

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Application Firmware

VER (ActiveX VER) Release Date					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)				Contents		
WV-SW559 WV-SP509	WV-SW558 WV-SP508	WV-SW598 WV-SC588	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SC387		A	B	C	U	Issue (Phenomenon)	Occurrence condition	Correspondence
For WV-SW559/SP509/SW558/SP508 only												
1.06 (4.08.00) Mar., '12	1.06 (4.08.00) Mar., '12				C				x	-	-	Improved Start up Time at low temperature environment.
1.07 (4.08.00) Apr., '12	1.07 (4.08.00) Apr., '12				C				x	Failed to capture a camera picture by Snap shot button on web browser. (Occurrence frequency: Low)	Attempting to capture a snap shot at high resolution JPEG like 3-Mega in HTTPS. Most of cases are at 3 Mega JPEG picture high resolution that takes more than 10 seconds for data processing.	Fixed to display a snap shot properly. Still it may occur if it would take more than 30 seconds for data processing depends on data volume. To avoid it, please make settings changed either [JPEG]-[Resolution] of [JPEG/H.264]-tab to be [QVGA] or [JPEG]-[Quality] to be lower.
									x	Alert may be displayed on SF548 and SF538 (those models do not have SD card slot). (Occurrence frequency: Low)	-	Fixed not to display the alert.
									x	Video streaming may be stopped. (Occurrence frequency: Low)	In a case power source were PoE and connecting with NWDR (keeping power "on"), then power of PoE to be "off" once and retain to "on".	Fixed not to stop streaming.
									x	JPEG recording may be stored 1st JPEG picture only and failed to do afterwards. (Occurrence frequency: Mid)	In a case recording in H.264 onto SD memory card and changing configuration from H.264 to JPEG.	Fixed to record properly.
									x	-	-	Improved picture quality at Super Dynamic "ON".
1.08 (4.08.00) May, '12	1.08 (4.08.00) May, '12				C				x	Video streaming may be stopped when receiving a command. (Occurrence frequency: Low)	In a case start streaming/stop streaming in RTSP were switched, repeatedly. Note; It does not occur using with Panasonic recorders.	Fixed not to stop streaming.
									x	Restart the unit, unexpectedly. (Occurrence frequency: High)	It happens when the following two conditions overlap; 1. IPv6 router gives IPv6 address with a prefix for RA. 2. Another IPv6 address that is 38-character or longer including prefix, exists in same network.	Fixed not to restart.
1.09 (4.08.00) June, '12	1.09 (4.08.00) June, '12				C				x	-	-	The Ex Optical Zooming will be initialized (Default reset) by [INITIAL SET] button, addition to do it by software on previous version.
									x	WV-SP509 and WV-SP508 only: Auto-focus function may not bring optimum focusing. (Occurrence frequency: High)	It seems to realize at "Wide" position	Improved auto-focus function bringing optimum focus.
									x	Camera picture may not be displayed. (Occurrence frequency: High)	In a case connecting with NV200 and 16 multi-picture on NV200 to be selected.	Fixed to display camera picture properly.
1.10 (4.08.00) July, '12	1.10 (4.08.00) July, '12				C			x	-	-	Reduced bandwidth (approx. 5% reduced than version 1.21) on H.264 while Super Dynamic is ON.	

