



**HD remote camera that enables high-quality video production even in dark environments.**

## AW-HE145

The HD integrated camera AW-HE145 realizes high sensitivity of F9/2000lx with the mounted 1.0-type MOS sensor, and can shoot beautifully at stage events or church services with low light. The operation mechanism is the same design as the high-end model, so the operating performance of the pan/tilt and zoom is smooth and accurate, allowing you to shoot without stress. Furthermore, it is equipped with an optical 20x zoom and horizontal 75.1° wide-angle lens to realize flexible video production.

### Key Features

High sensitivity achieved with the 1-type large-sized sensor

Optical 20x zoom/horizontal 75.1° wide-angle shooting

Pan/tilt performance that achieves smooth and accurate operation

Enables high-quality video production even in dark environments

SRT support for stable video transmission



## AW-HE145

<https://eu.connect.panasonic.com/pl/pl/products/broadcast-proav/aw-he145>

<b>General</b>	
<b>Power Requirements</b>	12 V DC (10.8 V to 13.2 V), DC 42 V to 57 V (Camera Input, PoE++ power supply)
<b>Current Consumption</b>	4.0 A (XLR IN connector), 1.2 A (PoE++ power supply)
<b>Ambient Operating Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Ambient Operating Humidity</b>	20 % to 90 % (no condensation)
<b>Storage Temperature</b>	-20 °C to 50 °C (-4 °F to 122 °F)
<b>Mass</b>	Approx. 4.1 kg (9.04 lb) (excluding mount bracket)
<b>Dimensions (W x H x D)</b>	213 mm x 267 mm x 219 mm (8-3/8 inches x 10-1/2 inches x 8-5/8 inches) (excluding protrusions, direct ceiling mount bracket)
<b>Finish</b>	AW-HE145W: Pearl white AW-HE145K: Metallic Black
<b>Controller Supported</b>	AW-RP150, AW-RP60, AK-HRP1000GJ, AK-HRP1015GJ, AK-HRP250GJ*1
<b>Camera Unit</b>	
<b>Imaging Sensors</b>	1-type Full-HD MOSx1
<b>Lens</b>	Motorized Optical 20x zoom, F2.8 to F4.5 [f=8.8 mm (1 1/32 inches) to 176.0 mm (6-15/16 inches); 35 mm (1-3/8 inches) equivalent: 24.5 mm (31/32 inches) to 490.0 mm (19-9/32 inches)]
<b>Zoom</b>	• Optical zoom: 20x • i.Zoom: FHD 32x • Digital zoom: 10x
<b>Conversion Lens</b>	Not supported
<b>Angle of View Range</b>	Horizontal angle of view: 75.1° (wide) to 4.0° (tele) Vertical angle of view: 46.7° (wide) to 2.3° (tele) Diagonal angle of view: 82.8° (wide) to 4.6° (tele)
<b>Optical Filter</b>	Through, 1/4, 1/16, 1/64, IR through (IR through is used as "Night mode")
<b>Focus</b>	Switching between auto and manual
<b>Focus Distance</b>	Entire zooming range: 1000 mm (3.3 ft) Wide end: 100 mm (0.33 ft)
<b>Color Separation Optical System</b>	1MOS
<b>Standard Sensitivity</b>	F9, 2000 lx (When normal mode is selected)
<b>Minimum Illumination</b>	2 lx (F2.8, 59.94p, 50IRE, 42 dB, without accumulation)
<b>Horizontal Resolution</b>	1000 TV lines Typ (Center area)
<b>Gain Selection</b>	Auto, 0 dB to 36 dB*2 Super Gain function equipped : +37 dB to 42 dB
<b>Frame Mix*3</b>	0 dB, 6 dB, 12 dB, 18 dB, 24 dB
<b>Electronic Shutter Speed</b>	59.94p/59.94i: 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 29.97p: 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 23.98p/24p: 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 50p/50i: 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 25p: 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
<b>Synchro Scan</b>	59.94p/59.94i: 60.00 Hz to 7200 Hz 29.97p: 30.00 Hz to 7200 Hz 23.98p/24p: 24.00 Hz to 7200 Hz 50p/50i: 50.00 Hz to 7200 Hz 25p: 25.00 Hz to 7200 Hz
<b>Gamma</b>	HD / FILMLIKE1 / FILMLIKE2 / FILMLIKE3 / FILM REC / VIDEO REC / HLG
<b>White Balance</b>	ATW : 3200K, 5600K ATW Speed : Normal / Slow / Fast AWB : AWB-A / AWB-B VAR (selectable between 2000K and 15000K by designating a value)
<b>Chroma Amount Variability</b>	OFF, -99 % to 99 %
<b>Scene File</b>	Scene1, Scene2, Scene3, Scene4

