


VER (ActiveX VER) Release Date	Priority Rank Level				U	Issue (Phenomenon)	Occurrence condition	Correspondence	Contents
	A	B	C	U					
2.50 (5.1.13.0) Nov.'11 Option:V1.02	C				x	-	-	Supported WV-SF132, 135, -SW152,155.	*: ONVIF is a trademark of Onvif, Inc.
					x	-	-	Improved Active-X to make "FF playback "smoother (without dropping frame) under low rate recording condition. * Improved playback performance of ASM200, etc.	
					x	-	-	* Add service functions for service/SE person. 1.Enable to display total count of alarms during 1 hour by CGI command. 2.Enable to store alarm history data for 750 hours.	
				x		Some recorded images cannot be played back. (Occurrence frequency : Low)	VMD alarm occurs frequently, and set writing mode as OVERWRITE.	Changed "overwrite process logic" to avoid this phenomenon. * Recorded HDD should be formatted with this version (or later) to activate this improvement. * Formatted HDD with this version(or later) should be used under this version HD716/616 (or later).	
					x	-	-	2 kind of firmware(2.40 & 2.4F) are consolidated to into one firmware.	
					x	-	-	Improved a recording rate reliability which is set under SD backup Mode.	
					x	-	-	Improved a reliability of FTP download (Image download from ASM, etc.).	
2.52 (5.1.13.0) Nov.'11 Option:V1.02	A	x			FTP download * is forced to stop. * Recorded data download Log download, etc.	In case of downloading image data from recorder, and trying to do FTP communication(log download ,etc.) by i-Pro Configuration Tool. When FTP communication by i-Pro Configuration Tool was stopped, ASM image download process was forced to stop.	Fixed. * FTP download session is STILL automatically down after 1 hour.(SPECIFIC).		
2.52 (5.1.13.0) Nov.'11 Option:V1.02	A	x			All HDDs in Main Unit(WJ-ND400) & Extension unit(WJ-HDE400) might be removed. (Occurrence frequency : Low to Very Rare*) * If ND400 system is not powered ON/OFF daily. We believe ND400 is usually used with UPS, and Daily power off/on operation must be quite rare.	[Occurrence timing] 1. Power On (Reboot) 2. Recorder's self reboot 3. Reboot came from outside factor (Temporary blackout) [Applicable serial No. of WJ-ND400,HDE400] May.'11 to Nov.'11 products(KEV***** to KKD*****) [CAUTION] If you use the applicable WJ-HDE400 with ND400, ND400 should be upgraded to Ver.2.52(or later).	Fixed. * Recorded HDD should be formatted with this version (or later) to activate this improvement. * In detail, please refer Service Bulletin of WJ-ND400, HDE400.		
3.00 (5.1.16.0) Mar.,'12 Option:V1.07	B				x	-	-	Supported WV-SW396, SC386, SW316, SW316L, SW314, SP508, SP509, SW558, SW559. BB-SW174W, SW175, SW172, ST165, ST162.	Note: Updating firmware from ver 2.50 (or older) to 2.52 (or newer) takes much longer than previous.
					x	-	-	Supported display picture in 16:9 on web browser (Previously available in 4:3 only).	
					x	-	-	Made possible to Create/Delete/Change for same/lower level of users/hosts only.	
					x	-	-	Added/revised the followings on ND_Viewer; 1. Renew designing. 2. Auto-loading: When starting the viewer, search recorded data automatically and playback from oldest data. 3. Support multi-aspect ratio: Selectable among 3 aspect ratio for picture screen. 4. Added smooth playback mode: Available full frame playback in Fast-forward at Step 2 and 3 out of 3 steps. 5. Full screen display: Available to choose full screen of PC monitor.	
					x	FTP Download data by ASM Series etc. may be shorter than specified period.	FTP Download on version 2.04 or newer)	Fixed to download correctly.	
		x		ND400 may be restarting when making sequence on ASM Series.	While sequence is working in MPEG/H.264 on AS Series with heavy load on ND400 (such as lots of VMD etc.).	Fixed not to restart.			

