 (4.50.11) Mar.,'17	Ver1.41 (4.50.11) Mar.,'17	C				x	-	-	Made Off and On (Advanced) would be able to select <b>when selecting VBR. even when selecting other than VBR.</b>
							x	-	-	Supported "Face Best Shot" function on the extension software.
							x	-	-	Supported "iVMD" function on the extension software.
							x	-	-	Improved the pop-up window showed that the plug-in software needs to be installed when the mouse cursor is on the plug-in software button if the plug-in software is not installed and the plug-in software button is displayed.
							x	-	-	Improved the settable range of video bit rate up to half of the conventional one when the lower limit was other than 64 kbps.
							x	The bit rate was controlled keeping in low.	-	Fixed.
							x	The current value at alarm condition of "Event action" in "Easy setup" may be displayed "Disable" even if "Enable" is set at the sound alarm.	-	Fixed.
							x	Selecting "DAY & Night(IR)" to "AUTO" by CGI command, made that IR-LED would not light. *:The value of "DAY & Night(IR)" setting would be "AUTO1 (IR Light Off)".	-	Fixed. 1. Added a choice to turn ON / OFF for IR Light Irradiation intensity. 2. Added a procedure to change for ONVIF® to be Auto 2 (IR Light).
							x	<b>Refresh interval becomes 8 seconds by changing the distribution mode setting change (CGI). Refresh interval may be switched to "8s", unexpectedly.</b>	<b>When setting were changed for the first time after initialization. By changing "Transmission priority" of H.264 for the options other than "VBR", initiated by PSSCT or WJ-NV300 only if it is the first time from the installation of the camera.</b>	Fixed.
							x	RTSP Streaming for WJ-NX400 during continuous operation may stop.	-	Fixed.
							x	Clock would not be corrected by NTP or Clock setting command of CGI	When the clock has advanced by less than 5 seconds	Fixed.
							x	-	-	Improved the function for reducing flicker on "Outdoor scene" of "Light control mode".
							x	-	-	Smoothing the brightness fluctuation when the brightness change is large.
			x	-	-	Improved the brightness of the dark area when Super Dynamic(SD) = "On".				
			x	Camera may not restart.	In a case camera is under low temperature environment.	Fixed.				
			x	Camera may not switch to black/white mode.	In a case camera is in 60-degree Celsius (140-degree Fahrenheit) environment.	Fixed.				
Ver1.41 (4.50.11) Mar.,'17	Ver1.41 (4.50.11) Mar.,'17		C			x	This effects WV-S1511LN/S1531LN/S2111L/S2131L/S2211L/S2231L/S2511LN and WV-S2531LN only because the other models do not include IR LED. IR LED did not lit.	In a case camera is in 60-degree Celsius (140-degree Fahrenheit) environment.	Fixed.	

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Corrected on Mar. 16, 2017

Corrected on June 5, 2017

## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents			
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence	
Ver1.42 (4.50.11) Apr.,'17	Ver1.42 (4.50.11) Apr.,'17	Ver1.42 (4.50.11) Apr.,'17	C				x	-	-	Supported WV-S1531LTN and WV-S2531LTN.	
								x	-	-	Improved color that was red dark.
								x	-	-	Improved resolution feeling.
								x	-	-	Improved resolution feeling at intelligent auto="On".
-	-	Ver1.42 (4.50.11) Apr.,'17	C				x	For WV-S2511LN and WV-S2531LN only.	-	Improved fan worked only low and high temperature instead of all time.	
							x	Model number contained a null number as suffix.	The model number was converted from Perth characters.	Fixed.	
							x	Communication error may occur.	By switching the RTSP connection sequence with the network disk recorder.	Fixed.	
							x	CGI command "/cgi-bin/setdata" did not return "UPSIDEDOWN" correctly.	-	Fixed.	
Ver1.42 (4.50.11) Apr.,'17	Ver1.42 (4.50.11) Apr.,'17					x	CGI command "/cgi-bin/get_media_attributes" did not return right response for H.265 recording.	-	Fixed.		
Ver1.43 (4.50.14) May,'17	Ver1.43 (4.50.14) May,'17	Ver1.43 (4.50.14) May,'17	C				x	-	-	Changed company name to the new company name in the plug-in (ActiveX) software.	
							x	Shifted VMD and Privacy zone setting areas.	When using with the Internet Explorer and not installed ActiveX.	Fixed.	
							x	Responded incorrect values for MONITOROUT and AUDIO_MONITOR by the CGI command /cgi-bin/setdata.	-	Fixed.	
							x	SPS parameter may not be encoded in Base64 correctly.	In RTSP connection.	Fixed.	
							x	-	-	Changed replying the SDP response for the stream mode from "H.264" to the same value of "Recording stream1 setting" by requesting replay at an existing URL when replaying from SD memory card.	
							x	-	-	Improved to handle multiple ONVIF® commands in parallel.	
						x	-	-	Improved picture quality as follow; 1) Visibility of face due to motion blur and contrast in backlight. 2) The bright part became saturated when the black background area was large. 3) Reduce the noise that had occurred in the subject with the edge when the contrast of the image was strong.		

