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

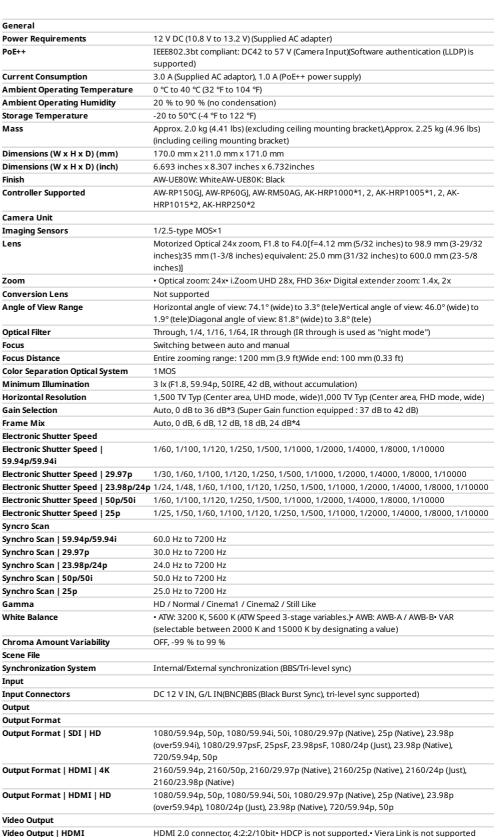https://eu.connect.panasonic.com/gb/en/products/broadcast-proav/aw-ue80

General	
Power Requirements	12 V DC (10.8 V to 13.2 V) (Supplied AC adapter)
PoE++	IEEE802.3bt compliant: DC42 to 57 V (Camera Input)(Software authentication (LLDP) is supported)
Current Consumption	3.0 A (Supplied AC adaptor), 1.0 A (PoE++ power supply)
Ambient Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Ambient Operating Humidity	20 % to 90 % (no condensation)
Storage Temperature	-20 to 50°C (-4 °F to 122 °F)
Mass	Approx. 2.0 kg (4.41 lbs) (excluding ceiling mounting bracket),Approx. 2.25 kg (4.96 lbs) (including ceiling mounting bracket)
Dimensions (W x H x D) (mm)	170.0 mm x 211.0 mm x 171.0 mm
Dimensions (W x H x D) (inch)	6.693 inches x 8.307 inches x 6.732inches
Finish	AW-UE80W: WhiteAW-UE80K: Black
Controller Supported	AW-RP150GJ, AW-RP60GJ, AW-RM50AG, AK-HRP1000*1, 2, AK-HRP1005*1, 2, AK-HRP1015*2, AK-HRP250*2
Camera Unit	
Imaging Sensors	1/2.5-type MOS×1
Lens	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)]
Zoom	• Optical zoom: 24x• i.Zoom UHD 28x, FHD 36x• Digital extender zoom: 1.4x, 2x
Conversion Lens	Not supported
Angle of View Range	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)
Optical Filter	Through, 1/4, 1/16, 1/64, IR through (IR through is used as "night mode")
Focus	Switching between auto and manual
Focus Distance	Entire zooming range: 1200 mm (3.9 ft)Wide end: 100 mm (0.33 ft)
Color Separation Optical System	1MOS
Minimum Illumination	3 lx (F1.8, 59.94p, 50IRE, 42 dB, without accumulation)
Horizontal Resolution	1,500 TV Typ (Center area, UHD mode, wide)1,000 TV Typ (Center area, FHD mode, wide)
Gain Selection	Auto, 0 dB to 36 dB*3 (Super Gain function equipped : 37 dB to 42 dB)
Frame Mix	Auto, 0 dB, 6 dB, 12 dB, 18 dB, 24 dB*4
Electronic Shutter Speed	
Electronic Shutter Speed	59.94p/59.94i	1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Electronic Shutter Speed	29.97p	1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Electronic Shutter Speed	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
Electronic Shutter Speed	50p/50i	1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Electronic Shutter Speed	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
Syncro Scan	
Synchro Scan	59.94p/59.94i	60.0 Hz to 7200 Hz
Synchro Scan	29.97p	30.0 Hz to 7200 Hz
Synchro Scan	23.98p/24p	24.0 Hz to 7200 Hz
Synchro Scan	50p/50i	50.0 Hz to 7200 Hz
Synchro Scan	25p	25.0 Hz to 7200 Hz
Gamma	HD / Normal / Cinema1 / Cinema2 / Still Like
White Balance	• 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)
Chroma Amount Variability	OFF, -99 % to 99 %
Scene File	
Synchronization System	Internal/External synchronization (BBS/Tri-level sync)
Input	
Input Connectors	DC 12 V IN, G/L IN(BNC)BBS (Black Burst Sync), tri-level sync supported)
Output	
Output Format	
Output Format	SDI	HD	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
Output Format	HDMI	4K	2160/59.94p, 2160/50p, 2160/29.97p (Native), 2160/25p (Native), 2160/24p (Just), 2160/23.98p (Native)
Output Format	HDMI	HD	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
Video Output	
Video Output	HDMI	HDMI 2.0 connector, 4:2:2/10bit• HDCP is not supported.• Viera Link is not supported
Video Output	3G-SDI OUT	SMPTE292M/424M/ 75 Ω(BNC×1)• Level-A/Level-B supported
Input/Output	