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

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For WV-SW559/SP509/SW558/SP508 only												
1.10 (4.08.00) July,'12	1.10 (4.08.00) July,'12				C				x	Between NV200 and camera, disconnect every some minutes and no video (solid black) after freezing, repeatedly.	In a case, connecting with NV200 and the camera were registered on NV200 by OnVIF.	Fixed not to disconnect.
									x	Setup window on EasyIPConfig software does not show properly. It can be seen that both choices of AUTO/MANUAL are selected and "0.0.0.0" is set as IP address.	While connecting with WV-NV200 and WV-NV200 has assigned IP address.	Fixed EasyIPConfig software to display properly.
									x	Restart, unexpectedly. (Occurrence frequency: Mid)	In a case receiving many requests for starting H.264 stream like switching cameras sequentially on ASM200 or requested by two or more clients.	Fixed not to restart.
For WV-SW559/SF549/SF539/SP509/SW558/SF548/SF538/SP508												
1.22 (4.08.00) July,'12	1.22 (4.08.00) July,'12				C				x	-	-	The Ex Optical Zooming will be initialized (Default reset) by [INITIAL SET] button, addition to do it by software on previous version.
									x	-	-	Improved picture quality (looks higher-definition).
									x	Solid black picture may be displayed instead of camera picture. (Occurrence frequency: High)	In a case connecting with NV200 and 16 multi-picture on NV200 to be selected.	Fixed to display camera picture properly.
									x	-	-	Reduced bandwidth (approx. 5% reduced than version 1.21) on H.264 while Super Dynamic is ON.
									x	Between NV200 and camera, disconnect every some minutes and no video (solid black) after freezing, repeatedly. (Occurrence frequency: High)	In a case, connecting with NV200 and the camera were registered on NV200 by OnVIF.	Fixed not to disconnect.
									x	Setup window on EasyIPConfig software does not show properly. It can be seen that both choices of AUTO/MANUAL are selected and "0.0.0.0" is set as IP address. (Occurrence frequency: High)	While connecting with WV-NV200 and WV-NV200 has assigned IP address.	Fixed EasyIPConfig software to display properly.
									x	Restart, unexpectedly. (Occurrence frequency: Mid)	In a case receiving many requests for starting H.264 stream like switching cameras sequentially on ASM200 or requested by two or more clients.	Fixed not to restart.
1.23 (4.09.00) Sept.,'12	1.23 (4.09.00) Sept.,'12				C			x	Picture may be destroyed. (Occurrence frequency: High)	Both Picture-in-Picture and slow-shutter are in use.	Fixed to display picture, properly.	
1.30 (4.16.03) Jan.,'13	1.30 (4.16.03) Jan.,'13				C				x	-	-	Added Fog correction function in "image adjust" setup menu.
									x	-	-	Added Advanced VBR (Variable Bit Rate) as choice for H.264 transmission.
									x	-	-	Supported VMD area at Alarm type in sub window.
									x	-	-	Added a guide of face detection appears on live picture.
									x	-	-	Added playback function for contents in H.264 on SD memory card.

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

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1.30 (4.16.03) Jan.,'13	1.30 (4.16.03) Jan.,'13				C				x	-	-	Improved to display IP address on "IP Setting Software" even if 20 minutes past after power-on.
									x	-	-	Changed factory default values "not to initialize settings" after version update.
									x	-	-	Changed not to initialize DNS server address at initializing setting data.
									x	-	-	Improved video transmission controls when setting "Best Effort" at Transmission priority mode for improving performance of transmission on narrowband or wireless network environment.
									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".
									x	-	-	Supported mounting/removing SD memory card while power is ON.
									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.
									x	-	-	In RTSP connection, opposing device does not include session parameters in RTSP packet of OPTIONS that is used in keep-alive. Fixed not to stop the streaming.
				Video streaming may be stopped. (Occurrence frequency : Low)								
								x				
Added on May 24, 2013								x	-	-	Supported bigger size of file at firmware upgrading.	
1.31 (4.16.03) June,'13	1.31 (4.16.03) June,'13				C				x	-	-	Improved color when shooting something green objects such as grass.
									x	Focus may not be optimized.	When an outdoor bright object is viewed while Super Dynamic is ON.	Fixed to focus properly.
1.32 (4.16.03) June,'13	1.32 (4.16.03) June,'13				C		x		Camera restarted, unexpectedly.	When camera runs under low illumination environment and the Auto slow shutter were set to other than "OFF".	Fixed.	
1.40 (4.17.01) July,'13	1.40 (4.17.01) July,'13				C				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 1.40 4.80 (and newer) would be installed.
									x	-	-	Added a message of "Time past from the date of manufacture" in the page of Upgrade (Maintenance).
									x	-	-	Added "Auto" as choice in language selection.
									x	-	-	Changed the settings about "Time zone" and "Summer time" from NTP (Server) to Basic (Basic).
									x	-	-	Added setting for "Monitor out" (NTSC/PAL switching) onto Basic (Basic).
									x	-	-	Added "Area" selection to the "DDNS" setting.
									x	-	-	Added "HTTP alarm notification".
			x	-	-	Supported SSL mail server.						

