



Panasonic
BUSINESS

Network Video Disk Recorder

WJ-NX400

WJ-HXE400 (Extension unit)

Security Systems Business Division
Panasonic System Networks Co., Ltd.

H.265/H.264 high-throughput and scalable recorder featuring integrated GUI and robust embedded IP security enabling **a secure end-to-end PC-Less surveillance solution**

Secure High Bandwidth Recording

- 128 cameras (H.264/H.265)
- 640 Mbps Maximum Total throughput
- Secure Communication between cameras and WJ-NX400 and between WJ-NX400 and applications



PC-Less Surveillance Solution

- Built-in GUI and Dual HDMI Outputs
- Automatic Security System configuration wizard
- Dual Stream Recording for mobile playback

Scalable Storage

- (9) Integrated Drive-bays RAID/5/6
- External storage expansion up to 324TB
- Expand storage capacity without stopping recording even if using a RAID configuration

High Reliability and Redundancy

- Dynamic HDD Power Management increases HDD life
- Redundant fail-over using an additional recorder

✓ **128 cameras (H.264/H.265)**

WJ-NX400 supports up to 128 cameras. As basic recorder, WJ-NX400 support 64 cameras. When adding two 32ch additional license WJ-NXE40(W) in WJ-NX400, WJ-NX400 supports up to 128 cameras.

In addition, WJ-NX400 can record both H.264 stream and H.265 stream. It is easy to configure a coexisting system of i-PRO H.264 cameras and i-PRO H.265 cameras since WJ-NX400 can record both H.264 stream and H.265 stream.

✓ **640 Mbps Total throughput**

WJ-NX400 is equipped with maximum 640 Mbps as total throughput. Maximum recording throughput is 384 Mbps, and it is possible to record the images of 128 cameras when connecting Full-HD H.265 camera (30ips, 2 Mbps). Maximum output throughput is 256 Mbps, and the video of 128 all cameras (Full-HD, 30ips, 2M bps) can be output to a monitoring software at one time.



WJ-NX400
Network Video Disk Recorder

✓ Secure Communication

Protect the devices from cyber attacks



Eliminated vulnerability with the latest CVE* support

*CVE : Common Vulnerabilities and Exposures. Common Vulnerabilities and Exposures is a dictionary of common names (i.e., CVE Identifiers) for publicly known

Prevention leakage of the data on communication network

Realize secure communication between devices by using communication encryption (SSL/TLS communication).



Prevention leakage of the video

Panasonic cameras deliver the encrypted video, and it's stored in WJ-NX400 (Panasonic recorder).

*When using this function, you need optional licenses.

The data can be password-protected and alteration detection helps ensure credibility of data.

The stream and video are encrypted by the module meet **FIPS140-2 level 1**. Panasonic fully protect the stream and the video on the End-to-End System.



By using hash value, can detect Video alteration.

PC-Less Surveillance Solution

✓ Built-in GUI and Dual HDMI Outputs

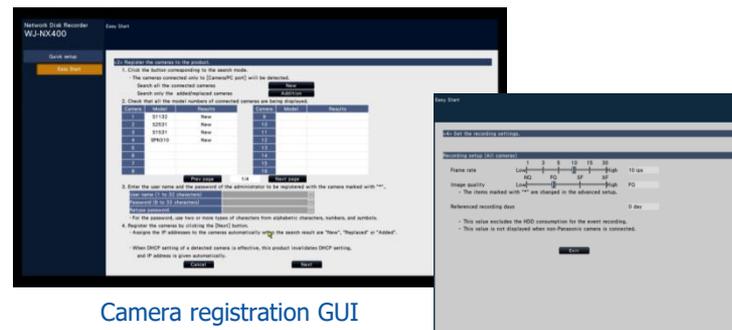
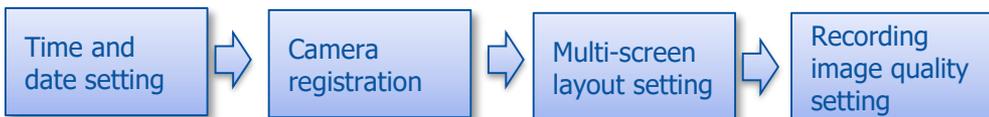
Equipped with two HDMI output, WJ-NX400 provides PC-less operation that enables users operate just about all features from the main display without running a PC. The main and sub displays support multi-screen viewing. The main display supports up to 4K resolution, and the sub display supports up to Full-HD resolution.