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3.00 (5.1.16.0) Mar., '12 Option:V1.07	B			x	-	-	Improved reliability not to restart by overload like exceeding restrictions about maximum streaming of VMD and audio.
				x	-	-	Updated the table for Daylight Saving Time (Summer time).
				x	-	-	Added cgi command to set mask period of playback VMD. Http://(IP address)/cgi-bin/vmdmaskduration.cgi?MASK=* (*=1. 3. 5 or 10)
				x	-	-	Fixed to be able to install properly.
3.10 (5.1.16.0) July, '12 Option:V1.07	U			x	-	-	Added choices at DDNS setting; Previous: Off/On New: Off/Viewnetcam.com/Dynamic DNS Update
				x	-	-	On, ND_Viewer, supported displaying Dot by dot and saving JPEG. Note: Dot by dot A dot on playing back device will be shown as a dot on displaying device. This means that it will not be enlarged or shrunk to fit displaying device.
				x	-	-	Added a function for PS-API and became managing stream ID.
				x	-	-	Improved maintenance function as follows; 1. Log for configuration Latest 5 setting histories will be stored to find incorrect configuration. 2. Added a cgi command to obtain period of recoding. Recording period on each HDD will be obtained. 3. Added a function to store model number of HDD in the internal log. 4. Added an operation to initialize the html contents. To make initializing the html contents.
3.20 (5.1.16.0) Oct., '12 Option; V1.20	C			x	-	-	Support HDD of Advanced Format. 
				x	-	-	Added parameters for ONVIF® (V1.02) cameras.
				x	-	-	Supporting RTSP over HTTP between cameras and recorders, makes possible to connect with i-pro cameras in Internet. Note: This is for a certain customer only.
				x	Reboot, unexpectedly.	Power OFF and ON under RAID environment.	Fixed not to reboot by correcting firmware for the internal RAID board and optional board.
				x	-	-	Supported H.264 (Audio G.711) on AXIS camera.
				x	-	-	Supported to display resolution of n3r on ND_Viewer. Note: This is for a certain customer only.
				x	-	-	Supported WV-SF538/SF539/SF548/SF549.
				x	-	-	Added Off, 40000H and 50000H as parameter for hour meter settings
				x	-	-	Made not to close session even if HDD were switched while RAID environment to avoid other user receive solid black picture on ASM series.
				x	Playing back will be quitted and live picture will be displayed approx. 10 sec. even if playing back FTP downloaded n3r files. (Occurrence frequency : High) Unable to playback the FTP downloaded n3r files. (Occurrence frequency : High) Unable to FTP download. (Occurrence frequency : High)	It occurs when recording HDD is switching from HDD(A) to HDD(B).	Fixed to playback or FTP download properly.

