Panasonic
BUSINESS

AW-HE38HW/HK [HDMI Model]

HD Integrated PTZ Camera

For indoor use

AW-HE38HW

Features 22x optical zoom lens
and support for PoE+*1
for outstanding operability
and installation flexibility

AW-HE38HK

*1: Abbreviation of Power over Ethernet Plus.

Full HD camera with integrated pan-tilt for lectures, meetings and a wide variety of applications.

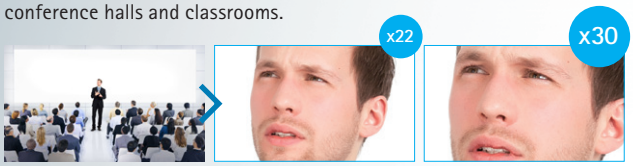
The integrated full HD camera AW-HE38HW/HK performs in a wide variety of onsite shooting applications that require high-quality video, such as conferences, lecture capture and other events, thanks to its high-performance zoom, wide angle of view and outstanding color reproducibility.
In addition to IP video transmission, support for PoE+*1 enables power to be supplied via a LAN cable*2. The result is installation flexibility. It also supports HD-IP video output, output of video and audio via USB, and SD card recording.

Developed 1/2.3-type MOS Sensor

Equipped with a developed 1/2.3-type MOS sensor and DSP (Digital Signal Processor) for high sensitivity and high resolution.

High Performance Optical 22x Zoom Lens/ Super Resolution 30x Zoom

In addition to a 22x optical zoom, the AW-HE38HW/HK can zoom up to 30x while maintaining high resolution thanks to Super Resolution technology. It also features a 16x digital zoom*3 and a 1.4x digital extender, which enables the AW-HE38HW/HK to shoot in large conference halls and classrooms.

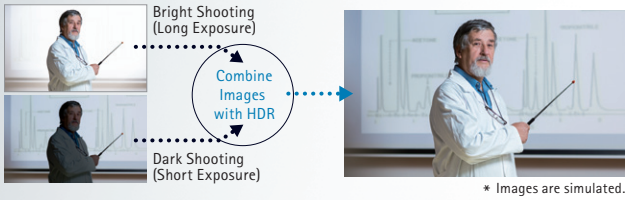


Wide side (31.6 mm) Telephoto side (705 mm) Super Resolution (iZoom)

*Images are simulated.

Equipped with High Dynamic Range (HDR) Mode

In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE38HW/HK is newly equipped with High Dynamic Range (HDR) mode. When shooting and synthesizing two images with differing exposure times, the AW-HE38HW/HK can create video with high visibility that corrects for halation and black defects even under backlit conditions.

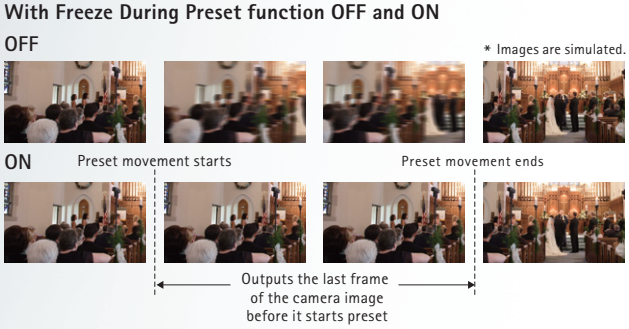


* Images are simulated.

Outputs Still Image During Preset Movements; Supports One-Camera Operations

The new Freeze During Preset function enables to freeze the video during preset playback. The immediately preceding still image is output during preset movements so that the swiveling movement is not displayed, making operations possible with one camera.

With Freeze During Preset function OFF and ON

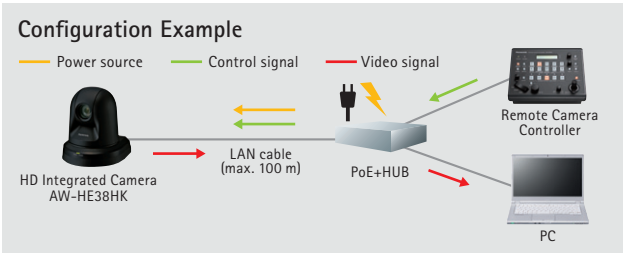


Audio Input Function

The AW-HE38HW/HK also supports audio input, embedding and encoding. Audio output to IP is also supported. The ALC (Audio Automatic Level Control) in the original AW-HE38HW/HK can be switched ON/OFF and an equalizer function can be used. By reducing low-frequency sound from air conditioners, projectors, and other devices, it is possible to emphasize and increase the clarity of the spoken words.