Corrected on Sept. 6, 2013

Feb. 24, '14 Feb. 24, '14

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

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1.40 (4.17.01) July,'13	1.40 (4.17.01) July,'13	Feb. 24, '14	Feb. 24, '14					x	-	-	Added "Forcible black & white mode", "Forcible Super Dynamic" and "Forcible WDR" to the schedule.		
		1.50 (4.17.01) Feb.,'14	1.50 (4.17.01) Feb.,'14						x	-	-	Supported missing "/" (slash) at the end of "HTTP" in path or header "Host:".	
										x	-	-	Added displaying the "Log" in live and "Permission level of viewing logs" settings.
										x	-	-	Changed the name of "List" button on the "Live" page to "List/Play".
										x	-	-	Added "Initial display stream on the browser" setting.
										x	-	-	Added "Internet" function.
										x	-	-	Added "Maximum file size" and "Pre alarm (recording) duration" to the "H.264 recording".
										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) "Maximum file size" of the "H.264 recording". 3) i-VMD (Required license registration) 4) i-VMD information will be added with streaming (Required license registration)
										x	-	-	Removed the version information of Onvif from the CGI to receive status of built-in function.
										x	-	-	Improved response time for HTTPS access.
										x	-	-	Supported the combination of Windows 8 and Internet Explorer 10.
										x	-	-	Improved that Authentication error took some time while connecting with Digest Authentication.
				Feb. 24, '14	Feb. 24, '14					x	-	-	Fixed an issue that Cancel may not be accepted while downloading video from the page of playing back video on IE9.
				1.50 (4.17.01) Feb.,'14	1.50 (4.17.01) Feb.,'14					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.
								x	Port number cannot be selected in grey color.	When "H.264(1)/H.264(2)" is selected at "Recording format" and either "Unicast port (MANUAL)" or "Multicast" is selected.	Fixed port number can be selected, properly.		
								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.		
								x	Change setting at "Image capture mode" may be error.	In a case attempting to do after initializing setups and changing time zone.	Fixed not to be error.		
								x			Corrected text that is alerted after recording video while "Bandwidth control(bit rate)" to be set other than "Unlimited(1500byte)"and attempting to download the log from log list.		

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1.40 (4.17.01) July, '13	-	Feb. 24, '14	Feb. 24, '14				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.
	-						x		Recording may not start again.	In a case changing "Capture mode" while recording video. Attempting to change setting at either "Capture image mode" or "Cropping" while in schedule recording.	Fixed to start recording again.
	-	1.50 (4.17.01) Feb., '14	1.50 (4.17.01) Feb., '14				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.
	-						x		Unable to access the camera.	In a case UPnP is set to "ON".	Fixed to access the camera, properly.
	1.40 (4.17.01) July, '13							x	-	-	Changed archive file format for installation file from executable file to cabinet file that is to install ActiveX upon accessing browser.
1.41 (4.17.01) July, '13	-				C			x	Script error occurred.	When clicking Alarm button of Setup menu.	Fixed.
-	-							x	Vertical noise (B/W line) may be seen.	After making position refresh.	Fixed not to be seen the noise.
-	-	1.04 (4.17.01) July, '13			C			x	Status lamp of LAN may not light in orange.	If the SD memory card (that is set in Lock) would be removed after removing LAN cable.	Fixed.
-	-		1.04 (4.17.01) July, '13					x	Unexpected files may be created.	In a case, turning Power-ON while recording by detecting network failure.	Fixed not to create unexpected files.
1.42 (4.17.01) July, '13	-							x	Recording will not be started after restarting camera.	When turn power off once and on while manual recording in 20MB.	Fixed to retain recording, properly.
	-	1.05 (4.17.01) July, '13			C			x	Script error occurred.	When selecting "360 map-shot" or "Preset map-shot" at Auto mode in live and exit the menu without starting.	Fixed.
	-		1.05 (4.17.01) July, '13					x	Playback on WJ-ND400 may be collapsed.	While connecting with WJ-ND400 and recording H.264 onto SD memory card as backup.	Fixed.
	1.42 (4.17.01) July, '13							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.
-	-							x	-	-	Corrected the label of the tab for i-VMD after inputting the key to release the Key Management System.

Added on Sept. 10, 2013

Important Information to upgrade/downgrade the firmware for WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559 only.

1. For the cameras prior to version 1.30, upgrade the firmware to one of ver1.30, ver1.31 or ver 1.32 first, then upgrade to ver 1.42 (or newer).

Please refer to the web site as follow for more details;

http://security.panasonic.com/pss/security/library/download/Products/2step_vup_info/2step_vup_info.html

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

But only firmware version 1.40 and newer can be installed for the products manufactured in July 2013 and after (Serial Number "MGxxxx", "MHxxxx", "MIxxxx" and so on).

