



High performance Network Disk Recorder for i-PRO Network Cameras with 9 Serial ATA HDD slots

Key Features

- H.264, MPEG-4 and JPEG multi format
- Up to 64 network cameras can be connected without extra license fee and their images can be recorded simultaneously.
- 200 Mbps high throughput : Best match with **i-PRO** Network Cameras
- Various Recording Modes : Manual, Schedule including Event (Pre/Post), Emergency.
Schedule mode includes eight recording programs with individual recording mode for each camera, and 6 time schedules per day.
- Panasonic camera control : Pan/Tilt, Zoom, Focus, Brightness, Preset Position, Auto mode (depending on camera model).
- Audio from **i-PRO** network cameras can be recorded and played back, G.726 (ADPCM) 32 kbps.
- Cameras can be assigned to one of the 8 groups for easier browsing.
- Flexible playback controls : Goto Date (Jump to specific time/date), Goto Last (Jump to 5 sec. - 5 min. before the record end).
- Various display modes : Spot, Quad (16 patterns), Spot Sequence, Quad Sequence (Live).
- Filtered search : Time & Date, Event Type, Camera number.
- VMD search : Motion in a specified area in the recorded images can quickly be searched (works with supported **i-PRO** cameras).
- 2x, 4x Digital zoom (Live/Playback)
- Recorded images can be downloaded to a PC.
Downloadable viewer software allows playback of images downloaded from the recorder.
- Various alarm sources include 32x Terminal inputs, 64x Camera alarms, Panasonic Alarm Protocol.
Flexible alarm actions include Event recording, E-mail notification, Alarm message, Camera positioning, FTP image transfer, Terminal output, Panasonic alarm protocol output, Buzzer and Indicator.
- 2x built-in network interfaces (10Base-T / 100Base-TX / 1000Base-T) for camera recording and client access
- Up to 16 clients can monitor images and control WJ-ND400 simultaneously.
- FTP client function enables periodic live image transfer or recorded image transfer in response to an alarm.
- Performance measurement function for appropriate recording frame rate setup
- Images recorded in the SD memory card in **i-PRO** network cameras can be transferred to the recorder automatically even when the recorder is in recording status.
- Setup can be made with the user friendly browser GUI.
Multilingual options include English / French / Spanish / Germany / Italian / Russian / Chinese / Japanese / Custom.
- User/Host authentication, 4 programmable user levels, 16 user priorities and User-Camera View/Control partitioning set up for sophisticated user management.
Up to 32 user registrations
- Alteration detection and recorded data encryption for data security
- Multi-recorder-Multi-site-system can be made with optional WV-ASM200 i-PRO Management Software.
- Up to 9 Serial ATA HDDs can be installed with the provided canisters. By RAID mode, the HDDs can be removed without interrupting the recording with hot plug support.
- HDD capacity is expandable up to 54 HDD slots (9 HDD slots in the main unit and 5 optional WJ-HDE400 Hard Disk Extension Units each with 9 HDD slots).
- Disk partitioning including Normal, Event, Pre-Event, Copy for flexible record management
- RAID5/6 redundant recording for data security
- Superior reliability with an embedded OS compared to PC-based system