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver1.43 (4.50.14) May, '17	Ver1.43 (4.50.14) May, '17	Ver1.43 (4.50.14) May, '17	C			x	Connection may be cutoff during supplying power by PoE Plus switch.	When enabling the Power Saving Mode or EEE(IEEE802.3az, Energy Efficient Ethernet).	Fixed.	
						x	<b>For WV-S11xx only;</b> Too big stream data in VBR.	On firmware version 1.40.	Fixed.	
						x	<b>Except WV-S11xx;</b> Too big stream data in VBR.	On firmware version 1.41 and 1.42.	Fixed.	
							<b>First production WV-S1132H</b>			
Ver1.44 (4.50.14) June, '17	Ver1.44 (4.50.14) June, '17	Ver1.44 (4.50.14) June, '17	C			x	Possible recording on SD memory card in VBR mode which should not be possible.	-	Fixed.	
							The adaptive black stretch set the dark portion correction level was automatically to "0", and the image shading becomes worse.	On connecting with Video Management Software, WV-ASM300.	Fixed.	
							Possible the image capture size of "stream 1" from "1920 x 1080" to "1280 x 720" which should not be possible.	When face best shot is in enabled.	Fixed.	
							The IR-LED did not light up in the black and white mode and may not return to color even if the illuminance were raised.	-	Fixed.	
Ver1.45 (4.50.14) June, '17	Ver1.45 (4.50.14) June, '17	Ver1.45 (4.50.14) June, '17	C			x	Not working VMD function after a power cycle (turned power off then on) even if the VMD setting were activated.	On firmware version 1.40 through 1.44.	Fixed.	
-	-	-					<b>Supported WV-S1531LNS.</b>			
Ver1.46 (4.50.14) June, '17	-	Ver1.46 (4.50.14) June, '17	C			x	Unable to send notifications after sending a certain numbers of notifications.	In combination with WV-ASF900 and WJ-NV300 (with WJ-NVF30JW Extension software of the Additional Business Intelligence Kit installed).	Fixed.	
							<b>For WV-S1131, WV-S1132(H), WV-S1111, WV-S1112 and WV-S2531LTN only.</b> The other WV-Sxxxx cameras are not the recommended models for the face recognition.			
Ver1.47 (4.50.14) Sept., '17	Ver1.47 (4.50.14) Sept., '17	Ver1.47 (4.50.14) Sept., '17	C			x	People count result was shown less than the number of people actually passed.	When using the face best-shot function on the network disc recorder WJ-NV300 (2-ch mode) or WJ-NX200.	Fixed.	
						x	<b>For WV-S1131, WV-S1132(H), WV-S1111, WV-S1112 and WV-S2531LTN only.</b> The other WV-Sxxxx cameras are not the recommended models for the face recognition.			
						x	Camera may restart unexpectedly while sending the best-shot.	When switching the monitor on the network disk recorder.	Fixed.	
						x	<b>For WV-S1132H only.</b> Camera may not start up at low temperature.	When using some certain PoE+ compatible switches.	Fixed.	
Ver1.47 (4.50.14) Sept., '17	Ver1.47 (4.50.14) Sept., '17	Ver1.47 (4.50.14) Sept., '17	C			x	Aborted video transmission in multicast transmission.	When "On" is selected for "Stabilizer".	Fixed.	
Ver1.48 (4.50.14) Oct., '17	Ver1.48 (4.50.14) Oct., '17	Ver1.48 (4.50.14) Oct., '17	C			x	Camera picture may be solid black.	-	Fixed.	

