



H264, True Day/Night HD Camera featuring *Super Dynamic*

Key Features

- 1,080p HD images up to 15 fps / 720p HD images up to 30 fps
- Multiple H.264 (High profile) streams and JPEG streams ensure simultaneous real time monitoring and high resolution recording by "UniPhier®", Panasonic's proprietary System LSI platform.
- Full frame (Up to 30 fps) transmission at 1,280 x 960 image size (1.3 Megapixel mode)
- **Super Dynamic** and ABS (Adaptive Black Stretch) technologies deliver 128x wider dynamic range compared with conventional cameras.
- **Face Super Dynamic** technology ensures clear face image.
- Up to 3 Megapixel (2,048 x 1,536) JPEG stream (3 Megapixel mode, JPEG only)
- H.264 and MPEG-4 are selectable for system migration.
- High sensitivity with Day/Night function: 1.0 lx (Color), 0.08 lx (B/W) at F1.4 (1.3 Megapixel mode)
- ABF (Auto Back Focus) ensures easy installation and stable focus in both color and B/W modes.
- Adaptive Digital Noise Reduction: Integration of 2D-DNR and 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.
- Superior color reproduction by primary (RGB) color filter
- Electronic sensitivity enhancement: Auto (Up to 16x) / OFF
- Selectable light control modes: Outdoor / Indoor / ELC / Fixed electronic shutter
 - Outdoor / Indoor: Electronic shutter and ALC lens iris control are automatically controlled depending on the mode and luminance level.
 - ELC: Up to 1/10,000 Electronic shutter is automatically applied for a fix iris lens.
 - Fixed electronic shutter: Up to 1/10,000 fixed electronic shutter can be selectable.
- VMD (Video Motion Detector) with 4 programmable detection areas, 15 steps sensitivity level and 10 steps detection size
- Privacy Zone can mask up to 8 private areas, such as house windows and entrances/exits.
- 2x, 4x digital zoom controlled by browser
- Camera title display: Up to 20 alphanumeric characters on the browser, Up to 16 alphanumeric characters with three selectable character sizes embedded in the image
- Alarm sources including 3 terminal input, VMD and Panasonic alarm command can trigger actions such as SD/SDHC memory recording, FTP image transfer, E-mail notification, Indication on browser, Alarm terminal output, and Panasonic 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.
- SD/SDHC Memory card slot for manual recording (H.264 / JPEG), alarm recording (H.264 / JPEG) and backup upon network failure (JPEG)
- H.264/MPEG-4 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/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
- IPv4/IPv6 protocol supported
- Analog Monitor output for easier installation
- ONVIF compliant model

Standard Accessories

• CD-ROM*1	1 pc.	• Safety Wire Lug for Wall	1 pc.
• Installation Guide	1 pc.	• Screws for Mounting Bracket (M2.5 x 8) ...	2 pcs.
• Code Label*2	1 pc.		
The followings are for installation.			
• Power Cord Plug	1 pc.		
• Safety Wire Plate for Ceiling	1 pc.		

*1 The CD-ROM contains Panasonic IP Setup Software, viewer software "Network Camera View 4", and Operation Instructions (PDF).
*2 This label may be required for network management. The network administrator shall retain the code label.

