

## TURBO-RAID System Recorder

H.265/H.264 high-throughput and scalable embedded recorder featuring integrated GUI and robust embedded IP security enabling a secure end-to-end PC-less surveillance solution for mission-critical applications.

Supports full data encryption streaming recording for all i-PRO cameras which comply to FIPS 140-2 Level 1 standards to keep your video secured from spoofing and snooping activities.

### Secure high bandwidth recording

- 16 ch. expandable to 32 ch. camera input. Support H.265 / H.264 mixed recordings.
- 512 Mbps total through put (including 256 Mbps recording bandwidth)
- Pre-installed device certificates \*Secure Communication Kits are necessary.

### PC-less non-VMS surveillance solution

- No camera license fees with a default number of cameras; no annual license updates required.
- Built-in GUI and Dual HDMI (4K / FHD) outputs
- Automatic camera configuration

### Scalable storage

- (4) integrated drive-bays RAID 1 / 5 / 6 \*Additional RAID Kit license is necessary to use the RAID feature.
- External storage expansion up to 132 TB

### High reliability and high efficiency data reading/writing

- Dynamic HDD power management increases HDD life
- TURBO-RAID for quick RAID recovery without sacrificing recording bandwidth and performance
- Eco-writing : Acceleration of data access (reading/writing) by original file system
- Instantaneous power failure measures: Normal operation at instantaneous power failure within 200 ms; safe shutdown at power failure of 200 ms or more.

### Industry examples

- Public safety (City / Road / Highway / Port)
- Transportation (Airport / Train / Subway)
- Bank / Retail
- Hospital / Education
- Factory





# Specifications

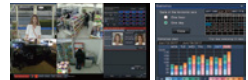
<b>Supported Camera</b>	Compatible vendor	Panasonic i-PRO series Network cameras, ONVIF NVT conformant camera and encoder	
	Supported Image Format	H.265(HEVC), H.264, JPEG	
	Supported Image Resolution (Depending on the camera)	<ul style="list-style-type: none"> <li>•Aspect ratio [4 : 3] 4000x3000, 2560x1920, 2048x1536, 1280x960, 800x600, 640x480</li> <li>•Aspect ratio [16 : 9] 3840x2160, 2560x1440, 1920x1080, 1280x720, 640x360</li> <li>•Aspect ratio [1 : 1] 2992x2992, 2816x2816, 2048x2048, 1280x1280</li> <li>•Aspect ratio [9 : 16] 1080x1920, 720x1280, 360x640</li> </ul>	
Supported Audio Format	G.711 for Onvif, G.726 (ADPCM) 32 kbps, AAC-LC		
Maximum Number of Cameras	MAX. 32* (Default number of cameras : 16)		
<b>Recording</b>	Recording Mode	Event, Schedule, Emergency	
	Pre-alarm Recording	Up to 15 seconds *When the delivery speed from the network camera is less than 4 Mbps.	
	Sub-stream Recording	64 / 128 / 256 / 384 / 512 / 768 kbps	
	Scheduled Recording Mode	16 programs, 6 time zones/day, independent setup for each day of the week	
	Frame Rate/Camera	Up to 60 fps (Depending on the camera)	
<b>Main Unit Functions</b>	Camera Control	Pan/Tilt, Zoom, Focus, Brightness, Preset position call and program (up to 256), Auto mode, Click centering, Wheel zoom, Zoom reset, Auto Back Focus, Aux, Wiper (for WV-SUD638)	
	Multiscreen Mode	<ul style="list-style-type: none"> <li>•[Main monitor] <ul style="list-style-type: none"> <li>• Control screen 4 / 9 / 16 split screen display</li> <li>• Wide view screen 2 / 3 / 4 / 5 / 6 / 7 / 9 / 12 / 16 / 24 / 32 split screen display, 1 screen sequence, 4 / 9 / 16 split screen sequence</li> </ul> </li> <li>•[Sub monitor] <ul style="list-style-type: none"> <li>1 / 4 / 9 / 16 / 24 / 32 split screen display, 1 screen sequence, 4 / 9 / 16 split screen sequence</li> </ul> </li> </ul>	
	Playback Control	PLAY, Rev PLAY, Pause, Stop, FF, FR, Prev Record, Next Record, Prev Image, Next Image, Go to Date, Go to Last (30 s), Time-saving playback	
	Search Mode	Search criteria : Time date, Playback by designating a timeline, VMD, Thumbnail	
	Copy	File Format: Original Format / MP4 Recorded data of selected cameras and time date range can be copied to USB storage.	
	Camera Title	Up to 16 Characters	
	Clock Display	Time : 12H/24H, Date : 5 formats	
	Digital Zoom	Live / Play: 1.25x 1.5x 1.75x, 2x, 2.5x, 3x, 3.5x 4x, 5x, 6x, 7x, 8x (only for 1-screen or 4-screen)	
	System Log	Operator access (500), Network error (100), Error (1,000), Event (1000), Operation (500)	
	System Setup	Setup page in English, French, Italian, Spanish, German, Russian, Portuguese, Thai, Simplified Chinese, Japanese	
	360 Camera Dewarp	Only 1ch display mode.	
	re-encoding	2Client	
	SD Memory Data Download	Images recorded in the SD card in the i-PRO series cameras can be transferred to the recorder automatically. (H.265/H.264)	
	<b>Browser GUI</b>	Camera Control	Pan/Tilt, Zoom, Focus, Brightness, Preset position call and program (up to 256), Auto mode, Click centering, Wheel zoom, Zoom reset, , Aux, Wiper (for WV-SUD638)
		Playback Control	PLAY, Rev PLAY, Pause, Stop, FF, FR, Prev Record, Next Record, Prev Image, Next Image, Go to Date, Go to Last (30 s)
Search Mode		Search criteria: Time date, Event type, VMD, Camera number	
Display Mode		1 / 4 screen	
Image Download		File Format: Original Format / MP4 Recorded data of selected camera and time range can be downloaded to a PC. Viewer software can be downloaded separately.	
Copy		File Format: Original Format / MP4 Recorded data of selected cameras and time date range can be copied to USB storage.	
Camera Title		Up to 16 characters	
Clock Display		On the browser. Time: 12H/24H, Date: 5 formats	
Alarm Control		Reset	
Digital Zoom		Live/Play: 2x, 4x (only for 1-screen)	
System Log		Operator access (500), Network error (100), Error (1,000), Event (1000), Operation (500)	
GUI Language		Setup page in English, French, Italian, Spanish, German, Russian, Portuguese, Thai, Simplified Chinese, Japanese	
Required PC		CPU: Intel® Core™ i7-860 or faster, RAM : 4 GB or more, VRAM: 128 MB or more (Min. 64 MB), Microsoft® DirectX® 9.0c or later	
Alarm / Event		Alarm Source 9x Terminal inputs, 32x Camera alarms (Panasonic Alarm Protocol), 128x Command alarms	
		Event Mode Off / On	
	Alarm Action Alarm recording, e-mail notification, Alarm message, Camera positioning, Terminal output, Panasonic alarm protocol output, Buzzer, Indicator		
	Alarm Control / Event log Reset / 1000		

