Panasonic
ideas for life

Super Dynamic III
Weather Resistant Dome Network Camera
WV-NW960 Series

NTSC **WV-NW964** (24 V AC) PAL **WV-NW960** (220 ~ 240 V AC)
WV-NW964 (24 V AC)

i-pro

SD III
Super Dynamic

MPEG-4/JPEG | **IP66** standard | **30x** OPTICAL ZOOM | day/night IR removable

Weather Resistant Dome Network Camera featuring 30x zoom and *Super Dynamic III*

Key Features

- *Super Dynamic III* technology delivers 128x wider dynamic range compared to conventional cameras.
- High sensitivity with Day/Night function: 0.5 lux (Color) at F1.4 (Wide), 0.04 lux (B/W) at F1.4 (Wide). IR cut filter switches on/off to enhance the sensitivity in B/W mode.
- Adaptive Digital Noise Reduction: Integration of 2D-DNR and 3D-DNR ensures noise reduction in various conditions.
- Electronic sensitivity enhancement: Auto (Up to 32x) / OFF
- 30x zoom lens: 3.8 ~ 114 mm (approx. 300x with digital zoom)
- Pan/Tilt speed of max. 400°/s at preset mode and 0.065°/s super fine control at manual mode
- Auto tracking: The camera automatically pans and tilts to follow a moving subject and keep it in the center of the image.
- VMD (Video Motion Detector) with 4 programmable detection areas and 6 sensitivity levels
- Meta data for VMD is supplied to work with the WJ-ND400 playback VMD function.
- Various I/O terminals: ALARM IN 1 / BW IN, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT
- Alarm sources include Terminal 1 ~ 3, VMD and Panasonic alarm command. Alarm actions include Preset positions 1 ~ 256, PATROL 1 ~ 4, SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Terminal output, Panasonic protocol output and Auto track.
- Auto Image Stabilizer for applications where vibration or wind is a concern
- Camera title display: 16 alphanumerics OSD and 20 alphanumerics on the browser
- Digital Slip-ring Transmission: The high speed digital video signal supplied by the *Super Dynamic III* DSP travels through the compact slip-ring without any DA/AD conversion process preventing image quality loss.
- MPEG-4/JPEG digital signal output at VGA image size with up to 30 ips
- MPEG-4 and JPEG dual stream output for simultaneous real time monitoring and high resolution recording
- Progressive output with motion adaptive interlace/progressive conversion allows every image to be clear even when the object is moving.
- PTZ control can be made on the user-friendly GUI with 16 speeds pan/tilt and new "Drag and Zoom" operation enabling finer control. 256 speeds available for system with WV-CU950 system controller.

- 360° map shot: 8 thumbnail images at 45° intervals make it simple to direct the camera by clicking on a thumbnail.
- Multiscreen: Image from 16 cameras can be displayed in 4 different Quad screens or 16-screen (JPEG only).
- FTP client function enables periodic image data transfer or transfer upon alarm.
- Alarm notification via e-mail
- Full duplex 2-way audio allows interactive communication between camera site and monitoring site.
- Alarm log, Manual REC log, FTP error log saved in the SD memory card is displayed on the browser GUI and can be downloaded to the client PC. Playback or Image data download through the log is also available.
- Internet mode: MPEG-4 images can be transmitted over HTTP protocol.
- Multi-language GUI and setup menu: English, French, Italian, Spanish, German, Russian (PAL) / English, French (NTSC) * Installation required except for English
- SD memory card slot for Manual recording, Alarm recording and Backup upon network failure
- Scheduling function for Alarm / VMD / Access permission, Preset position call and Position refresh
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Built-in fan/heater/sun shield for temperature changes of –40 °C ~ +50 °C (–40 °F ~ +122 °F)

Standard Accessories

- Operating Instructions .... 1 pc.
- CD-ROM .... 1 pc.

The IP setup software, the viewer software and the network operating instructions (PDF) are included on the CD-ROM.

The following items are for installation.

- 8P Alarm Cable .... 1 pc.
- Connector for 24 V AC (only for WV-NW964) .... 1 pc.
- Front/rear sun shield .... 1 set
- Front/rear sun shield mounting screws .... 2 pcs. (*one screw is a spare)
- Waterproof cap .... 3 pcs.
- RJ-45 junction connector .... 1 pc.