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			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence	
Ver1.70 (4.50.20) Nov., '17	Ver1.70 (4.50.20) Nov., '17	Ver1.70 (4.50.20) Nov., '17	C				x	-	-	Added a support page and so that it possible to access to support page by QR code.	
							x	-	-	RTSP distribution abolished the constraint which was only unicast while selecting multicast.	
							x	-	-	In CGI command, expanded the parameter of "get_io2". Added response format "3" so that information on sound detection / command alarm / i-VMD could be acquired.	
		-		-				x	For WV-S1131H only.		Profile S compliant service on ONVIF®, made available for streaming in H.265 settings.
								x	Except WV-S2130.	-	Added a message in the setting screen for SD memory card; "It is not available when "60fps" is selected for [Image capture mode]."
								x	-	-	Changed the hue etc. even if only the brightness were changed.
							x	Missing display the "VMD / i-VMD" column in i-VMD "Alarm".	In Spanish only.	Fixed.	
							x	When setting i-VMD depth, after drawing and registered rectangle, the coordinates of the rectangle would be shifted in the upper left direction when the screen was redisplayed.		Fixed.	
							x	At displaying system log, display the log in two lines. Also display shifting the date and time of occurrence and contents column each other.	In case outputting log with a long character string.	Fixed.	
							x	Camera may reboot by changing image capture mode.	When use with recorder.	Fixed.	
							x	Camera may reboot by accessing with a browser other than Internet Explorer (IE).	-	Fixed.	
							x	VMD area may not be able to set at second time and after.	-	Fixed.	
					x	-	-	Deleted encryption protocol TLS 1.0 for security purpose.			
					x	RTSP connection may be disconnected upon receiving an incorrect RTSP request.	-	Fixed.			

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Ver1.70 (4.50.20) Nov., '17	Ver1.70 (4.50.20) Nov., '17	Ver1.70 (4.50.20) Nov., '17	C			x	RSTP connection may be disconnected very rarely by sending RTSP request reception and RTSP response transmission at the same time.	-	Fixed.	
						x	-	-	Improved communication quality on video streaming in H.265/H.264.	
Ver1.80 (4.50.20) Dec., '17	Ver1.80 (4.50.20) Dec., '17	Ver1.80 (4.50.20) Dec., '17	C			x	Except WV-S2130.	-	Added SD memory card password lock function.	
						x	-	-	Fixed an issue in the cgi command "/Set?Func=Bright&Kind=1&Data=-2"	
Ver1.82 (4.50.20) Mar., '18	Ver1.82 (4.50.20) Mar., '18	Ver1.82 (4.50.20) Mar., '18	C			x	For Chinese market model, WV-S1132H, only.	-	Changed factory default setting values as follow; 传送模式: 恒定速率 带宽(每个客户端): 3072kbps 音频模式: 音频输出 输入音量: 线路中 AGC(音频): Middle	
						x	The specified image capture size may not be obtained even if it were specified with ImageViewer by CGI command.	-	Fixed.	
						x	-	-	Improved auto focus convergence speed quicker.	
						x	Administrator password may be deleted.	-	Fixed.	
1.90 (4.50.20) June, '18	1.90 (4.50.20) June, '18	1.90 (4.50.20) June, '18	C			x	-	-	Changed factory default setting for Authentication method; Previous: "Digest or Basic" New: "Digest" For more details: <a href="#">security_upgrade_June2018.pdf</a>	
						x	-	-	Changed password policy that it must include at least 3 types of characters among "upper case letters / lower case letters / numbers / symbols". For more details, click here. <b>Note:</b> Original passwords and authentication method of products on the system are kept unchanged even firmware and software have been updated. For more details: <a href="#">security_upgrade_June2018.pdf</a>	
						x	-	-	Added user authentication at host authentication.	
						x	-	-	Became saving history of login failure into system log.	
						x	Except Chinese market model, WV-S1132H.	-	Changed saving setting data with encryption. Note: unable to restore the setting data if you would downgrade the firmware.	

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1.90 (4.50.20) June, '18	1.90 (4.50.20) June, '18	1.90 (4.50.20) June, '18	C				x	-	Made some other security measures enhanced.
							x	-	Except Chinese market model, WV-S1132H.
							x	-	Added "EAP-TLS" to the EAP method for IEEE802.1x.
							x	-	Added "Drawing method", "Decoding options" and "Frame Skip Options (When PC is Heavy Processing Load)" onto plug-in software.
							x	-	Added "Reboot" to "Schedule".
							x	-	Added "<< Latest 100", "Number of pages display" in "Systemlog".
							x	-	Added a choice of "2pics/2s" for "Transmission interval" setting of "Transmission mode" in "Best shot function". <b>Note:</b> Concerning the models on this document, only the following models are recommended to use the Best shot function; WV-S1111, WV-S1112, WV-S1131, WV-S1132(H) and WV-S2531LTN
							x	-	Changed factory default setting for "Bandwidth control(bit rate)" Previous: Unlimited New: 51200kbps
						x		-	Communication may be disconnected when acquiring network information with SNMP.
						x		-	Network connection may not be possible due to the MAC address authentication with the network device may not be done properly at startup.
				x			-	Temperature compensation at lens may not work correctly and the focus sometimes shifts little by little.	
					x		-	Unable to configure the setting relating to the e-mail notification by the cgi command "reg_mailaddr".	
					x		-	Focusing may not work.	
					x		-	If an RTSP header contains two or more User-Agent headers. no HTTP400(Bad Request) error returned and ignore the second and subsequent User-Agentheaders.	
					x		-	It was usable even if the certificate for using HTTPS has expired.	
1.91 (4.50.20) July, '18	1.91 (4.50.20) July, '18	1.91 (4.50.20) July, '18	C			x		-	Solid black screen may appear during sequencing with the network disk recorder due to it takes time to output the video.