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1.44 (4.17.01) Nov., '13	1.44 (4.17.01) Nov., '13	1.06 (4.17.01) Nov., '13	1.07 (4.17.01) Nov., '13					x	-	-	Except WV-SW5xxH, SF5xxH, SW1xxH or SF1xxH Added a function for TV System to switch from NTSC to PAL by pressing RESET button within one second.			
											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.
											x	-	-	Added Portuguese as a choice at [Select language] pull-down menu.
											x	-	-	Improved video not to be jumpy at high bitrate.
										x	Time difference between on-screen and NTP of RTCP was bigger and bigger.	-	Fixed.	
										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.	
										x	Camera moved into Safe mode. (Occurrence frequency: High)	In a case upgrading the driver firmware after registering ONVIF.	Fixed to start up, properly.	
										x	The System log may show incorrect reasons for errors at "Not found Panasonic alarm protocol notification".	-	Fixed.	
					-						x	-	-	Improved vertical lines not to be shown while using slow shutter speed.
		1.44 except SP509	1.44 except SP508		-	-					x	-	-	Corrected "Extra optical zoom" that was shown "Extra zoom".
1.44	1.44	-	-					x	All camera pictures showing on configuration screen such as i-VMD, became cropping images. (Occurrence frequency: High)	In a case, same resolution in JPEG between initial display and cropping image were set.	Fixed to display, properly.			
			1.06	1.07					x	Camera may restart, unexpectedly. (Occurrence frequency: High)	In a case, failed to send Panasonic Alarm Notification repeatedly.	Fixed not to restart, unexpectedly.		
		-	-						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.		
-	-	-						x	-	-	Corrected disarraying characters at setting pages in Russian and Chinese.			
-	-	-	1.07					x	"Another user is in operation" at configuring VMD may not end. (Occurrence frequency: High)	Browser crashed while showing i-VMD configuration page, and opened the i-VMD configuration page again.	Fixed to return			
-	-	-						x	Panasonic alarm protocol notification may not be sent. (Occurrence frequency: High)	In a case, "Notification per VMD area" is set to "ON" and choice of "VMD/i-VMD alarm" is set to "i-VMD"	Fixed to send Panasonic alarm protocol notification, properly.			
1.45 (4.17.01) Nov., '13	1.45 (4.17.01) Nov., '13	1.45 (4.17.01) Nov., '13	1.08 1.45 (4.17.01) Nov., '13					x	Streaming may stop, unexpectedly. (Occurrence frequency: Low) Added on Jan. 10, 2014	In a case, setting to backup video in JPEG onto SD memory card. Note: It does not always occur under the condition as above but also it might occur under another condition.	Fixed not to stop streaming.			

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-	-		-						-	-	Changed the name of "Direction setting" to "Direction/Angle setting". Added "Panning 0-deg direction setting".	
	-		-						-	-	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).	
	1.50 (4.17.01) Feb., '14		1.50 (4.17.01) Feb., '14						-	-	Added "High Light Compensation (HLC)" function.	
									-	-	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).	
		1.50 (4.17.01) Feb., '14							-	-	Added hyper-link to the "Support Information on network camera (WV Series)" in the page of firmware upgrade.	
									-	-	Made possible to choose "BASELINE" or "HIGH" as H.264 Profile by CGI command.	
									-	-	Improved outputting frame rate while setting Max. bit rate were lower value in Advance Variable Bit Rate (AVBR).	
									-	-	E-mail notification can attach an image when recording video is in	
					C				-	-	In ONVIF ver2.4, supported the commands as follows; 1. Video Source Mode (Image Capture Mode) command. 2. OSD command. 3. Standard event. 4. Audio Back Channel over HTTP.	
									-	-	In ONVIF ver2.4, supported PresetTour command.	
									-	-	In ONVIF ver2.4, supported Audio Back Channel over HTTP.	
1.50	-		1.50						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, obtaining the desired MP4 file(s) by CGI command.	Fixed only desired MP4 file(s) to be obtained.	
-	-								-	-	Added a parameter in returning value of CGI command that would show availability about sound detect alarm recording function.	
1.50	1.50								Black-noise may appear. (Occurrence frequency: Mid)	When the image contains both complicated and simplified areas.	Improved so that a block-noise became hard to occur.	
-	-								-	-	Improved AF speed at bright environment.	
1.50	1.50		1.50						-	-	Improved I-frame to be added when re-connection is made while in transmitting multicast.	
									-	-	Improved the returning of CGI command (/cgi-bin/find_recording_seqs) would contain "Content-Length".	
		1.51 (4.17.01) Feb., '14			C				-	-	Improved accuracy of zoom control by dragging the mouse.	
	1.52 (4.17.01) Apr., '14	1.52 (4.17.01) Apr., '14	1.52 (4.17.01) Apr., '14				x		-	-	Added a recommendation for enabling CompatibleView setting on IE10 and IE11 if it were NOT enabled.	
							x		-	-	Added a hyper-link for the page of Support Information on title bar at the top of the Live picture.	
								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.	
1.53 (4.17.01) Jun., '14	-	1.53 (4.17.01) Jun., '14	1.55 (4.17.01) Jun., '14		C			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.	