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3.22 (5.1.16.0) Mar., '13 Option; V1.20		x			Write Error, Read Error or HDD SKIP might occur even HDDs are all fine. (Occurrence frequency : Low to Rare*) * May differ depend on HDD model type.	While running under RAID operation mode, Firmware Ver.3.20 with AF(Advanced Format) type HDD * Physically defected HDD shall not be applied in this case.	Improved robust stability under RAID operation mode. Even if HDD error may occur (Write-Error/Read Error/HDD Skip) (Only for Ver.3.20. Limited released. Please use Ver.3.30)	
3.30 (5.2.0.0) Apr., '13 Option; V1.20	U			x	-	-	Supported WV-SF438, SW458, SW458M, WJ-GXE100. * See readme.txt on bundled CD of 360-degree dome cameras.	
				x	-	-	Supported SD memory recording function on H.264 camera.	
				x	-	-	Enabled to display SD card info. & SD card backup progress on SETUP menu. (Camera Software, SD card model No., Working Hours, Over write times, Backup progress)	
				x	-	-	Enabled to register 2 NTP server address.	
3.40 (5.2.2.0) Aug., '13 Option; V1.20	C			x	-	-	Improved the performance for H.264 drawing more smoothly on the viewer software.	Note: Updating firmware from ver 2.50 (or older) to 2.52 (or newer) takes much longer than previous.
				x	-	-	Supported new cameras as follow; Full HD PTZ: WV-SC588, WV-SW598 Fixed dome: WV-SF138, WV-SW158	
				x	-	-	Added the alarm history relating to the i-VMD of the camera. Intruder detection: Camera alarm (Intruder detection) Loitering detection: Camera alarm (Loitering detection) Direction detection: Camera alarm (Direction detection) Scene change detection: Camera alarm (Scene change detection)	
				x	-	-	Supported NDViewer that has compensates and converts fish-eye images captured by Panasonic's 360-degree network camera (hereinafter referred to as 360-degree camera) to "1-screen PTZ" or "4-screen PTZ". The compensation function is available only when the library file for compensation is downloaded from the URL below and installed on the PC in which the viewer software is installed. http://security.panasonic.com/pss/security/support/info.html Then, place the "ImageCorrection.dll" that is zipped in the library file, into either the followings; The "bin" folder that is under the folder of "ND_Viewer.exe" is placed. Or, "System32" folder.	
				x	-	-	Supported SD card memory backup fro H.264 recording by 360-deg cameras. Note: The cameras must be installed firmware version 1.40 or newer.	
				x	-	-	Added a function for the data backed up by SD memory to transmit onto recorder by manual.	
				x	-	-	To prevent unexpected reboot, clicking [SET] key at each setup menu in service mode will be ignored when selecting "NO".	
				x	-	-	Added sending a notification when the new HDD or an extension unit was linked.	
				x	-	-	Improved displaying the RAID restoration progress.	
				x	-	-	Improved the log-in screen in browser. - The default cursor position is set in user name column. - The login is conducted by [Enter] key at keyboard.	
			x		Displaying no camera pictures and/or freezing the browser (Internet Explorer).	In case, switching live picture approx. 20 times on IE9/IE10.	Fixed the issue will not occur.	

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3.40 (5.2.2.0) Aug., '13 Option; V1.20	C			x		Camera control buttons can be used for only one direction. (Occurrence frequency : High)	Operate PT buttons on Camera control panel under Internet Explore 10.	Fixed it works, properly.	Note: Updating firmware from ver 2.50 (or older) to 2.52 (or newer) takes much longer than previous.
				x		No matching at VMD Search. (Occurrence frequency : High)	Only recording events with 200 sec or longer intervals.	Fixed it works, properly.	
				x		MIB information of SNMP did not change even if data transmission error would occur. (Occurrence frequency : High)	In case, data transmission error at ONVIF® connected cameras and/or cameras setting SD memory card backup for H.264 recording.	Fixed to return correct parameters.	
		Added on Oct. 15, 2013			x	Unable to record audio even if audio were input and recording audio were enabled in settings. (Occurrence frequency : High)	In a case switching audio recording ON and OFF in Schedule recording.	Fixed to record audio, properly.	
4.01 (5.2.2.0) Nov., '13 Option; V1.20	C				x	Playback may not be done in a certain period (Recording hour seems shorter). (Occurrence frequency : Low)	In a case HDD SKIP ERROR if SD memory backup were ON: In a case the recording is just switching over between HDDs while SD memory backup is in progress (as SD memory backup is "ON"), HDD SKIP ERROR appears (but it will not be logged) and unable to playing back in a certain period.	Fixed to playback, properly. Fixed to keep recording and playback, properly.	
					x	-	-	Changed software due to Main CPU changed. Note: New hardware that contains Main CPU requires new IPL and does not accept firmware version 3.40 or older.	
					x	-	-	Supported changing model numbers of camera for Japanese market from DG-xxxx to WV-xxxx.	
				x		1. Response in operation feels slow. 2. Unable to use cursor buttons on front panel. 3. Browser (IE) freezes. 4. It restarts after "1" through "3", above. (Occurrence frequency : High)	Attempting to view unauthorized camera.	Fixed.	
					x	Post-event-recording may not start. (Occurrence frequency : High)	Event-post-recording will not done under the either condition as follow; 1. Switching recording schedule on external recording between "External recording" and "Daily". 2. Switching event recording from none to exist.	Fixed.	
					x	Controlling Pan/Tilt on BB-HCM580/HCM581 makes unexpected direction. (Occurrence frequency : High)	In a case BB-HCM580/HCM581 is controlled by browser on WJ-ND400.	Fixed.	
4.02 (5.2.2.0) Nov., '13 Option; V1.20					x	Thermal error may occur. (Occurrence frequency : Low)	-	Fixed not to occur it by detecting temperature beyond threshold consecutively three times for thermal error.	
					x	Unable to register cameras due to undetected (Occurrence frequency : High)	Attempting to register cameras for Japanese market those have been changed model numbers from "DG-xxxx" to "WV-xxxx".	Fixed.	

