

# Panasonic

# AW-HE130W/K

HD Integrated Camera



AW-HE130W

AW-HE130K

For indoor use



Production Quality HD Video  
via 3G-SDI and IP Streaming



# Full HD Camera with Integrated Pan-Tilt Provides Video Output via 3G-SDI or IP Streaming Transmission for an Expanded Range of Applications

Introducing a new PTZ camera capable Production Quality

Full HD video output up to 1080/60p via IP transmission,  
in addition to 3G-SDI and HDMI.

Equipped with three newly developed 1/2.86 MOS sensors for high sensitivity,  
a superior S/N ratio and high resolution.

The AW-HE130W/K also supports PoE+\*, so the camera only needs one LAN cable  
for its power supply, control and video output.

Presenting the new standard in versatile, high-quality remote production  
with 3G-SDI, IP-Streaming, and POE+.



\* Abbreviation of Power over Ethernet Plus.

# A Single Cable Solution for Remote Video and Audio Capture

## Full HD video output via IP transmission

In addition to 3G-SDI and HDMI output, production quality full HD video output via IP transmission is supported with the AW-HE130W/K. The camera delivers up to four channels of IP streaming video (H.264), with a maximum quality level of 1080/60p at 24 Mbps\*1. Simultaneous transmission to as many as 14 devices is also supported.\*2 Flexible system setup is possible to meet various application needs.



## List of Supported Multi-streaming Outputs

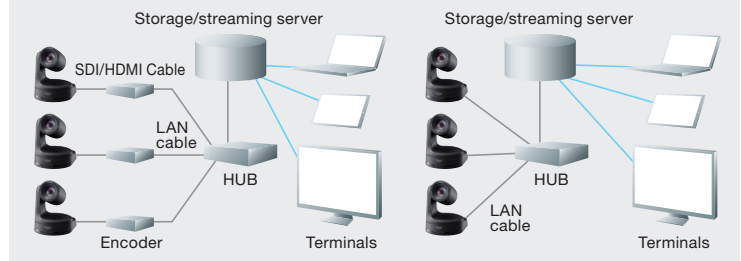
Settings	H.264			JPEG
	CH1	CH2	CH3/CH4	CH1/CH2/CH3
Resolution	1920x1080/ 1280x720	1920x1080/ 1280x720/640x360/ 320x180/160x90	1280x720/ 640x360/320x180/ 160x90	1920x1080/ 1280x720/640x360/ 320x180/160x90
Frame rate	60 Hz	60 fps	5 fps/15 fps/30 fps	5 fps/15 fps/30 fps
	50 Hz	50 fps	5 fps/12.5 fps/25 fps	5 fps/12.5 fps/25 fps
Bit rate	Up to 24 Mbps			
Voice transmission	Yes (AAC48 kHz)			
PoE+	Yes			

## Transmit IP video without a separate encoder reduces cost and simplifies installation

There is no need for the separate encoder normally required when streaming video and audio via IP. Systems can be built with exceptional cost/performance benefits.

### Lecture capture/Streaming System Example

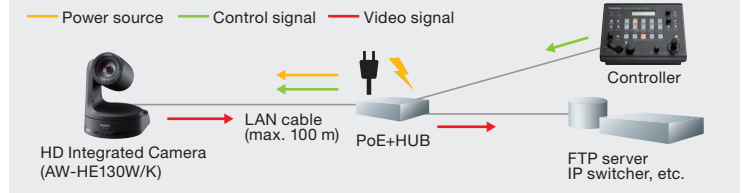
- When used with cameras with only SDI/HDMI output
- When used with cameras capable of IP video output



## Supporting POE+\*3 for lower installation cost

By connecting to network devices that support the IEEE 802.3at POE+ standard, power can be supplied via LAN cable. Since it is not necessary to install a power supply or even a local A.C. outlet, installation costs can be significantly reduced.

### Diagram Example



## IP control with image monitoring using PC, Mac and mobile terminals

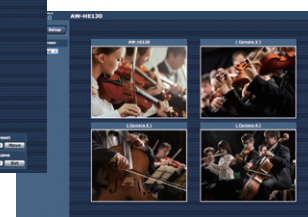
Using an IP browser, such as Internet Explorer or Safari, it is possible to set up and control the camera from a remote location. This feature simplifies the management of cameras around a campus, or across a worldwide enterprise network. IP video monitoring and remote camera control can also be performed from mobile terminals such as an iPhone, iPad or Android device.