<b>Output Format</b>	1080/59.94p, 1080/50p, 1080/29.97p*4, 1080/29.97PsF, 1080/25p*4, 1080/25PsF, 1080/23.98p*5, 1080/24p*4, 1080/23.98p*4, 1080/23.98PsF, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p
<b>Synchronization System</b>	Internal/External synchronization (BBS/Tri-level sync)
<b>Input</b>	
<b>Input Connector</b>	DC 12 V IN, G/L IN (BNC)  • BBS (Black Burst Sync), tri-level sync supported
<b>Output</b>	
<b>Video Output</b>	HDMI  HDMI 2.0 standard  4:2:2/10bit  • HDCP is not supported.  • Viera Link is not supported.  3G-SDI OUT  SMPTE292 / 75 Ω (BNC x 1)  • Level-A/Level-B supported
<b>Input/Output</b>	
<b>Input/Output Connector</b>	LAN  LAN connector for IP control (RJ-45)  RS-422  CONTROL IN RS-422A (RJ-45)  MIC/LINE input  AAC compatible (compatible with IP only)  ø 3.5 mm stereo mini jack  Input impedance: Approx. 10 kΩ (unbalanced)  • During MIC input  Supported mic: Stereo mic (plug-in power, on/off switching via menu)  Supply voltage: 2.5 V ± 0.5 V  Mic input sensitivity: Approx. -40 dBV (0 dB=1 V/Pa, 1 kHz)  • During LINE input  Input level: Approx. -10 dBV
<b>Pan-Tilt Head Unit</b>	
<b>Camera/Pan-Tilt Head Control</b>	IP connecting cable:  LAN cable*6: (category 5e or above, straight cable), max. 100 m (328 ft)  AW protocol connecting cable:  LAN cable*6: (category 5e or above, straight cable), max. 1000 m (3280 ft)
<b>Installation Method</b>	Stand-alone (Desktop) or suspended (Hanging)*7
<b>Pan/Tilt Operation Speed</b>	Minimum speed 0.08°/s  Maximum speed 60°/s or higher*8  • Maximum speed is 180°/s in high-speed mode
<b>Panning Range</b>	±175°
<b>Tilting Range</b>	-30° to 210°*9
<b>Quietness</b>	NC35 or less
<b>Supported Operating Systems and Web Browsers*10</b>	
<b>Supported operating systems and web browsers</b>	Windows  Microsoft(R) Windows(R) 10  Windows(R) Internet Explorer(R) 11 (64-bit/32-bit)  Microsoft Edge  Google Chrome  Mac  MacOS v11.0.1 / Safari 14.01  MacOS v11.0.1 / Google Chrome  MacOS V10.15 / Google Chrome  MacOS V10.14 / Google Chrome  iPhone / iPad  iOS  Google Chrome
<b>IP Streaming</b>	

