



**Full-HD PTZ Camera with simultaneous 3G-SDI,  
HDMI & USB output**

## AW-HE20

PTZ cameras play an increasingly important role in teleworking such as online meetings and online classes. The AW-HE20 offers high image quality, wide shooting angle and high-magnification zoom to provide more comfortable communication through high-quality video images and stable transmission. The AW-HE20 is compatible with a wide range of systems such as SDI, HDMI, USB and IP, thus allowing flexible camera setup and operation. The AW-HE20 is a high-quality entry model. The compact unit can be installed in a small place without getting in the way.

### Key Features

Compact size & wide angle

Simultaneous 3G-SDI, HDMI & USB output

High-Quality Video Streaming for More Comfortable Online Communication

Excellent system flexibility to achieve smart wiring and smooth operation

**HDMI**<sup>™</sup>  
HIGH DEFINITION MULTIMEDIA INTERFACE

**zoom**  
Certified



## AW-HE20

<https://ap.connect.panasonic.com/vn/vi/aw-he20>

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| <b>General -&gt; Power Requirements</b>                        | 12 V DC (10.8 V to 13.2 V) (Supplied AC adapter)   |
| <b>General -&gt; PoE</b>                                       | PoE+<br>IEEE802.3at compliant: DC42.5 to 57 V  |
| <b>General -&gt; Current Consumption</b>                       | 1.3 A (Supplied AC adaptor), 0.4 A (PoE+ power supply)   |
| <b>General -&gt; Ambient Operating Temperature</b>             | 0 °C to 40 °C (32°F to 104°F)  |
| <b>General -&gt; Ambient Operating Humidity</b>                | 20 ◆ to 90 ◆ (no condensation)   |
| <b>General -&gt; Storage Temperature</b>                       | -20 °C to 50 °C (-4 °F to 122 °F)  |
| <b>General -&gt; Weight</b>                                    | Approx. 1.9 kg (4.19lbs) (excluding ceiling mounting bracket)  |
| <b>General -&gt; Dimensions</b>                                | W 165.1 mm x H 176.2 mm x D 176.1 mm<br>(6.5 inches x 6.94 inches x 6.93 inches)<br>(Excluding protrusions, cable cover, mounting bracket)   |
| <b>General -&gt; Finish</b>                                    | AW-HE20W: white<br>AW-HE20K: black   |
| <b>General -&gt; Controller Supported</b>                      | See the "Compatibility Chart for Operation Devices and Application Software" page  |
| <b>Camera Unit -&gt; Imaging Sensor</b>                        | 1/2.8-type MOSx1   |
| <b>Camera Unit -&gt; Effective Pixels</b>                      | Approx. 8,460,000 pixels   |
| <b>Camera Unit -&gt; Zoom</b>                                  | <ul style="list-style-type: none"> <li>• Optical zoom: 12x</li> <li>• i.Zoom UHD 1.33x, FHD 1.33x</li> <li>• Digital extender zoom: 1.4x, 2x</li> <li>• Max Digital Zoom: 2x, 3x, 4x</li> </ul>                                    |
