



## 4K 50/60p PTZ Camera supporting Full-Bandwidth NDI®\*1, SRT and FreeD protocols

### AW-UE80

The AW-UE80W/K is a PTZ camera suitable for capturing the natural facial expressions of actors/performers and for recording events without spoiling the ambiance. The dome-shaped design minimizes “the feeling of being recorded on video” while the new direct-drive motor produces a very quiet operating sound so it won’t disturb the production activities or spoil the ambiance. The camera offers high-image-quality 4K/60p resolution, wide 74.1° angle, and optical zoom with up to 24x magnification to achieve superb video image quality. The AW-UE80W/K also offers excellent stability and security during video streaming so it can be used for any type of video production. From the production of a reality show to the recording of an internal business or educational event, the top-of-the-line standard model,

#### Key Features

Supports a wide variety of IP transmission protocols, including NDI®\*1 High Bandwidth, NDI®\*1 HX, and SRT\*2

Supports 4K 50p/60p shooting

Includes a wide-angle lens with a 74.1° field of view and 24x optical zoom

Supports FreeD for building AR/VR systems

New Direct Drive System for improved responsiveness and quietness





## AW-UE80

<https://ap.connect.panasonic.com/my/en/aw-ue80>

<b>General -&gt; Power Requirements</b>	12 V DC (10.8 V to 13.2 V) (Supplied AC adaptor)
<b>General -&gt; PoE</b>	PoE++ *1 IEEE802.3bt compliant: DC42 to 57 V (Software authentication (LLDP) is supported)
<b>General -&gt; Current Consumption</b>	3.0 A (Supplied AC adaptor), 1.0 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. 2.0 kg (4.41 lbs) (excluding ceiling mounting bracket), Approx. 2.25 kg (4.96 lbs) (including ceiling mounting bracket)
<b>General -&gt; Dimensions</b>	W 170.0 mm x H 211.0 mm x D 171.0 mm (6.693 inches x 8.307 inches x 6.732 inches) (Excluding protrusions, cable cover, ceiling mounting bracket)
<b>General -&gt; Finish</b>	AW-UE80W: White AW-UE80K: Black
<b>General -&gt; Controller Supported *1</b>	See the "Compatibility Chart for Operation Devices and Application Software" page
<b>Camera Unit -&gt; Imaging Sensor</b>	1/2.5-type 4K MOS x 1
<b>Camera Unit -&gt; Effective Pixels</b>	Approx. 8,490,000 pixels
<b>Camera Unit -&gt; Zoom</b>	• Optical zoom: 24x • i.Zoom UHD 28x, FHD 36x • Digital extender zoom: 1.4x, 2x
<b>Camera Unit -&gt; Lens</b>	Motorized Optical 24x zoom, F1.8 to F4.0 [f=4.12 mm (5/32 inches) to 98.9 mm (3-29/32 inches); 35 mm (1-3/8 inches) equivalent: 25.0 mm (31/32 inches) to 600.0 mm (23-5/8 inches)]
<b>Camera Unit -&gt; Conversion Lens</b>	Not supported
<b>Camera Unit -&gt; Angle of View Range</b>	Horizontal angle of view: 74.1° (wide) to 3.3° (tele) Vertical angle of view: 46.0° (wide) to 1.9° (tele) Diagonal angle of view: 81.8° (wide) to 3.8° (tele)
<b>Camera Unit -&gt; Optical Filter -&gt; ND Filter</b>	Through, 1/4, 1/16, 1/64, IR through (IR through is used as "night mode")
<b>Camera Unit -&gt; Focus</b>	Switching between auto and manual
<b>Camera Unit -&gt; Focus Distance</b>	Entire zooming range: 1200 mm (3.9 ft) Wide end: 100 mm (0.33 ft)
<b>Camera Unit -&gt; Color Separation Optical System</b>	1MOS
<b>Camera Unit -&gt; Minimum Illumination</b>	3 lx (F1.8, 59.94p, 50IRE, 42 dB, without accumulation)
<b>Camera Unit -&gt; Horizontal Resolution</b>	1,500 TV Typ (Center area, UHD mode, wide) > 4K
<b>Camera Unit -&gt; Horizontal Resolution</b>	1,000 TV Typ (Center area, FHD mode, wide) > HD
<b>Camera Unit -&gt; Gain Selection *2</b>	Auto, 0 dB to 36 dB *2 (Super Gain function equipped : 37 dB to 42 dB)
<b>Camera Unit -&gt; Frame Mix *3</b>	Auto, 0 dB, 6 dB, 12 dB, 18 dB, 24 dB *3
<b>Camera Unit -&gt; Electronic Shutter Speed -&gt; 59.94p/59.94i</b>	1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
<b>Camera Unit -&gt; Electronic Shutter Speed -&gt; 50p/50i</b>	1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
<b>Camera Unit -&gt; Electronic Shutter Speed -&gt; 29.97p</b>	1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
<b>Camera Unit -&gt; Electronic Shutter Speed -&gt; 25p</b>	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>Camera Unit -&gt; Electronic Shutter Speed -&gt; 23.98p/24p</b>	1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
<b>Camera Unit -&gt; Synchro Scan -&gt; 59.94p/59.94i</b>	60.00 Hz to 7200 Hz
<b>Camera Unit -&gt; Synchro Scan -&gt; 50p/50i</b>	50.00 Hz to 7200 Hz
<b>Camera Unit -&gt; Synchro Scan -&gt; 29.97p</b>	30.00 Hz to 7200 Hz
<b>Camera Unit -&gt; Synchro Scan -&gt; 25p</b>	25.00 Hz to 7200 Hz
<b>Camera Unit -&gt; Synchro Scan -&gt; 23.98p/24p</b>	24.00 Hz to 7200 Hz
<b>Camera Unit -&gt; Gamma</b>	HD / Normal / Cinema1 / Cinema2 / Still Like
<b>Camera Unit -&gt; White Balance</b>	• ATW: 3200 K, 5600 K (ATW Speed 3-stage variables.) • AWB: AWB-A / AWB-B • VAR (selectable between 2000 K and 15000 K by designating a value)
<b>Camera Unit -&gt; Chroma Amount Variability</b>	OFF, -99 % to 99 %