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4.10 (5.2.5.0) June,'14 Option; V1.20	C				x	-	-	Supported WV-SFV631L, WV-SFV611L, WV-SFN631L and WV-SFN611L.
					x	-	-	Made playing back every 30 second in background and would be restarted to restore by tamper detection.
					x	-	-	Improved judgment criteria at error while making backup H.264 onto SD memory card.
					x	-	-	Took measures for ntpd vulnerability.
					x	-	-	Added choice of giving the right for the level of USER to make HTTP Download.
					x	-	-	Added a process to warn or to release HDD if the HDD had been detected responding too slow.
				x		Hour-meter became zero (0) in RAID recovery. (Occurrence frequency : High)	In a case, turning power off and on during recovery.	Fixed the hour-meter showed correctly.
4.11 (5.2.5.0) June,'14 Option; V1.20	C				x	-	-	Improved the picture to be refreshed smoothly while connecting with a cameras among WV-SFx631L and WV-SFx611L series.
					x	-	-	Supported WV-SP104W.
4.12 (5.2.5.0) Sept.,'14 Option; V1.20	C			x		Oldest recording might not be updated in a certain period. (Occurrence frequency : High)	In the case HDD recording were the second round.	Fixed to update it, properly.
					x	-	-	Improved SD memory recording function as follows; 1. Avoid rebooting by changing configuration settings repeatedly when activated SD memory recording in H.264. 2. Avoid rebooting at downloading H.264 recording data by SD memory recording from SD memory card to WJ-ND400 if the recording data were too old.
4.21 (5.3.4.0) Sept.,'14 Option; V1.20	U				x	-	-	Support changing model number of Japanese market model from DG-ND400K to WJ-ND400K.
4.30 (5.3.6.0) Nov.,'14 Option; V1.20	U				x	-	-	Supported WV-SMR10 (including WV-SMR10N3).
4.40 (5.3.7.0) (5.3.6.0) Dec.,'14 Option; V1.20	U				x	-	-	Supported new cameras WV-SFN310, SFN311, SFR310, SFR311, SFV310, SFV311, SPN310, SPN311, SPN531, SPN611, SPN631, SPW531 and SPW631 (Note: also supported some models with "L" and "LT" as suffix) Also supported Extension unit, Model WV-SPN6R481, on WV-SPN611 and SPN631.