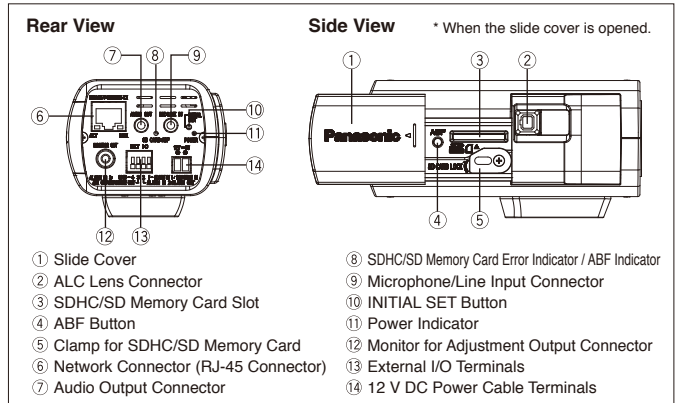
Specifications

TV System	NTSC	PAL
Camera	1/3 type interline transfer CCD	
Effective Pixels	1,296 (H) x 976 (V) x2	
Scanning Mode	Progressive scan	
Scanning Area	4.86 mm (H) x 3.65 mm (V)	
Minimum Illumination	1. 3 Megapixel mode: Color: 1.0 lx, B/W: 0.08 lx at F1.4 (Shutter: 1/30 s, AGC: High, SD: OFF) Color: 0.06 lx, B/W: 0.005 lx at F1.4 (Shutter: 16/30 s, AGC: High, SD: OFF) 3 Megapixel mode: Color: 2.0 lx, B/W: 0.16 lx at F1.4 (Shutter: 1/30 s, AGC: High), Color: 0.12 lx, B/W: 0.01 lx at F1.4 (Shutter: 16/30 s, AGC: High)	
White Balance	AWC (2,000 ~ 10,000 K), ATW1 (2,700 ~ 6,000 K), ATW2 (2,000 ~ 6,000 K)	
Light Control Mode	Outdoor: Automatic integration of ALC and ELC Indoor: Automatic integration of ALC and ELC (up to 1/100 s) ELC: (up to 3/10,000 s) (ELC: only at Super Dynamic: OFF)	
Shutter Speed	Fix shutter: 3/100, 2/100, 1/100, 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 (1.3 Megapixel mode only)	
Face Super Dynamic	ON / OFF (Only at Super Dynamic: ON)	
Dynamic Range	52 dB typical (Super Dynamic: ON, Light Control mode: Indoor)	
Adaptive Black Stretch	ON / OFF (Only at Super Dynamic: 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))	
Black and White Mode	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, Gray / Mosaic	
Up Side Down	ON / OFF	
Auto Image Stabilizer	ON / OFF	
Camera Title (OSD)	Up to 16 alphanumeric characters (3 selectable character sizes)	
Back Focus Adjustment	ABF / MANUAL, ABF mode upon CL/BW switching: AUTO / PRESET / FIX	
Camera Control	Brightness, AUX ON / OFF, Zoom (1x, 2x, 4x)	
Browser GUI		
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.	
Digital Zoom	1x, 2x, 4x controlled by browser GUI	
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, Audio Output: ON / OFF	
SD Memory Data Download	Still or Motion Images recorded in the SD/SDHC memory card can be downloaded.	
GUI/Setup Menu Language	English, French (Installation required for French)	English, French, Italian, Spanish, German, Russian (Installation required except for English)
System Log	Up to 100 (Internal), Up to 4,000 (SD/SDHC memory when the recording format is set to JPEG.) error logs	
Supported OS	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), Microsoft® Internet Explorer® 6.0 SP3	
Network		
Network IF	10Base-T / 100Base-TX, RJ-45 connector	
Image Resolution*1	1.3 Megapixel mode (Aspect ratio [4:3]): H.264: 1,280 x 960 / SVGA (800 x 600) / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps MPEG-4: VGA (640 x 480) / QVGA (320 x 240), up to 30 fps JPEG: 1,280 x 960 / SVGA (800 x 600) / VGA (640 x 480) / QVGA (320 x 240), up to 30 fps 1.3 Megapixel mode (Aspect ratio [16:9]): H.264: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps JPEG: 1,280 x 720 / 640 x 360 / 320 x 180, up to 30 fps 3 Megapixel mode (Aspect ratio [4:3]): H.264: 1,280 x 960 / VGA (640 x 480) / QVGA (320 x 240), up to 15 fps MPEG-4: VGA (640 x 480) / QVGA (320 x 240), up to 15 fps JPEG: 2,048 x 1,536 / 1,280 x 960 / VGA (640 x 480), up to 15 fps 3 Megapixel mode (Aspect ratio [16:9]): H.264: 1,920 x 1,080 / 640 x 360 / 320 x 240, up to 15 fps JPEG: 1,920 x 1,080 / 640 x 360 / 320 x 240, up to 15 fps	
H.264 / MPEG-4	Transmission Priority	Constant bitrate / Frame rate priority / Best effort / Advanced VBR
1	Frame Rate	1 / 3 / 5 / 7.5 / 10 / 15 / 20 / 30* fps * 1.3 Megapixel mode only
	Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 1,536 / 2,048 / 3,072 / 4,096 / 8,192* kbps / Unlimited * H.264 mode only
	Image Quality	LOW / NORMAL / FINE
	Refresh Interval	0.2 s / 0.33 s / 0.5 s / 1 s / 2 s / 3 s / 4 s / 5 s
	Transmission Type	UNICAST / MULTICAST