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WV-SW559 WV-SF549 WV-SF539 WV-SP509	WV-SW558 WV-SF548 WV-SF538 WV-SP508	WV-SW598 WV-SC588	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SC387			A	B	C	U	Issue (Phenomenon)	Occurrence condition
1.60 (4.27.02) Nov.,'14	1.60 (4.27.02) Nov.,'14	1.60 (4.27.02) Nov.,'14	1.60 (4.27.02) Nov.,'14					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.	
								x	-	-	Improved displaying live picture even if the setting of the Compatibility View on Internet Explorer11 were "Off".	
	-								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.
	-								x	-	-	Added "SD memory card warning output" at the "Alarm output terminal".
									x	-	-	Supported time and camera title can be displayed by separation. Note: it must be sent a cgi command.
									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
									x	-	-	Reviewed and updated the Time Zone values
									x	-	-	Supported ONVIF Profile G.
									x	Unable to record pre alarm recording. (Occurrence frequency: High)	In a case, configure the settings as follows; - Maximim image size: 20MB - Save trigger: FTP error	Fixed.
									x	Stopped recording and unable to start manual recording any more.	In a case, changing image capture mode while recording H.264 into SD memory card.	Fixed.
							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 grey) is selected for recording compression.	Fixed.		
							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.		

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Application Firmware

VER (ActiveX VER) Release Date					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)	Contents					
WV-SW559 WV-SF549 WV-SF539 WV-SP509	WV-SW558 WV-SF548 WV-SF538 WV-SP508	WV-SW598 WV-SC588	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SC387				A	B	C	U	Issue (Phenomenon)
1.60	-	1.60	1.60		C			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 grey). - Alarm (in grey)	Fixed.
							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.	
							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.	
	-						x		Replied RTSP with a header of Speed. (Occurrence frequency: High)	When specifying "Rate-Control: no".	Fixed.	
	-							x	-	-	In information range for GetRecordingOptions command, the responses of CompatibleSources was vary depends on job generation state.	
	-							x	The following issues occurred; 1. E-mail notification: No images attached 2. FTP Periodic image transmission: Not sent (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.	
	1.60							x	Added unnecessary "0" at the end of POST connection of RTP over RTSP over HTTP.	-	Fixed.	
	-							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".	
	-							x	Unable to set FTP periodic image transmission ON.	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.	Fixed.	
	1.60							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.	
				x	i-VMD Schedule2 did not work.	In a case, ending time of Schedule1 and starting time of Schedule2 were same; Example: Schedule1: 12:00 - 12:05 Scene1 Schedule2: 12:05 - 12:10 Scene1	Fixed.					
-	-	1.60						x		Panasonic e-mail alarm notification by detecting audio only, was not sent by sending cgi command "/cgi-bin/pana_alm?pana_alm=96".	-	Fixed.
1.60	-							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.	

