Panasonic
ideas for life

16ch Real-time H.264
Digital Disk Recorder
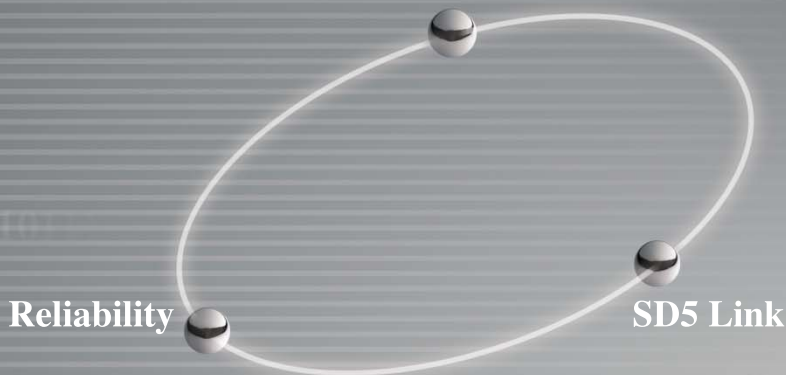# WJ-HD716

16ch H.264 Digital Disk Recorder
WJ-HD616

Preliminary

High Picture Quality

Reliability

SD5 Link

Digital Disk Recorder
WJ-HD716/616

Excellent Picture Quality

H.264 High Profile

UniPhier® Panasonic Platform LSI

UniPhier® is the unified Panasonic platform LSI for versatile applications with high quality AV, real time processing and low power consumption.

H.264 High profile

H.264 Baseline profile

WAVELET

MPEG-4

JPEG

UniPhier

By utilizing the high capability of UniPhier®, Panasonic has realized both high picture quality and high compression by H.264 High Profile compression. This reduces bandwidth and storage size by up to 40% compared with MPEG-4 compression.

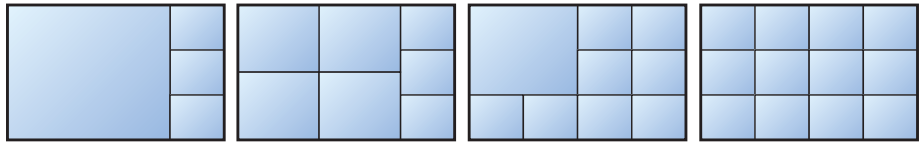## Full HD 1080i with multidisplay capability

FULL HD

Dual Full HD 1080i (1,920 x 1,080) display output for both Live and Live/Playback is possible.
Real-time images of up to 960 ips (NTSC) / 800 ips (PAL) at 16ch on 2 monitors can be displayed.
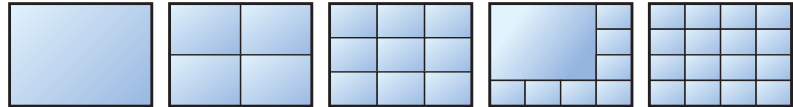
Live/Playback   **Live**

Multi Screen Display Layout (16 : 9)

Dual Full HD output

Multi Screen Display Layout (4 : 3)

* Dual composite output (BNC) also available

Real-time Recording

WJ-HD716

Field   : 480/400 ips = 16ch Real-time recording (NTSC/PAL)
Frame : 240/200 ips = 8ch Real-time recording (NTSC/PAL)

* WJ-HD616 features Field 240/200 ips and Frame 120/100 ips (NTSC/PAL)
  Up to 15 ips/ch (Field), 7.5 ips/ch (Frame) : NTSC
  Up to 12.5 ips/ch (Field), 6.25 ips/ch (Frame) : PAL

Intelligent System with SD5 Camera

Disk Saving and Easy Search with
i-VMD (intelligent-Video Motion Detection) alarm of "SD5" camera

SD5 Link
Super Dynamic

WV-CP500 Series

Alarm

Via Coax Cable

Alarm

WV-CW500 Series

WJ-HD716/616

i-VMD alarm trigger recording
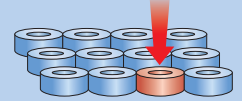with alarm event tag

Benefit 1 Disk Saving
Efficient recording contribute to
TCO (Total Cost of Ownership) reduction

Benefit 2 Easy Search
By multiple alarm events
● Object Removal/Left Behind
● Intruder Detection
● Duration, Direction
● Scene Change
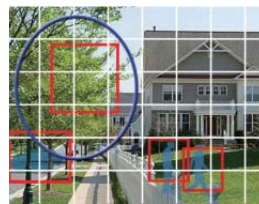
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i-VMD (intelligent-Video Motion Detection)

This amazing new intelligence contributes to Superior Image of *Super Dynamic 5*. Plus, it offers efficient and reliable surveillance, preventing loss of vital scenes, and providing easy search and disk saving for recorder system.

