



## 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, AW-UE80W/K, can be used in a diversity of applications.

#### 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://eu.connect.panasonic.com/gb/en/products/broadcast-proav/aw-ue80>

<b>General</b>	
<b>Power Requirements</b>	12 V DC (10.8 V to 13.2 V) (Supplied AC adapter)
<b>PoE+</b>	IEEE802.3bt compliant: DC42 to 57 V (Camera Input)(Software authentication (LLDP) is supported)
<b>Current Consumption</b>	3.0 A (Supplied AC adaptor), 1.0 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 to 50°C (-4 °F to 122 °F)
<b>Mass</b>	Approx. 2.0 kg (4.41 lbs) (excluding ceiling mounting bracket), Approx. 2.25 kg (4.96 lbs) (including ceiling mounting bracket)
<b>Dimensions (W x H x D) (mm)</b>	170.0 mm x 211.0 mm x 171.0 mm
<b>Dimensions (W x H x D) (inch)</b>	6.693 inches x 8.307 inches x 6.732 inches
<b>Finish</b>	AW-UE80W: White AW-UE80K: Black
<b>Controller Supported</b>	AW-RP150GJ, AW-RP60GJ, AW-RM50AG, AK-HRP1000*1, 2, AK-HRP1005*1, 2, AK-HRP1015*2, AK-HRP250*2
<b>Camera Unit</b>	
<b>Imaging Sensors</b>	1/2.5-type MOS×1
<b>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>Zoom</b>	• Optical zoom: 24x• i.Zoom UHD 28x, FHD 36x• Digital extender zoom: 1.4x, 2x
<b>Conversion Lens</b>	Not supported
<b>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>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: 1200 mm (3.9 ft) Wide end: 100 mm (0.33 ft)
<b>Color Separation Optical System</b>	1MOS
<b>Minimum Illumination</b>	3 lx (F1.8, 59.94p, 50IRE, 42 dB, without accumulation)
<b>Horizontal Resolution</b>	1,500 TV Typ (Center area, UHD mode, wide) 1,000 TV Typ (Center area, FHD mode, wide)
<b>Gain Selection</b>	Auto, 0 dB to 36 dB*3 (Super Gain function equipped : 37 dB to 42 dB)
<b>Frame Mix</b>	Auto, 0 dB, 6 dB, 12 dB, 18 dB, 24 dB*4
<b>Electronic Shutter Speed</b>	
<b>Electronic Shutter Speed   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>Electronic Shutter Speed   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>Electronic Shutter Speed   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>Electronic Shutter Speed   50p/50i</b>	1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
<b>Electronic Shutter Speed   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>Syncro Scan</b>	
<b>Syncro Scan   59.94p/59.94i</b>	60.0 Hz to 7200 Hz
<b>Syncro Scan   29.97p</b>	30.0 Hz to 7200 Hz
<b>Syncro Scan   23.98p/24p</b>	24.0 Hz to 7200 Hz
<b>Syncro Scan   50p/50i</b>	50.0 Hz to 7200 Hz
<b>Syncro Scan   25p</b>	25.0 Hz to 7200 Hz
<b>Gamma</b>	HD / Normal / Cinema1 / Cinema2 / Still Like
<b>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>Chroma Amount Variability</b>	OFF, -99 % to 99 %
<b>Scene File</b>	
<b>Synchronization System</b>	Internal/External synchronization (BBS/Tri-level sync)
<b>Input</b>	
<b>Input Connectors</b>	DC 12 V IN, G/L IN(BNC)BBS (Black Burst Sync), tri-level sync supported)
<b>Output</b>	
<b>Output Format</b>	
<b>Output Format   SDI   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>Output Format   HDMI   4K</b>	2160/59.94p, 2160/50p, 2160/29.97p (Native), 2160/25p (Native), 2160/24p (Just), 2160/23.98p (Native)
<b>Output Format   HDMI   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>Video Output</b>	
<b>Video Output   HDMI</b>	HDMI 2.0 connector, 4:2:2/10bit• HDCP is not supported. • Viera Link is not supported
<b>Video Output   3G-SDI OUT</b>	SMPTE292M/424M/ 75 Ω(BNC×1)• Level-A/Level-B supported
<b>Input/Output</b>	