Added on July 27,2018

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1.91 (4.50.20) July, '18	1.91 (4.50.20) July, '18	1.91 (4.50.20) July, '18	C			x		SD memory backup recording did not stop.	By turning power on / off while SD memory backup recording during connecting with the network disk recorder.	Fixed.
							x	Revised on Sept. 7, 2018 Camera may reboot, unexpectedly.	When sequencing the network disk recorder <b>and or</b> the video management software (WV-ASM series) <b>with "SD memory backup" enabled simultaneously.</b>	Fixed.
							x		By downloading the SD memory backed up data with the network disk recorder	Fixed.
							x	Recording may not retain when restarting camera.	In an environment where the communication state is unstable	Fixed.
							x	Recording may not stop at restoration of communication		Fixed.
1.92 (4.50.34) Aug., '18	1.92 (4.50.34) Aug., '18	1.92 (4.50.34) Aug., '18	C				x	<del>Did not work</del> Hardware decode of plug-in software <del>may not work</del> when selecting compression method "H.265".	-	Fixed.
					x			Frame rate <b>and bit rate</b> may drop.	By transmitting H.264/H.265/JPEG live images continuously over 1 year without being rebooted.	Fixed.
							x	Camera may restart by disconnecting the camera's LAN cable while transmitting video in UDP.	In AC power operation.	Fixed.
1.93 (4.50.34) Oct., '18	1.93 (4.50.34) Oct., '18	1.93 (4.50.34) Oct., '18	C				x	When Image quality to be set in Motion priority (Frame rate), picture may not be displayed according to the frame rate. (Occurrence frequency : Rare)	-	Fixed.
							x	ONVIF RTSP Multicast may not be transmitted.	-	Fixed.
1.94 (4.50.34) Nov., '18	1.94 (4.50.34) Nov., '18	1.94 (4.50.34) Nov., '18	C				x	Multicast related settings ("Transmission type" setting and some others) may restore to the factory default settings by upgrading firmware from version 1.82 (or earlier) to version 1.90 (or later).	-	Fixed.
Ver2.00 (4.50.34) Dec., '18	Ver2.00 (4.50.34) Dec., '18	Ver2.00 (4.50.34) Dec., '18	C				x	-	-	Improved detection capability of "face wearing a mask" at detecting face by Facial Recognition Server Software, WV-ASF950, etc. <b>Note: Not recommended product for Face best shot function.</b>
							x	-	-	Settings of "HTTP max segment size(MSS)" to be relating to the camera action; - JPEG transmission for Face Best Shot - "HTTP alarm notification"
							x	Camera may restart, unexpectedly. (Occurrence frequency: Rare)	In case of high load such as multi-stream transmission at 60fps etc.	Fixed.
						x		By receiving ONVIF command continuously.	Fixed.	

\*: ONVIF is a trademark of Onvif, Inc.



## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver2.00 (4.50.34) Dec., '18	Ver2.00 (4.50.34) Dec., '18	Ver2.00 (4.50.34) Dec., '18	C			x		Camera may send corrupt AAC-LC data.	When the transmission is delayed due to the network environment etc.	Fixed.
						x		Video distribution may not be possible.	When the configuration of UI setting for Baseline Profile were as follow; - 30fps, H.264, FHD, Other than VBR	Fixed.
						x		Communication error may occur. (Occurrence frequency: Rare)	While connecting with Network Disk Recorder, WJ-NX series.	Fixed.
Ver4.00 (4.50.35) Feb., '19	Ver4.00 (4.50.35) Feb., '19	Ver4.00 (4.50.35) Feb., '19	C				x	-	-	Added "Overlay Image" function.
							x	-	-	Added "VIQS (Variable Image Quality on Specified area)" function.
							x	-	-	Added a choice of "On(Frame rate control)" to "GOP Control" in "Smart coding".
						x		The refresh interval value may not be reflected in the CGI command as follow; /cgi-bin/set_h264?f_priority=4&nr_framerate=1&h264_bandwidth=64&h264_quality=9&h264_ivop=0.2	-	Fixed.
						x		Black screen may be displayed back while recording H.264/H.265 to SD memory card and turning power Off and On.	-	Fixed.
						x		-	-	Improved resolution feeling in JPEG still image update at multiscreen in full screen display.
						x		May not be able to change the save destination at the time of FTP periodical transmission error.	-	Fixed.
						x		The settings of SMTP server may return before the setting by restarting the camera.	-	Fixed.
						x		Except Chinese market model, WV-S1132H.	-	Enhanced security.
						x		-	-	Changed the URLs of hype-link destination according to change of support page URL (from "http" to "https").
		x		Displayed full screen on the main monitor when placing IE on the sub monitor and clicking the full screen display button.	When using the two monitor screens of main and sub.	Fixed.				
		x		-	-	Improved the visibility of characters in the date/time screen.				

