**Panasonic**
**CONNECT**

## 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 flexiblility to achieve smart wiring and smooth operation

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

zoom
Certified

# AW-HE20

https://ap.connect.panasonic.com/ph/en/aw-he20

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|---|---|
| General -> Power Requirements | 12 V DC (10.8 V to 13.2 V) (Supplied AC adapter) |
| General -> PoE | PoE+<br>IEEE802.3at compliant: DC42.5 to 57 V |
| General -> Current Consumption | 1.3 A (Supplied AC adaptor), 0.4 A (PoE+ power supply) |
| General -> Ambient Operating Temperature | 0 ℃ to 40 ℃ (32°F to 104°F) |
| General -> Ambient Operating Humidity | 20 � to 90 � (no condensation) |
| General -> Storage Temperature | -20 ℃ to 50 ℃ (-4 °F to 122 °F) |
| General -> Weight | Approx. 1.9 kg (4.19lbs) (excluding ceiling mounting bracket) |
| General -> Dimensions | W 165.1 mm x H 176.2 mm x D 176.1mm<br>(6.5 inches x 6.94 inches x 6.93 inches)<br>(Excluding protrusions, cable cover, mounting bracket) |
| General -> Finish | AW-HE20W: white<br>AW-HE20K: black |
| General -> Controller Supported | See the "Compatibility Chart for Operation Devices and Application Software" page |
| Camera Unit -> Imaging Sensor | 1/2.8-type MOSx1 |
| Camera Unit -> Effective Pixels | Approx. 8,460,000 pixels |
| Camera Unit -> Zoom | • Optical zoom: 12x<br>• i.Zoom UHD 1.33x, FHD 1.33x<br>• Digital extender zoom: 1.4x , 2x<br>• Max Digital Zoom: 2x, 3x, 4x |
| Camera Unit -> Lens | 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] |
| Camera Unit -> Conversion Lens | Not supported |
| Camera Unit -> Angle of View Range | 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) |
| Camera Unit -> Minimum Illumination | 0.4 lx (50IRE, Gain=42dB, Shutter Speed 1/30, IRIS=F1.6) |
| Camera Unit -> Horizontal Resolution -> HD | 1,000 Typ (Center area) |
| Camera Unit -> Gain Selection | Auto, 0dB to 42dB [*1] |
| Camera Unit -> Frame Mix | Auto, 0dB, 6dB, 12dB, 18dB, 24dB |
| Camera Unit -> Electronic Shutter Speed -> Manual | 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 ] |
| Camera Unit -> Synchro Scan -> 59.94p/59.94i | 60.0Hz ~ 660.0Hz |
| Camera Unit -> Synchro Scan -> 50p/50i | 50.0Hz ~ 570.1Hz |
| Camera Unit -> Synchro Scan -> 29.97p | 60.0Hz ~ 660.0Hz |
| Camera Unit -> Synchro Scan -> 25p | 50.0Hz ~ 570.1Hz |
| Camera Unit -> White Balance | ATW, AWB A, AWB B, 3200K, 5600K |
| Camera Unit -> Chroma Amount Variability | 11 steps (0 to 10) |
| Camera Unit -> Output Format (SDI) -> HD | [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 |
| Camera Unit -> Output Format (HDMI) -> 4K | [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 |
| Input Connector -> DC IN | DC 12 V IN |
| Output Connector -> HDMI | HDMI Connector<br>4:4:4/8 bit<br>• HDCP is not supported.<br>• Viera Link is not supported. |
| Output Connector -> 3G-SDI OUT | 75Ω BNC<br>• Level-A supported [*2] |
| Input/Output Connector -> LAN | LAN terminal for IP control (RJ-45) 100BASE-TX/1000BASE-T |
| Input/Output Connector -> RS-232C | Mini DIN 8-pin (IN)/Mini DIN 8-pin (OUT) |
| Input/Output Connector -> RS-422 | CONTROL IN RS422A (RJ-45) |
| Input/Output Connector -> USB | Type-C connector |