Specifications

Supported Cameras	Supported Cameras	Panasonic i-PRO series Network cameras (Contact Panasonic for BB series and Axis® cameras)	
	Supported Image Format	H.264, MPEG-4, JPEG, M-JPEG	
	Supported Image Resolution (Depending on the camera)	Aspect ratio [4 : 3] 4,000 x 3,000, 2,560 x 1,920, 2,048 x 1,536, 1,600 x 1,200, 1,280 x 960, 960 x 720, 800 x 600, 640 x 480, 320 x 240 Aspect ratio [16 : 9] 3,840 x 2,160, 2,560 x 1,440, 1,920 x 1,080, 1,280 x 720, 640 x 360, 320 x 180 Aspect ratio [1 : 1] 2,992 x 2,992, 2,816 x 2,816, 2,048 x 2,048, 1,280 x 1,280, 640 x 640, 320 x 320	
	Supported Audio Format	G.726 (ADPCM) 32 kbps	
	Maximum Number of Cameras	64	
Recording	Recording Mode	Manual, Schedule including Event (Pre/Post), Emergency	
	Pre-Event Recording	Up to 15 minutes with dedicated HDD for Pre-Event. Shorter Pre-Event recording is possible without dedicated HDD.	
	Scheduled Recording Mode	8 programs, 6 time zones/day, Independent setup for each day of the week	
	Frame Rate/Camera	Up to 60 ips (Depending on the camera)	
Browser GUI	Camera Control	Pan/Tilt, Zoom, Focus, Brightness, Preset position call and program (up to 256), Auto mode	
	REC/Playback Control	REC, PLAY, Rev PLAY, Pause, Stop, FF, REW, Prev Record, Next Record, Prev Image, Next image, Goto Date, Goto Last (5 sec. - 5 min.)	
	Search Mode	Filtered search : Time date, Event type, Camera number VMD search : one detection areas per search (works with supported i-PRO cameras)	
	Display Mode	Spot/Quad (16 patterns) / Spot Sequence / Quad Sequence (Sequence : Live only)	
	Camera Grouping	8 groups each with 16 characters title	
	Image Download	Recorded data of selected camera and time range can be downloaded to a PC. Viewer software can be downloaded separately.	
	SD Memory Data Download	Images recorded in the SD card in the i-PRO series cameras can be transferred to the recorder automatically.	
	Copy	Recorded data of selected cameras and time date range can be copied to the COPY partition.	
	Camera Title	On the browser, Up to 16 Characters	
	Clock Display	On the browser. Time : 12 H/24 H Date : 3 formats (YY.MM.DD, MMM.DD.YY, DD.MMM.YY)	
	Alarm Control	Reset, Suspend	
	Digital Zoom	2x, 4x	
	System Log	Operator access (100), Network error (1,000), Error (100), Event (750)	
	System Setup	Setup page in English, French, Italian, Spanish, German, Russian, Chinese, Japanese	
	GUI Language	English, French, Italian, Spanish, German, Russian, Chinese, Japanese, Custom	
	Supported OS ^{*1}	Microsoft® Windows® 10 Microsoft® Windows® 8.1 Microsoft® Windows® 7 Microsoft® Windows Vista® Microsoft® Windows® XP SP3 The language of OS must be the same as selected GUI language.	
	Supported Browser	Windows® Internet Explorer® 11 (32 bit) Windows® Internet Explorer® 10 (32 bit) Windows® Internet Explorer® 9 (32 bit) Windows® Internet Explorer® 8 (32 bit) Windows® Internet Explorer® 7 (32 bit) Windows® Internet Explorer® 6 SP3	
	Required PC	JPEG/MPEG-4	CPU : Intel® Pentium® 4 3.0 GHz or faster RAM : 1 GB or more, VRAM : 128 MB or more (Min. 64 MB), Microsoft® DirectX® 9.0c or later
		H.264	CPU : Intel® Core™ i7-920 or faster ^{*2} RAM : 4 GB or more, VRAM : 128 MB or more (Min. 64 MB), Microsoft® DirectX® 9.0c or later
	Alarm/Event	Alarm Source	32x Terminal inputs, 64x Camera alarms, Panasonic Alarm Protocol
		Event Mode	Off / On
		Alarm Action	Alarm recording, e-mail notification, Alarm message, Camera positioning, FTP image transfer, Terminal output, Panasonic alarm protocol output, Buzzer, Indicator
	Alarm Control	Reset, Suspend	
	Event log	750	
Network	Network Interface	Camera port : 10Base-T / 100Base-TX / 1000Base-T (RJ45) Client port : 10Base-T / 100Base-TX / 1000Base-T (RJ45) Maintenance port : 10Base-T (RJ45)	
	Maximum Band Width	Total 200 Mbps	
	Bandwidth Control (Client Port)	32 K / 64 k / 128 k / 256 k / 512 k / 1,024 k / 2 M / 5 M / 10 M (bps) and unlimited	
	Supported Protocol	TCP/IP, UDP/IP, HTTP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, RTP	
	E-mail	Upon Alarm or Warning	
	FTP Client	Upon alarm or Periodic transfer	
	No. of Simultaneous Users	16	
	User Registration	Up to 32 users	
	User level	4 Levels (Programmable)	
	Partitioning	User - Camera (View only, View & Control, No Access)	
	Security Method	User authentication (ID and password), Host authentication (IP address), Alteration detection, HTTP Port No. (1 - 65,535 except for reserved numbers), FTP Port No. (1 - 65,535 except for reserved numbers)	

