

**Panasonic**  
ideas for life

Weather Proof  
Super Dynamic III  
Color Dome Camera  
**WV-CW964**



SEES REALITY & THINKS ACTIVELY  
**New Advances in 24-hour Outdoor Surveillance**



# Ready for the Outdoors: All-in-One Super Dynamic III Dome Camera

WV-CW964

This new **Super Dynamic III** color dome camera integrates a weatherproof housing, 360° high-speed pan and tilt base, and 30x optical zoom lens. Through exclusive Panasonic high performance features like Pixel Based 128x Dynamic Range, unprecedented image realism is achieved. Moreover, new intelligent functions, including Auto Image Stabilizer, Scene Change Detection, and Auto Tracking, deliver outstanding reliability in outdoor surveillance. The WV-CW964 camera will play a dynamic role in a host of security applications; including parking lots, amusement parks, shopping malls, airports, train stations, expressways, city streets, plazas.

## For All-Weather Outdoor Use

IP66  
standard

### Rain Resistant

The WV-CW964 camera can be installed under eaves, on external walls or rooftops, and in other outdoor locations. It's IP66 (IEC60529 standard) approved.



### Ready for Temperature Changes

The housings built-in fan and heater ensure an operating temperature range of -40°C to +50°C (-40°F to +122°F).



### Shielded against the Sun

Built-in sun shield permits camera locations in direct sunlight.

## Super Dynamic III Function

SDIII  
Super Dynamic

### Powerful Pixel Based 128x Dynamic Range

Area-free natural contrast image correction is pixel based to ensure accurate reproduction, whatever the subject or location. The 128x Dynamic Range, with both 1/8,000 sec. and 1/60 sec. shutter speeds, makes this the ideal surveillance solution for ATMs, entrances, and other areas where contrast can lighting can vary.



Conventional

Image may be marred by black spots or halos, depending on subject position.



Super Dynamic III

Pixel based 128x dynamic range reproduces every subject.

### 540-line Horizontal Resolution Captures the Details

Optimized filtering and broadband digital signal processing developed for the **Super Dynamic III** DSP deliver the finest details, with 540 lines of horizontal resolution in color (typical) and 570 lines in B/W.



### Enhanced Processing for Natural Color

To deliver natural color in its full range, new digital color circuitry in the DSP processes color in finer detail, for reproduction of pale or dimly lit colors.



## 24-hour Surveillance



### Automatic Switching to B/W for Night Surveillance

For optimal surveillance, day and night, the camera automatically switches to B/W mode, for greater sensitivity, when darkness falls. In daylight, it automatically switches to color mode. Mode selection can also be set to manual operation.

Color mode for daylight



B/W mode for low-light conditions



Day/Night switching

### Minimum Illumination of 0.04 lux (0.004 fc) in B/W Mode

Capture a clear surveillance image even in poor light. Minimum illumination needed is only 0.5 lux (0.05 fc) in color and 0.04 lux (0.004 fc) in B/W mode, with pix sens up off, sens up off (AGC high).

### Auto Focus

WV-CW964 cameras are all equipped with Auto Focus, ensuring that what you see is always in sharp focus.

## Innovative Features Set a New Standard in Reliability

### 30x Optical Zoom (300x with digital zoom)

The standard 30x optical zoom lens on the WV-CW964 and 10x digital zoom provide a total of 300x zoom. This powerful zoom capability allows you to zoom in on distant subjects and identify them correctly.



Up to  
300x  
zoom

### 0.065°/sec. Super Fine Pan Control

Our proprietary control chip, brushless DC motor, and microprocessor with optimized speed profile give you super fine 0.065°/sec. pan control. Combined with high-performance zoom, it permits smooth tracking and captures moving subjects.



Conventional

WV-CW964

Conventional

### Streak-free Adaptive Digital Noise Reduction

Movement-generated streaking is corrected with 2D DNR processing for moving subjects and 3D DNR for the background. Now capture headlights of moving cars clearly, unmarred by the streaking previous 3D DNR subject-image processing generated.