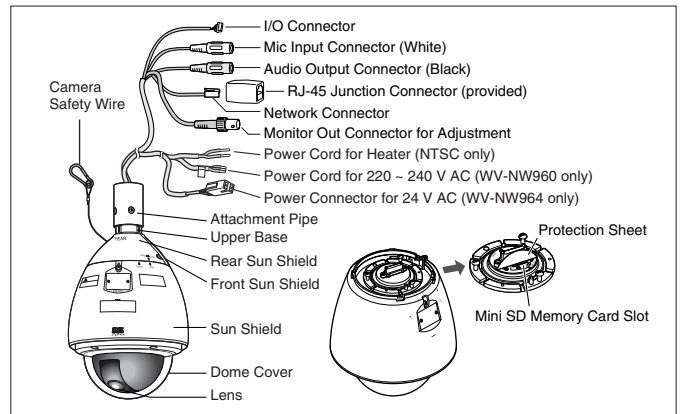## Optional Accessory

Wall Mount Bracket
WV-Q122

This catalog is provided for all over the world.
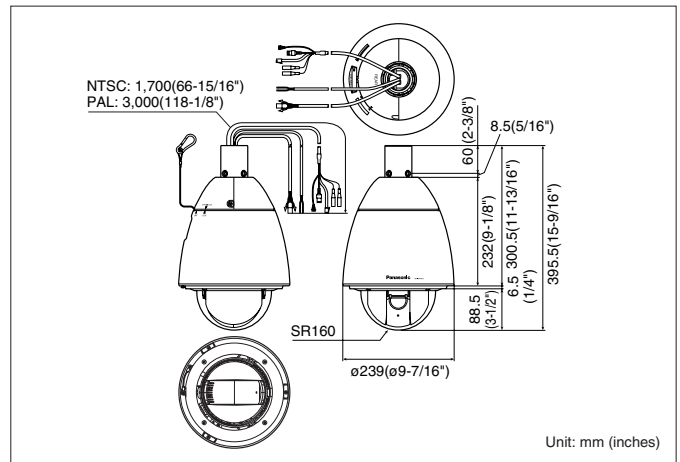Some accessories may not be available in some countries.

Specifications

TV System		NTSC	PAL
Camera	Image Sensor	4.5 mm (1/4 inch) interline transfer CCD	
	Effective Pixels	768 (H) x 494 (V)	
	Scanning Mode	2 : 1 interlace scan (with motion adaptive interlace/progressive conversion)	
	Scanning Area	3.59 (H) x 2.70 (V) mm	
	Minimum Illumination	Color (30IRE): 0.5 lux (Sens up: OFF), 0.02 lux (Sens up: 32x) at F1.4 B/W (10IRE): 0.04 lux (Sens up: OFF), 0.0013 lux (Sens up: 32x) at F1.4	
	White Balance	AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)	
	Light Control	Automatic integration of ALC/ELC	
	AGC	ON (LOW, MID, HIGH) / OFF	
	Super Dynamic III	ON / OFF (With BLC masking 8 x 6 areas)	
	Dynamic Range	52 dB typical (Super Dynamic III: ON, Shutter speed: OFF)	
	Electronic Shutter	OFF (1/60), AUTO, 1/100	
	Electronic Sensitivity UP	OFF / AUTO (2x / 4x / 6x / 10x / 16x / 32x)	
	Digital Noise Reduction	High/Low, 2D/3D adaptive DNR	
	Black and White Mode	ON / OFF / Auto (High / Low), Wait time: 10 sec. ~ 5 min.	
	Digital Zoom	Up to 10x	
	Video Motion Detection	For preset position: 4 programmable detection areas, Sensitivity: 6 steps Non-preset position: Detects entire screen except clock area, Sensitivity: 6 steps	
	Privacy Zone	Up to 8 zones, Gray / Mosaic	
	Auto Image Stabilizer	ON / OFF	
	Camera Title (OSD)	Up to 16 characters (alphanumeric characters, marks)	
	Auto Focus	AUTO	
Lens	Focal Length	3.8 mm ~ 114 mm, 30x zoom, 300x with 10x digital zoom	
	Zoom Speed	Manual: Approx. 6 sec. (Wide ~ Tele) Preset: Approx. 2 sec. (Wide ~ Tele)	
	Angular Field of View	H: 1.9° (Tele) ~ 52.0° (Wide), V: 1.4° (Tele) ~ 40.0° (Wide)	
	Maximum Aperture Ratio	1 : 1.4 (Wide) ~ 3.7 (Tele)	
	Focusing Range	1.5 m ~ ∞	
	Aperture Range	F1.4 ~ 22, Close	
Pan and Tilt	Panning Range	360° endless	
	Panning Speed	Manual: Approx. 0.065°/s ~ 120°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 400°/s	
	Tilting Range	−5° ~ 185° (upward-level-downward) Tilting angle limit: 0° / −1° / −2° / −3° / −4° / −5°	
	Tilting Speed	Manual: Approx.0.065°/s ~ 120°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 400°/s	
	Proportional Pan/Tilt Control	Yes	
	Number of Preset Positions	256	
	Auto Mode	OFF / preset sequence / auto pan / auto track / patrol	
	Auto Track	Standard Auto track	
	Patrol	1 / 2 / 3 / 4	
	Image Hold	ON / OFF	
	Digital Flip	Yes	
	PTZ Position Display	ON / OFF	
	Preset Position Setting	Preset ID / Auto focus / Dwell time / SDIII / ALC mask area	
	Map Shot	360° map shot / preset map shot	
Browser GUI	Camera Control	Pan/Tilt (16 steps), Zoom, Focus, Click centering, Drag zoom, Iris, Preset position call and program, Auto mode	
	Display Mode	Image from 16 cameras can be displayed in 4 different Quad screens or 16-screen (JPEG only).	
	Camera Title	Up to 20 alphanumeric characters	
	SD Memory Data Download	Images recorded in the SD memory card can be downloaded.	
	Clock Display	Time: 12H / 24H, Date: 5 formats on the browser, Summer time (Manual)	
	Alarm Control	Reset	
	GUI / Setup Menu Language	English, French (Installation required for French)	English, French, Italian, Spanish, German, Russian (Installation required except for English)
	System Log	Alarm log, Manual REC log, FTP error log (SD memory required)	
	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)	
Network	Network IF	10Base-T / 100Base-TX, RJ-45 connector	
	Image Resolution	VGA (640 x 480) / QVGA (320 x 240)	
	Image Compression	MPEG-4: Image quality: LOW / NORMAL / FINE, Transmission type: UNICAST / MULTICAST JPEG: Image quality: 10 steps, Transmission type: PULL / PUSH MPEG-4 and JPEG dual streaming and JPEG multi-resolution supported.	
	Image Refresh Rate	0.1 / 0.2 / 0.33 / 0.5 / 1 / 2 / 3 / 5 / 6 / 10 / 15 / 30 ips (Max rate will be 5 ips-VGA, 10 ips-QVGA when transmitting JPEG and MPEG-4 simultaneously)	
	Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps	
	Audio Mode	OFF / Mic input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
	Authentication for Audio	Level 1 only / Level 2 higher / All users	
	Total Bit Rate	64 / 128 / 256 / 512 / 1,024 / 2,048 / 4,096 kbps / Unlimited	
	Max. Bit Rate / Client (MPEG-4)	64 / 128 / 256 / 512 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 kbps or Frame rate priority (4,096 kbps / Unlimited)	
	Supported Protocol	TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP	
	FTP Client	Alarm image transfer, Periodic image transfer	
	No. of Simultaneous Users	Up to 8 users	
	Mini SD Memory Card (Option)	Manual REC / Alarm REC / Backup upon network failure. Compatible SD card: Panasonic mini SD card: 64 MB, 128 MB, 256 MB, 512 MB, 1 GB, 2 GB model. SDHC standard card not supported.	
	Alarm E-mail	Yes, Port number assignable.	
	User Registration	Up to 16 users	

