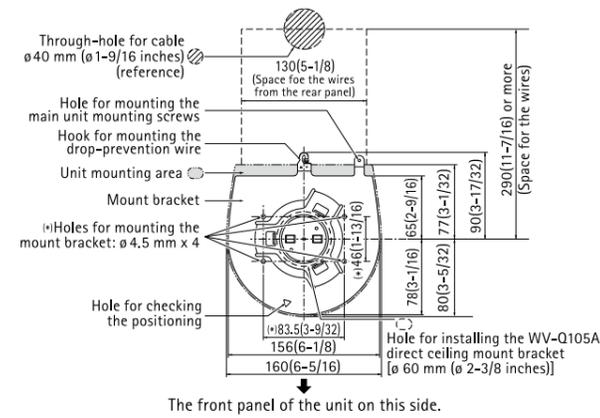


Other Functions

- 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



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 
 * Not available in some areas.	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®

Panasonic Corporation
Connected Solutions Company

2-15 Matsuba-cho, Kadoma, Osaka 571-8503 Japan
<https://pro-av.panasonic.net/>

[Countries and Regions]

Argentina +54 11 4122 7200
Australia +61 (0) 2 9491 7400
Brazil +55 11 3889 4035
Canada +1 905 624 5010
China +86 10 6515 8828
Hong Kong +852 2313 0888
Czech Republic +421 (0) 903 447 757
Denmark +45 43 20 08 57
Egypt +20 2 23938151
Finland, Latvia, Lithuania, Estonia
+358 (9) 521 52 53
France +33 (0) 1 47 91 64 00
Germany, Austria, Switzerland
+49 (0) 6103 313887
Greece +30 210 96 92 300
Hungary +36 (1) 382 60 60
India +91 1860 425 1860
Indonesia +65 6277 7284
Iran
(Vida) +98 21 2271463
(Panasonic Office) +98 2188791102
Italy +39 02 6788 367
Jordan +962 6 5859801
Kazakhstan +7 727 298 0891
Korea +82 2 2106 6641

Kuwait +96 522431385
Lebanon +96 11665557
Malaysia +60 3 7809 7888
Mexico +52 55 5488 1000
Mongolia +976 70115577
Netherlands, Belgium
+31 73 640 2729
New Zealand +64 9 272 0100
Norway +47 67 91 78 00
Pakistan +92 21 111 567 111
Palestine +972 2 2988750
Panama +507 229 2955
Philippines +65 6277 7284
Poland +48 (22) 338 1100
Portugal +351 21 425 77 04
Romania, Albania, Bulgaria, Macedonia
+40 (0) 729 164 387
Russia & CIS +7 495 9804206
Saudi Arabia +966 (1) 4790499
Singapore +65 6277 7284
Slovak Republic, Croatia, Serbia, Bosnia,
Montenegro, Slovenia
+421 (0) 903 447 757
South Africa +27 11 3131622
Spain +34 (93) 425 93 00

Sweden +46 (8) 680 26 41
Taiwan +886 2 2227 6214
Thailand +662 731 8888
Turkey +90 216 578 3700
U.A.E. (for All Middle East)
+971 4 8862142
Ukraine +380 44 4903437
U.K. +44(0)1344 70 69 13
U.S.A. +1 877 803 8492
Vietnam +65 6277 7284



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

Optional Software

Auto Tracking Software Key

AW-SF100/AW-SF200

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

A 30-day Free Trial is Available

- 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.

PTZ Control Center

Free Software

- 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

Free Software

- 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.

* For further information on the optional software, please see "Software Download" on the Panasonic website <<https://pro-av.panasonic.net/>>.

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



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.

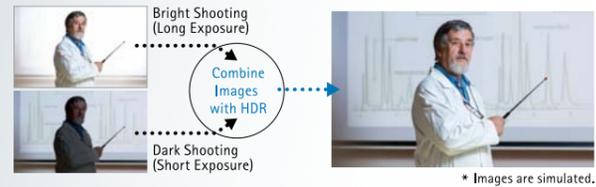
High Performance Optical 22x Zoom Lens/ Super Resolution 30x Zoom

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

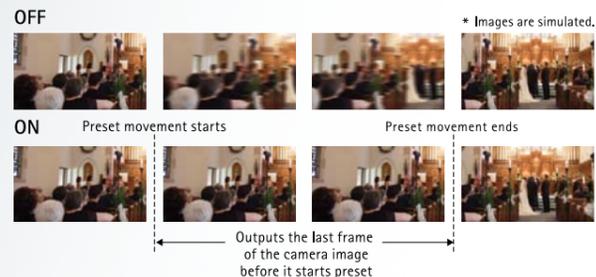
In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE38HW/HK is newly equipped with High Dynamic Range (HDR) mode. When shooting and synthesizing two images with differing exposure times, the AW-HE38HW/HK can create video with high visibility that corrects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