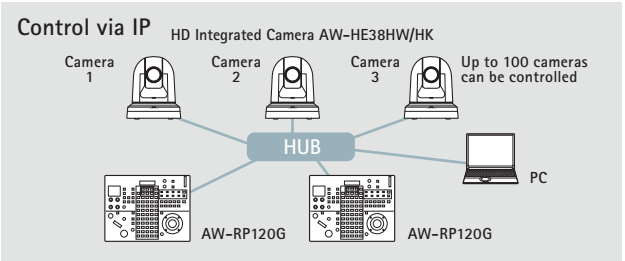
Supporting PoE+*1 for Lower Installation Costs

By connecting network devices that support the IEEE802.3at PoE+ standard, power can be supplied via LAN cable. Since it is not necessary to install a power supply or even a local AC outlet, installation costs can be significantly reduced.



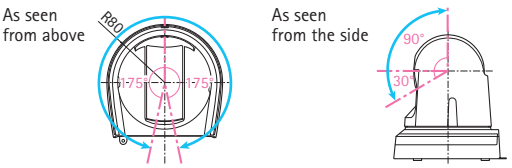
Flexible IP Control Architecture Simplifies System Design and Operation*4

Up to 100 x AW-HE38HW/HK cameras can be controlled via IP from a single AW-RP120G/RP50 or PC. An AW-HE38HW/HK can also be simultaneously controlled by up to five AW-RP120G/RP50's via IP.



Exceptional Pan-tilt Performance for Smooth Shooting Over a Wide Area*5

The pan range of ±175 ° and the tilt range of -30 ° to +90 ° cover a wide shooting area*5. Pan and tilt operate at a maximum speed of 90°/second and respond quickly to remote control operation. They operate quietly at a sound level of NC35 or lower.



*1: Abbreviation of Power over Ethernet Plus. *2: The software for the AW-HE38HW/HK may need to be updated depending on the existing software version. For details, see the Panasonic website (https://pro-av.panasonic.net/). *3: Picture quality is lower with the digital zoom. *4: Controller upgrade required. For details, please refer to the "service and support" section on the Panasonic website (https://pro-av.panasonic.net/). *5: Depending on the position of the pan and tilt, the unit itself may be reflected in the image.

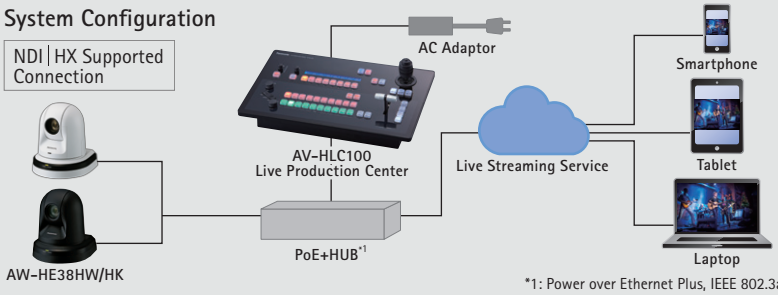
NDI|HX Compatibility for Excellent Video Streaming Quality

The AW-HE38HW/HK can be upgraded to an NDI|HX compatible model if purchasing a license from the NewTek website (https://www.newtek.com/ndi/). Highly efficient NDI|HX compatibility enables excellent broadcast streaming by encoding and transmitting high-quality video in real time. This technology eliminates the need for IP decoders, allowing input to be sent directly to the switcher.

* Contact your local Panasonic vendor for further information.