TV System		NTSC	PAL
Network	User/Host Level	3 Levels: Administrator, Camera control, Live only	
	Security Measures	User authentication (ID 32 digit, PW 32 digit), Host authentication (IP address)	
Alarm	Alarm Source	3x Terminal inputs, VMD, Command alarm	
	Alarm Actions	Preset position 1 ~ 256, PATROL 1 ~ 4, SD memory recording, FTP image transfer, e-mail notification, Indication on browser, Terminal output, Panasonic protocol output, Auto track	
	Alarm Log	With SD memory card: 5,000 logs, Without SD memory card: 1,000 logs	
	Schedule	Alarm / VMD / Access permission, Preset position call, Position refresh	
Input / Output	Monitor Output (for adjustment)	1.0 V [P-P] / 75 Ω, NTSC composite, BNC	1.0 V [P-P] / 75 Ω, PAL composite, BNC
	Microphone Input	MIC IN (Applicable microphone; Plug-in power type) Supply voltage: 2.5 V ±0.5 V Input impedance: 3 KΩ ±10%	
	Audio Output	AUDIO OUT ø3.5 mm stereo mini jack (monaural output) Line level	
	External I/O Terminals	ALARM IN 1 / BW IN, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT	
General	Safety/EMC Standard	UL (UL60065), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	CE (EN60065, EN55022 ClassB, EN55024), GOST (GOST R 51558)
	Power Source and Power Consumption	24 V AC 60 Hz, 85 W (Heater ON)	WV-NW960: 220 ~ 240 V AC 50 Hz, 90 W (Heater ON) WV-NW964: 24 V AC 50 Hz, 85 W (Heater ON)
	Ambient Operating Temperature/Humidity	−40 °C ~ +50 °C (−40 °F ~ 122 °F) (Heater ON), 90 % or less (without condensation)	
	Water and Dust Resistance	IP66, IEC60529 measuring standard compatible.	
	Dimensions	ø239 mm x 395.5 mm (H) (ø9-7/16" x 15-9/16" (H))	
	Weight (approx.)	4.7 kg (10.34 lbs.)	4.9 kg (10.78 lbs.)

Part Names and Functions

- I/O Connector
- Mic Input Connector (White)
- Audio Output Connector (Black)
- RJ-45 Junction Connector (provided)
- Network Connector
- Monitor Out Connector for Adjustment
- Power Cord for Heater (NTSC only)
- Power Cord for 220 ~ 240 V AC (WV-NW960 only)
- Power Connector for 24 V AC (WV-NW964 only)

Camera Safety Wire

Attachment Pipe
Upper Base
Rear Sun Shield
Front Sun Shield

Sun Shield

Dome Cover
Lens

Protection Sheet
Mini SD Memory Card Slot

Appearance

NTSC: 1,700(66-15/16")
PAL: 3,000(118-1/8")

60 (2-3/8")
8.5(5/16")
232(9-1/8")
300.5(11-13/16")
6.5 (1/4")
88.5 (3-1/2")
395.5(15-9/16")

SR160

ø239(ø9-7/16")

Unit: mm (inches)

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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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