

NTSC **WJ-RT416** (120 V AC)
<With 1x 250GB HDD>
WJ-RT416K (120 V AC)
<Without HDD>
WJ-RT416V (120 V AC)
<With DVD drive, 1x 250GB HDD>
WJ-RT416VK (120 V AC)
<With DVD drive, without HDD>

PAL **WJ-RT416** (220 ~ 240 V AC)
<With 1x 250GB HDD>
WJ-RT416K (220 ~ 240 V AC)
<Without HDD>
WJ-RT416V (220 ~ 240 V AC)
<With DVD drive, 1x 250GB HDD>
WJ-RT416VK (220 ~ 240 V AC)
<With DVD drive, without HDD>



16CH Real-Time MPEG-4 Digital Disk Recorder supporting 480 ips (NTSC) / 400 ips (PAL)

Key Features

- Equipped with 8 Dual Core Encoders, all 16 cameras can be recorded at 30 ips (NTSC) / 25 ips (PAL) per channel.
- MPEG-4: High quality and high compression technology for economical recording.
- Supports multiplexed video and control data over the coax (4ch default, additional 4ch by optional board WV-PB4164) and RS-485 camera control (channel 1 ~ 16).
- Panasonic camera control: Pan/Tilt, Zoom, Focus, Iris, Preset Position, Auto mode (depends on the camera model) with a system controller, the monitoring software or the web browser*.
- Various recording modes: Manual, Timer, Event (Pre/Post)
- Flexible recording/playback controls: REC, PLAY, Pause, Stop, FF, REW, Prev Record, Next Record
- Various display modes: 4 / 6 / 9 / 16 split screen display (Live)
- Sixteen alarm inputs and four alarm outputs.
- Synchronized audio recording for 16 channels.
- Direct Search and List Search (Time & Date, Event Type, Camera number).
- Alarm notification via e-mail.
- Three user levels: Manager, Operator and Viewer
Camera partitioning setting can be applied to each user level.
- Built-in Video Motion Detector: Mask area: 24 x 20, Sensitivity: 01 ~ 99
- Recorded image data can be copied to CD-R, DVD-R, DVD+R, USB memory (FAT32), USB HDD (FAT32) via COPY interface (Specified model only) or DVD-R, CD-R via internal DVD drive (WJ-RT416V). Viewer software can be included when copying.
- A maximum of 3 TB (6x 500 GB, WJ-RT416) or 2.5 TB (5x 500 GB, WJ-RT416V) hard disk drives can be installed.
- HDD Safety Mode to protect HDDs during installation.
- Optional WV-CU650 or WV-CU950 system controllers can be connected (RS-485). Playback speed can be controlled by Jog/Shuttle. Direct camera preset position program is also available.
- Integration capability with System150*2 or System650*3: System controllers connected to System150/650 can control WJ-RT416. Cameras connected to System150/650 can be controlled from the monitoring software (RT4client) or the web browser*.
- Built-in network interfaces (10Base-T / 100Base-TX) for remote monitoring and operation.
- Multi-recorder, Multi-site system can be made with the provided monitoring software (RT4client).
- Recorded video and audio data can be downloaded to the client PC with the monitoring software or the web browser*.
- Up to 16 network clients can monitor live spot images (total network video stream is 16, Refresh rate depends on the number of streams, recording mode and playback mode).
- Up to four playback streams can be sent to the network.
- Selectable Unicast/Multicast for efficient network utilization.
- The viewer software can convert recorded audio and video data into Windows Media-format, and also can extract audio to wav file.

Standard Accessories

- CD-ROM* 1 pc.
 - Installation Guide 1 pc.
- * The followings are included on the CD-ROM.
- Operating instructions of the monitoring software (PDF)
 - Monitoring software (RT4client, including the viewer software)

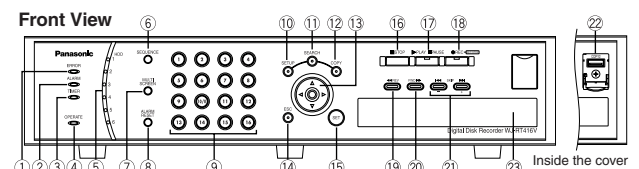
- The followings are for installation.
- Power cable (for NTSC model) 1 pc.
 - Power cable (for PAL model) 2 pcs.
 - HDD mounting screws, sleeves, dampers
 - Rack mounting brackets 2 pcs.
 - Fixing screw for rack mounting brackets ... 8 pcs.