Video Motion Detection

High resolution detection area and advanced motion analyze algorithm enables accurate motion detection. Stay detection and direction detection are also possible.
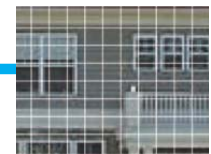
Conventional

Back ground movements such as tree, rain, shadow, waves are wrongly detected.

8 x 6 detection setup areas

i-VMD

i-VMD learns back ground movements and only subjective movement can be detected.

320 x 240 detection resolution

Object Detection

Left Behind

Abandoned object can be detected and indicated with the red frame to alert a malicious attempt.

A person is leaving a bag behind.

The abandoned bag is detected and indicated by red frame.

Removal

Removed object in the specified area can be detected and indicated with the red frame to alert a theft.

A person is approaching to the PCs.

The stolen PC is detected and indicated by red frame.

Easy Operation

Easy GUI
• Basic concept of WJ-HD316A maintained
• User interface becomes easier than WJ-HD316A
  - "From Left to Right" easy-to-understand i-Pro like design

Mouse Operation becomes available for Operation and Setup
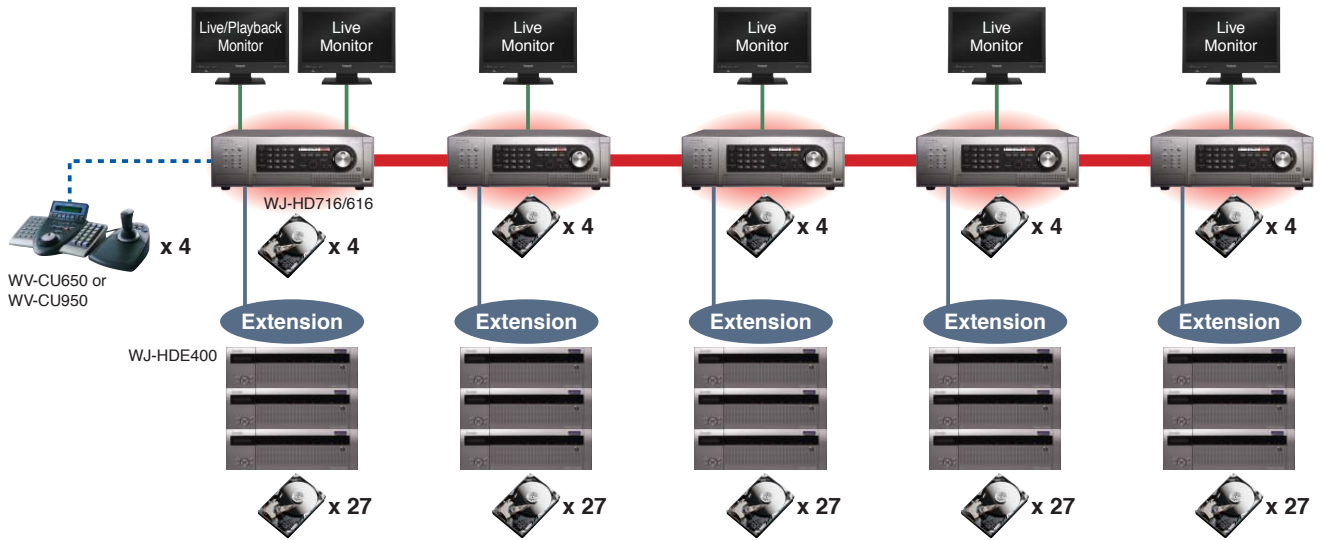• Mouse port is featured in front panel

WJ-HD716/616

Mouse operation enable easy operation

Mouse

Monitor

SAMPLE

System Scalability and Flexibility

Flexible system design is possible in accordance with various applications.
Also, it can smoothly be migrated from 16ch Digital Disk Recorder, WJ-HD316A.
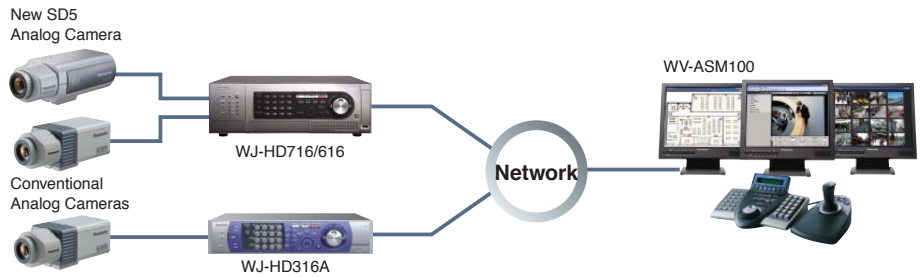
High Scalability with Cascade and HDD Extension