| <b>Camera Unit -&gt; Lens</b>                                  | Motorized Optical 12x zoom, F1.6 to F2.8<br>[f=3.9 mm to 46.8 mm;<br>35 mm equivalent: 26.4 mm to 316.4 mm]  |
| <b>Camera Unit -&gt; Conversion Lens</b>                       | Not supported  |
| <b>Camera Unit -&gt; Angle of View Range</b>                   | Horizontal angle of view: 71.0° (wide) to 6.0° (tele)<br>Vertical angle of view: 43.0° (wide) to 3.0° (tele)<br>Diagonal angle of view: 79.0° (wide) to 7.0° (tele)  |
| <b>Camera Unit -&gt; Minimum Illumination</b>                  | 0.4 lx (50IRE, Gain=42dB, Shutter Speed 1/30, IRIS=F1.6)   |
| <b>Camera Unit -&gt; Horizontal Resolution</b>                 | > HD<br>-1,000 Typ (Center area)   |
| <b>Camera Unit -&gt; Gain Selection</b>                        | Auto, 0dB to 42dB *1   |
| <b>Camera Unit -&gt; Frame Mix</b>                             | Auto, 0dB, 6dB, 12dB, 18dB, 24dB   |
| <b>Camera Unit -&gt; Electronic Shutter Speed -&gt; Manual</b> | 1/1, 1/2, 1/3, 1/7, 1/15, 1/30, 1/60, 1/120, 1/240, 1/480, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000 [ 60Hz/59.94Hz ]<br>1/1, 1/2, 1/3, 1/6, 1/12, 1/25, 1/50, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000 [ 50Hz ] |
| <b>Camera Unit -&gt; Synchro Scan -&gt; 59.94p/59.94i</b>      | 60.0Hz ~ 660.0Hz   |
| <b>Camera Unit -&gt; Synchro Scan -&gt; 50p/50i</b>            | 50.0Hz ~ 570.1Hz   |
| <b>Camera Unit -&gt; Synchro Scan -&gt; 29.97p</b>             | 60.0Hz ~ 660.0Hz   |
| <b>Camera Unit -&gt; Synchro Scan -&gt; 25p</b>                | 50.0Hz ~ 570.1Hz   |
| <b>Camera Unit -&gt; White Balance</b>                         | ATW, AWB A, AWB B, 3200K, 5600K  |
| <b>Camera Unit -&gt; Chroma Amount Variability</b>             | 11 steps (0 to 10)   |
| <b>Camera Unit -&gt; Output Format (SDI) -&gt; HD</b>          | [60Hz]1080/60p, 1080/60i, 1080/30p, 720/60p<br>[59.94Hz]1080/59.94p, 1080/59.94i, 1080/29.97p, 720/59.94p<br>[50Hz]1080/50p, 1080/50i, 1080/25p, 720/50p   |
| <b>Camera Unit -&gt; Output Format (HDMI) -&gt; 4K</b>         | [60Hz]1080/60p, 1080/60i, 1080/30p, 720/60p<br>[59.94Hz]1080/59.94p, 1080/59.94i, 1080/29.97p, 720/59.94p<br>[50Hz]1080/50p, 1080/50i, 1080/25p, 720/50p   |
| <b>Input Connector -&gt; DC IN</b>                             | DC 12 V IN   |
| <b>Output Connector -&gt; HDMI</b>                             | HDMI Connector<br>4:4:4/8 bit<br>• HDCP is not supported.<br>• Viera Link is not supported.  |
| <b>Output Connector -&gt; 3G-SDI OUT</b>                       | 75Ω BNC<br>• Level-A supported *2  |
| <b>Input/Output Connector -&gt; LAN</b>                        | LAN terminal for IP control (RJ-45) 100BASE-TX/1000BASE-T  |
| <b>Input/Output Connector -&gt; RS-232C</b>                    | Mini DIN 8-pin (IN)/Mini DIN 8-pin (OUT)   |
| <b>Input/Output Connector -&gt; RS-422</b>                     | CONTROL IN RS422A (RJ-45)  |
| <b>Input/Output Connector -&gt; USB</b>                        | Type-C connector   |