Display	Interface	Viewing live images	Playback videos	Operation and Setting
Main display	HDMI	✓	✓	✓
Sub display	HDMI, BNC	✓	-	-



✓ Automatic camera configuration

With only 4-steps "Easy start" of WJ-NX400, the setting of the recorder and cameras is completed in a few minutes from main display (without PC).



Camera registration GUI

✓ Dual Stream Recording for mobile playback

Video delay may be happened as playing a several cameras at one time or playing on a narrow band. Therefore, WJ-NX400 has the function which can record 2 stream per a camera.

When using this function, an operator can set the stream depending on their playback environment.

i.e)

1st stream is recorded at Full-HD resolution and 2nd stream is recorded at VGA resolution.

When network band of an operating environment is narrow band.

- When playing the video on WV-ASM300, it plays a video of 1st stream.

When an operator play a several cameras at one time.

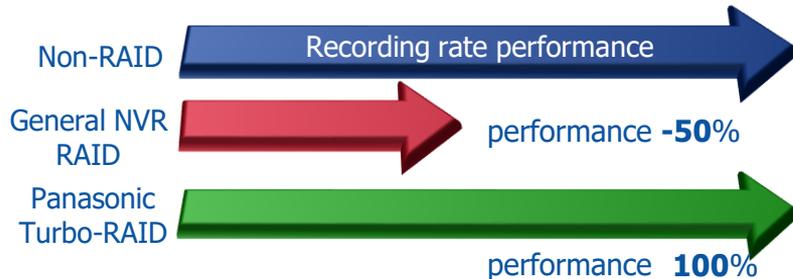
- It is possible to use 2nd stream when playing the video on multiscreen on WV-ASM300.



✓ (9) Integrated Drive-bays RAID/5/6

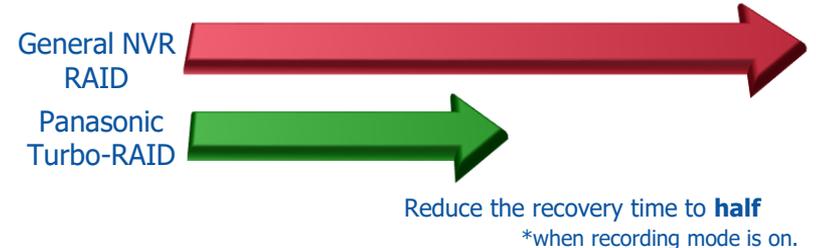
Keep throughput performance

Generally, when configuring RAID, a throughput performance is reduced to approx. 50%. However, RAID of WJ-NX400 equipped with Turbo-RAID keeps it the same as non RAID configuration. An additional unit by the reduced performance isn't needed. Turbo-RAID can provide the ensuring reliability of data and the high-performance throughput.



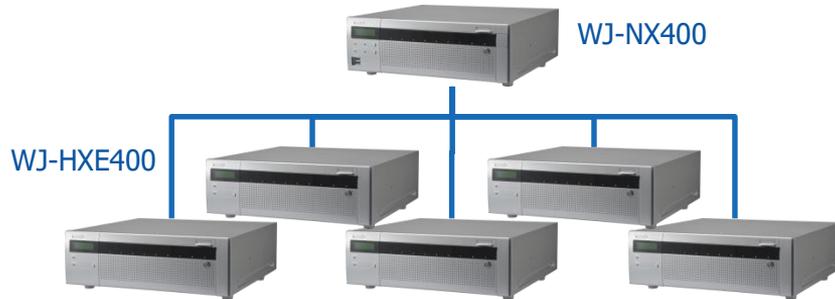
Achieve high-speed recovery time

If a recorder needs to recover for crashing the data, it is possible to recover in a short time. WJ-NX400 equipped with Turbo-RAID can be recovered in **half** the time more than a general network video disk recorder, when recording mode is on. If recording mode is off, can recover at **one-tenth times** of general network video disk recorder.