- Internal 4 HDDs (accessible from front side)
- High scalability with 5 main units ➤ up to 80 camera inputs
- High scalability with main unit x 4 HDDs + 3 extension units x 9 HDDs ➤ up to 155 HDDs total
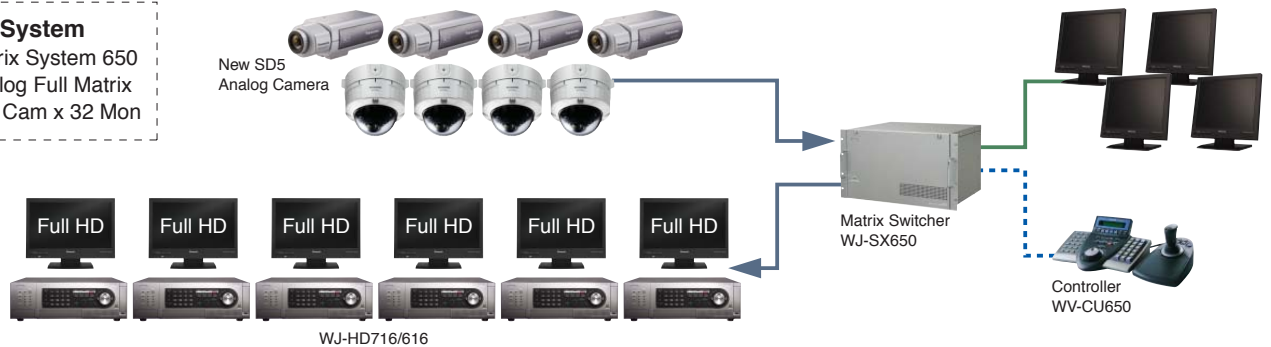- Up to 4 Controllers (WV-CU650, WV-CU950) can be connected (PS·Data)

Migration with WJ-HD316A

- WJ-HD316A can be easily replaced by WJ-HD716/616
- WJ-HD316A and WJ-HD716/616 can be used in the same multi-site system

Integration with Matrix System 650

SX System
Matrix System 650
Analog Full Matrix
256 Cam x 32 Mon

Outstanding Reliability

- **Embedded Real-time Operating System**
- **HDD Redundancy with RAID 5/6**

Network Capability

Basic performances have greatly improved and QVGA Live Output is possible even under narrow bandwidth while being independent from the setting of recording.

It can also be integrated with i-Pro equipments or 3rd party system with PS-API*.
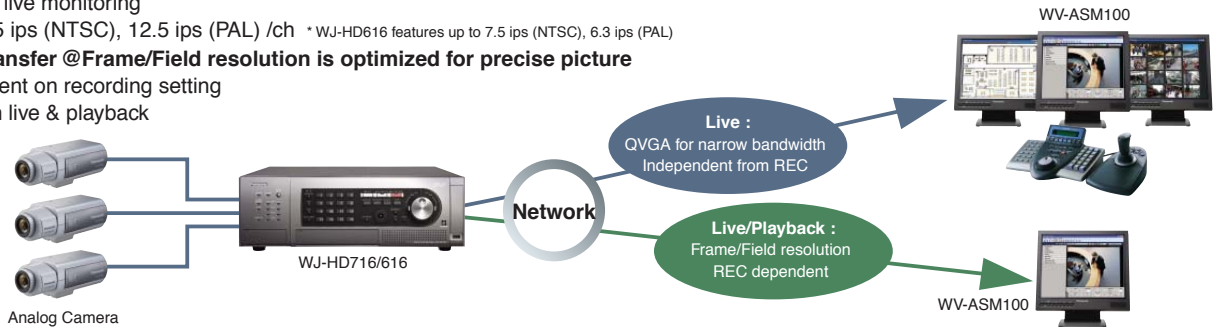
"QVGA" and "Frame/Field" Dual Resolutions for Network Stream