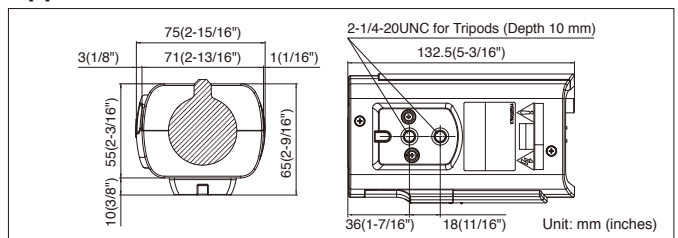
TV System	NTSC	PAL
Network	10 steps	
JPEG	Image Quality	
	Transmission Type: PULL / PUSH	
Audio Compression	G.726 (ADPCM) 32 kbps / 16 kbps	
Audio Mode	OFF / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)	
Authentication for Audio	Level 1 only / Level 2 higher / All users	
Total Bit Rate	64 / 128 / 256 / 384 / 512 / 768 / 1,024 / 2,048 / 4,096 / 8,192 kbps / Unlimited	
Supported Protocol	IPv4: TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP IPv6: TCP/IP, UDP/IP, HTTP, RTP, FTP, SMTP, DNS, NTP, SNMP	
FTP Client	Alarm image transfer, Periodic image transfer, Active/Passive selectable (When the FTP periodic transmission is failed, backup on an optional SDHC/SD memory card is available.)	
No. of Simultaneous Users	Up to 14 users (Depends on network conditions)	
SDHC/SD Memory Card (Option)	H.264 recording: Manual REC / Alarm REC (Pre/Post) JPEG recording: Manual REC / Alarm REC (Post) / Backup upon network failure Compatible SD (SDHC) card: Panasonic 256 MB, 512 MB, 1 GB, 2 GB, 4 GB*, 8 GB*, 16 GB* model * SDHC card	
Alarm	3 terminal inputs, VMD, Command alarm	
Alarm Actions	SDHC/SD memory recording, E-mail notification, Alarm terminal output, Indication on browser, FTP image transfer, Panasonic protocol output	
Alarm Log	With SDHC/SD memory card: 5,000 logs, Without SDHC/SD memory card: 1,000 logs	
Schedule	Alarm / VMD / Access permission	
Input / Output		
Monitor Output (for adjustment)	1.0 V [P-P] / 75 Ω, NTSC composite, RCA Jack	1.0 V [P-P] / 75 Ω, PAL composite, RCA 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 k	
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 / EXPOSURE OUT	
General		
Safety/EMC Standard	UL (UL60065), FCC (Part15 ClassA), C-U.L. (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	CE (EN55022 ClassB, EN55024)
Power Source and Power Consumption	12 V DC: 630 mA, PoE (IEEE 802.3af): 7.6 W (Class 0 device)	
Ambient Operating Temperature/Humidity	-10 C ~ +50 C (14 F ~ 122 F), 90 % or less (without condensation)	
Dimensions	75 mm (W) x 65 mm (H) x 132.5 mm (D) (2-15/16" (W) x 2-9/16" (H) x 5-3/16" (D))	
Mass (approx.)	430 g (0.95 lbs.)	

*1 H.264 and MPEG-4 are alternative.

Part Names and Functions



Appearance



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- Microsoft, and Windows are registered trademarks of Microsoft Corporation in the U.S. and other countries.
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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.

- All TV pictures are simulated.
- Masses 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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