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver4.00 (4.50.35) Feb.,'19	-	-				x	For Chinese market model, WV-S1132H, only.	-	Changed factory default settings as follow; - Internet mode (over HTTP) from "On" to "Off" - Image capture mode from 30fps to 25fps, SD from "Off" to "On" - Date/time display format from "DD/MM/YYYY" to "YYYY/MM/DD" - Time zone from "GMT+00:00" to "GMT+08:00"	
-	Ver4.00 (4.50.35) Feb.,'19	-				x	For WV-S2110 only.	-	Improved resolution feeling of images.	
						x		-	Added a message as follow in the "Schedule" page; "VMD permission" is required when assigning the period to be detected. Setting is not necessary when detection at any time.	
								-	Changed a message by clicking the Delete button in the log list window to; Delete the log and image as the result of retrieval including the page where log is not displayed. (All of data selected by "Event" and "Recording time" are deleted.)	
								-	The recorded data of the log one before the relevant time might be downloaded when downloading the recorded data from the log list.	
						x	The area setting of the privacy zone may shift little by little each time clicking the setting button.	-	Fixed.	
Ver4.00 (4.50.35) Feb.,'19		Ver4.00 (4.50.35) Feb.,'19				x		-	ONVIF ProfileT Supported Scope/Scene Change Event, Property/DeviceIO/Metadata Sync.	
						x		-	ONVIF ProfileT Supported Scene Change Event.	
						x		-	ONVIF ProfileT Supported ONVIF Event Content Filter.	
	Ver4.00 (4.50.35) Feb.,'19					x	There was an issue at GetVideoEncoderConfigurationOptions in ONVIF 60fps mode.	-	Fixed.	
						x	Camera may restart unexpectedly while receiving ONVIF command continuously.	-	Fixed.	
						x	XML may be a syntax error by ONVIF Event command due to the XML namespace prefix was not defined at WS-Addressing.	-	Fixed.	
						x	Multicast parameters did not appear in the Milestone stream setting when ONVIF camera was registered in Media 2.	-	Fixed.	

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2434	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver4.00 (4.50.35) Feb.,'19	Ver4.00 (4.50.35) Feb.,'19	Ver4.00 (4.50.35) Feb.,'19	C				x	-		Changed the response of "/cgi-bin/get_io2?format=3&"; It became not to notify CGI response each time even if detecting command alarm continuously.
						x		When one network is disconnected from the network, the same alert screen is displayed for other cameras.	While using multi-screen display.	Fixed.
						x		Camera may restart when a file which cannot be deleted were created during JPEG overwrite recording on the SD memory card.	-	Fixed.
							x	-	-	Made Stream(3) available when "On" is set for Stabilizer.
							x	RTC communication may not be normal in rare cases when turning power from OFF to ON.	-	Fixed.
						x		When deleting SD card data on the log list screen, data that can not be deleted may be left while displaying the play window.	-	Fixed.
						x		Camera may restart upon receipt of certain CGI commands (those are to change H.264/H.265 1st stream quality / bitrate / resolution without disconnect the stream).	While face detection or face best-shot is enabled.	Fixed.
						x		Transmission type (H.264/H.265) and image capture size of stream may not be changed (transmission type and image capture size hold before change).	If those were changed within 2 minutes after the network had been disconnected with over RTSP connection.	Fixed.
							x	-	-	Improved visibility of "SDREC" button on the window for tablet PC.
Ver4.01 (4.50.35) Feb.,'19	Ver4.01 (4.50.35) Feb.,'19	Ver4.01 (4.50.35) Feb.,'19	B				x	The oldest recorded data may not be able to play back.	When the setting of overwrite recording to SD memory card is "On".	Fixed.
							x	Communication may stop even if connected with a PC or switch after starting up by PoE injector or external power supply (24V AC / 12V DC).	-	Fixed.
Ver4.02 (4.50.35) Apr.,'19	Ver4.02 (4.50.35) Apr.,'19	Ver4.02 (4.50.35) Apr.,'19	B		x			After upgrading the firmware from version 2.00 (or earlier) to 4.00 or 4.01, flicker caused by fluorescent light may not be prevented even if setting either "Indoor scene (50 Hz)" or "Indoor scene (60 Hz)" at "Light control mode".	-	Fixed.

