Panasonic

Preliminary

i-PRO SmartHD

MEGA Super Dynamic

Onvif

RAIN WASH COATING | NO HUMIDICATION | day/night IR removable | FULL HD Full High Definition 1080

90x EXTRA OPTICAL ZOOM | IP66 standard | VIQS Variable Image Quality on Specified area | H.264 / JPEG

Full HD / 1,920 x1,080 H.264 Weather Proof Camera featuring Optical 30x zoom and *Super Dynamic*

Key Features

- 1080p HD images up to 30 fps
- 2.4 Megapixel high sensitivity MOS Sensor
- Super high resolution at Full HD / 1,920 x 1,080 created by 2.4 Megapixel high sensitivity MOS Sensor
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by new "UniPhier®", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,920 x 1080 image size
- *30x optical zoom*
  90x extra optical zoom at 640x360 resolution with 12x digital zoom enabling 1080x zoom.
- *Super Dynamic* and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared to conventional cameras.
- *Face Super Dynamic* Range technology ensures clear face image.
- High sensitivity with Day & Night (IR) function:
  0.5 lx (Color), 0.06 lx (B/W) at F1.6
- VIQS (Variable Image Quality on Specified area) technology allows the designated *2 areas* to retain higher image quality while the excluded area will have a decreased image quality, which enables to use lower image file size and bit rate. VIQS can be set on preset position (1 to 8) and except preset.
- Digital Noise Reduction: 3D-DNR ensures noise reduction in various conditions.
- Progressive scan ensures clear images with less motion blur and no tearing even when the subject is moving.
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes:
  Outdoor scene / Indoor scene (50 Hz) / Indoor scene (60 Hz) / Fix shutter
  Indoor scene (50 Hz / 60 Hz): Flicker caused by fluorescent lightning will be automatically compensated.
- *360-degrees endless Panning*
- Advanced auto tracking: The camera automatically pans and tilts to follow a moving subject and keep it in the center of the image.
- PTZ control can be taken very smoothly 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.
- Up to 256 preset positions
- 360 map shot: 8 thumbnail images at 45 deg. intervals make it simple to direct the camera easily by clicking on a thumbnail.
- Industrial grade Pan / Tilt / Zoom mechanism for high reliability
- VMD (Video Motion Detection) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 32 private areas, such as house windows and entrances/exits.

- Camera title display: Up to 20 alphanumeric characters on the browser
- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SDXC/SDHC/SD memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic alarm protocol output.
- Full duplex bi-directional audio allows interactive communication between camera site and monitoring site.
- JPEG Image compression ratio can be changed by alarm so that higher quality image can be provided.
- Prioritized stream control: One of the video streams can be prioritized when multiple recorders or client PCs are accessing the camera so that the recorder or the client PC can maintain the frame rate.
- SDXC/SDHC/SD Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- H.264 max. bit rate / client and Total bit rate control allows flexible network traffic management. Frame rate priority mode controls bit rate and compression ratio to provide the specified frame rate.
- Internet mode: H.264 images can be transmitted over HTTP protocol.
- Multi-language: English / Italian / French / German / Spanish / Russian / Chinese / Japanese
- IPv4/IPv6 protocol supported
- Supports SSL, DDNS (viewnetcam, RFC2136)
- Still images (JPEG) can be viewed on mobile phones via Internet.
- Onvif compliant model
- IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard.
- Dehumidification device for use in various weather conditions
- Rain wash coat dome cover
- Ambient Operating Temperature : -50 °C ~ +55 °C (-58 °F ~ 131 °F)
- Fog and Sandstorm compensation

Standard Accessories

• CD-ROM*1 ....1 pc.	• Front/Rear Sun Shield .... 1 set
• Installation Guide..............................1 pc.	• Front/Rear Sun Shield Fixing Screws
	.... 2 pcs. (incl. 1 spare)
The followings are for installation.	• Code Label*2 ....1 pc.
• Protection Cover .... 1 pc.	*1 The CD-ROM contains the operating instructions (PDFs) and different kinds of tool software programs.
• RJ45 connector .... 1 pc.	*2 This label may be required for network management. The network administrator shall retain the code label.
• 8P Alarm Cable................................. 1 pc.	
• Connector Kit for 24 V AC .... 1 pc.	

