Panasonic
BUSINESS

i-PRO
EXTREME

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 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)
- Symantec 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
- 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)
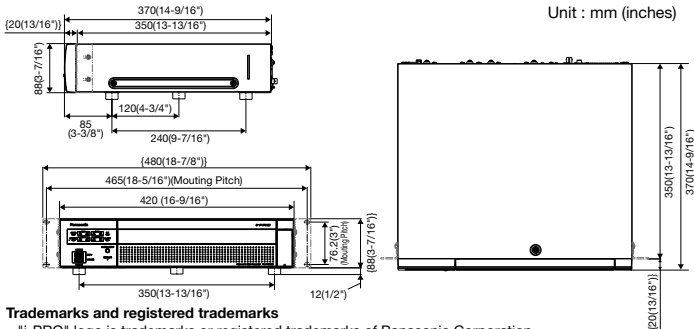- Bank / Retail
- Hospital / Education
- Factory

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

Onvif® | S

H.265 / H.264 JPEG

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 •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)
Recording	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)
Main Unit Functions	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
	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)
Browser GUI	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 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		Reset
	Event log		1000
Input / Output	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 ×1 (RCA pin jack)
	Alarm / Control Terminal	Alarm	Alarm input 1 - 9*2, Alarm output*3, Alarm reset input*2
		Control	Time adjustment input/output*2, +5 V output*4, Emergency recording input
		Error/ Warning	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)
	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	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: 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
Other Functions	Time Synchronization		Terminal (Master/Slave), NTP (Server/Client)
	Summer Time		User definable (using menu setup)
	Remote Monitoring on Smartphone/Tablet		16 clients or less *5
HDD	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 a extension unit) Up to 6 TB will be supported.*6
	RAID(Hardware RAID)*7		RAID 1, 5, 6
Viewer Software	Playback Control		PLAY, Rev PLAY, Pause, FF, FR, Prev Record, Next Record, Prev Image, Next Image
	Additional Functions	NX Viewer	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
General Specifications	Safety / EMC Standard		cUL (UL60065), FCC Part15 ClassA
	Power Source		120 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 Panasonic Security Viewer v.3.0 or later is required on smartphone/tablet PC.
*6 Please check the following URL for the latest information. (https://security.panasonic.com/download/library/)
*7 Additional RAID Kit WJ-NXR30 is necessary.

Appearance

Unit : mm (inches)

370(14-9/16") / 350(13-13/16") / {20(13/16")} / 88(3-7/16") / 85 (3-3/8") / 120(4-3/4") / 240(9-7/16") / {480(18-7/8")} / 465(18-5/16")(Mouting Pitch) / 420 (16-9/16") / 76.2(3")(Mouting Pitch) / 88(3-7/16") / 350(13-13/16") / 12(1/2") / 350(13-13/16") / 370(14-9/16") / {20(13/16")}

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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.

Optional Accessories

Hard Disk Extension Unit WJ-HXE400

Power Source	120 V AC, 60 Hz
Power Consumption	85 W (170 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 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

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

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