

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 Extreme cameras which use an encryption module standardized by FIPS publication 140-2 for secure video streaming to keep your video 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)
- DigiCert device certificates pre-installed *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.

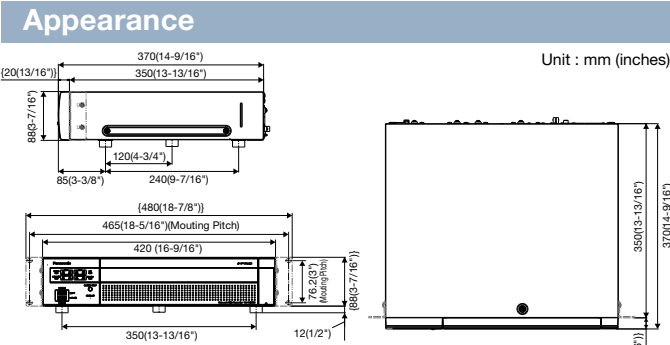
Applications

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



Specifications

Supported Camera	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)	• Aspect ratio [4 : 3] 4000x3000, 2560x1920, 2048x1536, 1280x960, 800x600, 640x480
		• Aspect ratio [16 : 9] 3840x2160, 2560x1440, 1920x1080, 1280x720, 640x360
Recording		• Aspect ratio [1 : 1] 2992x2992, 2816x2816, 2048x2048, 1280x1280
		• Aspect ratio [9 : 16] 1080x1920, 720x1280, 360x640
	Supported Audio Format	G.711 for Onvif, G.726 (ADPCM) 32 kbps, AAC-LC
	Maximum Number of Cameras	MAX. 32 ¹⁾ (Default number of cameras : 16)
Main Unit Functions	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)
	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	[Main monitor] • Control screen 4 / 9 / 16 split screen display • 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 [Sub monitor] 1 / 4 / 9 / 16 / 24 / 32 split screen display, 1 screen sequence, 4 / 9 / 16 split screen sequence
	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
Browser GUI	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)
	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	Liver/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



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- All other trademarks identified herein are the property of their respective owners.

Important
- Safety Precaution : Carefully read the Important Information, Installation Guide and operating instructions before using this product.
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

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

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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	Reset
Input / Output	Event log	1000
	Spot Output Connector	1x 1 V [p-p] / 75 Ω (BNC) NTSC / PAL (selectable in setup menu)
	Monitor (HDMI) Connector	[Main monitor] HDMI 4K UHD(3840x2160p) /30Hz, 4K UHD(3840x2160p) /25Hz, 1920x1080p /60Hz, 1920x1080p /50Hz, 1920x1080i /60Hz, 1920x1080i /50Hz [Sub monitor] HDMI 1920x1080p /60Hz, 1920x1080p /50Hz, 1920x1080i /60Hz, 1920x1080i /50Hz
	Audio Output Connector	-10 dBV, 600 Ω, unbalanced x1 (RCA pin jack)
	Alarm / Control Terminal	Alarm Control Error/ Warning
		Alarm input 1 - 9 ²⁾ , Alarm output ³⁾ , Alarm reset input ²⁾ , Face matching output ⁵⁾ Time adjustment input/output ²⁾ , +5 V output ⁴⁾ , Emergency recording input Network error output ³⁾ , HDD error / Recording error output ³⁾ , Camera error output ³⁾ , Recorder error output ³⁾
	Mouse Connection Port	2 (Front 1, Rear 1)
	Network Port	2x 10BASE-T / 100BASE-TX / 1000BASE-T (RJ45)
Network	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
	Supported Protocol	IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, RTP, RTSP, ICMP, ARP IPv6: ICMIPv6
	E-mail	Upon Alarm or Warning
	No. of Simultaneous Users	16 or less
Other Functions	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 ⁶⁾
	HDD	Type 8.89 cm (3.5 inch) Serial ATA HDD, Up to 4x HDDs can be installed.
Viewer Software	Maximum Capacity	22 HDD slots (with 2x WJ-HXE400 Extension Units, 9x HDDs installed in a extension unit) Up to 6 TB will be supported. ⁷⁾
	RAID(Hardware RAID) ⁸⁾	RAID 1, 5, 6
	Playback Control	PLAY, Rev PLAY, Pause, FF, FR, Prev Record, Next Record, Prev Image, Next Image
	Additional NX Viewer Functions	Alteration detection, Save as JPEG, Two times zoom, Print, Copy, Aspect ratio switching, fish eye correction, corridor display
General Specifications	Supported OS, Language	Language of the software will be English or Japanese
	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 Kits WJ-NXE30 are necessary.
*2 Non-voltage make contact input, +3.3 V pull-up Approx. 23 kΩ
*3 Open collector output, 24 V DC, -200 mA max.
*4 +5V ±0.5 V 200 mA max.
*5 Additional Business Intelligence Kit WJ-NXF02 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/download/library/>)
*8 Additional RAID Kit WJ-NXR30 is necessary.

Optional Accessories

Hard Disk Extension Unit WJ-HXE400/G

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)

Rack Mount Bracket WV-Q202

Additional Business Intelligence Kit WJ-NXF02, WJ-NXF02W

WJ-NXF02(W) is a license kit intended to improve the usefulness of Network Disk Recorder WJ-NX300. After registering the WJ-NXF02(W) into WJ-NX300, WJ-NX300 is enabled statistical processing functions such as "People counting" and "Face matching / Age & Gender judgment". *2ch input per license

Additional RAID Kit WJ-NXR30, WJ-NXR30W

WJ-NXR30(W) is a license kit intended to improve the usefulness of Network Disk Recorder WJ-NX300. After registering the WJ-NXR30(W) into WJ-NX300, WJ-NX300 is enabled RAID functions.

Additional Camera Kits

Number of cameras used in the system can be increased to 32 (maximum) by purchasing the Additional Camera Kits (WJ-NXE30, WJ-NXE30W : license for 8 cameras.)

Secure Communication Kits 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.			
WJ-NXS01, WJ-NXS01W	WJ-NXS04, WJ-NXS04W	WJ-NXS16, WJ-NXS16W	WJ-NXS32, WJ-NXS32W
1 camera	4 cameras	16 cameras	32 cameras

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(2A-200BA)