# Panasonic CONNECT



### Professional PTZ with 4K 60p/50p Unleashing New Possibilities in Video Production

## **AW-UE150**

The AW-UE150 is Panasonic's comprehensive professional PTZ camera lineup. Featuring a 1-type large MOS sensor, this next-generation PTZ camera supports high-quality 4K/UHD 60p video, features a 75.1degree viewing angle, 20x optical zoom and supports versatile outputs, including 12G-SDI, HDMI, optical fiber, and IP. Simultaneous 4K/HD operation makes this PTZ camera powerhouse ideal for those looking to future-proof their system.

#### **Key Features**

- First 60p/50p Integrated PTZ Camera
- 75.1° horizontal viewing angle (widest in its class)

BOSCH

- Various 4K interfaces (12G-SDI, HDMI, Optical Fiber, IP)
- Optical 20x Zoom + iZoom

PROFESSIONAL PARTNER LEVEL PROFESSIONAL PARTNER LEVEL

4K/HD Simultaneous Output







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## AW-UE150

https://ap.connect.panasonic.com/sg /en/aw-ue150







General -> Power Requirements	12 V DC (10.8 V to 13.2 V), DC 42 V to 57 V (Camera Input, PoE++ power supply)
General -> Current Consumption	4.0 A (XLR IN connector), 1.2 A (PoE++ power supply)
General -> Ambient Operating	0 °C to 40 °C (32 °F to 104 °F)
Temperature	
General -> Ambient Operating Humidity	0 ℃ to 40 ℃ (32 °F to 104 °F)
General -> Storage Temperature	–20 °C to 50 °C (–4 °F to 122 °F)
General -> Weight	Approx. 4.2 kg (9.24 lb) (excluding mount bracket)
General -> Dimensions	W 213 mm x H 267 mm x D 219 mm
	(8-3/8 inches x 10-1/2 inches x 8-5/8 inches)
	(excluding protrusions, direct ceiling mount bracket)
General -> Finish	AW-UE150WP/AW-UE150WE: Pearl white AW-UE150KP/AW-UE150KE: Black
General -> Controller Supported *1	See the "Compatibility Chart for Operation Devices and Application Software" page
Camera Unit -> Imaging Sensor	1-type 4K MOSx1
Camera Unit -> Effective Pixels	20,180,000 pixel
Camera Unit -> Zoom	• Optical zoom: 20x
Camera Unit -> 200m	• i.Zoom: UHD 24x, FHD 32x
	• Digital zoom: 10x
Camera Unit -> Lens	Motorized Optical 20x zoom, F2.8 to F4.5
	[f=8.8  mm (11/32  inches)  to  176.0  mm (6-15/16  inches);
	35 mm (1-3/8 inches) equivalent: 24.5 mm (31/32 inches) to 490.0 mm (19-9/32 inches)]
Camera Unit -> Conversion Lens	Not supported
Camera Unit -> Angle of View Range	Horizontal angle of view: 75.1° (wide) to 4.0° (tele)
	Vertical angle of view: 46.7° (wide) to 2.3° (tele)
	Diagonal angle of view: 82.8° (wide) to 4.6° (tele)
Camera Unit -> Optical Filter -> ND Filter	Through, 1/4, 1/16, 1/64, IR through (IR through is used as "Night mode")
Camera Unit -> Focus	Switching between auto and manual
Camera Unit -> Focus Distance	Entire zooming range: 1000 mm (3.3 ft)
	Wide end: 100 mm (0.33 ft)
Camera Unit -> Color Separation Optical System	1 MOS
Camera Unit -> Standard Sensitivity	F9, 2000 lx (When normal mode is selected)
	n 2 k (E2 8 E0 04n E0IDE 42 dB without accumulation)
Camera Unit -> Minimum Illuminatio	1 2 IX (F2.8, 59.94), SOIRE, 42 uB, WILLOUL ACCUITUIALION
	60 dB or more
Camera Unit -> Minimum Illumination Camera Unit Camera Unit -> Horizontal Resolution > 4K	60 dB or more
Camera Unit Camera Unit -> Horizontal Resolution > 4K	60 dB or more
Camera Unit Camera Unit -> Horizontal Resolution > 4K	60 dB or more -2,000 TV lines Typ (Center area)
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection <sup>*2</sup>	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection <sup>*2</sup> Camera Unit -> Frame Mix <sup>*3</sup>	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection <sup>*2</sup> Camera Unit -> Frame Mix <sup>*3</sup> Camera Unit -> Electronic Shutter	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection * <sup>2</sup> Camera Unit -> Frame Mix <sup>*3</sup> Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB
Camera Unit Camera Unit -> Horizontal Resolution	60 dB or more 1-2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59,94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000
Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25.9 Camera Unit -> Electronic Shutter Speed -> 25.9 Camera Unit -> Electronic Shutter Speed -> 25.9 Camera Unit -> Slectronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan -> 50p/50i Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz
Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25.9 Camera Unit -> Electronic Shutter Speed -> 25.9 Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan -> 50p/50i Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 30.00 Hz to 7200 Hz
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59,94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50p/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25.9 Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz
Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 50,94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50,950i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan -> 50p/50i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 30.00 Hz to 7200 Hz
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 509/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan -> 250p/50i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 509/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 509/50i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 23.98p/24p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 24.00 Hz to 7200 Hz HD / FILMLIKE1 / FILMLIKE2 / FILMLIKE3/ FILM REC / VIDEO REC / HLG
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 509/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 509/50i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 23.98p/24p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 24.00 Hz to 7200 Hz HD / FILMLIKE1 / FILMLIKE2 / FILMLIKE3/ FILM REC / VIDEO REC / HLG ATW: 3200K, 5600K
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 509/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 59.94p/59.94i Camera Unit -> Synchro Scan -> 250p/50i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 24.00 Hz to 7200 Hz HD / FILMLIKE1 / FILMLIKE2 / FILMLIKE3/ FILM REC / VIDEO REC / HLG
Camera Unit Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 509/50i Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 509/50i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 23.98p/24p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz HD / FILMLIKE1 / FILMLIKE2 / FILMLIKE3/ FILM REC / VIDEO REC / HLG ATW: 3200K, 5600K ATW Speed : Normal / Slow / Fast
Camera Unit -> Horizontal Resolution > 4K Camera Unit -> Gain Selection *2 Camera Unit -> Frame Mix *3 Camera Unit -> Frame Mix *3 Camera Unit -> Electronic Shutter Speed -> 59.94p/59.94i Camera Unit -> Electronic Shutter Speed -> 50.97p Camera Unit -> Electronic Shutter Speed -> 29.97p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 25p Camera Unit -> Electronic Shutter Speed -> 23.98p/24p Camera Unit -> Synchro Scan -> 50.950i Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 29.97p Camera Unit -> Synchro Scan -> 23.98p/24p Camera Unit -> Synchro Scan ->	60 dB or more -2,000 TV lines Typ (Center area) Auto, -3 dB to 36 dB *2 Super Gain function equipped : +37 dB to 42 dB 0 dB, 6 dB, 12 dB, 18 dB, 24 dB 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/25, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 1/24, 1/48, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000 60.00 Hz to 7200 Hz 50.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz 25.00 Hz to 7200 Hz HD / FILMLIKE1 / FILMLIKE2 / FILMLIKE3/ FILM REC / VIDEO REC / HLG ATW : 3200K, 5600K ATW Speed : Normal / Slow / Fast AWB : AWB-A / AWB-B