\* For the latest information on supported OS/browser, please refer to the "service and support" on the Panasonic website (<http://pro-av.panasonic.net>).

### Camera control screen (Mac)



Live screen



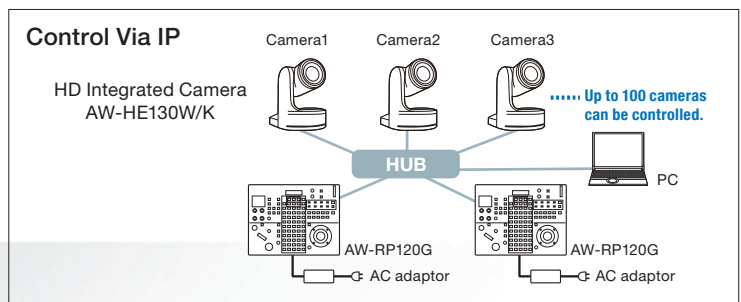
Multi-screen screen

### Mobile terminal screen



## Flexible IP Control Architecture Simplifies System Design and Operation\*4

Up to 100 x AW-HE130W/K cameras can be controlled via IP from a single AW-RP120G, AW-RP50, or PC. An AW-HE130W/K can also be simultaneously controlled by up to five AW-RP120G or AW-RP50's via IP. AK-HRP200G can be used for precise color adjustment.



\*1: 1920 x 1080 60 fps output is 1ch display only. For 2ch or more, display is max. 30 fps. Also, JPEG output is up to 3ch.

\*2: The number varies depending on distribution settings or network environment. Only one Android™ device can be connected to one camera.

\*3: Abbreviation of Power over Ethernet Plus.

\*4: Controller upgrade required. For details, please refer to the "service and support" on the Panasonic website (<http://pro-av.panasonic.net>).



# Advanced Video Processing for High Quality Video Image.

## Three newly developed 1/2.86-type MOS sensors for high-level video capture and production.

Equipped with three newly developed 1/2.86-type full HD MOS sensors and DSP (Digital Signal Processor), AW-HE130W/K achieves high sensitivity, a high S/N ratio and high resolution through the use of advanced video processing.

## Optical Image Stabilizer and Digital Extender for capturing clear images at any distance.

### Optical Image Stabilization System (OIS)

Automatically minimizes the effect of small vibrations from the surface where the camera is mounted caused ; whether this is caused by the opening and closing of doors, nearby speakers, or other disturbances.

### High Performance 20x Zoom Lens/1.4x Digital Extender Zoom

In addition to a sharp, fast F1.6, 20x optical zoom lens, the AW-HE130W/K is equipped with an innovative 1.4x digital extender that can increase the effective focal length of the lens by 40% while delivering smooth, high resolution video.



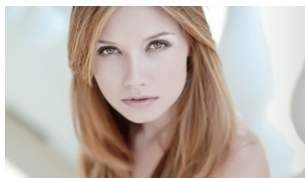
\*Images are simulated

## Advanced color adjustment capabilities for precision imaging

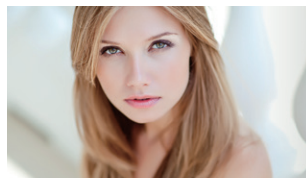
### Independent Color Correction Function with 12 Color Axes + 3 Skin Tone Axes

In addition to the conventional 12 axes, three additional axes have been added for the skin tone area. This makes it possible to reproduce skin tones with greater precision.

#### Conventional model



#### AW-HE130W/K



\*Images are simulated

### Color Temperature Adjustment Mode

In addition to the usual white balance modes, a new variable Color Temperature-based function has been added. This makes it easier to make the precise camera adjustments required for different lighting conditions.



\*Images are simulated

## Dynamic Range Stretch (DRS) / Hybrid Digital Noise Reduction (Hybrid DNR)

Black defects, halation and washed-out colors are minimized for video images with a visually broad dynamic range (DRS). In addition, with Hybrid Digital Noise Reduction (Hybrid DNR), two types of noise reduction, 2D and 3D, are used together to enable clear video capture under a wide range of lighting conditions, with minimal after-image blurring or image degradation.

## Equipped with Night Mode for infrared shooting

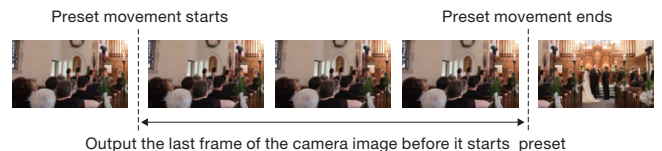
The AW-HE130W/K can deliver high-quality monochrome video in total darkness, when the camera's Night Mode is used in conjunction with an optional IR illuminator.