✓ External storage expansion up to 324TB

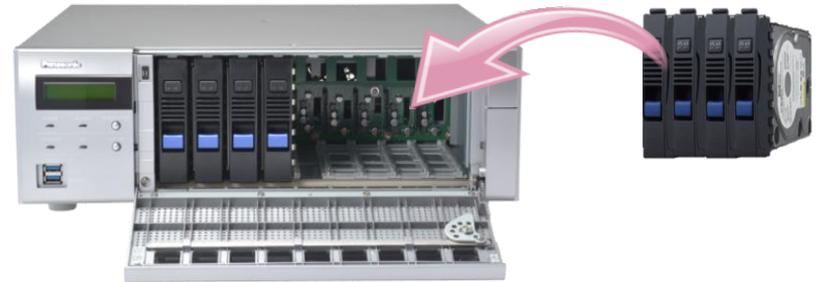
WJ-NX400 can record up to 324TB videos with WJ-HXE400 extension unit. Basic recorder WJ-NX400 supports 54TB per one recorder. It is possible to expand up to 5 units of WJ-HXE400 depending on the number of connected cameras and retention period of recording videos.



✓ Expand storage capacity without stopping recording even if using a RAID configuration

In initial design, it isn't necessary to think extension HDDs or an ultimate configuration of system, if use WJ-NX400. Because Turbo-RAID of WJ-NX400 can add HDDs without stopping recording. Don't worry about deleting the data while adding HDDs.

The cost generated at an initial investment will be low and HDDs can be added easily in accordance with the situation.

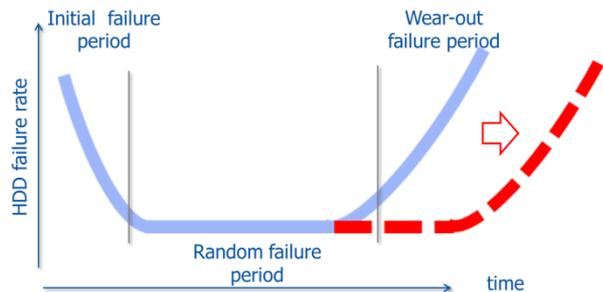


*This function will be supported by upgraded firmware.

✓ Dynamic HDD Power Management increases HDD life

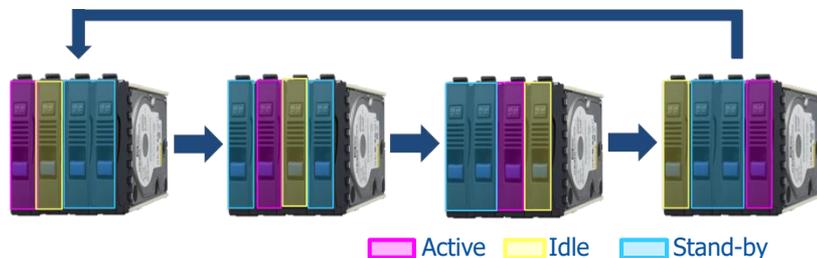
Reduce the movement of a head to the utmost limit

WJ-NX400 can reduce the movement of a head to the utmost limit to access own HDD since it equips with Panasonic proprietary file system. Thus WJ-NX400 achieves the high efficiency of writing control, and can extend the life of HDDs.



HDD is managed individually

WJ-NX400 manages the status of each HDD using three states. One is the active state which is accessed by WJ-NX400 to a HDD. First status is Active, it indicates the state accessing a HDD. Second status is Idle, it indicates the state working a motor and this HDD is used after a current active HDD. Third status is Stand-by, it indicates the state stopping a motor.



WJ-NX400 extends the life of HDDs by reducing the movement of a head and managing HDDs individually.