<b>Input / Output</b>	Spot Output Connector	1 x 1 V [p-p] / 75 Ω (BNC) NTSC / PAL (selectable in setup menu)
	Monitor (HDMI) Connector	<ul style="list-style-type: none"> <li>•[Main monitor] <ul style="list-style-type: none"> <li>HDMI 4K UHD(3840x2160p) /30Hz, 4K UHD(3840x2160p) /25Hz, 1920x1080p /60Hz, 1920x1080p /50Hz, 1920x1080i /60Hz, 1920x1080i /50Hz</li> </ul> </li> <li>•[Sub monitor] <ul style="list-style-type: none"> <li>HDMI 1920x1080p /60Hz, 1920x1080p /50Hz, 1920x1080i /60Hz, 1920x1080i /50Hz</li> </ul> </li> </ul>
<b>Audio Output Connector</b>	Alarm / Alarm	Alarm input 1 - 9 <sup>2</sup> , Alarm output <sup>3</sup> , Alarm reset input <sup>2</sup> , Face matching output <sup>5</sup>
	Control / Control	Time adjustment input/output <sup>2</sup> , +5 V output <sup>4</sup> , Emergency recording input
	Terminal / Error / Warning	Network error output <sup>3</sup> , HDD error / Recording error output <sup>3</sup> , Camera error output <sup>3</sup> , Recorder error output <sup>3</sup>
	Mouse Connection Port	2 (Front 1, Rear 1)
	Network Port	2x 10BASE-T / 100BASE-TX / 1000BASE-T (RJ45)
	USB Storage	USB 3.0 / USB 2.0 memory, USB 3.0 / USB 2.0 connected HDD (except bus powered device)
	External Storage	2x WJ-HXE400
	Network Interface	2x 10BASE-T / 100BASE-TX / 1000BASE-T (RJ45)
	Maximum Recording Rate	256 Mbps or less
	Maximum Band Width	Total 512 Mbps or less
<b>Network</b>	Supported Protocol	IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, RTP, STP, ICMP, ARP IPv6: ICMPv6
	E-mail	Upon Alarm or Warning
	No. of Simultaneous Users	16 or less
	User Registration	Up to 32 users
	User Level	3 Levels (Programmable)
	Partitioning	User level - Camera (View & Control, No Access)
	Security Method	User authentication (ID and Password), Host authentication, Alteration detection, SSL/TLS
	Time Synchronization	Terminal (Master/Slave), NTP (Server/Client)
	Summer Time	User definable (using menu setup)
	Remote Monitoring on Smartphone/Tablet	16 clients or less <sup>6</sup>
<b>HDD</b>	Type	8.89 cm (3.5 inch) Serial ATA HDD, Up to 4x HDDs can be installed.
	Maximum Capacity	22 HDD slots (with 2x WJ-HXE400 Extension Units, 9x HDDs installed in an extension unit) Up to 6 TB will be supported. <sup>7</sup>
<b>Viewer Software</b>	RAID(Hardware RAID) <sup>8</sup>	RAID 1, 5, 6
	Playback Control	PLAY, Rev PLAY, Pause, FF, FR, Prev Record, Next Record, Prev Image, Next Image
<b>General Specifications</b>	Additional Functions	Alteration detection, Save as JPEG, Two times zoom, Print, Copy, Aspect ratio switching, fish eye correction, corridor display
	Supported OS, Language	Language of the software will be English or Japanese
<b>General Specifications</b>	Safety / EMC Standard	CE (EN60065, EN55032 ClassB, EN55024), EAC
	Power Source	220 V-240 V AC 50 Hz/60 Hz
	Power Consumption	approx. 72 W
	Ambient Operating Temperature	Main body : +5 °C to +45 °C (41 °F to 113 °F), Mouse (provided) : +5 °C to +40 °C (41 °F to 104 °F)
	Ambient Operating Humidity	5 % to 90 % (without condensation)
	Maximum Operating Altitude	2,000 m (6,562 feet) above sea level
	Dimensions	420 mm(W)×88 mm(H)×370 mm(D) (From Rack Mount Bracket 350 mm) (16-9/16 inches(W)×3-7/16 inches(H)×14-9/16 inches (D))(From Rack Mount Bracket (13-13/16")) (excluding rubber feet and projections)
	Mass (approx.)	When no HDD is installed: 7.0 kg (15.4 lbs)