TV System		NTSC	PAL
External Interface	Alarm Connector (D-sub25pin)	Alarm	Alarm input 1 - 7, 17 - 32 ^{*3}
	Alarm/Control Connector (D-sub25pin)	Alarm	Alarm input 8 - 16 ^{*3} , 1x Alarm output ^{*4} , 1x Alarm reset input ^{*3} , 1x Alarm suspend input ^{*3}
		Control	Emergency recording input ^{*3} , Power outage detection input ^{*3} , External recording mode switching ^{*3} , Power outage recovery completion output ^{*5} , Time adjustment input/output ^{*6} , +5 V output ^{*7}
	Error/Warning	Network error output ^{*4} , Available disk space warning output ^{*4} , HDD error output ^{*4} , Camera error output ^{*4} , Error output ^{*4}	
	External Storage	High-speed serial interface 1.5 Gbps (theoretical value) Only for WJ-HDE400 Extension Unit	
Other Functions	Time Synchronization	Terminal (Master or Slave), NTP (Server/Client)	
HDD	Summer Time	User definable (using menu setup)	
	Type	3.5 inch Serial ATA HDD, Up to 9x HDDs can be installed.	
	Maximum Capacity	54 HDD slots (with 5x WJ-HDE400 Extension Units, 9x HDDs installed in each unit)	
	RAID	RAID 5/6 supported	
	Partitioning	Normal / Event / Pre-Event / Copy	
Viewer Software	Playback Control	Play, Rev Play, Pause, FF, REW, Prev Record, Next Record, Prev Image, Next image	
	Additional Functions	Alteration detection, Save as JPEG, Two times zoom, Print	
	Supported OS, Language	Same as browser GUI, Language of the software will be English	
General Specifications	Safety/EMC Standard	UL (UL60065), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	CE (EN60065, EN55022 ClassB, EN55024), EAC
		Power Source	120 V AC, 60 Hz
	Power Consumption	approx. 170 W	
	Ambient Operating Temperature	+5 °C to +45 °C (41 °F to 113 °F)	
	Ambient Operating Humidity	5 % to 90 % (no condensation)	
	Maximum Operating Altitude	2,000 m (6,500 feet) above sea level	
	Dimensions	430 mm (W) x 132 mm (H) x 400 mm (D) (16-15/16" (W) x 5-3/16" (H) x 15-3/4" (D)) (excluding rubber feet and projections)	
	Weight	13 kg (28.6 lbs.) without Canister and HDD 20 kg (44.1 lbs.) with 9 HDDs	

^{*1} Microsoft® Windows® 7 Starter and Microsoft® Windows Vista® Starter are not supported.

For information on the operation verification of the supported operating systems and web browsers, refer to our website at <http://security.panasonic.com/support/>

^{*2} Recommend CPU : Intel® Core™ i7 4770 or faster when 2,560 x 1,920 or more resolution is selected.

^{*3} Non-voltage make contact, +5 V pull-up 150

^{*4} Open collector output, 24 V max., -100 mA

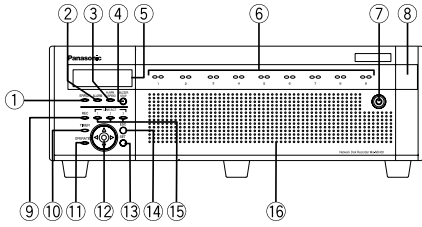
^{*5} High (+5 V to +12 V, 6.3 mA maximum)

^{*6} 52 k, 5 V pull-up, -100 mA / make contact

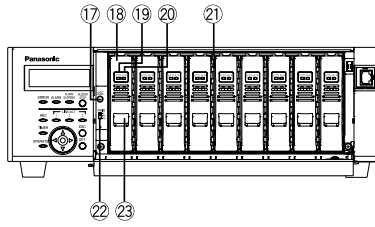
^{*7} 200 mA at maximum

Part Names and Functions

Front View

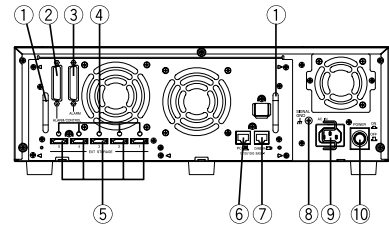


- ① Error Indicator
- ② Alarm Indicator
- ③ Alarm Suspension Indicator
- ④ Buzzer Stop Button
- ⑤ LCD
- ⑥ HDD Indicators
- ⑦ Key Hole
- ⑧ Maintenance Port
- ⑨ Recording Indicator
- ⑩ Timer Indicator
- ⑪ Operate Indicator
- ⑫ Arrow Buttons
- ⑬ SET Button
- ⑭ Escape Button
- ⑮ Link Indicators
- ⑯ Front Cover