\*Images are simulated

## Freeze During Preset function

The new Freeze During Preset function may be enabled to freeze the video during preset playback. The immediately preceding still image is output during preset movements so that the swiveling movement is not displayed, making operations possible with one camera.



## Supports multiple formats for flexible output

In addition to typically supported formats, the camera supports output formats required for specialized applications, including 1080/29.97p, 1080/25p, 1080/23.98p. Remote control video capture can now be more easily performed for specialized applications such as teleproduction, and scientific research.

#### Supported formats

1080/59.94p 1080/29.97p\*1 1080/23.98p 1080/59.94i  
1080/29.97PsF 1080/23.98PsF 720/59.94p 480/59.94p(HDMI)  
or 480/59.94i(SDI) 1080/50p 1080/25p\*1 1080/50i  
1080/25PsF 720/50p 576/50p(HDMI) or 576/50i (SDI)

\*1 Native output

## Audio input function

The AW-HE130W/K also supports audio input, embedding, and encoding. The input from the camera's switchable mic/line input can be combined with the HD-SDI, HDMI, and streaming outputs for mixing, recording or transmission.

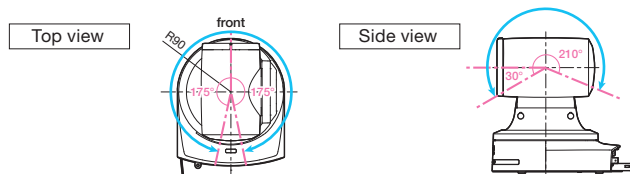
## Excellent quietness

Thanks to its fan-less design and advanced pan-tilt mechanism, the AW-HE130W/K is very quiet and greatly reducing audio noise during video capture.

## Exceptional Pan-Tilt mechanism performance for smooth moves during video capture.

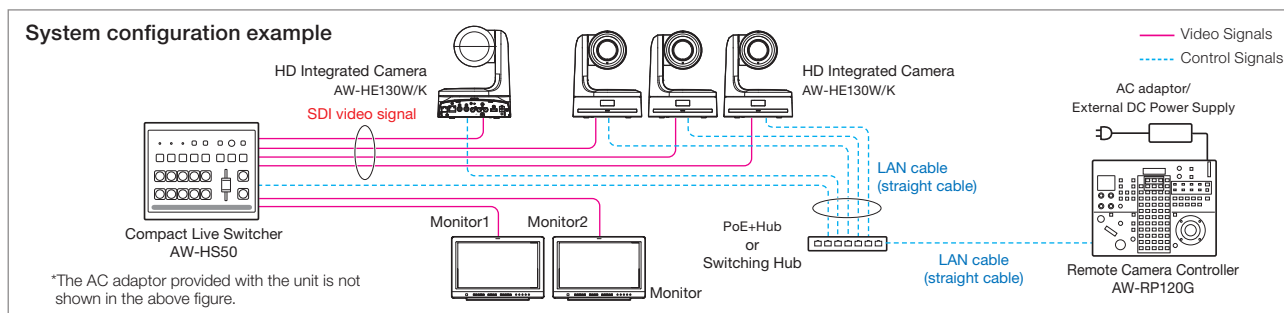
Thanks to a highly evolved pan-tilt design, the AW-HE130W/K achieves smoother and more natural movement during on-air shots. The pan-tilt head also has a wide shooting range\*, with a pan range of  $\pm 175^\circ$  and a tilt range of  $-30^\circ$  to  $210^\circ$ . The newly developed pan-tilt drive provides high-speed operation at maximum  $60^\circ/s$ , excellent response to remote control operation, and highly precise stop control. These features combine to accurately capture fast-action sports scenes or smooth concert footage. The noise level during operation is also very low, at NC35 or less, which is ideal for use in quiet environments.

\* Depending on the position of the pan and tilt, its own unit may be reflected in the image.



## Other Functions

- Equipped with ND filters (Through, 1/8, 1/64).
- Equipped with four types of scene files that can be set by the user.
- Preset memory of up to 100 positions.
- Functions such as freeze during preset, digital extender zoom, color temperature settings can be assigned to the user buttons on Panasonic controllers.
- Equipped with RS422 remote terminal; up to five units can be controlled via serial control from a controller.
- Equipped with RS232C remote terminal (Standard serial communication support).
- Up to four units can be operated with a wireless remote controller (AW-RM50G sold separately).
- Easy installation thanks to use of turn-lock mechanism.
- Color variations (black/white) that can be chosen for different applications or conditions.