Optional Accessory

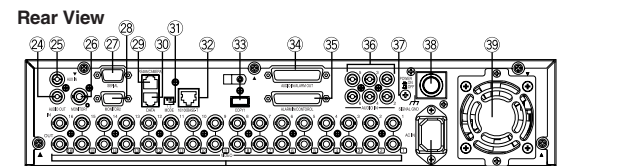
4CH Camera Control Board
WV-PB4164



Part Names and Functions



- | | | |
|-------------------------|----------------------------|--------------------------------|
| ① Error Indicator | ⑨ Camera Selection Buttons | ⑰ Play/Pause Button |
| ② Alarm Indicator | ⑩ Setup Button | ⑱ Record/Record Stop Button |
| ③ Timer Indicator | ⑪ Search Button | ⑲ Fast Reverse Playback Button |
| ④ Operate Indicator | ⑫ Copy Button | ⑲ Fast Forward Playback Button |
| ⑤ HDD Access Indicators | ⑬ Arrow Button | ⑲ Skip Buttons |
| ⑥ Sequence Button | ⑭ Escape Button | ⑲ Copy 2 Port |
| ⑦ Multi-screen Button | ⑮ Set Button | ⑲ Internal CD/DVD drive |
| ⑧ Alarm Reset Button | ⑯ Stop Button | (Only for the WJ-RT416V) |



- | | | |
|---------------------------|--------------------------------------|---|
| ②④ Audio Output Connector | ③① Mode Switch | ③⑥ Audio Input Connectors |
| ②⑤ AUX Input Connector | ③② Network Port | ③⑦ Signal Ground Terminal |
| ②⑥ Monitor 1 Connector | ③③ Copy 1 Port | ③⑧ Power Button |
| ②⑦ Serial Terminal | ③④ Audio Input/Alarm Output Terminal | ③⑨ Cooling Fan |
| ②⑧ Monitor 2 Terminal | ③⑤ Alarm Input/Control Terminal | ④① Power Cord Inlet |
| ②⑨ RS-485 Port | | ④② Video Input Connectors/Video Output Connectors |
| ③① Data Port | | |

* Available from version 1.4, *2 System150 version 2.2 or later. *3 System650 version 3.0 or later.

