



**AW-HE38 Full HD Remote Camera with integrated pan-tilt**

## **AW-HE38H**

The AW-HE38 pan/tilt/zoom camera incorporates newly-developed 1/2.3-type full HD MOS sensors and Digital Signal Processors (DSP) for high sensitivity, high resolution and superior video capture in a wide range of shooting conditions.

### **Key Features**

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1/2.3-Type MOS

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22x Optical Zoom

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Available upgrade to NDI|HX - PoE+ for Power, Ultra Low Latency Audio/Video, Tally & Control via a Single Cable or choose the AW-HN38H for out-of-the-box support for NDI|HX

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IP Connectivity for web interface and control plus PoE+ support for single cable power, streaming and camera control

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HDMI Video Output, in addition to USB and microSD card built-in recording



## AW-HE38H

<https://eu.connect.panasonic.com/n/en/products/broadcast-proav/aw-he38h>

### General

<b>Power Requirements</b>	DC 12 V (Supplied AC adaptor) DC 42 V to 57 V (PoE+ power supply)
<b>Current Consumption</b>	1.2 A (Supplied AC adaptor) 0.4 A (PoE+ power supply)
<b>Ambient Operating Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Storage Temperature</b>	-20 °C to 50 °C (-4 °F to 122 °F)
<b>Allowable Humidity Ranges</b>	20 % to 90 % (no condensation)
<b>Mass</b>	Approx. 1.5 kg (3.30 lb)
<b>Dimensions (W x H x D)</b>	160 mm x 186 mm x 166 mm (6-5/16 inches x 7-41/128 inches x 6-17/32 inches)

<b>Finish</b>	[AW-HE38HW] Pearl white, [AW-HE38HK] Metallic black
<b>Controller Supported*1</b>	AW-RP50, AW-RP120G, AK-HRP200G

<b>Input Power</b>	DC 12 V IN, PoE+ (IEEE802.3at standard)
<b>MIC/Line Input</b>	Stereo mini-jack (φ3.5 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

<b>Output</b>	
<b>Output Video   HDMI</b>	[AW-HE38HW/HK] HDMI connector * HDCP is not supported. * VIERA Link is not supported.

<b>Input/Output</b>	
<b>Input/Output Connector   LAN</b>	LAN connector for IP control (RJ-45) Equipped with straight/crossover cable auto detection function

<b>INPUT/OUTPUT connector   RS-232C</b>	Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT)
<b>Input/Output Connector   RS-422</b>	CONTROL IN RS422A (RJ-45)
<b>INPUT/OUTPUT connector   USB</b>	Mini-B port
<b>INPUT/OUTPUT connector   SD card</b>	microSD card slot

### FUNCTIONS AND PERFORMANCE

<b>[Camera unit]</b>	
<b>Imaging Sensors</b>	1/2.3-type MOS
<b>Lens</b>	AW-HE38HW/HK : Motorized 22x zoom, F1.6 to F4.3 [f=4.3 mm (1 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)]
<b>Focus</b>	Switching between auto and manual
<b>Focus Distance</b>	Entire zooming range:1.2 m (3.94 ft) Wide end: 10 cm (0.33 ft)
<b>Color Separation Optical System</b>	On-chip color lter system
<b>Minimum illumination   59.94 Hz</b>	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])
<b>Minimum illumination   50 Hz</b>	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])
<b>Horizontal Resolution</b>	1000 TV lines Typ (Center area)
<b>Gain Selection*2</b>	Auto, 0 dB to 48 dB (3 dB step)
<b>Frame Mix*3</b>	Auto, Off, 6 dB, 12 dB, 18 dB, 24 dB
<b>Electronic shutter speed   During Full Auto</b>	1/30 to 1/2000 [59.94 Hz]
<b>Electronic shutter speed   During Auto</b>	1/25 to 1/2000 [50 Hz] 1/60 to 1/2000 [59.94 Hz] 1/50 to 1/2000 [50 Hz]
<b>Electronic shutter speed   During Manual</b>	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]

<b>Synchro Scan</b>	59.94 Hz : 59.94 Hz to 660.09 Hz 50 Hz : 50.00 Hz to 570.12 Hz
<b>Gamma</b>	Off, Normal (Low, Mid, High), Cinema
<b>White Balance</b>	AWB A, AWB B, ATW, 3200K,5600K, VAR (2400K to 9900K)
<b>Chroma Amount Variability</b>	±3 step
<b>Scene File</b>	Full Auto, Manual1, Manual2, Manual3
<b>Output format   HD</b>	1080:59.94p/50p 1080:59.94i/50i 1080:29.97p/25p 1080:29.97PsF/25PsF 720:59.94p/50p
<b>Synchronization System</b>	Internal synchronization
<b>[USB connection]</b>	* This may vary depending on the operating environment.
<b>Video Output</b>	USB Video Class Ver1.0
<b>Video Compression Format</b>	MPEG-4 AVC/H.264 High Pro le
<b>Resolution</b>	1920 x 1080, 1280 x 720, 640 x 360
<b>Frame Rate</b>	max 30 fps (System frequency 59.94 Hz) max 25 fps (System frequency 50 Hz)
<b>Audio Output</b>	USB Audio Class Ver1.0
<b>Audio Compression Format</b>	AAC-LC (48 kHz, 16 bit, 2 ch, 128 kbps)
<b>Supported Models</b>	Devices standardly equipped with a USB 2.0 compatible port
<b>[Pan-tilt head unit]</b>	
<b>Installation Method</b>	Stand-alone (Desktop) or suspended (Hanging)*4
<b>Pan/Tilt Operation Speed</b>	Maximum speed during preset: 300°/s Maximum speed during manual: 90°/s
<b>Panning Range</b>	±175°
<b>Tilting Range</b>	-30° to 90°*5
<b>Quietness</b>	During preset: NC40 or less During manual: NC35 or less
<b>[Camera/pan-tilt head control]</b>	
<b>IP Connecting Cable</b>	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)
<b>AW Protocol Connecting Cable</b>	LAN cable*6 (category 5 or above, straight cable), max. 1000 m (3280 ft)
<b>Standard Protocol Connecting Cable</b>	Mini DIN 8-pin cable, male
<b>[SD card recording]</b>	
<b>SD Card Type</b>	micro SDHC (4 GB to 32 GB), micro SDXC (64 GB to 128 GB), Speed class 10 or higher
<b>System Frequency</b>	59.94 Hz/50 Hz
<b>SD Card Recording</b>	MPEG-4 AVC le standard compliant (.MP4)
<b>Recording Format</b>	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
<b>[Network]</b>	
<b>Resolution   JPEG</b>	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
<b>Resolution   H.264</b>	1920 x 1080, 1280 x 720, 640 x 360, 320 x 180 max.60 fps
<b>Supported protocol   IPv4</b>	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCP, DNS, NTP, IGMP, UPnP, ICMP, ARP, RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
<b>Supported protocol   IPv6</b>	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCPv6, DNS, NTP, ICMPv6(MLD), RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
<b>i-OS, Android support</b>	JPEG image display
<b>Accessories</b>	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 washer, spring washer) M3 x 6 mm: 1 Power cable (1.5 m [4.92 ft]) [AW-HE38HW/HKP]: 1, [AW-HE38HW/HKE]: 3 AC adaptor: 1
<b>Note</b>	*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 (WW-Q105A).