Optional Accessory

Wall Mount Bracket
WV-Q122A (in Europe only)

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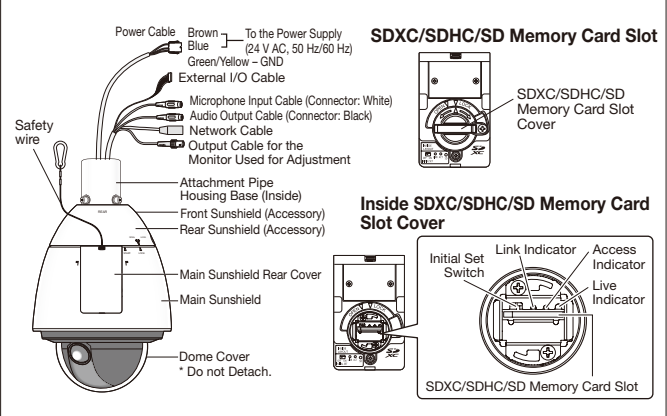
Specifications

Camera		
	Image Sensor	1/2.8 type MOS Sensor
	Effective Pixels	Approx. 2.4 megapixel
	Scanning Mode	Progressive scan
	Scanning Area	5.44 mm (H) x 3.43 mm (V) {3/16 inches (H) × 1/8 inches (V)}
	Minimum Illumination	Color: 0.5 lx, BW: 0.06 lx (F1.6, Auto slow shutter: Off (1/30s), Gain:On(High)) Color: 0.03 lx, BW 0.004 lx (F1.6, Auto slow shutter: Max. 16/30s, Gain:On(High)) [*1]
	White Balance	AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)
	Light Control Mode	Outdoor scene: Automatic integration of ALC and ELC Indoor scene [50 Hz]: Automatic integration of ALC and ELC (up to 1/100 s) Indoor scene [60 Hz]: Automatic integration of ALC and ELC (up to 1/120 s) Fix shutter
	Shutter Speed	Fix shutter: 1/30, 3/100, 3/120, 2/100, 2/120, 1/100, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 (only at Super Dynamic Off)
	Super Dynamic	ON / OFF
	Face Super Dynamic	ON / OFF (Only at Super Dynamic: ON)
	Adaptive Black Stretch	ON / OFF (Only at Super Dynamic: OFF)
	Fog compensation	ON / OFF
	AGC	ON (LOW, MID, HIGH) / OFF
	Electronic Sensitivity UP	OFF / AUTO (Max. 2x (2/30 s), 4x (4/30 s), 6x (6/30 s), 10x (10/30 s), 16x (16/30 s))
	Day & Night (IR)	Mode: AUTO1 / AUTO2 / AUTO3 / ON / OFF, Level:High / Low, with external control
	Digital Noise Reduction	High / Low
	Video Motion Detection	4 areas, Sensitivity: 15 steps, Detection size: 10 steps
	Privacy Zone	Up to 8 zones / Up to 32 zones, Gray / Mosaic
	VIQS	Up to 2 zones at preset position 1-8 and except preset
	Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks)
	Focus distance	Limited / Unlimited
Lens	Focal Length	4.3 mm ~129.0 mm, 30x
	Zoom Ratio	30x / 90x with extra optical zoom (at 640x360)
	Digital (Electrical) Zoom	12x (Max. 1080x combined with extra optical zoom at 640x360)
	Angular Field of View	H: 2.6° (TELE) ~ 64.6° (WIDE) V: 1.6° (TELE) ~ 38.2° (WIDE)
	Maximum Aperture Ratio	1 : 1.6 (WIDE) ~ 4.7 (TELE)
	Focusing Range	2.0 m ~ ∞
	Aperture Range	F1.6 ~ 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. 300°/s
	Tilting Range	−15° ~ 195° (upward-level-downward) Selectable tilting angle: 0° / −5° / −10° / −15
	Tilting Speed	Manual: approx. 0.065°/s ~ 120°/s, Up to 256 steps (depending on the controller) Preset: up to approx. 300°/s
	Proportional Pan/Tilt Control	Yes
	Number of Preset Positions	256
	Auto Mode	preset sequence / auto pan / auto track / patrol
	Image Hold	ON / OFF
	PTZ Position Display	ON / OFF
	Self Return	10 s / 20 s / 30 s / 1 min / 2 min / 3 min / 5 min / 10 min / 20 min / 30 min / 60 min
	Map Shot	360° map shot / preset map shot
Browser GUI	Camera Control	Pan/Tilt (256 steps), Zoom, Focus, Click centering, Drag zoom, Iris, Preset position call and program, Auto mode