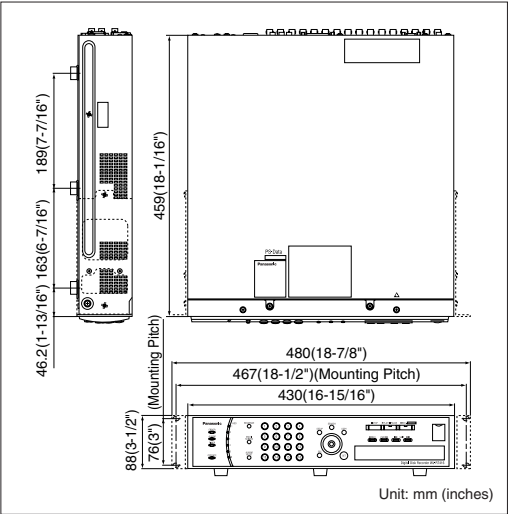
Specifications

TV System			NTSC	PAL
Audio / Video IF	Video Inputs		16x 1.0 V [p-p] / 75 Ω NTSC composite video inputs (BNC) Multiplexed control data compatible: 1 ~ 4 CH / 1 ~ 8 CH* Active loop through outputs: 1 ~ 4 CH / 1 ~ 8 CH* Auto termination loop through outputs: 5 ~ 16 CH / 9 ~ 16 CH* * With WV-PB4164 control board.	16x 1.0 V [p-p] / 75 Ω PAL composite video inputs (BNC) Multiplexed control data compatible: 1 ~ 4 CH / 1 ~ 8 CH* Active loop through outputs: 1 ~ 4 CH / 1 ~ 8 CH* Auto termination loop through outputs: 5 ~ 16 CH / 9 ~ 16 CH* * With WV-PB4164 control board.
	Video Outputs		Monitor 1: 1.0 V [p-p] / 75 Ω NTSC composite video signal (BNC) Monitor 2: RGB output (15 pin D-sub)	Monitor 1: 1.0 V [p-p] / 75 Ω PAL composite video signal (BNC) Monitor 2: RGB output (15 pin D-sub)
	Audio Inputs		16x ~10 dBV, 51 KΩ (CH 1 ~ 6: RCA, CH 7 ~ 16: 25 pin D-sub), AUX (Mic): -52 dB, 2.2 KΩ (RCA)	
	Audio Output		1x ~10 dBV, 1 KΩ (RCA)	
Audio / Video Format	Video Format	Image Resolution	Field (704 x 240), SIF (352 x 240), Independent for each camera	Field (704 x 288), SIF (352 x 288), Independent for each camera
	(Recording and NW)	Video Compression and Color Mode	MPEG-4: Super Fine (SF), Fine (FQ), Normal (NQ), Extended (EX), Independent for each camera 4 : 1 : 1	
	Audio Compression Method		ADPCM 8 Kbps, 8 Bit	
	Recording Mode		Manual (Power ON start available), Alarm, Timer (schedule)	
Recording	Timer (Schedule) REC Mode		One program, 2 time zone / day, Independent time zone setup for each day of the week or daily.	
	Frame Rate / Camera		Full / 1/2F / 1/4F / 1/8F / 1/16F, Independent for each camera	
	Frame Rate Total		480 ips	400 ips
	Pre-alarm Recording		Max. 5 sec.	
Main Unit Functions	REC / Playback Control		REC, PLAY, Pause, Stop, Fast Rev Play (6 steps), Fast Fwd Play (7 steps), Next record, Prev Record, Step Fwd, Step Back, (Made by 7 buttons)	
	Search Mode		Search criteria: Time date, Record type, Camera number	
	Display Mode		Live: 4 / 6 / 9 / 16 split screen display, Spot sequence, Quad sequence, Dwell time 5 ~ 30 sec., Play back: Spot	
	Camera Title		Alpha numeric, Up to 10 Characters	
	Clock Display		OSD, Image embedded, 12H / 24H, Date: 5 formats	
	Time Synchronization		Terminal (Slave), NTP (Client)	
	Summer Time		User definable (Menu setup required)	
	VMD		Mask area: 24 x 20, Sensitivity: 01 ~ 99	
	Video Loss Detection		Supported (Sync Level)	
	Copy to External Media		WJ-RT416, WJ-RT416K: CD-R, DVD-R, DVD+R, USB memory (FAT32), USB HDD (FAT32) via COPY interface (Specified model only), Viewer software can be included. WJ-RT416V, WJ-RT416VK: CD-R, DVD-R, DVD+R, USB memory (FAT32), USB HDD (FAT32) via COPY interface (Specified model only) or DVD-R, CD-R via internal DVD drive, Viewer software can be included.	
	User Level / Registrations		3 levels: Manager (4 Users), Operator (8 users), Viewer (20 users), User level-Camera partitioning available. Applicable for Main unit and NW users	
	System Log		Access log (100), Error log (100), Operation log (500)	
	System Setup		OSD Setup menu (English, Japanese, Chinese)	
	Camera Control		Pan/Tilt, Zoom, Focus, Iris, Preset position call (up to 256), Auto mode.	
	REC/Playback Control		PLAY, Pause, Stop, Prev Record, Next Record, Step Fwd, Play Speed	
	Search Mode		Search criteria: Time date, Record type, Camera number	
	Display Mode		1 / 4 / 6 / 9 / 16 split screen display (Live/Playback)	
Browser GUI*	Image Download		Supported	
	Camera Title		*Cam1" to "Cam16" (fixed) on the browser	
	Clock Display		On the browser. Format depends on the PC time/date format.	
	GUI Language		English, Chinese, Japanese	
Alarm	Supported OS		Microsoft® Windows® XP Home SP2, Microsoft® Windows® XP Professional SP2 The language of the OS must be same as selected GUI language.	
	Supported Browser		Microsoft® Internet Explorer® 6.0 SP2	
	Alarm Source		16x Terminal inputs, 16x Camera alarms, PSData	
	Alarm Action		Alarm recording, e-mail notification, Alarm message, Camera spot with positioning, Terminal output, Buzzer, LED. Panasonic Alarm Protocol	
Network	Alarm Control		Reset	
	Alarm Log		9,990	
	Network Interface		10Base-T / 100Base-TX (RJ-45)	
	Maximum Bandwidth		Apporox. 24 Mbps (Data download at Non-recording status)	
External IF	Supported Protocol		TCP/IP, UDP/IP, SMTP, POP3, DHCP, DNS, NTP	
	No. of Simultaneous Video Streams		Live full rate: Up to 4, Live I frame only: Up to 16, Playback: Up to 4 (live will be I frame only), Simultaneous Live I frame and Playback is possible.	
	Security Method		User authentication, Alteration detection with the viewer software	
	Alarm / Control Connector		Alarm 16x Terminal inputs (25 pin D-sub, Make contact), 4x Alarm outputs (25 pin D-sub, Relay, N.O. / N.C) Control Time adjust input Error / Warning HDD error output, Error output	
HDD / DVD	DATA Interface		1x RS-485 (RJ-11) PSData compatible for control from WV-CU650, WV-CU950 or Matrix switcher.	
	RS-485 Camera Interface		1x RS-485 (RJ-11), 4wire, full duplex, for 1 ~ 16 CH	
	Copy Interface		High speed serial interface (USB TypeA connector front / rear)	
	HDD		WJ-RT416, WJ-RT416V: 1x 3.5-type 250 GB HDD, WJ-RT416K: Without HDD, Up to 6x 500 GB HDDs can be installed, WJ-RT416VK: Without HDD, Up to 5x 500 GB HDDs can be installed.	
General Specifications	DVD		WJ-RT416V, WJ-RT416VK: 1x CD/DVD drive supporting DVD-R/CD-R burning	
	Safety / EMC Standard		UL (6500 Edition2), FCC (Part15 ClassA), C-UL (E60065), DOC (ICES003 ClassA)	CE (EN60065, EN55022, EN55024, ClassB), GOST (R 51558)**.
	Power Source		120 V AC, 60 Hz	220 ~ 240 V AC, 50 Hz
	Power Consumption		WJ-RT416, WJ-RT416K: 110 W WJ-RT416V, WJ-RT416VK: 120 W	
	Ambient Operating Temperature		+5 °C ~ +45 °C (41 °F ~ 113 °F)	
	Ambient Operating Humidity		WJ-RT416, WJ-RT416K: 5 % ~ 90 % (without condensation) WJ-RT416V, WJ-RT416VK: 10 % ~ 80 % (without condensation)	
	Dimensions		430 mm (W) x 88 mm (H) x 459 mm (D) (16-15/16"(W) x 3-1/2" (H) x 18-1/16" (D)) (excluding rubber feet and projections)	
	Weight		WJ-RT416, WJ-RT416V: 12 kg (26.49 lbs.) WJ-RT416K, WJ-RT416VK: 11 kg (24.28 lbs.)	