System Configuration

NDI | HX Supported Connection



*1: Power over Ethernet Plus, IEEE 802.3at

Specifications

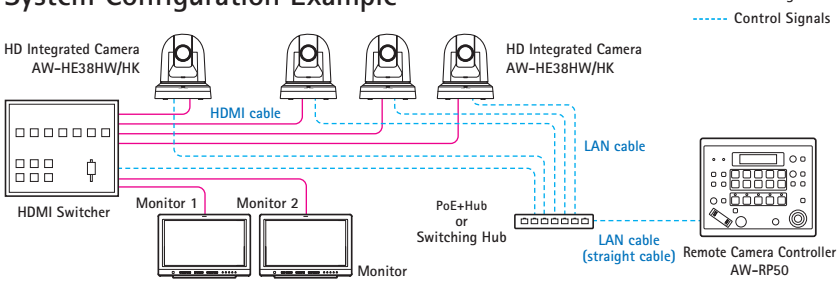
As of February, 2018

GENERAL	Power requirements		DC 12 V (Supplied AC adaptor) DC 42 V to 57 V (PoE+ power supply)
	Current consumption		1.2 A (Supplied AC adaptor) 0.4 A (PoE+ power supply)
	Ambient operating temperature		0 °C to 40 °C (32 °F to 104 °F)
	Storage temperature		–20 °C to 50 °C (–4 °F to 122 °F)
	Allowable humidity ranges		20 % to 90 % (no condensation)
	Mass		Approx. 1.5 kg (3.30 lb)
	Dimensions (W x H x D)		160 mm x 186 mm x 166 mm (6-5/16 inches x 7-41/128 inches x 6-17/32 inches) [excluding protrusions, direct ceiling mount bracket]
	Finish		[AW-HE38HW] Pearl white, [AW-HE38HK] Metallic black
	Controller supported*1		AW-RP50, AW-RP120G, AK-HRP200G
INPUT	Power		DC 12 V IN, PoE+ (IEEE802.3at standard)
	Mic/line input		Stereo mini-jack (ø3.5 mm) Input impedance: Approx. 2 kΩ (unbalanced) [Mic input] Supported microphones: Stereo mic (plug-in power, on/off switching via menu) Supplied voltage: 2.5 V ± 0.5 V Mic input level: –60 dBV ± 3 dBV [Line input] Input level: -10 dBV ± 3 dBV
OUTPUT	Output Video	HDMI	[AW-HE38HW/HK] HDMI connector * HDCP is not supported. * VIERA Link is not supported.
INPUT/ OUTPUT	Input/ Output connector	LAN	LAN connector for IP control (RJ-45) Equipped with straight/crossover cable auto detection function
		RS-232C	Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT)
		RS-422	CONTROL IN RS422A (RJ-45)
		USB	Mini-B port
		SD card	microSD card slot
FUNCTIONS AND PERFORMANCE	**[Camera unit]**		
	Imaging sensors		1/2.3-type MOS
	Lens		AW-HE38HW/HK : Motorized 22x zoom, F1.6 to F4.3 [f=4.3 mm (11/64 inches) to 94.6 mm(3-23/32 inches); 35 mm (1-3/8 inches) equivalent: 31.6 mm (1-31/128 inches) to 705.0 mm (27-49/64 inches)]
	Focus		Switching between auto and manual
	Focus distance		Entire zooming range:1.2 m (3.94 ft) Wide end: 10 cm (0.33 ft)
	Color separation optical system		On-chip color filter system
	Minimum illumination	59.94 Hz	0.7 lx (50 IRE, F1.6, 48 dB,1/60 without accumulation) 0.35 lx (50 IRE, F1.6, 48 dB,1/30 with accumulation[Frame Mix 6 dB])
		50 Hz	0.7 lx (50 IRE, F1.6, 48 dB,1/50 without accumulation) 0.35 lx (50 IRE, F1.6, 48 dB,1/25 with accumulation[Frame Mix 6 dB])
	Horizontal resolution		1000 TV lines Typ (Center area)
	Gain selection*2		Auto, 0 dB to 48 dB (3 dB step)
	Frame mix*3		Auto, Off, 6 dB, 12 dB, 18 dB, 24 dB
	Electronic shutter speed	During Full Auto	1/30 to 1/2000 [59.94 Hz] 1/25 to 1/2000 [50 Hz]
		During Auto	1/60 to 1/2000 [59.94 Hz] 1/50 to 1/2000 [50 Hz]
		During Manual	1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [59.94 Hz] 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [50 Hz]
	Synchro scan		59.94 Hz : 59.94 Hz to 660.09 Hz 50 Hz : 50.00 Hz to 570.12 Hz
	Gamma		Off, Normal (Low, Mid, High), Cinema
	White balance		AWB A, AWB B, ATW, 3200K,5600K, VAR (2400K to 9900K)
	Chroma amount variability		±3 step
	Scene file		Full Auto, Manual1, Manual2, Manual3