<b>Camera Unit -&gt; Output Format (SDI) -&gt; HD</b>	1080/59.94p, 50p, 1080/59.94i, 50i, 1080/29.97p (Native), 25p (Native), 23.98p (over59.94i), 1080/29.97psF, 25psF, 23.98psF, 1080/24p (Just), 23.98p (Native), 720/59.94p, 50p
<b>Camera Unit -&gt; Output Format (HDMI) -&gt; 4K</b>	2160/59.94p, 2160/50p, 2160/29.97p (Native), 2160/25p (Native), 2160/24p (Native), 2160/23.98p (Native)
<b>Camera Unit -&gt; Output Format (HDMI) -&gt; HD</b>	1080/59.94p, 50p, 1080/59.94i, 50i, 1080/29.97p (Native), 25p (Native), 23.98p (over59.94p), 1080/24p (Just), 23.98p (Native), 720/59.94p, 50p
<b>Synchronization System</b>	Internal/External synchronization (BBS/Tri-level sync)
<b>Input Connector -&gt; DC IN</b>	DC 12 V IN
<b>Input Connector -&gt; G/L IN</b>	BBS (Black Burst Sync), tri-level sync supported)
<b>Output Connector -&gt; HDMI</b>	HDMI 2.0 connector 4:2:2/10bit • HDCP is not supported. • Viera Link is not supported.
<b>Output Connector -&gt; 3G-SDI OUT</b>	SMPTE292M/424M/ 75 Ω(BNC×1) • Level-A/Level-B supported
<b>Input/Output Connector -&gt; LAN</b>	LAN terminal for IP control (RJ-45) 100BASE-TX/1000BASE-T
<b>Input/Output Connector -&gt; RS-422</b>	CONTROL IN RS422A(RJ-45)
<b>Input/Output Connector -&gt; MIC/LINE Input</b>	AC compatibility (compatible with IP only) Φ3.5 mm stereo mini jack • During MIC input Input level: -40 dBV (0 dB=1 V/Pa, 1 kHz) Supply voltage: 2.5 V±0.5 V (plug-in power compatible) "• Input impedance: Approx. 2 kΩ (when plug-in power is turned ON) Approx. 20 kΩ (when plug-in power is turned OFF)" • During LINE input Input level: -10 dBV Input impedance: Approx. 3 kΩ • Input volume variable range: -36 dB to 12 dB (3 dB step) • Embedded audio output level: -12 dBFS • Sampling frequency: 48 kHz • Quantization bit rate: 24 bit (SDI, HDMI), 16 bit (IP)
<b>Pan-tilt Head Unit -&gt; IP connecting cable</b>	• If you have a PoE++ ethernet hub LAN cable *4 *5(category 5e or above, straight cable) Max 100 m (328 ft) • If you don't have a PoE++ ethernet hub LAN cable *4 *5(category 5e or above, straight cable) Max 100 m (328 ft)
<b>Pan-tilt Head Unit -&gt; AW protocol connecting cable</b>	LAN cable *4(category 5e or above, straight cable) Max 1000 m (3280 ft)
<b>Pan-tilt Head Unit -&gt; Installation Method</b>	Stand-alone (Desktop) or suspended (Hanging) *6
<b>Pan-tilt Head Unit -&gt; Pan/tilt Operation Speed</b>	Speed range: 0.08°/s to 60°/s (Normal mode) *7 • 3 speed modes installed Normal:60°/s, Fast1:90°/s, Fast2:180°/s
<b>Pan-tilt Head Unit -&gt; Panning Range</b>	±175°
<b>Pan-tilt Head Unit -&gt; Tilting range</b>	-30°to 90° *8
<b>Pan-tilt Head Unit -&gt; Quietness</b>	NC25 or less
<b>Supported Operating Systems and Web Browsers -&gt; Windows *9</b>	Windows 10 Windows® Internet Explorer® 11 (32 bit / 64 bit) Microsoft Edge Google Chrome
<b>Supported Operating Systems and Web Browsers -&gt; Mac *9</b>	Mac OS v11.0.1 / Safari 14.01 Mac OS v11.0.1 / Google Chrome Mac OS v10.15 / Google Chrome Mac OS v10.14 / Google Chrome
<b>Supported Operating Systems and Web Browsers -&gt; iPhone/iPad *9</b>	iOS Safari iPadOS
<b>Supported Operating Systems and Web Browsers -&gt; Android *9</b>	Android OS Google Chrome
<b>IP Streaming -&gt; Image Streaming Mode</b>	JPEG(MJPEG), H.264, H.265, NDI®  HX version 2 *10 *11 *12 (H.264), High Bandwidth NDI®
<b>IP Streaming -&gt; Image Resolution</b>	1920×1080, 1280×720, 640×360, 320×180
<b>IP Streaming -&gt; Image Transmission Setting (JPEG)</b>	Frame rate: Maximum 30fps Image quality (Fine / Normal)
<b>IP Streaming -&gt; Image Transmission Setting (H.264) -&gt; Transmission Type</b>	Unicast port (AUTO) Unicast port (MANUAL) Multicast port
<b>IP Streaming -&gt; Image Transmission Setting (H.264) -&gt; Transmission mode</b>	Constant bit rate Frame rate Best effort
<b>IP Streaming -&gt; Image Transmission Setting (H.264) -&gt; Frame Rate</b>	[60 Hz] 5fps / 15fps / 30fps / 60fps [50 Hz] 5fps / 12.5fps / 25fps / 50fps
<b>IP Streaming -&gt; Image Transmission Setting (H.264) -&gt; Max Bit Rate</b>	512kbps / 768kbps / 1024kbps / 1536kbps / 2048kbps / 3072kbps / 4096kbps / 6144kbps / 8192kbps / 10240kbps / 12288kbps / 14336kbps / 16384kbps / 20480kbps / 24576kbp
<b>IP Streaming -&gt; Image Transmission Setting (H.265) -&gt; Transmission Type</b>	Unicast port (AUTO) Unicast port (MANUAL) Multicast port
<b>IP Streaming -&gt; Image Transmission Setting (H.265) -&gt; Frame Rate</b>	[60 Hz] 30fps / 60fps [50 Hz] 25fps / 50fps
<b>IP Streaming -&gt; Image Transmission Setting (H.265) -&gt; Max Bit Rate</b>	1024kbps / 1536kbps / 2048kbps / 3072kbps / 4096kbps / 6144kbps / 8192kbps / 10240kbps / 12288kbps / 14336kbps / 16384kbps / 20480kbps / 24576kbps
<b>IP Streaming -&gt; Audio Compression Format</b>	AAC-LC, 48 kHz, 16 bit, 2 ch

