



## Network Disk Recorder with removable HDD for digital image data from up to 16 Network Cameras

### Key Features

- MPEG-4 and JPEG multi format
- Up to 16 network cameras can be connected and recorded.
- Various Recording Modes: Manual, Schedule, Event (Pre/Post), Emergency, External Timer
- Various alarm sources include 16x Terminal inputs, 16x Camera alarm, Panasonic Alarm Protocol. Flexible alarm actions include Alarm recording, E-mail notification, Alarm message, Camera positioning, FTP image transfer, Terminal output, Panasonic alarm protocol output, Buzzer and LED.
- Panasonic Camera Control: Pan/Tilt, Zoom, Focus, Brightness, Preset Position, Auto mode (depending on camera model).
- Audio from the **i-Pro** network cameras can be recorded and played back, G.726 (ADPCM) 32 kbps.
- Cameras may be assigned to one of the 4 groups to meet application requirements.
- 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 (4 patterns), Spot Sequence, Quad Sequence (Sequence: Live only).
- 4 Quad screens are fully programmable. Any of the 16 cameras can be assigned to any area of the Quad screens.
- Filtered Search: Time & Date, Event Type, Camera number, Text
- Recorded images can be downloaded to a PC.
- Downloadable viewer software allows playback of images downloaded from the Recorder.
- Built-in network interface (10Base-T / 100Base-TX) for recording and client access
- Quick IP Setup for Panasonic **i-Pro** series network cameras
- Bandwidth control: 32 k / 64 k / 128 k / 256 k / 512 k / 1,024 k / 2 M / 5 M / 10 M (bps) and unlimited
- Up to 4 clients can monitor image and control WJ-ND200 simultaneously.
- Image transfer to FTP server: Recorded image upon alarm and/or live image periodically
- Performance measurement function for appropriate recording frame rate setup
- SD memory recordings initiated by network failure in the **i-Pro** series cameras can be transferred automatically or manually to the recorder even when the recorder is in recording status.

- Equipped with 1x 2.5 inch 160 GB removable HDD. Up to 2 HDDs can be installed.
- The removable HDD can be connected to a PC via WJ-HDC20 Connection Unit and played back with provided HDD viewer software. (NTSC model only)
- Alarm notification by e-mail
- User/Host authentication, 4 user levels and User-Camera View/Control partitioning set up for sophisticated user management of up to 32 user registrations.
- Multi-recorder, Multi-site system can be made with optional WV-ASM100 i-Pro Management Software.
- RAID1 mirroring capability
- Vertical installation is possible with the optional WV-Q201 Vertical Stand.

### Standard Accessories

• CD-ROM* .....	1 pc.	The followings are for installation:
• Installation Guide .....	1 pc.	
* The CD-ROM contains the operating instructions (PDFs and the software).		• Power Cord (NTSC model) .....
		1 pc.
		• Power Cord (PAL model) .....
		2 pcs.
		• Key .....
		2 pcs.
		• Brace (for the power cord) .....
		1 pc.

### Optional Accessories

<p>Rack Mount Bracket <b>WV-Q200</b></p> 	<p>Vertical Stand <b>WV-Q201</b></p> 
<p>Removable HDD <b>WJ-HDD16</b> (160 GB)</p> 	<p>Connection Unit <b>WJ-HDC20</b> (NTSC only)</p> 

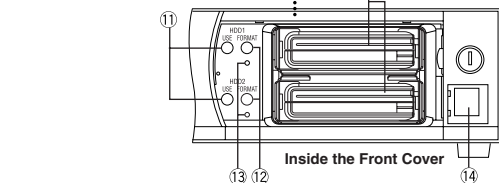
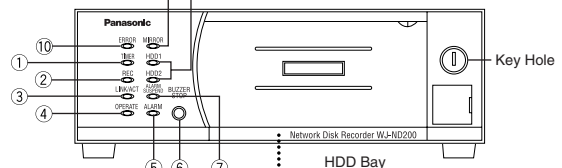
## Specifications