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Application Firmware

VER (ActiveX VER) Release Date					Priority Rank Level	Priority Rank Level				Contents		
WV-SW559 WV-SF549 WV-SF539 WV-SP509	WV-SW558 WV-SF548 WV-SF538 WV-SP508	WV-SW598 WV-SW598A WV-SC588 WV-SC588A	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SC387 WV-SC387A		A	B	C	U	Issue (Phenomenon)	Occurrence condition	Correspondence
-	-	-	1.61 (4.27.02) Feb., '15		C	-		x		Downloading H.264 images may fail.	From playing back recorded images on SD memory card.	Fixed.
1.62 (4.27.02) Apr., '15	-	1.62 (4.27.02) Apr., '15	1.62 (4.27.02) Apr., '15		C			x		-	-	Supported downloading H.264 recorded data on SD memory card from WV-ASM200 that configured maximum file size to be 20MB. Note: Required upgrading firmware on WV-ASM200.
	1.62 (4.27.02) Apr., '15							x		Unable to download recorded data from SD memory card.	-	Fixed.
								x		-	-	Improved the H.264 picture quality at power on.
-	-	-	-	1.70 (4.27.02) May,'15						1st mass-production for the models of WV-SW397, WV-SW397A and WV-SC387.		
-	-	1.63 (4.27.02) June,'15	-	1.71 (4.27.02) June,'15						Due to factory reason.		
1.64 (4.27.02) Aug., '15	-	1.64 (4.27.02) Aug., '15	1.64 (4.27.02) Aug., '15	1.72 (4.27.02) Aug., '15	C			x	Schedule recording may stop, will not resume by turning POWER OFF and ON.	While scheduled recording H.264 onto SD memory card.	Fixed.	
	Deleted on Sep 14, 2015							x	Stop recording due to failed to overwrite H.264 recording data.	Scheduled H.264 recording onto SD memory card.	Fixed.	
Added on Sep 14, 2015			1.64 (4.27.02) Aug., '15	-						CGI command Changed returning the parameter of Alarm content from "0x83" to "0x43".		
-	-	1.67 (4.27.02) Oct., '15	-	1.73 (4.27.02) Oct., '15	U			x	-	-	Improved not to be conspicuous jagged image at 640x320 and 320x180.	
-	-	1.80 (4.27.02) Feb,'16	-	1.80 (4.27.02) Feb,'16					1st mass-production for the models of WV-SW598A(H), WV-SC588A(H), WV-SW397B(H) and WV-SC387A(H).			
-	-	1.90 (4.27.02) Feb., '16	-	1.90 (4.27.02) Feb., '16	C			x	-	-	Added "15s" and "25s" to the "Dwell time" of "Preset position". (Need to upgrade both the application and the driver firmware.)	
								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.)	
								x	-	-	Added "Alarm area No." setting to the "Preset per sender". (Need to upgrade both the application and the driver firmware.)	
								x	For WV-SW598, WV-SC588, WV-SW397, WV-SW397A, WV-SC387, WV-SW158, WV-SF138 only.			
								x	-	-	Added "VBR" to the "transmission priority" of H.264.	

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Application Firmware

VER (ActiveX VER) Release Date					Priority Rank Level	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
WV-SW559 WV-SF549 WV-SF539 WV-SP509	WV-SW558 WV-SF548 WV-SF538 WV-SP508	WV-SW598 WV-SW598A WV-SC588 WV-SC588A	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SW397B WV-SC387 WV-SC387A		A	B	C	U			
-	-	-	-	-					x	For WV-SW598, WV-SC588, WV-SW598A and WV-SC588A only.	-	Improved showing "Total use time" correct in [Status] tab of the "maintenance" page. Also see the Driver Firmware Versions 1.07 and 3.25.
1.90 (4.27.02) Feb., '16	1.90 (4.27.02) Feb., '16	1.90 (4.27.02) Feb., '16	1.90 (4.27.02) Feb., '16	1.90 (4.27.02) Feb., '16	C				x	-	-	Added a notice for each screen that alarm notification will not be appeared while displaying VMD and audio detection.
									x	-	-	Regarding the header (WS-Addressing) which is attached with ONVIF commands, supported WS-Addressing in August 2004, used to bethe one in August 2005 only.
									x	-	-	Improved picture quality such as Brightness, Focus, Super Dynamic range and Contrast.
2.40 (4.27.02) Apr., '16	2.40 (4.27.02) Apr., '16	2.40 (4.27.02) Apr., '16	2.40 (4.27.02) Apr., '16	2.40 (4.27.02) Apr., '16	C				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.
-	-	-	2.41 (4.27.02) June, '16	-	C				x	Unable to download the recorded files (footage) by web browser. (Occurrence frequency : High)	Recorded by iVMD alarm in H.264.	Fixed.
									x	Backup of recorded picture (in JPEG) from SD memory card to WJ-ND400 may be solid black.	-	Fixed.
									x	Recording may be stopped.	While "2MB" is selected at "Maximum file size".	Fixed.
									x	Unable to download video by "500 Internal Server Error".	When downloading video from browser during overwrite deletion.	Fixed.
2.43 (4.27.0.2) June, '16	2.43 (4.27.0.2) June, '16	2.43 (4.27.0.2) June, '16	2.43 (4.27.0.2) June, '16	2.43 (4.27.0.2) June, '16	C				x	H.264 video within the latest log on SD memory card may not be able to download by web browser.	-	Fixed.
									x	Video on SD memory card may not be able to playback become a solid black.	Depending on the subjects.	Fixed.
									x	A log of exceeding 1 hour may be created.	By downloading video while recording.	Fixed.
									x	Recording resumption may take 3 minutes or more after strating up.	While recording onto SD memory card.	Fixed.