<b>IP Streaming -&gt; Supported Protocol -&gt; Network Protocol</b>	ICMP, ARP, GARP, MLD
<b>IP Streaming -&gt; Supported Protocol -&gt; Transmission Protocol</b>	TCP/IP, UDP/IP
<b>IP Streaming -&gt; Supported Protocol -&gt; IPv6</b>	HTTP, HTTPS, DNS, NTP, DHCPv6, MDNS, SNMP, 802.1X
<b>IP Streaming -&gt; Supported Protocol -&gt; IPv4</b>	HTTP, HTTPS, DNS, NTP, DHCPv4, MDNS, SNMP, 802.1X
<b>IP Streaming -&gt; Supported Protocol -&gt; Video Streaming Protocol</b>	RTP/RTCP over RTSP, RTMP, RTMPS, SRT, MPEG2-TS over UDP, NDI®  HX version 2, High bandwidth NDI®
<b>IP Streaming -&gt; Supported Protocol -&gt; External Device Cooperation Protocol</b>	FreeD, TSL5.0, SNMP
<b>NDI® Support -&gt; NDI® Support</b>	NDI® NDI®  HX Ver.2: Included as standard *13 High Bandwidth NDI®: Included as standard*13
<b>NDI® Support -&gt; Output Format (NDI® High bandwidth) -&gt; HD</b>	1080/59.94p, 1080/50p, 1080/29.97p, 1080/25p, 1080/24p, 1080/23.98p, 720/59.94p, 720/50p
<b>NDI® Support -&gt; Image Resolution (NDI® HX)</b>	1920x1080, 1280x720
<b>NDI® Support -&gt; Image Streaming Setting (NDI® High bandwidth) -&gt; Transmission Type</b>	TCP/UDP, Unicast/Multicast
<b>NDI® Support -&gt; Image Streaming Setting (NDI® High bandwidth) -&gt; Max Bit Rate</b>	250 Mbps
<b>NDI® Support -&gt; Image Streaming Setting (NDI® HX) -&gt; Transmission Type</b>	TCP/UDP, Unicast/Multicast
<b>NDI® Support -&gt; Image Streaming Setting (NDI® HX) -&gt; Frame rate</b>	[60 Hz] 5fps/15fps/30fps/60fps [50 Hz] 5fps/12.5fps/25fps/50fps
<b>NDI® Support -&gt; Image Streaming Setting (NDI® HX) -&gt; Max Bit Rate</b>	512kbps / 768kbps / 1024kbps / 1536kbps / 2048kbps / 3072kbps / 4096kbps / 6144kbps / 8192kbps / 10240kbps / 12288kbps / 14336kbps / 16384kbps / 20480kbps / 24576kbps
<b>NDI® Support -&gt; Audio Compression Type (NDI® High bandwidth)</b>	AAC, 48 kHz, 2 ch
<b>NDI® Support -&gt; Audio Compression Type (NDI® HX)</b>	AAC-LC, 48 kHz, 16 bit, 2 ch
<b>Other Function -&gt; Tally LED Display Color</b>	red / green
<b>Other Function -&gt; VR Support (IP/RS422)</b>	Compatible with FreeD