TV System		NTSC	PAL
Functions with System Controller	Camera Control	Pan/Tilt, Zoom, Focus, Iris, Preset position call and program (up to 256), Auto mode, Setup menu.	
	REC / Playback Control	REC, PLAY, Pause, Stop, Fast Rev Play (6 steps), Fast Fwd Play (7 steps), Next record, Prev Record, Step Fwd, Step Back	
Monitoring Software	Number of Recorder Registration	Unlimited	
	Camera Control	Pan/Tilt, Zoom, Focus, Iris, Preset position call (up to 256), Auto mode	
	Recorder Control	REC, PLAY, Pause, Stop, Prev Record, Next Record, Next Image, Play Speed, Frame play, Alarm reset	
	Search Mode	Search criteria: Time date, Record type, Camera number	
	Display Mode	1 / 4 / 6 / 9 / 16 split screen display (Live / Playback)	
	Favorite Display	10 Favorites, Multiple recorders can be mixed.	
	Image Download	Supported	
	Camera Title	Up to 12 alphanumeric characters	
	Recorder Title	Up to 12 alphanumeric characters	
	Clock Display	OSD, Image embedded, 12H / 24H, Date: 5 formats	
Viewer Software	Audio	AUX: Bi-directional between client PC and Recorder. Audio input 1 ~ 16: Single directional from recorder to PC (Live and Playback)	
	Local Recording	Supported	
	System Setup	GUI Setup menu, Setup data Download / Upload supported.	
	GUI Language	English, Chinese, Japanese	
	Required PC	CPU: Intel® Pentium® 4 3.0 GHz or faster, RAM: 512 MB or more, VRAM: 256 MB or more, Overlay compatible, Microsoft® DirectX® 8.0a or later	
	Supported OS	Microsoft® Windows® XP Home SP2, Microsoft® Windows® XP Professional SP2 The language of the OS must be same as selected GUI language.	
	Playback Control	Play, Pause, FF, Prev Record, Next Record, Next image	
	File Export	Downloaded image data can be converted to Microsoft® Windows® Media-formatted file	
	Additional Functions	Alteration detection, Save as Bitmap	
	Supported OS	Microsoft® Windows® XP Home SP2, Microsoft® Windows® XP Professional SP2, English	

* Available from version 1.4 ** WJ-RT416, WJ-RT416K only

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/menu are simulated.
 - Weights and dimensions are approximate.
 - Specifications are subject to change without notice.
 - These products may be subject to export control regulations.
 - Product pictures shown in this catalog are all NTSC models.

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