Input/Output Connector	
**Input/Output Connector	LAN**	LAN terminal for IP control (RJ-45)
**Input/Output Connector	RS-422**	CONTROL IN RS422A(RJ-45)
MIC/Line Input	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)
Pan Tilt Head Unit	
Camera/Pan-Tilt Head Control	
IP Connecting Cable	• 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)
AW Protocol Connecting Cable	LAN cable*5 (category 5e or above, straight cable) Max 1000 m (3280 ft)
Installation Method	Stand-alone (Desktop) or suspended (Hanging)*7
Pan/Tilt Operation Speed	Speed range: 0.08°/s to 60°/s (Normal mode)*8
	• 3 speed modes installedNormal:60°/s, Fast1:90°/s, Fast2:180°/s
Panning Range	±175°
Tilting Range	-30°to 90°*9
Quietness	NC25 or less
Image Streaming Mode	JPEG(MJPEG), H.264, H.265, NDI®*1HX version 2* 11, 12, 13 (H.264), NDI®*1 High Bandwidth
Supported operating systems and web browsers	
Windows	Windows 10
	Windows® Internet Explorer® 11(32 bit / 64 bit)
	Microsoft Edge
	Google Chrome
Mac	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
iPhone / iPad	iOS
	Safari
	iPadOS
Android	Android OS
	Google Chrome
IP Streaming	
Image Resolution	1920×1080, 1280×720, 640×360, 320×180
Image Transmission setting (JPEG)	Frame rate: Maximum 30fpsImage quality (Fine / Normal)
Image Transmission Setting (H.264)	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
Image Transmission Setting (H.265)	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
Audio Compression Type	AAC-LC, 48 kHz, 16 bit, 2 ch
Supported Protocol	
**Supported protocol	IPv6**	TCP/IP, UDP/IP, HTTP, HTTPS, DNS, NTP, DHCPv6, RTSP/RTP, MLD, ICMP, ARP, SRT
**Supported protocol	IPv4**	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP/RTP, MPEG2-TS, DHCP, DNS, DDNS, NTP, IGMP, ICMP, ARP, RTMP, RTMPS, SRT
Output Formats	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
Image Transmission Setting (High Bandwidth NDI®)	Transimission Type: TCP/UDP, Unicast/Multicast
	Max Bit Rate: 250 Mbps
New Functions	
F-Number Display	Displayed on the AW-RP150GJ and AW-RP60GJ sides
Menu Display on IP Video	Supported*15
Power LED	ON/OFF control
Tripod Screw Penetration Measures	Possible
Pan/Tilt Mechanical Method	New Direct Drive System
Privacy Mode	The lens surface faces backward when standing by (ON/OFF)* Default is OFF
Image Stabilization	OIS 2-axisMENU switching: Select between Off/O.I.S.(STABLE)/O.I.S.(PAN/TILT)
Other Function	
Tally LED display color	red / green
VR Compatibility	Supports FreeD protocol

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

1920x1080, 1280x720
Transimission Type: TCP/UDP, Unicast/Multicast
AAC-LC, 48 kHz, 16 bit, 2 ch
NDI®*1 HX version 2: Included as standard

NDI®*1 High Bandwidth: Included as standard*14
AAC-LC, 48 kHz, 2 ch