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Application Firmware

VER (ActiveX VER) Release Date					Priority Rank Level	Priority Rank Level				Issue (Phenomenon)	Occurrence condition	Correspondence
WV-SW559 WV-SF549 WV-SF539 WV-SP509	WV-SW558 WV-SF548 WV-SF538 WV-SP508	WV-SW598 WV-SW598A WV-SC588 WV-SC588A	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SW397B WV-SC387 WV-SC387A		A	B	C	U			
2.46 (4.27.0.7) July, '17	2.46 (4.27.0.7) July, '17	2.46 (4.27.0.7) July, '17	2.46 (4.27.0.7) July, '17	2.46 (4.27.0.7) July, '17	C				x	-	-	Changed company name to the new company name in the plug-in (ActiveX) software.
									x	-	-	Updated the URL of the support WEB site displayed on the screen.
								x		Screen may show solid black.	-	Fixed. Improved fail-safe processing at the occurrence of abnormality of image encoding processing unit so that to avoid displaying solid black.
								x		WV-SW458 unable to transmit more than 4Mbps.	On ONVIF.	Fixed.
								x		Recording on SD memory card may stop when an error occurred at writing.	When selecting "H.264 recording".	Fixed.
									x	-	-	Added a choice, Reboot, at Schedule 5 in the schedule settings.
Ver2.48 (4.27.07) Feb.,'18	Ver2.48 (4.27.07) Feb.,'18	Ver2.48 (4.27.07) Feb.,'18	Ver2.48 (4.27.07) Feb.,'18	Ver2.48 (4.27.07) Feb.,'18	C				x	-	-	Improved security.
						x		Except WV-SW598, WV-SC588. Zoom may not work.	When using ONVIF.	Fixed.		
							x	Except WV-SW598, WV-SC588. -	-	Improved PAN/TILT/ZOOM position accuracy of ONVIF command.		
-	-	Only for WV-SW598A and WV-SC588A	-	Only for WV-SW397B and WV-SC587A	C				x	-	-	Changed factory default setting for Authentication method; Previous: "Digest or Basic" New: "Digest" For more details: security upgrade June2018.pdf
									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. Note: Original passwords and authentication method of products on the system are kept unchanged even firmware and software have been updated. For more details: security upgrade June2018.pdf
		Ver2.50 (4.27.07) Jun.,'18	Ver2.50 (4.27.07) Jun.,'18					x		Streaming may stop at camera startup while setting in multicast streaming.	-	Fixed.

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Application Firmware

VER (ActiveX VER) Release Date					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				Contents		
WV-SW559 WV-SF549 WV-SF539 WV-SP509	WV-SW558 WV-SF548 WV-SF538 WV-SP508	WV-SW598 WV-SW598A WV-SC588 WV-SC588A	WV-SW158 WV-SF138	WV-SW397 WV-SW397A WV-SW397B WV-SC387 WV-SC387A		A	B	C	U	Issue (Phenomenon)	Occurrence condition	Correspondence
-	-	Only for WV-SW598A and WV-SC588A Ver2.50 (4.27.07) Jun., '18	-	Only for WV-SW397B and WV-SC587A Ver2.50 (4.27.07) Jun., '18				x		If an RTSP header contains two or more User-Agentheaders. no HTTP400(Bad Request) error returned and ignore the second and subsequent User-Agentheaders.	-	Fixed.