Conventional

WV-CW964

### Auto Image Stabilizer Removes Blurring

Automatic image stabilization prevents blurring when high winds or vibration from aircraft, trains, or trucks affect cameras.



Conventional

WV-CW964

### Scene Change Detection Pinpoints Interference

For example, if the camera has been tampered with by a manual change in its angle, removal of the lens, defocusing, or blocking the lens with cloth or paint, this feature detects the interference and sends an alarm.



Sprayed

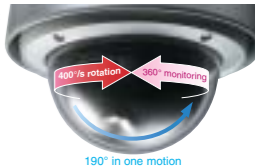
Defocused

### Auto Tracking

Using the auto tracking feature, the camera follows the largest movement in the image, automatically. The camera will pan and tilt to keep the subject in the center of the image.

### High-speed Panning at 400°/sec

Quickly capture a subject, thanks to a maximum 400°/sec. panning speed. The surveillance range is 360° horizontally (endless panning) and 190° vertically.



### Maximum 256 Preset Positions

Press a key on the controller to select preset positions.

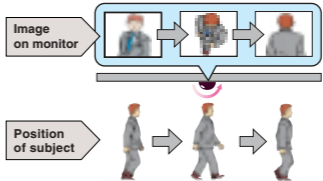
## Handy Features for More Efficient Surveillance

### Image Hold Eliminates Screen Blurring

The Image Hold function stores and displays the image immediately before the position selection until selection of preset positions is complete. This function eliminates the screen blurring that occurs during panning with conventional cameras, for clear, well-defined images during monitoring.

### Digital Flip

When the camera pans 135° vertically, the top and bottom of the image can be digitally reversed. A subject passing directly under the camera can be continuously tracked as the camera continues its 180° pan.



### Privacy Zone Masking

Mask any portion of the surveillance image on screen to prevent privacy infringement. (Gray and mosaic masking supported.)



### Motion Detector

When movement is detected within the surveillance area, the motion detector sends an alarm to external devices. Connection to a VCR or DVR recording system is also possible.



### Patrol Learn Stores/Reproduces Manual Operations

Perform a camera operation such as panning or zooming once, then, with Patrol Learn, reproduce it at the flip of a switch.

### Text Display of Camera IDs

Show an identifying name for each camera on the monitor, up to 16 characters and symbols.

### Alarm Inputs/Outputs for External Device Control

With 4 alarm inputs and 2 alarm outputs on the output connector, each alarm signal can operate under preset positions and zooms. Alarm signals can also control DVR, VCR, or other external recording devices.

### Ready to Use with One Coaxial Cable — or RS-485

Transmits video image signals, control data, synchronization signals (VD2), and alarm signals over one coaxial cable up to 900 m (3,000 ft) long. The system also supports RS-485 data communication for use over extended distances and with expanded services.

### Multiple Setup Languages

System set up in eight languages: English, German, French, Spanish, Italian, Russian, Chinese, and Japanese.

The above photographs were taken for the purpose of this explanation; actual performance and images may vary depending on environmental or other conditions.

# SPECIFICATIONS

Model No.	WV-CW964
<b>General</b>	
Power Requirements	24 V AC, 60 Hz
Power Consumption	17 W (for camera), 62 W (for heater)
Pick-up Device	1/4-type (1/4") interline transfer CCD
Effective Pixels	768 (H) x 494 (V)
Scanning Area	3.65 mm (H) x 2.74 mm (V)
Signal	NTSC
Synchronization	Internal (INT), multiplexed vertical drive (VD2), line-lock (LL)
Scanning	2:1 interlace
Scanning Frequencies	Horizontal: 15.734 kHz, Vertical: 59.94 Hz
Video Output	VBS: 1.0 V [p-p] / 75 Ω (BNC plug)
Resolution (Center)	Horizontal: 480 TV lines minimum (color NORMAL mode) 540 TV lines typ., 520 TV lines minimum (color HIGH mode) 570 TV lines minimum (black and white) Vertical: 350 TV lines minimum (Center)
Minimum Illumination	0.5 lux (0.05 fc) (color mode) 0.04 lux (0.004 fc) (black and white mode) SENS UP: OFF; AGC: HIGH
Dynamic Range	52 dB typ. (SUPER-D III : ON)
S/N Ratio	50 dB minimum (AGC: OFF)
Ambient Operating Temperature	-40 °C ~ +50 °C (-40 °F ~ +122 °F)
Ambient Operating Humidity	90 % max. (non-condensation) *1
Water Resistance	IP66 protection from water jets from a nozzle (IEC60529/JIS C 0920)
Dimensions	ø239 mm (D) x 395.5 mm (H) (ø9-7/16" (D) x 15-9/16" (H))
Weight	approx. 4.7 kg (10.4 lbs.)
Finish	Camera: Die cast aluminum, baked on coating (Paint color: Fine silver) Sun shield: ASA resin, coated (Paint color: Fine silver) Dome: Clear polycarbonate resin