## Specifications

GENERAL		INPUT		OUTPUT		INPUT/OUTPUT		FUNCTIONS AND PERFORMANCE	
Power requirements	DC 12 V (AC adaptor supplied) DC 42 - 57 V (PoE+ power supply)	Gain selection	Auto, 0 dB to 36 dB	Video output	HDMI	Input connector	DC 12 V IN, G/L IN (BNC)	Frame mix <sup>*2</sup>	0 dB, 6 dB, 12 dB, 18 dB, 24 dB
Current consumption	1.8 A (AC adaptor supplied) 0.6 A (PoE+ power supply)	HD/SD SDI OUT	SMPTTE424/SMPTTE292/SMPTTE259 standards 75 Ω (BNC×1)	HD/SD SDI OUT	SMPTTE424/SMPTTE292/SMPTTE259 standards 75 Ω (BNC×1)	Input connector	• BBS (Black Burst Sync), tri-level sync supported • Locking to a color subcarrier is not possible with BBS. PoE+ (IEEE802.3at standard)	Electronic shutter speed	59.94p/59.94i: 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 29.97p: 1/30, 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
Ambient operating temperature	0 °C to 40 °C (32 °F to 104 °F)	VIDEO OUT	NTSC/PAL 1.0 V [p-p]/75 Ω (BNC×1)	LAN	LAN connector for IP control (RJ-45)	Input connector	• 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	Electronic shutter speed	23.98p: 1/24, 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 50p/50i: 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 25p: 1/25, 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
Storage temperature	-20 °C to 50 °C (-4 °F to 122 °F)	LAN	LAN connector for IP control (RJ-45)	RS-422	CONTROL IN RS-422A (RJ-45)	Input/Output connector	φ3.5 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	Synchro scan	59.94 Hz: 60.15 Hz to 642.21 Hz 50 Hz: 50.15 Hz to 535.71 Hz
Allowable humidity ranges	20 % to 90 % (no condensation)	RS-422	CONTROL IN RS-422A (RJ-45)			MIC/LINE input	φ3.5 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	Gamma	HD, SD, FILMLIKE1, FILMLIKE2, FILMLIKE3 0.30 to 0.75 (Manual setting)
Mass	Approx. 3.1 kg (6.83 lb) [Including mount bracket]							White balance	AWB A, AWB B, ATW, 3200K, 5600K, VAR (2000K to 15000K)
Dimensions (W x H x D)	180 mm × 228 mm × 234 mm (7-3/32 inches x 9 inches x 9-3/16 inches) (excluding protrusions, cable cover, direct ceiling mount bracket)							Chroma amount variability	OFF, -99 % to 40 %
Finish	AW-HE130W/AW-HE130WE: Pearl white AW-HE130KP/AW-HE130KE: Metallic black							Scene file	Scene1, Scene2, Scene3, Scene4
Controller supported <sup>*1</sup>	AW-RP120, AW-RP50, AK-HRP200							Output format	1080/59.94p, 1080/29.97p <sup>*3</sup> , 1080/23.98p, 1080/59.94i, 1080/29.97PsF, 1080/23.98PsF, 720/59.94p, 480/59.94p(i) <sup>*4</sup> , 1080/50p, 1080/25p <sup>*3</sup> , 1080/50i, 80/25PsF, 720/50p, 576/50p(i) <sup>*4</sup>
								Synchronization system	Internal/External synchronization (BBS/Tri-level sync)
								[Pan-tilt head unit]	
								Installation method	Stand-alone (Desktop) or suspended (Hanging) <sup>*5</sup>
								Camera/pan-tilt head control	IP connecting cable • When connecting through a hub: LAN cable <sup>*6</sup> (category 5e or above, straight cable), max. 100 m (328 ft) • When a hub is not used LAN cable <sup>*6</sup> (category 5 or above, crossover cable) max. 100 m (328 ft) RP connecting Cable LAN cable <sup>*6</sup> (category 5 or above, straight cable), max. 1000 m (3280 ft) RS-422A, AW series protocol
								Pan-tilt operation speed	0.08°/s to 60°/s
								Panning range	±175°
								Tilting range <sup>*7</sup>	-30° to 210°
								Quietness	NC35 or less