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|--|---|
| <b>Input/Output Connector -&gt; MIC/LINE Input</b>                                 | MIC/LINE input compatible (SDI/HDMI/IP/USB)<br>AAC compatible (compatible with IP only)<br>ø 3.5 mm stereo mini jack Imbalance<br>• During MIC input<br>Input level: -40 dBV ( 0 dB=1 V/Pa, 1 kHz )<br>Compatible Plug-in power, Supply voltage: 2.5 V ± 0.5 V<br>• During LINE input<br>Input level: Approx. -10 dBV<br>• Variable input volume range: -36 dB to +12 dB (3 dB step)<br>• Embedded audio output level: -12 dBFS<br>• Sampling frequency: 48 kHz<br>• Number of quantization bits: 16 bits |
| <b>Pan-tilt Head Unit -&gt; IP connecting cable</b>                                | • If you have a PoE+ ethernet hub<br>LAN cable *3(category 5e or above, straight cable) Max 100 m (328 ft)<br>• If you don't have a PoE+ ethernet hub<br>LAN cable *3   |
| <b>Pan-tilt Head Unit -&gt; AW protocol connecting cable</b>                       | • LAN cable *3(category 5e or above, straight cable) Max 1000 m (3280 ft)   |
| <b>Pan-tilt Head Unit -&gt; Standard Protocol Connecting Cable</b>                 | Mini Din 8-pin cable (male)   |
| <b>Pan-tilt Head Unit -&gt; Installation Method *4</b>                             | Stand-alone (Desktop) or suspended (Hanging) *4   |
| <b>Pan-tilt Head Unit -&gt; Pan/tilt Operation Speed</b>                           | Speed range:<br>Manual: 0.1°/s to 100°/s<br>Preset: 0.1°/s to 200°/s (Tilt: to 140°/s)  |
| <b>Pan-tilt Head Unit -&gt; Panning Range</b>                                      | ±170°   |
| <b>Pan-tilt Head Unit -&gt; Tilting range</b>                                      | -30° to 90° *5  |
| <b>Pan-tilt Head Unit -&gt; Quietness</b>  | NC40 or less (60 deg/sec or less)<br>NC55 or less (100 eg/sec or less)  |
| <b>Supported Operating Systems and Web Browsers -&gt; Windows *6</b>               | Windows 10<br>Windows® Internet Explorer® 11 (32 bit / 64 bit)<br>Microsoft Edge<br>Google Chrome   |
| <b>Supported Operating Systems and Web Browsers -&gt; Mac *6</b>                   | Mac OS v10.15<br>Mac OS v10.14<br>Mac OS v10.13<br>Mac OS v10.12<br>Safari<br>Google Chrome   |
| <b>IP Streaming -&gt; Image Streaming Mode</b>                                     | MJPEG (HTTP), H.264 (RTSP/RTMP/RTMPS), H.265 (RTSP)   |
| <b>IP Streaming -&gt; Image Resolution</b>   | [MJPEG]<br>1280×720、640×360<br>[H.264/H.265]<br>1920×1080、1280×720、640×360  |
| <b>IP Streaming -&gt; Image Transmission Setting (MJPEG) -&gt; Frame Rate *7</b>   | Max 30fps (25fps)   |
| <b>IP Streaming -&gt; Image Transmission Setting (MJPEG) -&gt; Max Bit Rate *7</b> | Unspecified*7   |
| <b>IP Streaming -&gt; Image Transmission Setting (H.264) -&gt; Frame Rate</b>      | [60Hz/59.94Hz] 5fps/15fps/30fps/60fps<br>[50Hz] 5fps/10fps/25fps/50fps  |
| <b>IP Streaming -&gt; Image Transmission Setting (H.264) -&gt; Max Bit Rate</b>    | RTSP/RTMP: 1024kbps to 32768kbps<br>RTMPS: 1024kbps to 8192kbps   |
| <b>IP Streaming -&gt; Image Transmission Setting (H.265) -&gt; Frame Rate</b>      | [60Hz/59.94Hz] 5fps/15fps/30fps/60fps<br>[50Hz] 5fps/10fps/25fps/50fps  |
| <b>IP Streaming -&gt; Image Transmission Setting (H.265) -&gt; Max Bit Rate</b>    | 1024kbps to 32768kbps   |
| <b>IP Streaming -&gt; Audio Compression Format</b>                                 | AAC-LC, 48kHz/16bit/2ch   |
| <b>IP Streaming -&gt; Supported Protocol -&gt; IPv6</b>                            | TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, DNS, ICMPv6, NTP   |
| <b>IP Streaming -&gt; Supported Protocol -&gt; IPv4</b>                            | TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, DHCP, DNS, ICMP, ARP, RTMP, RTMPS, NTP   |
| <b>USB web camera -&gt; Image output type</b>                                      | USB Video Class Ver1.1<br>YUV (Uncompressed), MJPEG, H.264  |
| <b>USB web camera -&gt; Image resolution -&gt; YUV</b>                             | 640x360   |
| <b>USB web camera -&gt; Image resolution -&gt; MJPEG</b>                           | 1920x1080, 1280x720, 640x360  |
| <b>USB web camera -&gt; Image resolution -&gt; H.264</b>                           | 1920x1080, 1280x720, 640x360  |
| <b>USB web camera -&gt; Image Transmission Setting (frame rate) -&gt; YUV</b>      | [60Hz/59.94Hz]:15fps<br>[50Hz]:10fps  |
| <b>USB web camera -&gt; Image Transmission Setting (frame rate) -&gt; MJPEG</b>    | [60 Hz/59.94 Hz] 30fps/ 15fps/ 5fps<br>[50 Hz] 25fps/ 10fps/ 5fps   |
| <b>USB web camera -&gt; Image Transmission Setting (frame rate) -&gt; H.264</b>    | [60Hz/59.94Hz] 5fps, 15fps, 30fps, 60fps<br>[50Hz] 5fps, 10fps, 25fps, 50fps  |
| <b>USB web camera -&gt; Audio Output Compression Format</b>                        | USB Audio Class Ver1.0<br>Linear PCM, 48KHz/16bit/2ch   |

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**Footnote Description**

1. Can be set in 3 dB step increments.
2. Embedded audio is not supported.
3. STP (Shielded Twisted Pair) is recommended.
4. To ensure safety, the unit must be secured using the mount bracket supplied.
5. The main unit may appear in the video depending on the pan/tilt position.
6. Supported OS indicated are for browsers current as of September 2021. See "Service and Support / PASS" for the latest information on browser support.
7. JPEG and H.264, H.265 simultaneous operation is possible.