\*1 When power is on continuously, the camera's interior temperature is -10 °C (14 °F) or higher

<b>Pan and Tilt</b>	
Panning Range	360 ° endless
Panning Modes	Manual, auto, manual position, sequential position
Panning Speed <sup>2</sup>	Manual: approx. 0.065 °/s ~ 120 °/s 8 steps, 16 steps, 64 steps Preset: approx. 400 °/s
Tilting Range	-5 ° ~ 185 ° (horizontal - vertical - horizontal) (According to the TILT ANGLE)
Tilting Modes	Manual, manual position, sequential position
Tilting Speed <sup>2</sup>	Manual: approx. 0.065 °/s ~ 120 °/s 8 steps, 16 steps, 64 steps Preset: approx. 400 °/s

\*2 Actual speed depends on type of controller being used.

<b>Lens</b>	
Zoom Ratio	30x (approx. 300x with digital zoom)
Focal Length	3.8 mm ~ 114 mm
Maximum Aperture Ratio	1:1.4 (WIDE) ~ 3.6 (TELE)
Object Distance	1.5 m
Iris Range	F1.4 ~ 22, Close
Angular Field of View	Horizontal: 1.8 ° (TELE) ~ 52 ° (WIDE) Vertical: 1.4 ° (TELE) ~ 40 ° (WIDE)

<b>Main Functions</b>	
Controller Interface	Coaxial Multiplex System, RS485
Control Functions	Pan and tilt, zoom and focus, 256 preset positions, home position, patrol
AGC	ON (LOW), ON (MID), ON (HIGH), OFF
Title(ID)	ON, OFF (Preset ID, camera ID, area title: 16 alphanumeric characters)
Zoom Speed	approx. 6.0 seconds (TELE ~ WIDE) in manual mode
Zoom Limit	1x ~ 300x (Over 30x is digital zoom)
Password Lock	All menus
Auto Focus	MANUAL/AUTO (PAN, TILT, ZOOM linked)
Iris	ALC (Adjustable OPEN/CLOSE output target level)/MANUAL
Shutter	OFF (1/60), AUTO, 1/100, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000
Electronic Sensitivity Enhancement	32x max. (AUTO or FIX)
Auto Mode	OFF, SEQ, SORT, AUTO PAN, PATROL, AUTO TRACK
Auto Pan Key	SEQ, SORT, AUTO PAN, PATROL, AUTO TRACK
Digital Flip	ON/OFF
SUPER-D III	ON/OFF
Motion Detector	OFF/MODE1/MODE2
Alarm Input/Output	4 inputs (ALARM IN 1 ~ ALARM IN 4) 2 outputs (ALARM/AUX1, BW/AUX2)
Black and White Mode Switching	AUTO/ON/OFF
Privacy Zone	ON/OFF (8 zone settings)
Patrol	STOP/PLAY/LEARN
Cleaning	ON/OFF
Image Hold	ON/OFF
Auto Image Stabilizer	ON/OFF
Scene Select Setting	INDOOR (L)/INDOOR (H)/OUTDOOR (L)/OUTDOOR (H)
Language Setting	English, German, French, Italian, Spanish, Russian, Chinese, Japanese

**Important** – Safety Precaution: carefully read the operating instructions and installation manual before using this product.