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2434	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence					
			A	B	C	U								
							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)							
							Contents							
							*: ONVIF is a trademark of Onvif, Inc.							
Ver4.10 (4.50.35) June, '19	Ver4.10 (4.50.35) June, '19	Ver4.10 (4.50.35) June, '19	C				x	-	-	Security has been enhanced.				
										x	Audio may not output by attempting to connect two sessions simultaneously and failure to authenticate one of them.	-	Fixed.	
												x	-	Added a note in the window of DDNS setting page when using "Dynamic DNS Update", "Dynamic DNS Update(DHCP)".
												x	-	Supported multi-browsers other than the Internet Explorer. <a href="#">Some restrictions apply: click here for details.</a>
												x	-	Improved smooth text display by changing the texts on the screen from 2 gradations to grayscale.
												x	-	Added a CGI command to make an alarm; /Set?Func=SoftTrigger or /cgi-bin/Set?Func=SoftTrigger or /cgi-bin/comalarm.cgi
												x	For Chinese market models only	
												x	-	Changed factory default setting of the time zone to Chinese Standard Time(CST), UTC+8.
												x	-	Added parameters of get_capability, CGI command, for motorized variable focal lens; - Enable/disable and Magnification of EX-Zoom.
												x	-	Added interference detection information to additional information when using the i-VMD function of Extension software.
												x	-	Display the license of open source software (OSS) on upgrade screen.
												x	ONVIF communication may become a cause of destroying resources.	Fixed.
												x	-	Fixed Session Description Protocol/SDP (IPv6) on ONVIF.
												x	Unable to find ONVIF search.	Fixed.
												x	JPEG frame rate setting display becomes 0.33 fps by changing image capture mode rom 25 fps to 30 fps with CGI (/cgi-bin/setdata?IMG_MODE) although actual transmission rate is 5 fps.	Fixed.
												x	For Chinese market models only	
												x	-	Supported On-Screen Display (OSD) in Chinese.
								x	-	The file may not be found by opening the log list during overwrite recording of the SD memory card and attempt to browse.				
								x	-	Improved responses to ONVIF commands for PTZ cameras.				



## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2434	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	Priority Rank Level				Contents		
			A	B	C	U			
						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)	*: ONVIF is a trademark of Onvif, Inc.		
			Issue (Phenomenon)				Occurrence condition	Correspondence	
Ver4.10 (4.50.35) June, '19	Ver4.10 (4.50.35) June, '19	Ver4.10 (4.50.35) June, '19	C			x	PTZ may not stop even if it received stop command in ONVIF.	-	Fixed.
						x	-	-	The camera may restart by encrypting the stream 1 only, selecting audio transmission mode AAC-LC and recording video and audio simultaneously.
						x	-	-	Improved accuracy of Click-to-Center".
						x	Displayed "Approx. 2 min." for an alert of initializing operation.	-	Corrected the display to "3 min".
						x	Displayed "8 min" at upgrading firmware with selecting "Reset the settings to the default after completing the upgrade".	-	Corrected the display to "11 min".
Ver4.11 (4.50.35) July, '19	Ver4.11 (4.50.35) July, '19	Ver4.11 (4.50.35) July, '19	C			x	The face best-shot image used to display face search history data on Video Management Software may not be created correctly. (Occurrence frequency: Rare)	-	Fixed. Note: The cameras as follow are NOT recommended to use the face best-shot function; WV-S1511LN, WV-S1531LN, WV-S1531LNS, WV-S2120, WV-S2130, WV-S2111L, WV-S2131, WV-S2131L, WV-S2211L, WV-S2231L, WV-S2511LN, WV-S2531LN and WV-S1531LTN.
						x	The camera may restart when live sequence display by network disk recorder or Video Management Software without distributing H.264 or H.265 for recording. (Occurrence frequency: Rare)	-	Fixed.
Ver4.20 (4.50.35) Sept., '19	Ver4.20 (4.50.35) Sept., '19	Ver4.20 (4.50.35) Sept., '19	C			x	-	-	In FTP / SNMP authentication, "Authentication error" is logged in the system log by failing authentication more than a certain condition.
						x	-	-	Added "authentication error" to the system log when authentication fails more than a certain condition during FTP / SNMP authentication.
						x	-	-	Supported EasyIpSetup software (Ver4.31R00) and became to display serial numbers of devices.
						x	-	-	Updated (Enhanced) SNMP MIB information. The document of i-PRO camera management information (MIB) is available at the following URL; <a href="https://security.panasonic.com/training_support/panasonic_device_integration/snmp-mib/">https://security.panasonic.com/training_support/panasonic_device_integration/snmp-mib/</a>
						x	-	-	Improved so that available to connect with HIKVision recorder by CGI command.
						x	Recording may not stop when changing imaging capture mode.	-	Fixed.
						x	VMD Alarm may not detect crossing the line at the bottom of the screen.	-	Fixed.
						x	The slide-bar for VMD may not be able to be slid.	In Compatibility View mode on Internet Explorer.	Fixed.
		x	The camera may restart due to memory access error. (Occurrence frequency: Rare)	-	Fixed.				

## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver4.22 (4.50.35) Nov., '19	Ver4.22 (4.50.35) Nov., '19	Ver4.22 (4.50.35) Nov., '19	C			x	"Transmission type" and "Multicast address" configured by system configuration tool, may not be saved.	-	Fixed.	
							x	-	-	Improved a phenomenon that CPU load might increase after updating for V4.20.
Ver4.23 (4.50.38) Jan., '20	Ver4.23 (4.50.38) Jan., '20	Ver4.23 (4.50.38) Jan., '20	C				x	-	-	Supports multi-browsers Google Chrome, Firefox and Microsoft Edge in addition to Internet Explorer for; - the setup screen of the extension function "i-VMD" - i-VMD frame display on the live image - the face detection frame on the live image
							x	-	-	Changed the company name in the plug-in software Active X to the new one.
						x		Rebooting may cause the image to be out of focus when the extension function "face best-shot" is enabled.	-	Fixed.
Ver4.25 (4.50.38) Mar., '20	Ver4.25 (4.50.38) Mar., '20	Ver4.25 (4.50.38) Mar., '20	C			x	The camera may restart unexpectedly due to the irregularity in the data transmission/receiving process in the memory. (Occurrence frequency: Rare)	-	Fixed.	
						x	The camera may restart unexpectedly due to the irregularity in the alive monitoring process. (Occurrence frequency: Rare)	-	Fixed.	
						x	The camera may show black images on its "Live" window. (Occurrence frequency: Rare)	-	Fixed.	
Ver4.30 (4.50.38) April, '20	Ver4.30 (4.50.38) April, '20	Ver4.30 (4.50.38) April, '20	B				x	-	-	Added "SNMP trap setting" in [Network] > [Advanced] > [SNMP]. <a href="#">(Click here for detail)</a>
							x	-	-	Added a CGI command "/cgi-bin/setup_menu_disp?25fps=1" to make 25/50fps selectable on the "Image capture mode" menu.
					x			All sessions get disconnected by executing the ONVIF® commands for changing the framerate and the resolution.	-	Fixed.
							x	-	-	Changed the date character string format for response which responds via SNMP to "DateAndTime" format as it was not transmitted correctly.

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver4.30 (4.50.38) April, '20	Ver4.30 (4.50.38) April, '20	Ver4.30 (4.50.38) April, '20	B					Except WV-S2110 and WV-S2130		
							X	-	-	Supports multi-browsers Google Chrome, Firefox and Microsoft Edge in addition to Internet Explorer for; - Playing back the images on SD memory card <a href="#">(Click here for detail)</a>
							X	-	-	Changed the URL, QR code and Data_Matrix linked to the support page on the "Support" menu.
						X		Except Chinese market model, WV-S1132H.		
						X		Installing "CA certificate" opens two installation screens, a small window and a tab.	-	Fixed.
						X		On the "/cam" window for mobile terminal, reloading the image will show the normal live images when the camera is switched to the "Access permission" period from inaccessible period.	-	Fixed.
						X		-	-	Improved the response when reconnecting in HTTPS connection on Windows 10.
				X				Selecting the image capture size on the "Image" tab may change the bit rate to 3Mbps.	-	Fixed.
					X			-	-	Corrected the coordinate of the transmitted contents in ONVIF Metadata.
		X		-	-	Enhanced the access restriction function of SNMP v1/v2. <a href="#">(Click here for detail)</a>				
		X		-	-	Improved the image quality as followings: 1. Motion-blur in low light level Reduced the image lag under the low light condition to improve the visibility of moving objects. 2. Resolution Improved to be more natural resolution and outlines 3. Blocked up shadows in dark areas Improved to illuminate the dark areas <a href="#">(Click here for detail)</a>				