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Corrected
on Mar 30, 2016

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4.42 (5.3.7.0) Jan., '15 Option; V1.20				x		Recording rate may be higher than setting. (Occurrence frequency : High)	By changing the configuration at "live image transmission rate" and "recording rate" or "schedule recording rate" with the procedures as follow; Step 1: Configure the setting as follow; Greater value of either manual recording rate (ips) or schedule recording rate (ips), is greater than live image transmission rate (ips). Step 2: After the Step 1, change the setting as follow; Greater value of either manual recording rate (ips) or schedule recording rate (ips), is smaller than live image transmission rate (ips). As a result of the Step 1 and 2, above, actual recording rate will be same with the live image transmission rate. Note: You see no symptoms or will the symptom gone by one of the operation of Setup menu as follows; - By turn Power Off and On. - By changing the recording rate at . - By detecting cameras. - By clicking measure button to check network transmission rate is appropriate in use. - By opening of setup menu and entering configuring. - By changing recording rate due to changing recording program, starting event recording and so on.	Fixed.		
Corrected on May 7, 2015 and on May 8, 2015						<p>Important information – Please read carefully!</p> <p>There are 2 files of firmware version 4.5, one is version 4.50, named "ND400_V450.zip (ND400.IMG)" and the other is version 4.59, named "ND400_V459.zip (ND4004K.IMG)". And you have to find which file is appropriate for your WJ-ND400(K) by yourself. Please note that both version 4.50 and 4.59 are latest, and either version 4.50 or 4.59 is NOT older/newer than the other version.</p> <p>How to find appropriate firmware file for your WJ-ND400(K).</p> <p>Q1. Do you use 9 Megapixel 360-degree cameras such as WV-SFN480 and WV-SFV480? A1.If yes, please go to the next question, Q2. If no, please use the version 4.59, "ND400_V45901.zip (ND4004K.IMG)" 4.50, "ND400_V45001.zip (ND400.IMG)".</p> <p>Q2. About configuration, does the bit rate for H.264 to be configured 6Mbps or greater? A2.If yes no, please use the version 4.50, "ND400_V45001.zip (ND400.IMG)" and make sure the bit rate for H.264 to be configured less than 6Mbps. If no yes, please use the version 4.59, "ND400_V45901.zip (ND4004K.IMG)".</p> <p>Please DO NOT place both files in a folder to upgrade firmware by Panasonic Security System Configuration Tool, otherwise it may be installed incorrect file.</p>				
4.50 4.59 (5.3.12.0) Apr., '15 Option; V1.20				x		-	-	Supported new cameras; WV-SPW611 Series, WV-SFN480, WV-SFV481, WV-SPN313, WV-SPN533, WV-SPW311L		
				x	For WJ-ND400/G only	-	-	Changed factory default date/time for starting/ending summer time (daylight saving time). Start: 01:00 on Last Sunday in Mar., End: 01:00 on Last Sunday in Oct.		

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5.00 (5.3.16.0) (5.3.7.0) Jul., '15 Jan., '15 Option; V1.20				x	Corrected on Mar 30, 2016	-	-	Supported new cameras; WV-SFV781, SPV781, WV-SC364, SW374, WV-SC387, SW397, WV-SFN531, SFV531, SFR531, SFN532, SFN533, SFV533, SPW533, WV-SFN313, SFV313, SPW313
	C			x	Corrected on Mar 14, 2016	-	-	Added choices for selecting resolution mode, either "4K resolution" or "Normal". As a result, one file of firmware covers both conventional cameras (firmware version 4.50) and 360-deg. 9Megapixel cameras (version 4.59).
				x	Recorded audio data of 360-deg network cameras may be destroyed. (Occurrence frequency : Low)	-	-	Fixed.

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Restrictions on firmware version 5.00

- Live picture may delay approx. 2 sec. while resolution setting for camera were 4M(2048x2048 pixel).
- Live picture may be collapsed depends on a load on PC.
- 4-screen live picture to be displayed I-Frame only while setting FHD(1920x1080 pixel) or greater resolution.
- Up to 6Mbps of bitrate or SXVGA resolution (1280x960 pixel) can be backed up on SD memory card.
- Attachment file (Jpeg) of an alarm notification must be 1MB or less.
- 1MB or bigger image by FTP periodical transmission from camera, may be collapsed.

Restrictions on "Normal" mode.

- Maximum bitrate for Live, recording and playback is up to 6Mbps.

Restrictions on "4K resolution" mode.

- Up to 8 units (must be CH1 to CH8) of 9 Megapixel 360-degree Network Camera (14Mbps or more) can be used.
Or, supports 14Mbps on CH1 to CH8 and 8Mbps on CH9 to CH64.
- Number of users for playback reduces from 16 to 8.
- Playing back video (8Mbps or more) with audio may be a cause of interruption at a timing of refreshment of video.
- Number of users for FTP transmission reduces from 8 to 4.
- Impossible to download data that is 2GB or more by FTP or HTTP.