FUNCTIONS AND PERFORMANCE	Output format	HD	1080:59.94p/50p 1080:59.94i/50i 1080:29.97p/25p 1080:29.97PsF/25PsF 720:59.94p/50p
	Synchronization system		Internal synchronization
	[USB connection]		* This may vary depending on the operating environment.
	Video output		USB Video Class Ver1.0
	Video compression format		Motion JPEG
	Resolution		1920 x 1080, 1280 x 720, 640 x 360
	Frame rate		max 30 fps (System frequency 59.94 Hz) max 25 fps (System frequency 50 Hz)
	Audio output		USB Audio Class Ver1.0
	Audio compression format		Linear PCM, 48 kHz, 16-bit, 2 channels
	Supported models		Devices standardly equipped with a USB 2.0 compatible port
	[Pan-tilt head unit]		
	Installation method		Stand-alone (Desktop) or suspended (Hanging)*4
	Pan/tilt operation speed		Maximum speed during preset: 300°/s Maximum speed during manual: 90°/s
	Panning range		±175°
	Tilting range		–30° to 90°*5
	Quietness		During preset: NC40 or less During manual: NC35 or less
	[Camera/pan-tilt head control]		
	IP connecting cable		When connecting through a hub: LAN cable*6 (category 5 or above),max. 100 m (328 ft) When using a PoE+ hub: LAN cable*6 (category 5e or above),max. 100 m (328 ft) When a hub is not used: LAN cable*6 (category 5 or above),max. 100 m (328 ft)
	AW protocol connecting cable		LAN cable*6 (category 5 or above,straight cable), max. 1000 m (3280 ft)
	Standard protocol connecting cable		Mini DIN 8-pin cable, male
	[SD card recording]		
	SD card type		micro SDHC (4 GB to 32 GB), micro SDXC (64 GB to 128 GB), Speed class 10 or higher
	System frequency		59.94 Hz/50 Hz
	Video compression format		MPEG-4 AVC/H.264 High Profile
	Audio compression format		AAC-LC (48 kHz, 16 bit, 2 ch, 128 kbps)
	SD card recording		MPEG-4 AVC file standard compliant (.MP4)
	Recording format		1920 x 1080/59.94p, 1920 x 1080/50p, 1920 x 1080/29.97p, 1920 x 1080/25p, 1280 x 720/59.94p, 1280 x 720/50p, 1280 x 720/29.97p, 1280 x 720/25p
	[Network]		
	Resolution	JPEG	VGA (640 x 360), QVGA (320 x 180) max.30 fps 1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 max.30 fps
		H.264	1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 max.60 fps
	Supported protocol	IPv4	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCP, DNS, NTP, IGMP, UPnP, ICMP, ARP, RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
		IPv6	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCPv6, DNS, NTP, ICMPv6(MLD), RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
	i-OS, Android support		JPEG image display
ACCESSORIES	Mount bracket for installation surface (Hanging*7 / Desktop): 1 Drop-prevention wire (already attached to the unit): 1 Bracket mounting screws (bind-head) M4 x 10 mm: 4 Main unit mounting screw (with flat washer, spring washer) M3 x 6 mm: 1 Power cable (1.5 m [4.92 ft]) [AW-HE38HW/HKPJ]: 1, [AW-HE38HW/HKEJ]: 3 AC adaptor: 1		

*1: It may be necessary to upgrade the version of the controller so that the controller will support the unit. *2: During Auto, 6 dB to 48 dB (6 dB step) are available for AGC Max Gain setting.
*3: During Auto, 0 dB, 6 dB, 12 dB and 18 dB are available for Auto F.Mix Max Gain setting. *4: To ensure safety, the unit must be secured using the mount bracket supplied.
*5: Depending on the pan or tilt position, the camera may be reflected in the image. *6: Use of an STP (shielded twisted pair) cable is recommended.
*7: To ensure more safety, AW-HE38HW/HK can be secured by using the direct ceiling mount bracket (WV-Q105A).