Image transfer @QVGA resolution is optimized for narrow network bandwidth
- Independent from recording
- Only for live monitoring
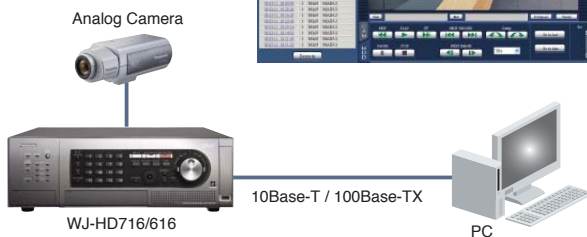- Up to 15 ips (NTSC), 12.5 ips (PAL) /ch * WJ-HD616 features up to 7.5 ips (NTSC), 6.3 ips (PAL)

Image transfer @Frame/Field resolution is optimized for precise picture
- Dependent on recording setting
- For both live & playback

WV-ASM100

Live :
QVGA for narrow bandwidth
Independent from REC

Live/Playback :
Frame/Field resolution
REC dependent

Network

WJ-HD716/616

Analog Camera

WV-ASM100

With Internet Explorer®

- Monitor Live Images
- Start/Stop REC manually
- Search and Play Recording Event
- Setup etc

Analog Camera

SAMPLE

WJ-HD716/616

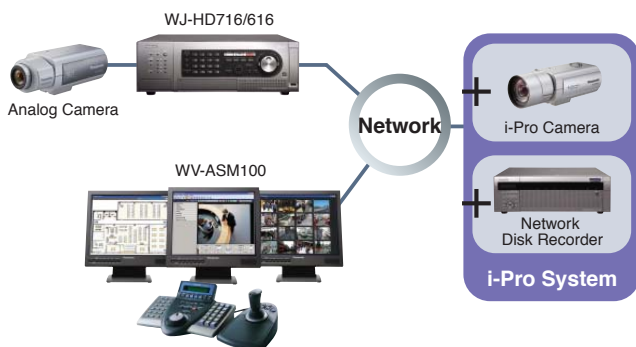10Base-T / 100Base-TX

PC

WV-ASM100 i-Pro Management Software

- Monitor Live Images
- Start/Stop REC manually
- Search and Play Recording Event
- Save Recorded Images
- Print etc

Analog Camera

WV-ASM100

WJ-HD716/616

10Base-T / 100Base-TX

Hybrid System with WV-ASM100 & i-Pro Products
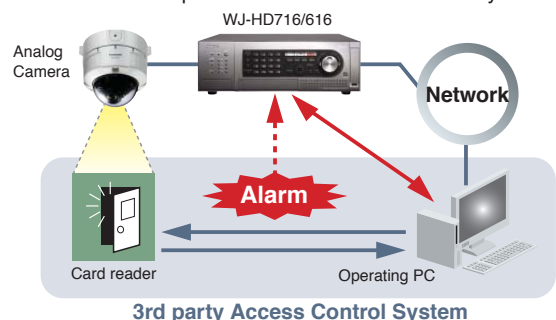
Browsing from WV-ASM100
- Both live image and playback image from WJ-HD716/616 can be browsed at WV-ASM100
- i-Pro system can be added to the system and also can be browsed at WV-ASM100

WJ-HD716/616

Analog Camera

Network

WV-ASM100

i-Pro Camera

Network Disk Recorder

i-Pro System

System Integration with PS-API*

Example: Integration with Access Control System
- WJ-HD716/616 start recording triggered by the alarm sent from card reader
- Both live image and playback image from WJ-HD716/616 can be browsed from Operation PC of Access Control System

WJ-HD716/616

Analog Camera

Network

Alarm

Card reader

Operating PC

3rd party Access Control System

* PS-API is the SDK (Software Development Kit) which is provided to help to develop the application to control Panasonic video monitoring security products (Network cameras, Network Disk Recorders, Digital Disk Recorders, Network Interface Units) by the unified method and to get video image.

Easy Installation and Maintenance

- **Front accessible 4 HDD slots for easier maintenance without removing unit from the mount rack**
- **Front maintenance Ethernet port for easier maintenance without entering customer network**

End to End Solution

To provide the highest picture quality for the best identification through total Panasonic system approach

SD5 Family
SuperDynamic

Capturing

WV-CP500 Series
SD5 *SuperDynamic*

WV-CW500 Series
SD5 *SuperDynamic*

- Intelligence (i-VMD)
- Superior Image
- Surveillance Assist

Storage

WJ-HD716/616

UniPhier
SD5 Link *SuperDynamic*

- High Picture Quality
- Reliability
- SD5 Link

Viewing

New Wide LCD Monitors
WV-LW2200   **WV-LW1900**

Full HD (1,920 x 1,080)   W-XGA (1,366 x 768)