	Display Mode	Spot, Quad: Image from 16 cameras can be displayed in 4 different Quad screens or 16 split screen (JPEG only). 20 characters camera title available.
	Camera Title	Up to 20 alphanumeric characters
	Clock Display	Time: 12H/24H, Date: 5 formats on the browser, Summer time (Manual)
	Alarm Control	Reset
	One Shot Capture	A still picture will be displayed on a newly opened window.
	Audio	Mic (Line) Input: ON / OFF Volume adjustment: Low / Middle / High, Audio Output: ON / OFF Volume adjustment: Low / Middle / High
	SD Memory Data Download	Still or motion Images recorded in the SDXC/SDHC/SD memory card can be downloaded.
	GUI/Setup Menu Language	English / Italian / French / German / Spanish / Russian / Chinese / Japanese
	System Log	Up to 100 (Internal) Up to 4,000 (SDXC/SDHC/SD memory when the recording format is set to JPEG.) error logs
	Supported OS [*2] [*3]	Microsoft® Windows® 8, Microsoft® Windows® 7, Microsoft® Windows Vista®, Microsoft® Windows® XP SP3
	Supported Browser	Windows® Internet Explorer® 10.0 (32 bit), Windows® Internet Explorer® 9.0 (32 bit), Windows® Internet Explorer® 8.0 (32 bit),Windows® Internet Explorer® 7.0 (32 bit)
Network	Network IF	10Base-T / 100Base-TX, RJ-45 connector
	Image Resolution — Image Capture Mode: 2 mega pixel [16:9]	H.264 : 1,920 x 1,080 / 640 x 360 / 320 x 180, up to 30 fps JPEG (MJPEG): 1,920 x 1,080 / 640 x 360 / 320 x 180, up to 30 fps
	Image Resolution — Image Capture Mode: 1.3 mega pixel [16:9]	H.264 : 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG (MJPEG): 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps
	Image Resolution — Image Capture Mode: 1.3 mega pixel [4:3]	H.264 : 1,280 x 960 / VGA(640 x 480) / QVGA(320 x 240), up to 30 fps JPEG (MJPEG): 1,280 x 960 / VGA(640 x 480) / QVGA(320 x 240), up to 30 fps
	H.264 [*4] — Transmission Mode	Constant bitrate / Frame rate priority / Best effort /Advanced VBR
	Frame Rate	1 / 3 / 5 / 7.5 / 10 / 12 / 15 / 20 / 30 fps
	Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 6,144 / 8,192 / 10,240 / 12,288 / 14,336 kbps
	Image Quality	LOW / NORMAL / FINE
	Refresh Interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5 s
	Transmission Type	UNICAST / MULTICAST
	JPEG — Image Quality	10 steps
	Refresh Interval	0.1 fps ~ 30 fps
	Transmission Type	PULL / PUSH
	Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps, G.711 64 kbps for transmitting, AAC for audio recording and sound detection
	Audio Mode	OFF / Mic (Line) 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 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited
	Supported Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, ICMP, ARP IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP,FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP , IGMP , ICMP , ARP
	FTP Client	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SDXC/SDHC/SD memory card is available.)
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)