System Configuration Example



*The AC adaptor provided with the unit is not shown in the above figure.
*The camera unit automatically recognizes straight cables and cross cables connected to the LAN terminal.

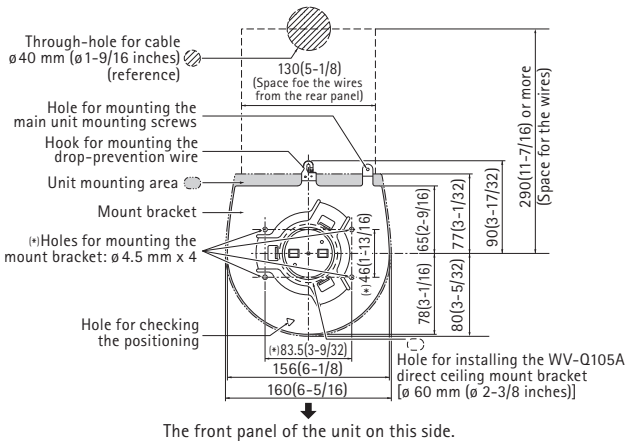
Rear View

Other Functions

- Preset memory up to 100 positions.
- Functions such as freeze during preset, digital extender zoom and color temperature settings can be assigned to the user buttons on Panasonic controllers.
- Equipped with RS422 remote terminal; up to five units can be controlled via serial control from a controller.
- Equipped with RS232C remote terminal (standard serial communication support). Up to seven units can be controlled via daisy chain connection.
- Up to four units can be operated with a wireless remote controller (AW-RM50G sold separately).
- Easy installation thanks to use of turn-lock mechanism.

Bottom View

Unit: mm(inches)



Optional Software

Auto Tracking Software Key
AW-SF100/AW-SF200

[2 Additional Licenses AW-SF202
3 Additional Licenses AW-SF203]

- Motion detection and face detection technologies using video streaming from camera achieves smooth auto tracking regardless of where the person is facing.
- AW-SF100 allows a single PTZ camera to be controlled on either a stand-alone or web application version.
- AW-SF200 enables simultaneous auto tracking and centralized control of multiple cameras.*1

*1: Up to four cameras per server can be controlled simultaneously.

A 30-day free trial for Auto Tracking Software is available. Please see "Software Download" on the Panasonic website <https://pro-av.panasonic.net/> for details.

PTZ Control Center

- Intuitive GUI with the capability to control multiple cameras.
- Image quality adjustment and pan-tilt-zoom control on a GUI.
- Easy to recall presets by clicking preset buttons with thumbnails.

Main View

PTZ Virtual USB Driver

- High quality video perfect for web conferencing, utilizing a PTZ camera on the network as a USB camera.
- Automatic detection of connected cameras, and network settings supported.

System Camera Options

As of February, 2018

Live Production Center
AV-HLC100
Scheduled for release in the spring of 2018.

Control Assist Camera
AW-HEA10W

Control Assist Camera
AW-HEA10K

Remote Camera Controller
AW-RP50

Remote Camera Controller
AW-RP120G
(AC adaptor (DC12 V) is required separately.)

Remote Operation Panel
AK-HRP200G
(AC adaptor (DC12 V) is required separately.)

Wireless Remote Control
AW-RM50G
("AA", "R6" or "LR6" battery x 2 are not included.)

Direct Ceiling Mount Bracket
WV-Q105A

For more information, please visit Panasonic web site **https://pro-av.panasonic.net/**

*Specifications are subject to change without notice.

Panasonic

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ISO 14001 JACO EC98J2010 UKAS MANAGEMENT SYSTEMS 051

Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)

SP-HE38PE

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