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| **Input/Output Connector -> MIC/LINE Input** | 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 |
| **Pan-tilt Head Unit -> IP connecting cable** | • 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] |
| **Pan-tilt Head Unit -> AW protocol connecting cable** | • LAN cable [*3](category 5e or above, straight cable) Max 1000 m (3280 ft) |
| **Pan-tilt Head Unit -> Standard Protocol Connecting Cable** | Mini Din 8-pin cable (male) |
| **Pan-tilt Head Unit -> Installation Method [*4]** | Stand-alone (Desktop) or suspended (Hanging) [*4] |
| **Pan-tilt Head Unit -> Pan/tilt Operation Speed** | Speed range:<br>Manual: 0.1°/s to 100°/s<br>Preset: 0.1°/s to 200°/s (Tilt: to 140°/s) |
| **Pan-tilt Head Unit -> Panning Range** | ±170° |
| **Pan-tilt Head Unit -> Tilting range** | -30° to 90° [*5] |
| **Pan-tilt Head Unit -> Quietness** | NC40 or less (60 deg/sec or less)<br>NC55 or less (100 eg/sec or less) |
| **Supported Operating Systems and Web Browsers -> Windows [*6]** | Windows 10<br>Windows® Internet Explorer® 11 (32 bit / 64 bit)<br>Microsoft Edge<br>Google Chrome |
| **Supported Operating Systems and Web Browsers -> Mac [*6]** | Mac OS v10.15<br>Mac OS v10.14<br>Mac OS v10.13<br>Mac OS v10.12<br>Safari<br>Google Chrome |
| **IP Streaming -> Image Streaming Mode** | MJPEG (HTTP), H.264 (RTSP/RTMP/RTMPS), H.265 (RTSP) |
| **IP Streaming -> Image Resolution** | [MJPEG]<br>1280×720、640×360<br>[H.264/H.265]<br>1920×1080、1280×720、640×360 |
| **IP Streaming -> Image Transmission Setting (MJPEG) -> Frame Rate [*7]** | Max 30fps (25fps) |
| **IP Streaming -> Image Transmission Setting (MJPEG) -> Max Bit Rate [*7]** | Unspecified*7 |
| **IP Streaming -> Image Transmission Setting (H.264) -> Frame Rate** | [60Hz/59.94Hz] 5fps/15fps/30fps/60fps<br>[50Hz] 5fps/10fps/25fps/50fps |
| **IP Streaming -> Image Transmission Setting (H.264) -> Max Bit Rate** | RTSP/RTMP: 1024kbps to 32768kbps<br>RTMPS: 1024kbps to 8192kbps |
| **IP Streaming -> Image Transmission Setting (H.265) -> Frame Rate** | [60Hz/59.94Hz] 5fps/15fps/30fps/60fps<br>[50Hz] 5fps/10fps/25fps/50fps |
| **IP Streaming -> Image Transmission Setting (H.265) -> Max Bit Rate** | 1024kbps to 32768kbps |
| **IP Streaming -> Audio Compression Format** | AAC-LC, 48kHz/16bit/2ch |
| **IP Streaming -> Supported Protocol -> IPv6** | TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, DNS, ICMPv6, NTP |
| **IP Streaming -> Supported Protocol -> IPv4** | TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, DHCP, DNS, ICMP, ARP、RTMP, RTMPS, NTP |
| **USB web camera -> Image output** | USB Video Class Ver1.1 |
| **USB web camera -> Image output type** | YUV (Uncompressed), MJPEG, H.264 |
| **USB web camera -> Image resolution -> YUV** | 640x360 |
| **USB web camera -> Image resolution -> MJPEG** | 1920x1080, 1280x720, 640x360 |
| **USB web camera -> Image resolution -> H.264** | 1920x1080, 1280x720, 640x360 |
| **USB web camera -> Image Transmission Setting (frame rate) -> YUV** | [60Hz/59.94Hz]:15fps<br>[50Hz]:10fps |
| **USB web camera -> Image Transmission Setting (frame rate) -> MJPEG** | [60 Hz/59.94 Hz] 30fps/ 15fps/ 5fps<br>[50 Hz] 25fps/ 10fps/ 5fps |
| **USB web camera -> Image Transmission Setting (frame rate) -> H.264** | [60Hz/59.94Hz] 5fps, 15fps, 30fps, 60fps<br>[50Hz] 5fps, 10fps, 25fps, 50fps |
| **USB web camera -> Audio Output** | USB Audio Class Ver1.0 |
| **USB web camera -> Audio Compression Format** | Linear PCM, 48KHz/16bit/2ch |

| Footnote Description | 1. Can be set in 3 dB step increments. |
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| | 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. |