TV System	NTSC	PAL
<b>Supported Cameras</b>	Supported Cameras: Panasonic i-Pro series Network cameras, BB series (specific models) and Axis® (specific models)	
Supported Image Format	MPEG-4 (Specific cameras), JPEG, M-JPEG	
Supported Image Resolution	1,280 x 960, 960 x 720, 640 x 480, 320 x 240 (Depending on the camera)	
Supported Audio Format	G.726 (ADPCM) 32 kbps	
Maximum Number of Cameras	16	
<b>Recording</b>	Recording Mode: Manual, Event, Schedule, Emergency, External timer	
Pre-alarm Recording	Up to 30 seconds	
Scheduled Recording Mode	4 programs, 6 time zones/day, Independent setup for each day of the week	
Frame Rate/Camera	Up to 30 ips (Depending on the Camera)	
<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	
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.), Text display	
Search Mode	Search criteria: Time date, Event type, Camera number, Text ON/OFF	
Display Mode	4x Spot/Quad groups/Spot Sequence/Quad Sequence (Sequence: Live only)	
Camera Grouping	4 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	SD recording associated with network error in the i-Pro series cameras can automatically be transferred to the recorder.	
Camera Title	On the browser, Up to 16 characters	
Clock Display	On the browser. Time: 12H/24H, Date: 3 formats (YY.MM.DD, MMM.DD.YY, DD.MMM.YY)	
Alarm Control	Reset, Suspend	
Digital Zoom	Up to 4 times, Mouse wheel control supported	
Text Attachment	Free comment can be attached for each record and reviewed at later time. Up to 200 characters	
System Logs	Operator access (100), Network error (1,000), Error (100), Event (750)	
System Setup	Setup page in English, French, Italian, Spanish, German, Russian, Chinese, Japanese	
Time Synchronization	Terminal (Master or Slave), NTP (Client)	
Summer Time	User definable (using menu setup)	
GUI Language	English, French, Italian, Spanish, German, Russian, Chinese, Japanese	
Supported OS	Microsoft® Windows Vista® Business 32 bit, Microsoft® Windows® XP Home/Professional SP2 The language of the OS must be same as selected GUI language.	
Supported Browser	Windows® Internet Explorer® 7.0 (Microsoft® Windows Vista® Business 32 bit), Microsoft® Internet Explorer® 6.0 SP2 (Microsoft® Windows® XP Home/Professional SP2)	
Required PC	CPU: Intel® Pentium® 4 3.0 GHz or faster, RAM: 512 MB or more, Microsoft® DirectX® 9.0c or later	
<b>Alarm/Event</b>	Alarm Source: 16 x Terminal inputs, 16 x Camera alarms, Panasonic Alarm Protocol	
Alarm Action	Alarm recording, e-mail notification, Alarm message, Camera positioning, FTP image transfer, Terminal output, Panasonic alarm protocol output, Buzzer, LED	
Alarm Control	Reset, Suspend	
Event Log	750 logs	
<b>Network</b>	Network Interface: 10Base-T/100Base-TX (RJ-45)	
Maintenance Port	10Base-T (RJ-45)	
Maximum Band Width	Total 48 Mbps	
Bandwidth Control	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	
No. of Client at a Time	4	
FTP Client	Upon alarm or Periodic transfer	
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	
<b>External Interface</b>	Alarm Connector (25pin D-sub)	Alarm: Alarm input 1 ~ 16 <sup>*1</sup> , Alarm output 1 ~ 7 <sup>*2</sup>
	Alarm/Control Connector (25pin D-sub)	Alarm: Alarm output 8 ~ 16 <sup>*2</sup> , Alarm suspension input <sup>*1</sup> , Alarm reset input <sup>*1</sup> Control: Emergency recording input <sup>*1</sup> , Power outage detection input <sup>*1</sup> , External recording mode switching <sup>*1</sup> , Power outage recovery completion output <sup>*3</sup> , Time adjustment input/output <sup>*4</sup> , +5 V output <sup>*5</sup>
	Error/Warning	Network error output <sup>*2</sup> , Available disk space warning output <sup>*2</sup> , HDD error output <sup>*2</sup> , Camera error output <sup>*2</sup> , Error output <sup>*2</sup>
<b>HDD</b>	Type	1 x 2.5 inch 160 GB removable HDD (UP to 2 HDDs)
	RAID	RAID1 Mirroring mode supported
<b>Viewer Software</b>	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	Same as browser GUI (English, German, French, Italian, Spanish, Language of the software is English).
<b>HDD Viewer Software</b>	Playback Control	Play, Rev Play, Pause, FF, REW, Prev Record, Next Record, Prev Image, Next Image
	Additional Functions	Search (Time date, Event type, Camera number), Save as JPEG, Print, HDD Check
<b>Admin Software</b>	Supported OS	Same as Viewer software, Language of the software is English.
<b>Quick IP Setup Software</b>	Supported OS	Same as Viewer software, Language of the software is English.
<b>General Specifications</b>	Safety/EMC Standard	UL (6500), FCC (Part15 ClassA), CE (EN60065, EN55022 ClassB, C-UL (E60065), DOC (ICES003 ClassA)
	Power Source	120 V AC, 60 Hz / 220 ~ 240 V AC, 50 Hz
	Power Consumption	approx. 35 W
	Ambient Operating Temperature	+5 °C ~ +45 °C (41 °F ~ 113 °F)
	Ambient Operating Humidity	5 % ~ 90 % (without condensation)
	Maximum Operating Altitude	2,000 m (6,500 feet) above sea level
	Dimensions	270 mm (W) x 88 mm (H) x 360 mm (D) (10-5/8" (W) x 3-1/2" (H) x 14-1/4" (D)) (excluding rubber feet and projections)
	Weight	5 kg (11 lbs.)