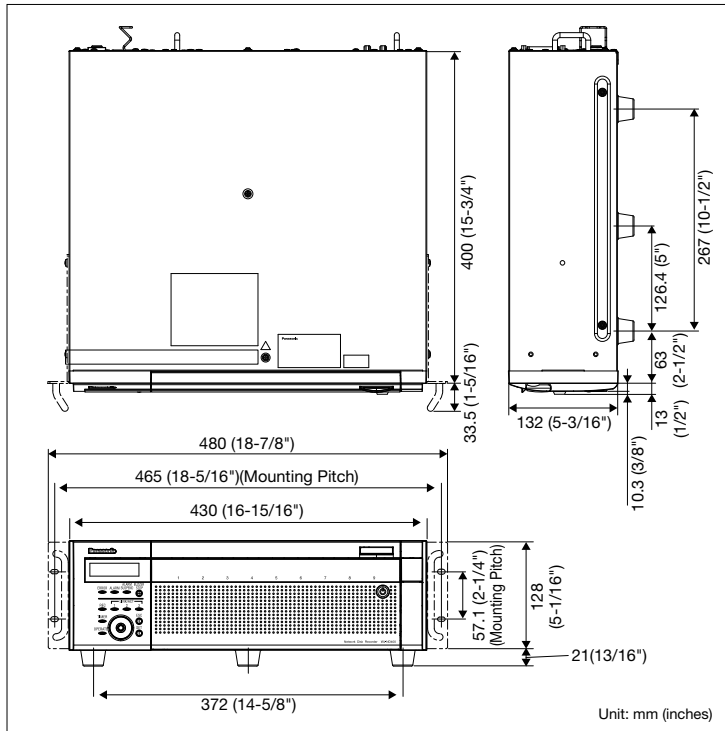
- ⑰ USE Button
- ⑱ HDD Unit
- ⑲ HDD Status Indicator
- ⑳ HDD Access Indicator
- ㉑ HDD Bay Slots
- ㉒ RAID Mode Switch
- ㉓ Removal Knob

Rear View



- ① Handle for Maintenance
- ② Alarm/Control Connector
- ③ Alarm Connector
- ④ Cable Clamp Fixing Holes
- ⑤ External Storage Connector
- ⑥ Client PC Port
- ⑦ Camera Port
- ⑧ Signal GND Terminal
- ⑨ Power Cord Inlet
- ⑩ Power Switch

Appearance



Standard Accessories

- CD-ROM* 1 pc.
 - Installation Guide 1 pc.
 - Quick Reference Guide 1 pc.
- * The CD-ROM contains the operating instructions (PDFs)

The following are for installation

- Power Cord (NTSC model) 1 pc.
- Power Cord (PAL model) 2 pcs.
- Key 2 pcs.
- Label 1 pc.
- Rack Mounting Bracket 2 pcs.
- Rack Mounting Bracket fixing screw 6 pcs.
- Handle for Rack Mounting Bracket 2 pcs.
- Handle fixing screw for Rack Mounting Bracket 4 pcs.
- Washer 4 pcs.
- HDD canister 9 pcs.
- HDD fixing Screw for HDD canister 54 pcs.

Optional Accessory

Hard Disk Extension Unit
WJ-HDE400



- Power Source : 120 V AC, 60 Hz (NTSC)
220 - 240 V AC, 50 Hz (PAL)
- Power Consumption : approx. 130 W
- Dimensions : 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 : 13.5 kg (29.8 lbs.) (When no HDD exist)
20 kg (44.15 lbs.) (When 9 HDDs are installed)

Trademarks and registered trademarks

- Microsoft, and Windows are registered trademarks of Microsoft Corporation in the U.S. and other countries.
- Axis is a registered trademark of Axis Communications AB.
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- ONVIF and the ONVIF logo are trademarks of ONVIF Inc.

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.

- All TV pictures are simulated.
- Weights and dimensions are approximate.
- Specifications are subject to change without notice.
- All product pictures are NTSC models.

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