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Driver Firmware

VER Release Date					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				Contents		
WV-SW598 WV-SC588	WV-SW397 WV-SW397A WV-SC387					A	B	C	U	Issue (Phenomenon)	Occurrence condition	Correspondence
1.70 July, '13					U				x	-	-	Improved Auto Focus and flare under positional light source.
									x	-	-	Improved white balance.
									x	-	-	Improved resolution by clarifying parameters related with picture quality.
1.76 July, '13					U				x	-	-	Improved Auto Focus under positional light source.
									x	-	-	Improved white balance not to be slightly purpose depends on the objects.
									x	-	-	Improved Super Dynamic performance at low illumination.
									x	-	-	Improved for resolution not to decrease too much during PTZ operation.
1.90 Sept., '13					U				x	-	-	Improved the speed of Pan/Tilt Motor to be optimized. Note: Please setting "Patrol" again due to the settings of Patrol may be shifted by upgrading this.
									x	-	-	Improved the Pan/Tilt speed control between preset positions.
									x	-	-	Unified threshold level of illumination for switching from color to black & white with the other cameras.
1.98 Feb., '14					C			x	-	-	After restarting, it returns to the preset position before power off although it would be off-preset position.	
2.07 Nov., '14 WV-SW598 only					C				x	-	-	Changed to connection information and warning display of the power supply device FROM OSD to system log; Before changed (OSD): CAUTION: POWER SUPPLY IS ONLY INTENDED FOR USE OF POE+(CLASS 4) HUB-IEEE802.3AT COMPLY OR AC24V MIN3.0A CLASS2 SUPPLY. After changed (on system log): <PoE+/24VAC> Detection error. Operating on PoE Class 0.
									x	-	-	Added a choice to enable auto-focus in patrol during recording/playing back. Previously, auto-focus was disabled in patrol.
2.07 Nov., '14								x	Privacy zone slipped off and visible little by little.	By moving Privacy zone to edge of the screen.	Fixed.	
-		1.00 May, '15							1st mass-production for the models of WV-SW397, WV-SW397A and WV-SC387.			
2.11 June, '15		1.02 June, '15						x	-	-	Improved response of Pan/Tilt operation.	
-		1.04 Oct., '15						x	Unable to control digital zoom.	By saving/playing back patrolling mode.	Fixed.	

WV-SF539/SF538/SF549/SF548/SP508/SP509/SW558/SW559/SW598/SC588/SW158/SF138/SW397(A)/SC387 Firmware Release Note

Driver Firmware

VER Release Date				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)				Contents		
WV-SW598 WV-SC588	WV-SW598A WV-SC588A	WV-SW397 WV-SW397A WV-SC387	WV-SW397B WV-SC387A		A	B	C	U	Issue (Phenomenon)	Occurrence condition	Correspondence
-	3.18 Feb, '16	-	3.18 Feb, '16						1st mass-production for the models of WV-SW598A(H), WV-SC588A(H), WV-SW397B(H) and WV-SC387A(H).		
2.14 Feb., '16	3.25 Feb., '16	1.07 Feb., '16	3.25 Feb., '16	C			x	-	-	Added "15s" and "25s" to the "Dwell time" of "Preset position". (Need to upgrade both the application and the driver firmware.)	
							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.)	
							x	-	-	Added "Alaerm are No." setting to the "Preset per sender". (Need to upgrade both the application and the driver firmware.)	
-	-	-					x	-	-	Improved showing "Total use time" correct in [Status] tab of the "maintenance" page. Also see the Application Firmware Version 1.90.	
-	-	-					x	Became blac/white picture, unexpectedly.	By switching SD (Super Dinamic) ON and OFF, repeatedly.	Fixed.	
-	-	-				x	-	-	Improved picture quality such as Brightness, Focus, Super Dynamic range and Contrast.		
-	3.26 June, '16	-	3.26 June, '16	C			x	For Chinese market models (WV-SW598AH, WV-SC588AH, WV-SW397BH, WV-SC387AH) only. The iamge may shak by stop panning from the fastest.	At "1x" zoom ratio.	Fixed.	
							x	A line at the bottom of the image looked magenta color.	While turning the image upside-down by digital flip.	Fixed.	
-	3.27 July, '16	-	3.27 July, '16	C			x	Privacy zone may be shifted; 1) Privacy zone may be enlarged and hide objects while defining an oblong object and by panning. 2) Hide objects may be seen by shifting privacy zone vertically by tilting.	-	Improved acuracy of privacy mask position. Please make sure the position of privacy mask after upgrading the firmware for just in case.	
							x	Privacy zone may disapear.	When zooming 200 times or more.	Fixed.	
2.15 Mar., '17	3.28 Mar., '17	1.08 Mar., '17	3.28 Mar., '17	C			x	Except WV-SC588(H), WV-SC588A(H), WV-SC387A(H). Double image reduction may not work.	In a case installed the camera in a vibrating environment	Fixed. (Increased power consumption since it is held by exciting current.)	
-	3.29 Feb., '18	3.29 Feb., '18	3.29 Feb., '18				X	Appeared red vertical treak.	When setting "Auto slow shutter" in settings relating to image quality ("Image adjust" setup menu) to anything other than "Off(1/30s)".	Fixed.	
-	Ver3.30 (4.27.07) Jun., '18	-	Ver3.30 (4.27.07) Jun., '18	C		X		Temperature compensation at lens may not work correctly and the focus sometimes shifts little by little.	-	Fixed.	