5.01 (5.3.16.0) (5.3.7.0) Aug., '15 Jan., '15 Option; V1.20	C		x	Failed upgrading firmware of RAID.	Corrected on Mar 30, 2016	Upgrading firmware from firmware version 5.00.	Fixed.
					Corrected on Mar 14,		
5.10 (5.3.16.0) Nov., '15 Option; V1.20	C			x	-	-	Supported formatting HDD by manual.
				x	-	-	Supported new cameras: WV-SPW532L and WV-SPW312L.
5.30 (5.3.16.0) Apr., '16 Option; V1.20	C			x	-	-	1. Deleted pre-registered User name (ADMIN), and Password (12345). 2. 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 "2") after initializing (default reset) by the INITIAL SET button or by the setup menu.
							Corrected on May 8, 2017

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5.50 (5.3.16.0) July, '16 Option; V1.20			x		Unable to record channels 9 and larger numbers in 4K resolution mode. (Occurrence frequency : Low)	When cameras are configured 5sec at refresh rate under 4K recording mode.	Fixed.	
5.50 (5.3.16.0) July, '16 Option; V1.20			x		Unable to record channels 9 and larger numbers in 4K resolution mode. (Occurrence frequency : Low)	When cameras are configured 5sec at refresh rate under 4K recording mode.	Fixed.	
5.60 (5.3.16.0) March, '17 Option; V1.30	B			x				Supported new cameras as follow; WV-S1111/WV-S1112/WV-S1131/WV-S1132/WV-S1511LN/WV-S1531 Series/ WV-S2110/WV-S2111L/WV-S2130/WV-S2131 Series/WV-S2211L/WV-S2231L/ WV-S2511LN/WV-S2531 Series/WV-V1170/WV-V1330L1/WV-V1330LK/ WV-V2530L1/WV-V2530LK/WV-V6430L/WV-X6511/WV-X6531
			x			It may restart unexpectedly by obtaining the log or by making screen operation on PSSCT.	Under high load condition.	Fixed.
					x	It may restart, unexpectedly.	When WV-ASM 200 Timeline function is ON, the PC firewall is valid and the exceptional settings of Windows Firewall (described in the WV-ASM200 Operation Manual) are NOT configured.	Fixed.
			x			RAID DOWN may occur; RAID5 1 DOWN, RAID5 2 DOWN, RAID6 1 DOWN, RAID6 2 DOWN or RAID6 3 DOWN.	When the power was turned off.	Fixed.
					x	-	-	Improved process for HDD to be disabled when HDD response delay occurs during operation.
					x	Communication with the browser may be disrupted.	In network access load state.	Fixed.
5.61 (5.3.18.0) August, '17 Option; V1.30	C			x			Changed company name to the new company name.	
				x		Icons of some cameras looked Pan/Tilt/Zoom camera; WV-S2110, WV-S2111, WV-S2112, WV-S2130, WV-S2131, WV-S2132, WV-S2211, WV-S2231, WV-S2511, WV-S2512, WV-S2531, WV-S2532, WV-V2530L1, WV-V2530LK	Fixed.	
5.70 (5.3.18.0) October, '17 Option; V1.30	U						Supported new cameras, WV-S6111, WV-S6130, WV-S6131 and WVS6530.	
5.80 (5.3.19.0) Feb., '18 Option; V1.31	C				x		Supported new cameras; WV-S4150 and WV-S4550L	
					x		Improved process of data recovery in RAID while connecting with Extension Unit, WJ-HDE400.	
5.90 (5.3.19.0) Apr., '18 Option; V1.31	C				x		Supported new cameras; WV-X4170, WV-X4171 and WV-X4571L	
					x		Improved process of data recovery in RAID while connecting with Network Microphone, WV-SMR10.	

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6.00 (5.3.20.0) Aug., '18 Option;V1.31	C			x		The system may reboot if formatting HDD takes 5 to 8 minutes.	On firmware version 5.90.	Fixed.
				x		The system may reboot while formatting 6TB or more HDD.	In case of the system contains 3 or more extension units.	Fixed.
6.10 (5.3.20.0) Dec., '18 Option;V1.31	U				x	-	-	Supported new cameras; WV-S3111L/WV-S3131L/WV-S3511L/WV-S3531L.

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