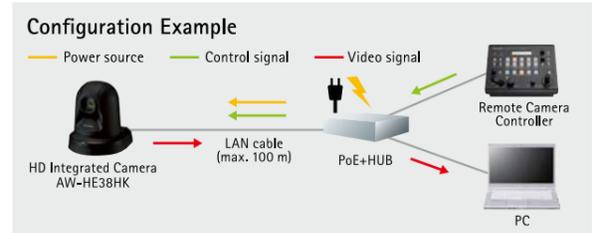
*1: Abbreviation of Power over Ethernet Plus. *2: The software for the AW-HE38HW/HK may need to be updated depending on the existing software version. For details, see the Panasonic website (<https://pro-av.panasonic.net/>). *3: Picture quality is lower with the digital zoom. *4: Controller upgrade required. 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.

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.

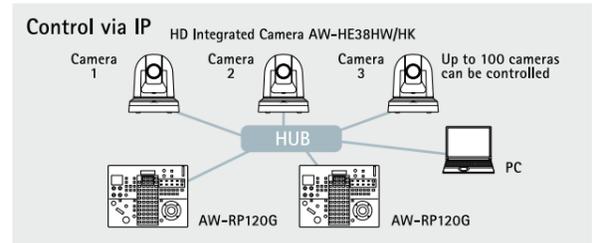
Supporting PoE+*1 for Lower Installation Costs

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.



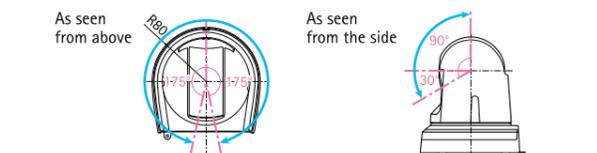
Flexible IP Control Architecture Simplifies System Design and Operation*4

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.



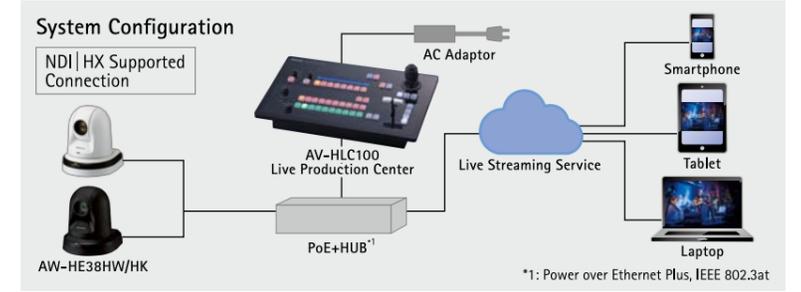
Exceptional Pan-tilt Performance for Smooth Shooting Over a Wide Area*5

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.



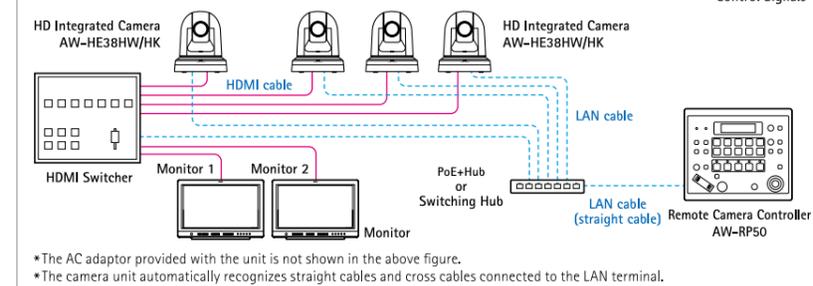
Specifications

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		
	Power	DC 12 V IN, PoE+ (IEEE802.3at standard)		
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		
	Mic/line input			
	Output Video	HDMI	[AW-HE38HW/HK] HDMI connector * HDCP is not supported. * VIERA Link is not supported.	
	LAN	LAN connector for IP control (RJ-45) Equipped with straight/crossover cable auto detection function		
INPUT/OUTPUT	Input/Output connector	RS-232C RS-422 USB SD card	Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT) CONTROL IN RS422A (RJ-45) Mini-B port microSD card slot	
	[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 (1/164 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			
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])	
		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	1/30 to 1/2000 [59.94 Hz]	
		Full Auto	1/25 to 1/2000 [50 Hz]	
		During Auto	1/60 to 1/2000 [59.94 Hz] 1/50 to 1/2000 [50 Hz]	
		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 1080:29.97Pf/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)**			
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)			
	LAN cable*6 (category 5 or above, straight cable), max. 1000 m (3280 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, 1280 x 720/25p, 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, RTSP/RTCP, FTP, DHCP, DNS, NTP, IGMP, UPnP, ICMP, ARP, RTPSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast		
	IPv6	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTSP/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/HKP]: 1, [AW-HE38HW/HKE]: 3, [AW-HE38HW/HKPC]: 1 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-0105A).

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