4K	>2160/59.94p, 2160/50p, 2160/29.97p *4, 2160/25p *4, 2160/24p *4, 2160/23.98p *4
Camera Unit -> Output Format (SDI) -> HD	>1080/59.94p, 1080/50p, 1080/29.97p <sup>*4</sup> , 1080/29.97PsF, 1080/25p <sup>*4</sup> , 1080/25PsF, 1080/23.98p <sup>*5</sup> , 1080/24p <sup>*4</sup> , 1080/23.98p <sup>*4</sup> , 1080/23.98PsF, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p
Camera Unit -> Output Format (HDMI -> 4K	)2160/59.94p, 2160/50p, 2160/29.97p *4, 2160/25p *4, 2160/24p *4, 2160/23.98p *4
	()1080/59.94p, 1080/50p, 1080/29.97p <sup>*4</sup> , 1080/29.97PsF, 1080/25p <sup>*4</sup> , 1080/25PsF,
-> HD	1080/23.98p, 1080/24p *4, 1080/23.98p *4 *5, 1080/23.98PsF, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p
Camera Unit -> Output Format(Fiber (video only)) -> 4K	2160/59.94p, 2160/50p, 2160/29.97p, 2160/25p, 2160/24p, 2160/23.98p
Camera Unit -> Output Format(Fiber (video only)) -> HD	1080/59.94p, 1080/50p, 1080/29.97p, 1080/29.97PsF, 1080/25p, 1080/25PsF, 1080/23.98p, 1080/24p, 1080/23.98p, 1080/23.98PsF, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p
Synchronization System	Internal/External synchronization (BBS/Tri-level sync)
Input Connector -> DC IN	DC 12 V IN
Input Connector -> G/L IN	BBS (Black Burst Sync), tri-level sync supported HDMI 2.0 standard
Output Connector -> HDMI	4:2:2/10bit • HDCP is not supported.
	Viera Link is not supported.
Output Connector -> 12G-SDI OUT	SMPTE 2082-1 standard / 75 Ω (BNC x 1)
Output Connector -> 3G-SDI OUT	SMPTE424M/SMPTE292 / 75 Ω (BNC x 1) • Level-A/Level-B supported
Output Connector -> MONIOUT	SMPTE292 / 75 Ω (BNC x 1)
Output Connector -> OpticalFiber	SFP+ standard • This unit does not support input by optical signals
Input/Output Connector -> LAN	LAN connector for IP control (RJ-45) 100BASE-TX/1000BASE-T
Input/Output Connector -> RS-422	CONTROL IN RS-422A (RJ-45)
	AAC compatible (compatible with IP only)
Input	ø 3.5 mm stereo mini jack Input impedance: High impedance
	• During MIC input
	Supported mic: Stereo mic (plug-in power, on/off switching via menu)
	Supply voltage: 2.5 V ± 0.5 V Mic input sensitivity: Approx. –40 dBV ± 3 dBV (0 dB=1 V/Pa, 1 kHz)
	During LINE input
	Input level: Approx. –10 dBV ±3 dBV
Pan-tilt Head Unit -> IP connecting cable	LAN cable *6 *7: (category 5e or above, straight cable / crossover cable), max. 100 m (328 ft)
Pan-tilt Head Unit -> AW protocol connecting cable	LAN cable *6: (category 5e or above, straight cable), max. 1000 m (3280 ft)
Pan-tilt Head Unit -> Installation Method	Stand-alone (Desktop) or suspended (Hanging) <sup>*8</sup>
Pan-tilt Head Unit -> Pan/tilt Operation	
Speed	Maximum speed 60°/s or higher <sup>*9</sup> • Maximum speed is 180°/s in high-speed mode
Pan-tilt Head Unit -> Panning Range	±175°
Pan-tilt Head Unit -> Tilting range	-30° to 210° *10
Pan-tilt Head Unit -> Quietness	NC35 or less
Supported Operating Systems and Web Browsers -> Windows <sup>*11</sup>	Microsoft® Windows® 7, 10 Windows® Internet Explorer® 11 (64-bit/32-bit) Microsoft Edge Google Chrome
Supported Operating Systems and	Mac OS 10.13, Mac OS 10.12, Mac OS 10.11
Web Browsers -> Mac <sup>*11</sup>	Safari 11, Google Chrome
Supported Operating Systems and Web Browsers -> iPhone/iPad <sup>*11</sup>	iOS 11.4.1 Google Chrome
IP Streaming -> Image Streaming	JPEG (MJPEG), H.264, H.265
Mode	2040-2160 1020-1000 1200-720 640-260 220-400
IP Streaming -> Image Resolution IP Streaming -> Image Transmission	3840x2160, 1920x1080, 1280x720, 640x360, 320x180 Frame Rate: Maximum 30 fps
Setting (JPEG)	Image quality (Fine / Normal)
IP Streaming -> Image Transmission	
Setting (H.264) -> Transmission Type	Unicast port (MANUAL) Multicast port
IP Streaming -> Image Transmission	•
Setting (H.264) -> Transmission mode	Frame rate Best effort
IP Streaming -> Image Transmission	[60Hz] 5fps / 15fps / 30fps / 60fps (UHD: 30fps, 60fps)
Setting (H.264) -> Frame Rate	[50Hz] 5fps / 12.5fps / 25fps / 50fps (UHD: 25fps, 50fps)
IP Streaming -> Image Transmission Setting (H.264) -> Max Bit Rate	HD: 512kbps / 768kbps / 1024kbps / 1536kbps / 2048kbps / 3072kbps / 4096kbps / 6144kbps /
	8192kbps / 10240kbps / 12288kbps / 14336kbps / 16384kbps / 20480kbps / 24576kb /
	, 32768kbps / 40960kbps / 51200kbps / 76800kbps UHD:
	12800kbps / 25600kbps / 51700kbps / 76800kbps
IP Streaming -> Image Transmission	
Setting (H.265) -> Transmission Type	Unicast port (MANUAL) Multicast port
IP Streaming -> Image Transmission	•
Setting (H.265) -> Frame Rate	[50Hz] 25fps
	8192kbps / 12800kbps / 25600kbps / 51200kbps / 76800kbps

