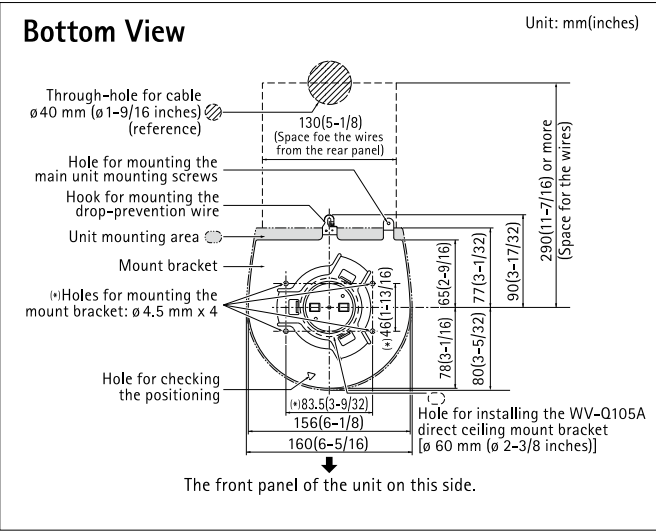


Other Functions

- 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.



System Camera Options

Live Production Center AV-HLC100 Scheduled for release in the spring of 2018.  * Not available in some areas.	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 

As of February, 2018

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

*Specifications are subject to change without notice.



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

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.

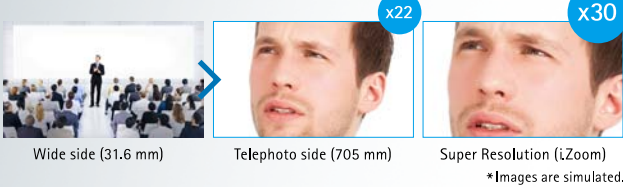
The integrated full HD camera AW-HE38HW/HK performs in a wide variety of onsite shooting applications that require high-quality video, such as conferences, lecture capture and other events, thanks to its high-performance zoom, wide angle of view and outstanding color reproducibility. In addition to IP 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.

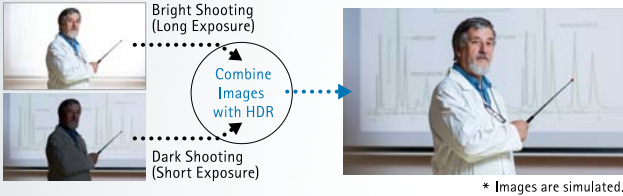
High Performance Optical 22x Zoom Lens/ Super Resolution 30x Zoom

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.



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.



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

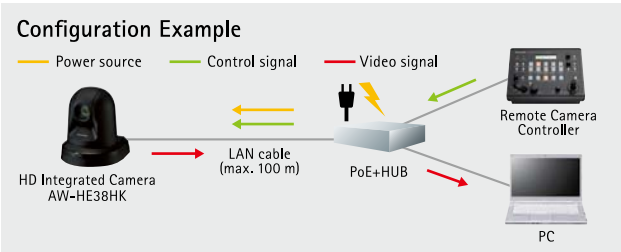


Audio Input Function

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.

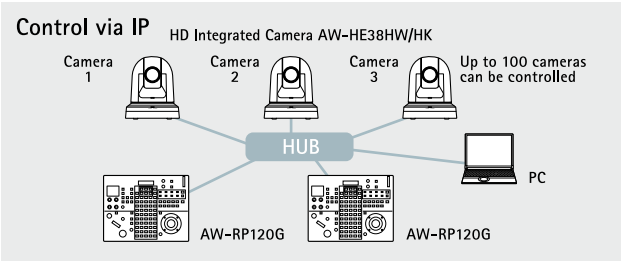
Supporting PoE+*1 for Lower Installation Costs

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.



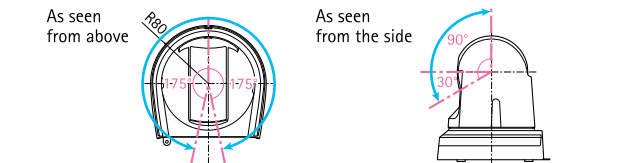
Flexible IP Control Architecture Simplifies System Design and Operation*4

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

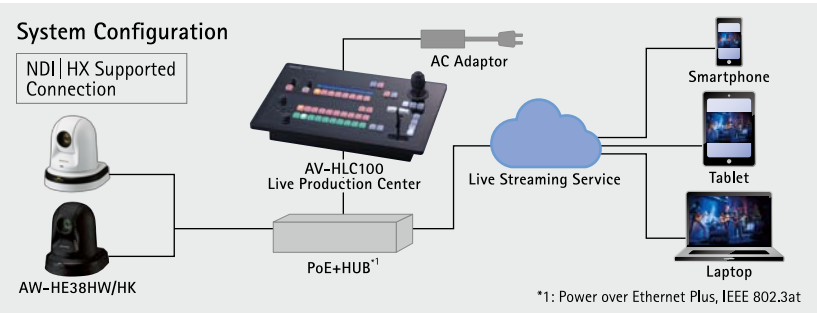
The pan range of $\pm 175^\circ$ and the tilt range of -30° to $+90^\circ$ cover a wide shooting area*5. Pan and tilt operate at a maximum speed of 90°/second and respond quickly to remote control operation. They operate quietly at a sound level of NC35 or lower.



