

**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.

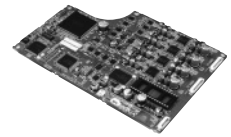
### Standard Accessories

- 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)

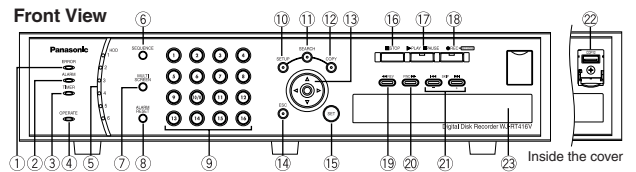
- The followings are for installation.
- Power cable (for NTSC model) ..... 1 pc.
  - Power cable (for PAL model) ..... 2 pcs.
  - HDD mounting screws, sleeves, dampers
  - Rack mounting brackets ..... 2 pcs.
  - Fixing screw for rack mounting brackets ... 8 pcs.

### Optional Accessory

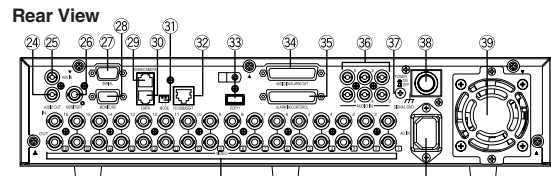
4CH Camera Control Board  
**WV-PB4164**



### 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              | ⑳ Fast Forward Playback Button |
| ⑤ HDD Access Indicators | ⑬ Arrow Button             | ㉑ Skip Buttons                 |
| ⑥ Sequence Button       | ⑭ Escape Button            | ㉒ Copy 2 Port                  |
| ⑦ Multi-screen Button   | ⑮ Set Button               | ㉓ 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/       | ③⑨ Cooling Fan             |
| ②⑧ Monitor 2 Terminal     | Alarm Output Terminal | ④① Power Cord Inlet        |
| ②⑨ RS-485 Port            | ③⑤ Alarm Input/       | ④② Video Input Connectors/ |
| ②⑩ Data Port              | Control Terminal      | Video Output Connectors    |

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

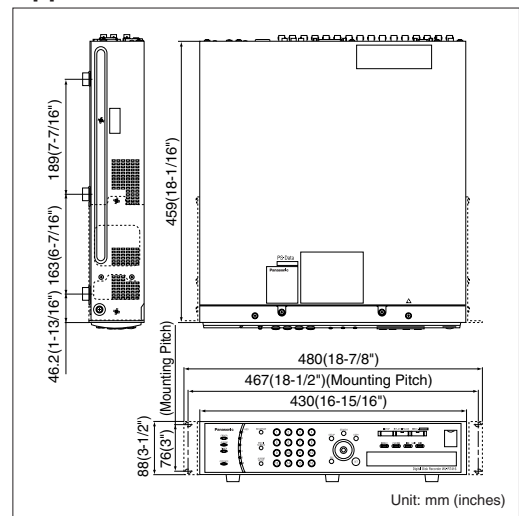
## Specifications

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	Field (704 x 240), SIF (352 x 240), Independent for each camera	Field (704 x 288), SIF (352 x 288), Independent for each camera	
	Image Resolution (Recording and NW)	MPEG-4: Super Fine (SF), Fine (FQ), Normal (NQ), Extended (EX), Independent for each camera Color Mode 4 : 1 : 1		
Recording	Audio Compression Method	ADPCM 8 Kbps, 8 Bit		
	Recording Mode	Manual (Power ON start available), Alarm, Timer (schedule)		
	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)		
	Browser GUI*	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)		
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	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		
	Alarm Control	Reset		
	Alarm Log	9,990		
	Network	Network Interface	10Base-T / 100Base-TX (RJ-45)	
Maximum Bandwidth		Approx. 24 Mbps (Data download at Non-recording status)		
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		
External IF	Alarm / Control	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		
	Connector	Error / Warning: HDD error output, Error output		
	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		
HDD / DVD	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	
Supported OS	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.
- Intel and Pentium are registered trademarks of Intel Corporation.

### 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.

DISTRIBUTED BY:

# Panasonic®

Printed in Japan  
(2A-009BA)