“Keep working & recording” without UPS

95%* of momentary power failure is a power failure within 200ms. WJ-NX400 doesn't have UPS, but it doesn't stop and doesn't reboot even when occur a instantaneous voltage drop within 200ms. When a power failure time is longer than 200ms, WJ-NX400 detects a power interruption and shuts safe down by itself.

WJ-NX400 provide a stable recording and a stable operation for you.

*The case of power source conditions in Japan



✓ Redundant fail-over using an additional recorder

WJ-NX400 will have a fail-over function. The standby recorder can monitor the operation state of up to 5 recorders, WJ-NX400 by preparing a recorder for a standby and setting a fail-over function on it. When detecting a failure of keep-alive of a specific recorder for defined period of time, the standby recorder take over the recording from it.



*It will be supported by upgraded firmware.

WJ-NX400 Specifications

Supported Cameras	Supported Cameras	Panasonic i-PRO series Network camera
	Supported Image Format	H.265,H.264,JPEG,
	Supported Audio Format	G.726 32kbps, AAC-LC* *It will be supported by upgraded firmware.
	Maximum Number of Cameras	MAX.128
Recording	Recording Mode	Event, Schedule, Emergency
	Frame Rate/Camera	Up to 60 ips
	Others	Pre-Event Recording, 2stream recording
HDD	Type	3.5 inch Serial ATA HDD, Up to 9x HDDs can be installed
	Maximum Capacity	54 HDD slots (with 5x WJ-HXE400 Extension Units, 9x HDDs installed in each unit) Up to 6TB will be supported
	Turbo-RAID(Hardware RAID)	RAID 1/5/6 supported *RAID1 will be supported by upgraded firmware.
Network	Maximum Band Width	Total throughput : Max. 640Mbps Recording throughput : Max. 384Mbps, Output throughput : Max. 256Mbps
External Interface	Alarm Connector	Alarm input:32 / output:4
	Audio Output Connector	1x -10 dBv, 600 ohm ,Unbalanced (RCA)
	External Storage	Only for WJ-HXE400 Extension Unit
	USB connector	4 Front: 1x USB (for copy, mouse, keyboard), Rear: 1x USB(for copy, mouse, keyboard)
General Specifications	Power Source	WJ-NX400K : 120 V AC, 60 Hz, WJ-NX400K/G : 220 V to 240 V AC, 50 Hz/60 Hz
	Power Consumption	WJ-NX400K : 125 W (230 VA), WJ-NX400K/G : 125 W (245 VA)
	Ambient Operating Temperature	+5 °C to +45 °C (41 °F to 113 °F)
	Ambient Operating Humidity	5 % to 90 % (no condensation)
	Dimensions (W x H x D)	430 mm x 132 mm x 400 mm (16-15/16" x 5-3/16" x 15-3/4", excluding rubber feet and projections)
	Weight	11.5kg (25.4lbs) [without HDD] / 20.0kg (44.1lbs) [with 9x HDDs]

WJ-NX400 optional line-up

Hardware



Model	WJ-HXE400 Extension unit	WJ-HXE400/G Extension unit
Power Source	120 V AC, 60 Hz	220 - 240 V AC, 50Hz / 60Hz
Power Consumption	85 W (170 VA)	85 W (175 VA)
Dimensions (W x H x D)	430 mm (W) x 132 mm (H) x 400 mm (D) (16-15/16" (W) x 5-3/16" (H) x 15-12/16" (D)) (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)	

Software

Additional Camera license	WJ-NXE40(W)	32ch additional channel license
Secure Communication license	WJ-NXS32(W)	Secure optional license for 32ch
	WJ-NXS16(W)	Secure optional license for 16ch
	WJ-NXS04(W)	Secure optional license for 4ch
	WJ-NXS01(W)	Secure optional license for 1ch

This recorder is suitable under the extreme conditions :

- ✓ City Surveillance
- ✓ Intersections
- ✓ Bank
- ✓ Stations
- ✓ Logistics
- ✓ Factory
- ✓ Shopping Malls



and more.