• 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.

# Panasonic

**Panasonic System Solutions Company**  
Unit Company of Panasonic Corporation of North America

## Security Systems

Website : [www.panasonic.com/security](http://www.panasonic.com/security)

For Customer Support : call **1.877.733.3689**

**Executive Office** : Three Panasonic Way 2H-2, Secaucus, New Jersey 07094  
**Zone Offices**

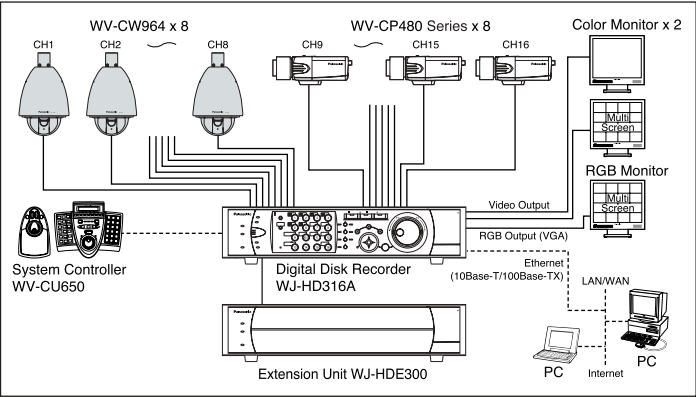
**Eastern** : Three Panasonic Way, Secaucus, New Jersey 07094

**Central** : 1707 N. Randal Road, Elgin, IL 60123

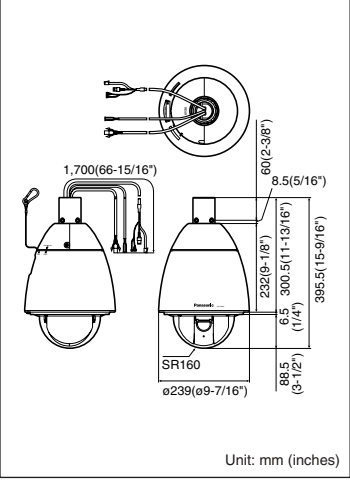
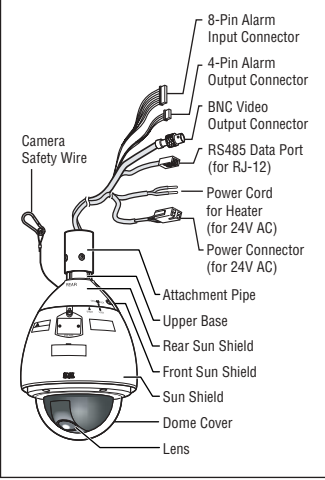
**Southern** : 1225 Northbrook Parkway, Suwanee, GA 30024

**Western** : 6550 Katella Ave., Cypress, CA 90630

# SYSTEM EXAMPLE



# MAJOR OPERATING CONTROLS DIMENSIONS



# OPTIONAL COMPONENTS & ACCESSORIES

<b>DIGITAL DISK RECORDERS</b>	<b>SYSTEM CONTROLLER</b>
<b>WJ-HD316A</b> (16ch) <b>WJ-HD309A</b> (9ch) <b>WJ-HD220</b> (8ch) <b>PS-Data</b>	<b>WV-CU650</b> <b>PS-Data</b>
<b>MATRIX SYSTEM</b>	<b>LCD MONITORS</b>
<b>SYSTEM 650</b>	<b>WV-LC1710</b> 43.2cm(17") <b>WV-LD2000</b> 50.8cm(20") <b>WV-LD1500</b> 38.1cm(15")



## Panasonic Preserving the Environment

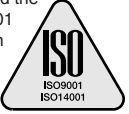
### Lead-free Solder

Panasonic is now phasing out lead solder in all of CCTV products. Lead-free board assembly are identified by the "PbF" identification with silkscreen printing on plates.



### ISO14001 Certification

Besides our R&D Division, Panasonic has achieved the environmental ISO14001 certification for plants in Yokohama, Japan, the Philippines, and in Suzhou, China.



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