<b>Footnote Description</b>	<p>* NDI® is a registered trademark of Vizrt NDI AB in the United States and other countries.</p> <ol style="list-style-type: none"> <li>1. In normal use within the ambient operating temperature range, the PoE+ switch will also work. However, the camera may stop operating or the power supply may be stopped depending on the specifications of the PoE+ switch when the power load exceeds the PoE+ specified power when abnormalities such as pan/tilt is stopped due to external forces or when the ambient temperature has changed significantly. Operation with PoE+ switch is not guaranteed, so please check the operation in advance under the condition of use, and judge the use by yourself.</li> <li>2. Can be set in 1 dB step increments.</li> <li>3. Cannot be set 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.</li> <li>4. STP (Shielded Twisted Pair) is recommended.</li> <li>5. Use Category 6 or higher when transmitting 4K video.</li> <li>6. To ensure safety, the unit must be secured using the mount bracket supplied.</li> <li>7. Note that the operating noise may be loud in high speed. If the operating noise is disturbing, use the Normal mode.</li> <li>8. The main unit may appear in the video depending on the pan/tilt position.</li> <li>9. Supported OS indicated are for browsers current as of August 2020. See "Service and Support / PASS" for the latest information on browser support.</li> <li>10. NDI® is a new protocol developed by NewTek, Inc. that supports IP video production workflow.</li> <li>11. NDI® is a registered trademark of NewTek, Inc. in the United States and other countries.</li> <li>12. In this instance, NDI® is used to indicate low latency with high bandwidth NDI®, NDI®  HX is used to indicate high efficiency low bandwidth NDI®  HX. In the NDI®  HX mode, 4K video signals cannot be output. AW-UE80 supports NDI®  HX version 2 and Full HD output.</li> <li>13. Simultaneous operation with the AW protocol is not possible.</li> <li>14. Non-synchronous with SDI-OUT</li> </ol>
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