\*1: Non-voltage make contact, +5 V pull-up 150 Ω \*2: Open collector output, 24 V max., -100 mA  
\*3: High (+5 V ~ +12 V, 6.3 mA maximum) \*4: 52 kΩ, 5 V pull-up, -100 mA / make contact \*5: 200 mA at maximum

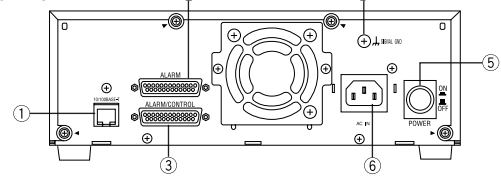
## Part Names and Functions

### Front View



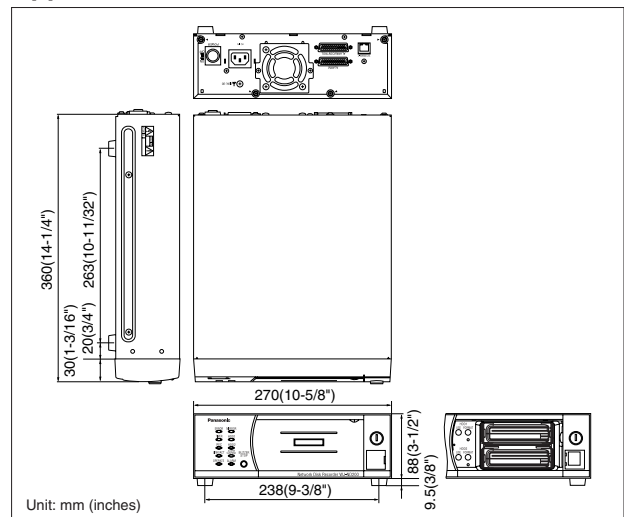
- ① Timer Indicator      ⑥ Buzzer Stop Button      ⑪ USE Button
- ② Recording Indicator      ⑦ Alarm Suspension Indicator      ⑫ FORMAT Button
- ③ Link Indicator      ⑧ HDD Access Indicators      ⑬ Write Protection Indicator
- ④ Operate Indicator      ⑨ Mirroring Indicator      ⑭ Maintenance Port
- ⑤ Alarm Indicator      ⑩ Error Indicator

### Rear View



- ① Network Port      ④ Signal Ground Terminal (SIGNAL GND)
- ② Alarm Connector (ALARM, 25pin D-sub, Female)
- ③ Alarm/Control Connector (ALARM/CONTROL, 25pin D-sub)
- ⑤ Power Switch
- ⑥ Power Cord Inlet

## Appearance



### Trademarks and registered trademarks

- Microsoft, and Windows are registered trademarks of Microsoft Corporation in the U.S. and other countries.
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### Important

- Safety Precaution: carefully read the operating instructions and installation manual before using this product.
- Panasonic can not be responsible for network performance and/or other manufacturer products that reside on the network.

- All TV pictures are simulated.
- Weights and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.
- All product pictures are NTSC models.

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