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver4.30 (4.50.38) April, '20	Ver4.30 (4.50.38) April, '20	Ver4.30 (4.50.38) April, '20	B				x	-	-	Enhanced security.
							x	-	-	Changed the below default setting. - [Internet mode]: from "OFF" to "ON" - [Viewer software (nwc4Ssetup.exe)] - [Smoother live video display on the browser (buffering)] from "ON" to "OFF".  <a href="#">(Click here for detail)</a>
						x		The process load on the camera may become high unexpectedly when: - The LAN cable of the network disk recorder on thereceiving side is disconnected. - The network disk recorder is powered off. (Occurrence frequency: Rare)	When streaming H.265 video using RTP over RTSP protocol	Fixed.
						x		<b>Except WV-S2110 and WV-S2130</b> The camera may not record the images in an SD memory card.	-	Fixed.
						x		-	-	Changed the company name in the plug-in software Active X to the new one.
Ver4.31 (4.50.38) July, '20	Ver4.31 (4.50.38) July, '20	Ver4.31 (4.50.38) July, '20	B		x		The camera keeps changing the image brightness to low and high alternately until it is rebooted. (Occurrence frequency: High)	When the camera operates continuously with [Image capture mode] set to the default value "30fps mode" for more than approx. 2 years* without being rebooted.  * This period will be shortened to approx 1 year for "60fps mode".	Fixed.	
Ver4.50 (4.50.38) Nov., '20	Ver4.50 (4.50.38) Nov., '20	Ver4.50 (4.50.38) Nov., '20	B		x			The camera may reboot. (Occurrence frequency: Low)	Continued operation of the following: - sequence display with a network disk recorder - sequence display with WV-ASM series software when [Live image source] is set to "Camera"	Fixed.
							x	-	-	Changed the behavior related to bit rate when the communication protocol is changed from "HTTP" to "HTTPS" as below. Previous versions: the camera automatically sets the bit rate to 4 Mbps when the selected one is larger than 4 Mbps. This version or later: the camera does not change the bit rate.
						x		<b>Applicable models: WV-S1111, WV-S1112, WV-S1131, WV-S1132, WV-S1132H, WV-S2531LTN</b> The camera may transmit the best shot face images captured outside the detection area.	When used with WV-ASF series software	Improved the accuracy of face best shot function

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## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2434	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents		
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence
Ver4.60 (4.50.38) Feb., '21	Ver4.60 (4.50.38) Feb., '21	Ver4.60 (4.50.38) Feb., '21	C				X	-	-	Improved the response to the CGI command "/cgi-bin/get_io2" by adding VMD ratio in percentage.
							X	-	-	Changed the default setting of [Transmission priority] to "VBR" when the browser's language is not Japanese.
							X	-	-	Changed the default setting of [Network Settings] in [Setup]-> [Network] page-> [Network] tab, from "Auto(Advanced)" to "DHCP".
							X	-	-	Added the On/Off setting for the Secure Real-time Transport Protocol (SRTP) function to the [Advanced] tab in [Setup]-> [Network] page.
							X	-	-	Improved the [HTTP alarm notification] function as follows: 1. Supports Digest authentication - The camera performs either "Digest" or "Basic" authentication according to the response from the HTTP server when initially accessed without ID and password. 2. Adds an error log for the failure in HTTP server user authentication - Displays "<HTTP alarm notification> authentication error" in the system log when the authentication fails. 3. Supports HTTPS Communication - Entering "https://" in [Address] enables HTTPS communication.
							X	-	-	Added the On/Off setting for ONVIF® to the [Network] tab in [Setup]-> [Network] page. (Default : On)
							X	-	-	Added the following note to the "HTTPS" window in [Setup]-> [Network] page-> [Advanced] tab. - When "HTTPS" is selected for "Connection", the maximum bandwidth(bit rate) is limited to 16Mbps.
							X	-	-	Corrected the RTSP protocol for transmitting H.265 images using ONVIF®.
							X	The camera does not issue a terminal alarm. (Occurrence frequency: High)	After the camera issues a terminal alarm, and the user turns off the terminal alarm during the time set in [Alarm deactivation time].	Fixed.
							X	The camera may reboot. (Occurrence frequency: Rare)	While performing JPEG recording.	Fixed.
			X	The camera does not display the full-width left parenthesis "(" on the live image.	-	Fixed.				
			X	UDP communication may be disconnected depending on the network environment. (Occurrence frequency: Rare)	When transmitting high resolution or high bit rate images.	Fixed.				
			X	-	-	Enhanced security.				

\*: ONVIF is a trademark of Onvif, Inc.

## WV-S15x1LN/S22x1L/S2131(L)/S2130/S211xL/S25x1LN/S1132(H)/S1131/S111x Firmware Release Note

WV-S1111 WV-S1112 WV-S1131 WV-S1132(H)	WV-S2110 WV-S2130 WV-S2131	WV-S1511LN WV-S1531LN WV-S1531LNS WV-S2111L WV-S2131(L) WV-S2211L WV-S2231L WV-S2511LN WV-S2531LN WV-S1531LTN WV-S2531LTN	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)	Contents			
			A	B	C	U		Issue (Phenomenon)	Occurrence condition	Correspondence	
<p><b>Important notes for users of Chinese market models only:</b></p> <p>1. The face detection function does not work when the frame rate is set to 25fps or 50fps.                  2. Stabilizer does not work when the frame rate is set to 60 fps, 50 fps, or 25 fps.</p>										*: ONVIF is a trademark of Onvif, Inc.	