<b>Input/Output Connector</b>	
<b>Input/Output Connector   LAN</b>	LAN terminal for IP control (RJ-45)
<b>Input/Output Connector   RS-422</b>	CONTROL IN RS422A(RJ-45)
<b>MIC/Line Input</b>	AAC compatibility (compatible with IP only)Φ3.5 mm stereo mini jack• During MIC inputInput 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 inputInput level: -10 dBVInput 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</b>	
<b>Camera/Pan-Tilt Head Control</b>	
<b>IP Connecting Cable</b>	• If you have a PoE++ ethernet hubLAN cable*5, 6 (category 5e or above, straight cable) Max 100 m (328 ft) If you don't have a PoE++ ethernet hubLAN cable*5, 6 (category 5e or above, straight cable) Max 100 m (328 ft)
<b>AW Protocol Connecting Cable</b>	LAN cable*5 (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>	Speed range: 0.08°/s to 60°/s (Normal mode)*8 • 3 speed modes installedNormal:60°/s, Fast1:90°/s, Fast2:180°/s
<b>Panning Range</b>	±175°
<b>Tilting Range</b>	-30°to 90°*9
<b>Quietness</b>	NC25 or less
<b>Image Streaming Mode</b>	JPEG(MJPEG), H.264, H.265, NDI®*1HX version 2* 11, 12, 13 (H.264), NDI®*1 High Bandwidth
<b>Supported operating systems and web browsers</b>	
<b>Windows</b>	Windows 10 Windows® Internet Explorer® 11(32 bit / 64 bit) Microsoft Edge Google Chrome
<b>Mac</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>iPhone / iPad</b>	iOS Safari iPadOS
<b>Android</b>	Android OS Google Chrome
<b>IP Streaming</b>	
<b>Image Resolution</b>	1920×1080, 1280×720, 640×360, 320×180
<b>Image Transmission setting (JPEG)</b>	Frame rate: Maximum 30fpsImage quality (Fine / Normal)
<b>Image Transmission Setting (H.264)</b>	Transmission Type: Unicast port (AUTO), Unicast port (MANUAL), Multicast port Transmission Priority: Constant bit rate, Frame rate, Best effort Frame Rate: [60 Hz] 5fps / 15fps / 30fps / 60fps, [50 Hz] 5fps / 12.5fps / 25fps / 50fps Max Bit Rate: 512kbps / 768kbps / 1024kbps / 1536kbps / 2048kbps / 3072kbps / 4096kbps / 6144kbps / 8192kbps / 10240kbps / 12288kbps / 14336kbps / 16384kbps / 20480kbps / 24576kbps
<b>Image Transmission Setting (H.265)</b>	Transmission Type: Unicast port (AUTO), Unicast port (MANUAL), Multicast port Transmission Priority: Constant bit rate, Frame rate, Best effort Frame Rate: [60 Hz] 30fps / 60fps, [50 Hz] 25fps / 50fps Max Bit Rate: 512kbps / 768kbps / 1024kbps / 1536kbps / 2048kbps / 3072kbps / 4096kbps / 6144kbps / 8192kbps / 10240kbps / 12288kbps / 14336kbps / 16384kbps / 20480kbps / 24576kbps
<b>Audio Compression Type</b>	AAC-LC, 48 kHz, 16 bit, 2 ch
<b>Supported Protocol</b>	
<b>Supported protocol   IPv6</b>	TCP/IP, UDP/IP, HTTP, HTTPS, DNS, NTP, DHCPv6, RTSP/RTP, MLD, ICMP, ARP, SRT
<b>Supported protocol   IPv4</b>	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP/RTP, MPEG2-TS, DHCP, DNS, DDNS, NTP, IGMP, ICMP, ARP, RTMP, RTMPS, SRT
<b>Output Formats</b>	NDI®*1 High Bandwidth : 【HD】 1080/59.94p, 1080/50p, 1080/29.97p, 1080/25p, 1080/24p, 1080/23.98p, 720/59.94p, 720/50p
<b>Image Transmission Setting (High Bandwidth NDI®)</b>	Transmission Type: TCP/UDP, Unicast/Multicast Max Bit Rate: 250 Mbps
<b>New Functions</b>	
<b>F-Number Display</b>	Displayed on the AW-RP150GJ and AW-RP60GJ sides
<b>Menu Display on IP Video</b>	Supported*15
<b>Power LED</b>	ON/OFF control
<b>Tripod Screw Penetration Measures</b>	Possible
<b>Pan/Tilt Mechanical Method</b>	New Direct Drive System
<b>Privacy Mode</b>	The lens surface faces backward when standing by (ON/OFF)* Default is OFF
<b>Image Stabilization</b>	OIS 2-axisMENU switching: Select between Off/O.I.S.(STABLE)/O.I.S.(PAN/TILT)
<b>Other Function</b>	
<b>Tally LED display color</b>	red / green
<b>VR Compatibility</b>	Supports Freed protocol

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**Note**

\*1:NDI® is a registered trademark of Vizrt NDI AB in the United States and other countries. Discontinued Model

\*2:Will be supported in the future

\*3:Can be set in 1 dB step increments.

\*4: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.

\*5:STP (Shielded Twisted Pair) is recommended.

\*6:Use Category 6 or higher when transmitting 4K video.

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

\*8:Note that the operating noise may be loud in high speed. If the operating noise is disturbing, use the Normal mode.

\*9:The main unit may appear in the video depending on the pan/tilt position.

\*10:Supported OS indicated are for browsers current as of August 2020. See "Service and Support / PASS" for the latest information on browser support.

\*11:NDI® is a new protocol developed by NewTek, Inc. that supports IP video production workflow.

\*12:NDI® is a registered trademark of NewTek, Inc. in the United States.

\*13:In this instance, NDI® is used to indicate low latency with NDI® High Bandwidth, 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.

\*14:Simultaneous operation with the AW protocol is not possible.

\*15:Non-synchronous with SDI-OUT

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1920x1080, 1280x720

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Transmission Type: TCP/UDP, Unicast/Multicast

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AAC-LC, 48 kHz, 16 bit, 2 ch

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NDI®\*1 HX version 2: Included as standard

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NDI®\*1 High Bandwidth: Included as standard\*14

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AAC-LC, 48 kHz, 2 ch