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.

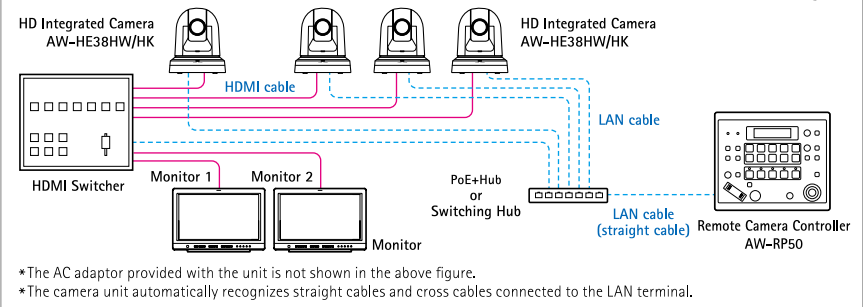


Specifications

GENERAL	Power requirements		DC 12 V (Supplied AC adaptor) DC 42 V to 57 V (PoE+ power supply)		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	
	Current consumption		1.2 A (Supplied AC adaptor) 0.4 A (PoE+ power supply)			Synchronization system		Internal synchronization		
	Ambient operating temperature		0 °C to 40 °C (32 °F to 104 °F)			[USB connection]		* This may vary depending on the operating environment.		
	Storage temperature		-20 °C to 50 °C (-4 °F to 122 °F)			Video output		USB Video Class Ver1.0		
	Allowable humidity ranges		20 % to 90 % (no condensation)			Video compression format		Motion JPEG		
	Mass		Approx. 1.5 kg (3.30 lb)			Resolution		1920 x 1080, 1280 x 720, 640 x 360		
	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]			Frame rate		max 30 fps (System frequency 59.94 Hz) max 25 fps (System frequency 50 Hz)		
INPUT	Finish		[AW-HE38HW] Pearl white, [AW-HE38HK] Metallic black		Audio output		USB Audio Class Ver1.0			
	Controller supported*1		AW-RP50, AW-RP120G, AK-HRP200G		Audio compression format		Linear PCM, 48 kHz, 16-bit, 2 channels			
	Power		DC 12 V IN, PoE+ (IEEE802.3at standard)		Supported models		Devices standardly equipped with a USB 2.0 compatible port			
	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		[Pan-tilt head unit]					
			Installation method		Stand-alone (Desktop) or suspended (Hanging)*4					
OUTPUT	Output Video	HDMI	[AW-HE38HW/HK] HDMI connector * HDCP is not supported. * VIERA Link is not supported.		Pan/tilt operation speed		Maximum speed during preset: 300°/s Maximum speed during manual: 90°/s			
	INPUT/ OUTPUT	Input/ Output connector	LAN	LAN connector for IP control (RJ-45) Equipped with straight/crossover cable auto detection function		Panning range		±175°		
RS-232C			Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT)		Tilting range		-30° to 90°*5			
RS-422			CONTROL IN RS422A (RJ-45)		Quietness		During preset: NC40 or less During manual: NC35 or less			
USB			Mini-B port		[Camera/pan-tilt head control]					
		SD card	microSD card slot		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)			
[Camera unit]					AW protocol connecting cable		LAN cable*6 (category 5 or above,straight cable), max. 1000 m (3280 ft)			
Imaging sensors			1/2.3-type MOS		Standard protocol connecting cable		Mini DIN 8-pin cable, male			
Lens			AW-HE38HW/HK : Motorized 22x zoom, F1.6 to F4.3 [f=4.3 mm (1/64 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)]		[SD card recording]					
Focus			Switching between auto and manual		SD card type		micro SDHC (4 GB to 32 GB), micro SDXC (64 GB to 128 GB), Speed class 10 or higher			
Focus distance			Entire zooming range:1.2 m (3.94 ft) Wide end: 10 cm (0.33 ft)		System frequency		59.94 Hz/50 Hz			
Color separation optical system			On-chip color filter system		Video compression format		MPEG-4 AVC/H.264 High Profile			
FUNCTIONS AND PERFORMANCE	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])		Audio compression format		AAC-LC (48 kHz, 16 bit, 2 ch, 128 kbps)			
		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])		SD card recording		MPEG-4 AVC file standard compliant (.MP4)			
	Horizontal resolution		1000 TV lines Typ (Center area)		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			
	Gain selection*2		Auto, 0 dB to 48 dB (3 dB step)		[Network]					
	Frame mix*3		Auto, Off, 6 dB, 12 dB, 18 dB, 24 dB		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			
	Electronic shutter speed		During		1/30 to 1/2000 [59.94 Hz] Full Auto 1/25 to 1/2000 [50 Hz]		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	
			During Auto		1/60 to 1/2000 [59.94 Hz] 1/50 to 1/2000 [50 Hz]		IPv6 TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCPv6, DNS, NTP, ICMPv6(MLD), RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast			
			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]		i-OS, Android support		JPEG image display	
	Synchro scan		59.94 Hz : 59.94 Hz to 660.09 Hz 50 Hz : 50.00 Hz to 570.12 Hz		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/HKPP]: 1, [AW-HE38HW/HKE]: 3, [AW-HE38HW/HKPC]: 1 AC adaptor: 1			
	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								

*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



Rear View



*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.