Specifications

TV System		NTSC	PAL
Audio / Video IF	Video Inputs	WJ-HD716: 16x 1.0 V [p-p] / 75 Ω composite video inputs (BNC) 16x multiplexed control data (1 ~ 16 CH) WJ-HD616: 16x 1.0 V [p-p] / 75 Ω composite video inputs (BNC) 8x multiplexed control data (1 ~ 8 CH)	
	Video Outputs	16x 1.0 V [p-p] / 75 Ω composite video signal (BNC), active loop through outputs Monitor outputs: 2x HD, 2x 1.0 V [p-p] / 75 Ω composite video signal (BNC), Video output (front RCA): 1x 1.0 V [p-p] / 75 Ω composite video signal	
	Audio Inputs	4x –10 dBv, 10 KΩ (RCA) (1 ~ 4 CH)	
	Audio Outputs	Rear: 1x –10 dBv, 600 Ω Front: 1x –10 dBv, 600 Ω	
Audio / Video Format	Recording	H.264 (High profile) Frame (720 x 480 pixels) Field (720 x 240 pixels)	H.264 (High profile) Frame (720 x 576 pixels) Field (720 x 288 pixels)
	Network	H.264 (High profile) QVGA (320 x 240 pixels): Recording independent Field/Frame: Recording dependent	
Recording	Frame Rate Total	WJ-HD716: 480 ips at Field, 240 ips at Frame WJ-HD616: 240 ips at Field, 120 ips at Frame	WJ-HD716: 400 ips at Field, 200 ips at Frame WJ-HD616: 200 ips at Field, 100 ips at Frame
Main Unit Functions	Camera Control	Pan/Tilt, Zoom, Focus, Iris, Preset position call (up to 256), Auto mode	
	Multiscreen Mode	4 / 7 / 9 / 12 / 16 split screen display	
	Copy to External Media	DVD±R, SD (SDHC)	
Browser GUI	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)	

TV System		NTSC	PAL
Network	Network Interface	10Base-T / 100Base-TX (RJ-45) x1	
	Maintenance Interface	10Base-T / 100Base-TX (RJ-45) x1	
	No. of Client at a Time	8	
	User Registration	Up to 32 users	
Alarm / Event	Alarm Source	16x Terminal inputs, 16x Camera alarm, PS-Data	
External IF	Alarm	16x Alarm inputs (25 pin D-sub, Make contact, N.O./N.C.) 16x Alarm outputs (25 pin D-sub, Open collector, N.O./N.C) 1x Alarm reset input, 1x Alarm suspend input	
	EXT Storage	3x High speed serial interface. Only for WJ-HDE400 Extension Unit.	
	Recording	Emergency recording input, External recording mode input	
	Time Adjustment	Time adjustment input/output	
	Controls	Sequence switching signal input. Power outage detection output, Shut down ready output	
	PS-Data (RS-485) Controller	2x RS-485 (RJ-11) PS-Data compatible for control from WV-CU650 or Matrix Switcher WJ-SX650	
	RS-485 Camera Interface	2x RS-485 (RJ-11), 2/4wire, half duplex, for 1 ~ 16 CH	
	Mouse	USB Mouse port (Front) x1	
	SD Slot	SD/SDHC Memory Card Slot (Front) x1	
HDD	Internal HDD	Up to 4x HDDs	
	Maximum HDD	31 HDDs (with 3x WJ-HDE400 extension units, 9x HDDs installed in each unit)	
	RAID	RAID5/RAID6 supported (with WJ-HDB601)	
General Specifications	Power Source	120 V AC, 60 Hz	220 ~ 240 V AC, 50 Hz
	Ambient Operating Temperature	+5 °C ~ +45 °C (41 °F ~ 113 °F)	
	Ambient Operating Humidity	Less than 85 % (without condensation)	
	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)	

Optional Accessories

Hard Disk Extension Unit
WJ-HDE400

Super Dynamic 5 Day/Night Camera
WV-CP500 Series
Lens: optional

Super Dynamic 5 Vandal Resistant Fixed Dome Camera
WV-CW500 Series

RS-485 System Controller with 3D-Joystick & Jog/Shuttle
WV-CU650

i-Pro Management Software
WV-ASM100

Matrix Switcher
WJ-SX650

HDD Canister
WJ-HDU40K

RAID Board
WJ-HDB601

Built-in DVD Drive
WJ-HDB611

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