Network	SDXC/SDHC/SD Memory Card (Option)	H.264 recording (Audio recording is enable): Manual REC / Alarm REC (Pre/Post) / Schedule REC JPEG recording: Manual REC / Alarm REC (Pre/Post) / Backup upon network failure Compatible SD (SDHC/SDXC) card: Panasonic 2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64GB** model *SDHC card, ** SDXC card (except miniSD card and microSD card)
	Cellular Phone Compatibility	JPEG image
	Mobile Terminal Compatibility	iPad, iPhone, iPod touch
Alarm	Alarm Source	3 terminals input, VMD, Command alarm, Sound detection
	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, Indication on browser, FTP image transfer, Panasonic protocol output
	Alarm Log	With SDXC / SDHC / SD memory card: 5,000 logs, without SDXC / SDHC / SD memory card: 1,000 logs
	Schedule	Alarm / VMD / Access permission / H.264 recording / Sound detection
Input/ Output	Monitor Output (for adjustment)	VBS: 1.0V[p-p] / 75Ω, NTSC / PAL composite, BNC Jack
	Microphone/Line Input	MIC IN and Line IN are selectable. ø3.5 mm stereo mini jack (monaural input) (Applicable microphone: Plug-in power type) Supply voltage: 2.5 V ±0.5 V Input impedance: approx. 2 kΩ
	Audio Output	ø3.5 mm stereo mini jack (monaural output) Line level
	External I/O Terminals	ALARM IN 1 / DAY/NIGHT IN, ALARM IN 2 / ALARM OUT, ALARM IN 3 / AUX OUT
General	Safety/EMC Standard	<Safety> UL (UL60950-1), C-UL (CAN/CSA C22.2 No.60950-1), CE, IEC60950-1 <EMC> FCC Part15 Class A, ICES-003 Class A, EN55022 Class B, EN55024
	Power Source and Power Consumption	AC24 V : 3.5 A, 55 W PoE+ : 470 mA, 25 W (IEEE802.3at compliant) POE Injector (60 W) : 1.0 A, 50 W
	Ambient Operating Temperature	AC24 V and PoE Injector (60 W) : –50 °C ~ +55 °C (-58 °F ~ 131 °F) * with limitations POE+ : -30°C ~ +55°C (-22 °F ~ 131 °F)
	Ambient Operating Humidity	Less than 90 % (no condensation)
	Water and Dust Resistance	IP66, IEC60529 measuring standard compatible
	Dimensions	ø229 mm x 392 mm(H) {ø9-1/32 inches x 15-7/16 inches(H)} diameter of the dome 160 mm (6-5/16 inches)
	Mass (approx.)	Approx. 5.0 kg { 11.04 lbs}
	Finish	Main body : Aluminum die cast, Natural silver Sunshields : ASA resin coating, Natural silver Dome section : Clear polycarbonate resin

*1 Converted value
*2 Refer to "Notes on Windows Vista® / Windows® 7 / Windows® 8" on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.
*3 When using IPv6 for communication, use Microsoft® Windows® 8 or Microsoft® Windows® 7 or Microsoft® Windows Vista®.
*4 Transmission for 2 streams can be individually set in the same compression method.

Part Names and Functions

Appearance

Unit: mm (inches)

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– UniPhier is a registered trademark of Panasonic Corporation.
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Important
– Safety Precaution: Carefully read the operating instructions and installation manual before using this product.
– Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

• Masses and dimensions are approximate. • Specifications are subject to change without notice.
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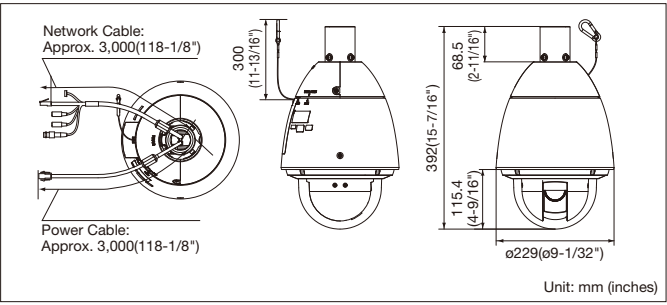
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