IP Streaming -> Audio Compression	AAC-LC, 48 kHz / 16 bit / 2ch
Format	

Format

IP Streaming -> Supported Protocol -> TCP / IP, UDP / IP, HTTP, HTTPS, DNS, NTP, DHCPv6, RTP, MLD, ICMP, ARP, RTMP, SRT IPv6

1640	
IP Streaming -> Supported Protocol -	> TCP / IP, UDP / IP, HTTP, HTTPS, RTSP, RTP / RTCP, DHCP, DNS, DDNS, NTP, UPnP, IGMP, ICMI
IPv4	ARP, RTMP, RTMPS, SRT
NDI <sup>®</sup> Support -> NDI <sup>®</sup> Support	NDI® HX version 2
Other Function -> Tally LED Display Color	red / green
Footnote Description	* NDI® is a registered trademark of Vizrt NDI AB in the United States and other countries
	1. Use may require a software version update.
	2.1 dB step increments can be set.
	3. This cannot be configured 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.
	4. Native output.
	5. It denotes "1080/23.98p over 59.94i".
	6. Use of an STP (shielded twisted pair) cable is recommended.
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- 7. Category 6 or more is used when sending 4K images.
- To ensure safety, the unit must be secured using the mount bracket supplied.
  Quietness, stationary accuracy, etc., in high-speed mode may vary from normal mode.
- 10. Depending on the pan or tilt position, the camera may be reflected in the image.
- 11. Supported OS indicated are for browsers current as of October 2018. See Service
- and Support for the latest information on browser support.
- 12. Contact your local Panasonic vendor for further information.