<b>Image Streaming Mode</b>	JPEG (MJPEG), H.264, H.265
<b>Image Resolution</b>	1920x1080, 1280x720, 640x360, 320x180
<b>Image Transmission Setting</b>	<p>JPEG</p> <p>Frame Rate: Maximum 30 fps, Image quality (Fine / Normal)</p> <p>H.264</p> <p>Transmission Type: Unicast port (AUTO), Unicast port (MANUAL), Multicast port</p> <p>Transmission Priority: Constant bit rate, Frame rate, Best effort</p> <p>Frame Rate: [60Hz] 60fps / 30fps / 15fps / 5fps, [50Hz] 50fps / 25fps / 12.5fps / 5fps</p> <p>Max Bit Rate: 24576kbps / 20480kbps / 16384kbps / 14336kbps / 12288kbps / 10240kbps / 8192kbps / 6144kbps / 4096kbps / 3072kbps / 2048kbps / 1536kbps / 1024kbps / 768kbps / 512kbps</p> <p>H.265</p> <p>Transmission Type: Unicast port (AUTO), Unicast port (MANUAL), Multicast port</p> <p>Frame Rate: [60Hz] 60fps / 30fps, [50Hz] 50fps / 25fps</p> <p>Max Bit Rate: 24576kbps / 20480kbps / 16384kbps / 14336kbps / 12288kbps / 10240kbps / 8192kbps / 6144kbps / 4096kbps / 3072kbps / 2048kbps / 1536kbps / 1024kbps / 768kbps / 512kbps</p> <p>NDI HX</p> <p>Transmission Type: Unicast port (AUTO), Unicast port (MANUAL), Multicast port</p> <p>Frame Rate: [60Hz] 60fps / 30fps / 15fps / 5fps, [50Hz] 50fps / 25fps / 12.5fps / 5fps</p> <p>Max Bit Rate 24576kbps / 20480kbps / 16384kbps / 14336kbps / 12288kbps / 10240kbps / 8192kbps / 6144kbps / 4096kbps / 3072kbps / 2048kbps / 1536kbps / 1024kbps / 768kbps / 512kbps</p> <p>SRT H.264</p> <p>Transmission Type: UDP Unicast Only</p> <p>Frame Rate: [60Hz] 60fps / 30fps / 15fps / 5fps, [50Hz] 50fps / 25fps / 12.5fps / 5fps</p> <p>Max Bit Rate: 24576kbps / 20480kbps / 16384kbps / 14336kbps / 12288kbps / 10240kbps / 8192kbps / 6144kbps / 4096kbps / 3072kbps / 2048kbps / 1536kbps / 1024kbps / 768kbps / 512kbps</p> <p>SRT H.265</p> <p>Transmission Type: UDP Unicast Only</p> <p>Frame Rate: [60Hz] 60fps / 30fps / 15fps / 5fps, [50Hz] 50fps / 25fps / 12.5fps / 5fps</p> <p>Max Bit Rate: 24576kbps / 20480kbps / 16384kbps / 14336kbps / 12288kbps / 10240kbps / 8192kbps / 6144kbps / 4096kbps / 3072kbps / 2048kbps / 1536kbps / 1024kbps / 768kbps / 512kbps</p> <p>RTMP/RTMPS</p> <p>Frame Rate: [60Hz] 60fps / 30fps / 15fps / 5fps, [50Hz] 50fps / 25fps / 12.5fps / 5fps, [24Hz] 24fps</p> <p>Max Bit Rate: 24576kbps / 20480kbps / 16384kbps / 14336kbps / 12288kbps / 10240kbps / 8192kbps / 6144kbps / 4096kbps / 3072kbps / 2048kbps / 1536kbps / 1024kbps / 768kbps / 512kbps</p>
<b>Audio Compression Type</b>	AAC-LC, 48 kHz / 16 bit / 2ch
<b>Supported Protocol</b>	<p>IPv6: TCP / IP, UDP / IP, HTTP, HTTPS, DNS, NTP, DHCPv6, MLD, ICMP, ARP, RTSP/RTP</p> <p>IPv4: TCP / IP, UDP / IP, HTTP, HTTPS, RTSP/RTP, DHCP, DNS, DDNS, NTP, IGMP, ICMP, ARP, RTMP, RTMPS, SRT, MPEG2-TS over UDP</p>
<b>Other Function</b>	
<b>NDI Support*11</b>	NDI   HX
<b>Tally LED display color</b>	red / green

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**Note**

\*1: Available in September 2021.

\*2: 1 dB step increments can be set.

\*3: This cannot be configured when the format is 2160/29.97p, 2160/23.98p, 2160/24p, 2160/25p, 1080/29.97p, 1080/23.98p(59.94i), 1080/29.97PsF, 1080/23.98PsF, 1080/25p, 1080/25PsF.

\*4: Native output.

\*5: It denotes "1080/23.98p over 59.94i".

\*6: Use of an STP (shielded twisted pair) cable is recommended.

\*7: To ensure safety, the unit must be secured using the mount bracket supplied.

\*8: Quietness, stationary accuracy, etc., in high-speed mode may vary from normal mode.

\*9: Depending on the pan or tilt position, the camera may be reflected in the image.

\*10: Supported OS indicated are for browsers current as of October 2018. See Service and Support (<https://www.pass.panasonic.co.jp/p2ui/guest/TopLogin.do?lang=en&category=pav>) for the latest information on browser support.

\*11: Contact your local Panasonic vendor for further information.