- \*1 Two Additional Camera Kit WJ-NXE30W are necessary.
- \*2 Non-voltage make contact input, +3.3 V pull-up Approx. 23 Ω
- \*3 Open collector output, 24 V DC, -200 mA max. \*4 +5V ±0.5 V 200 mA max.
- \*5 Additional Business Intelligence Kit WJ-NXF02W is necessary.
- \*6 Panasonic Security Viewer v.3.0 or later is required on smartphone/tablet PC.
- \*7 Please check the following URL for the latest information. (https://security.panasonic.com/training\_support/documentation\_database/)
- \*8 Additional RAID Kit WJ-NXR30W is necessary.

## Optional Accessories

<b>Hard Disk Extension Unit WJ-HXE400/G</b> Power Source : 220 - 240 V AC, 50 Hz / 60 Hz Power Consumption : 85 W (175 VA) Dimensions : 430 mm (W) x 132 mm (H) x 413 mm (D) (From Rack Mount Bracket 400 mm) (16-15/16" (W) x 5-3/16" (H) x 16-1/4" (D))(From Rack Mount Bracket 15-3/4") (excluding rubber feet and projections) Weight : 11 kg (24.3 lbs) (When no HDD exist), 19.5 kg (43.0 lbs) (When 9 HDDs are installed)		<b>Rack Mount Bracket WV-Q202</b> 
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<b>Additional Business Intelligence Kit WJ-NXF02W</b> WJ-NXF02W is a license kit intended to improve the usefulness of Network Disk Recorder WJ-NX300. After registering the WJ-NXF02W into WJ-NX300, WJ-NX300 is enabled statistical processing functions such as "People counting" and "Face matching / Age & Gender judgment". *2ch input per license	
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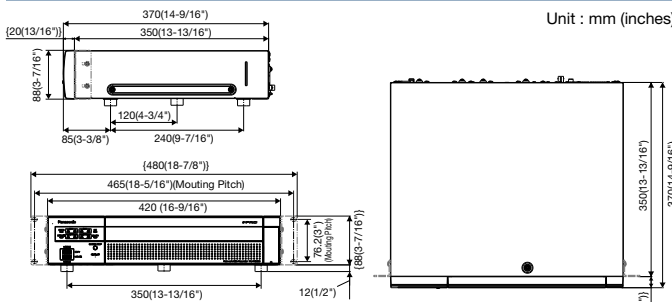
<b>Additional RAID Kit WJ-NXR30W</b> WJ-NXR30W is a license kit intended to improve the usefulness of Network Disk Recorder WJ-NX300. After registering the WJ-NXR30W into WJ-NX300, WJ-NX300 is enabled RAID functions.
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<b>Additional Camera Kit</b> Number of cameras used in the system can be increased to 32 (maximum) by purchasing the Additional Camera Kit (WJ-NXE30W : license for 8 cameras.)
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<b>Secure Communication Kits</b>			
The Secure Communication Kits are license kits to use the security function of the network disk recorder. Each Secure Communication Kit allows the following number of cameras to be registered.			
<b>WJ-NXS01W</b>	<b>WJ-NXS04W</b>	<b>WJ-NXS16W</b>	<b>WJ-NXS32W</b>
1 camera	4 cameras	16 cameras	32 cameras

• Masses and dimensions are approximate. • Specifications are subject to change without notice.

## Appearance



**Trademarks and registered trademarks**  
 - All other trademarks identified herein are the property of their respective owners.

**Important**  
 - Safety Precautions : Carefully read the Basic Information, Installation Guide and Operating Instructions before using this product.  
 - Panasonic i-PRO Sensing Solutions Co., Ltd. cannot be held responsible for the performance of the network and/or other manufacturers' products used on the network.



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