\*1: It may be necessary to upgrade the version of the controller in order to support the unit. For details on upgrading, visit the support page on the following website. <http://pro-av.panasonic.net/> \*2: This cannot be configured when the format is 1080/29.97p, 1080/23.98p, 1080/29.97PsF, 1080/23.98PsF, 1080/25p, or 1080/25PsF \*3: Native output \*4: A 'P' signal is output as HDMI output, an 'I' signal is output as SDI and an analog output for output formats of 480/59.94p(i) and 576/50p(i). \*5: To ensure safety, the unit must be secured using the mount bracket supplied. \*6: Use of an STP (shielded twisted pair) cable is recommended. \*7: Depending on the pan or tilt position, the camera may be reflected in the image.

## Computer requirements

CPU	Intel® Core™ 2 DUO 2.4 GHz or more	
Memory	For Windows:	1 GB or more (2 GB or more for 64-bit editions of Microsoft® Windows® 8.1, Microsoft® Windows® 8, and Microsoft® Windows® 7)
	For Mac:	2 GB or more
Network function	10BASE-T or 100BASE-TX port x 1	
Image display	Resolution: 1024 x 768 pixels or more	Color generation: True Color 24-bit or more
Supported operating systems and web browsers	For Windows:	Microsoft® Windows® 8.1 Pro 64-bit / 32-bit *1 Windows® Internet Explorer® 11.0 *1 *3 Microsoft® Windows® 8 Pro 64-bit / 32-bit *1 Windows® Internet Explorer® 10.0 *1 *3 Microsoft® Windows® 7 Professional SP1 64-bit / 32-bit *2 Windows® Internet Explorer® 11.0 / 10.0 / 9.0 / 8.0 *3
	For Mac:	OS X 10.9 Safari 7.0.2 OS X 10.8 Safari 6.1.2 OS X 10.7 Safari 6.1.2
For iPhone, iPad, iPod touch:	iOS 7.1 Standard web browsers	
	For Android Android OS Standard web browsers	
Other	CD-ROM drive (for using the Operating Instructions and various software)	
	Adobe® Reader® (for viewing the Operating Instructions on the CD-ROM)	

\*1 Use the desktop version of Internet Explorer. (Internet Explorer for Windows UI is not supported.)

\*2 Windows® XP compatibility mode is not supported.

\*3 The 64-bit version of Internet Explorer® is not supported.

\* For the latest information on supported OS/browser, please refer to the "service and support" on the Panasonic website (<http://pro-av.panasonic.net>).

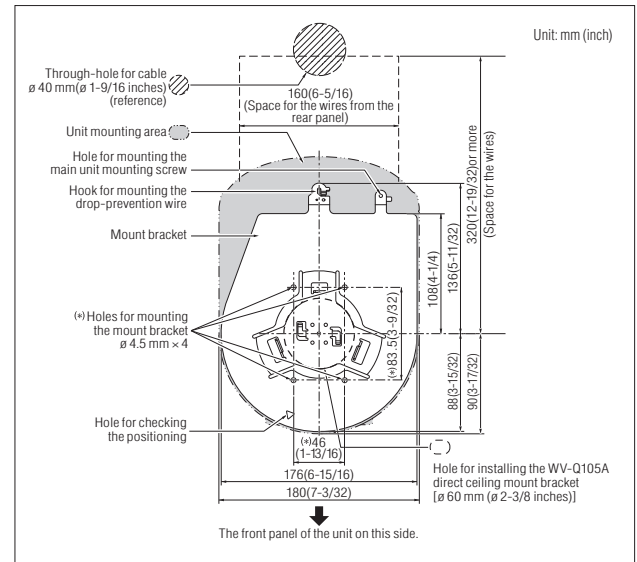
## Standard Accessories

- Mount bracket for installation surface (Hanging / Desktop)
- Drop-prevention wire
- Drop-prevention wire mounting screw (comes attached to the unit)
- Bracket mounting screws (bind-head) M4 x 10 mm
- Main unit mounting screw (with flat washer, spring washer) M3 x 6 mm
- Cable cover
- Power cable
- CD-ROM
- AC adaptor

## Rear view



## Bottom view



## System Camera Option

Remote Camera Controller <b>AW-RP50</b>		Remote Camera Controller <b>AW-RP120G</b> (AC adaptor(DC12 V) is required separately.)		Remote Operation Panel <b>AK-HRP200G</b>	
Wireless Remote Controller <b>AW-RM50G</b> (*AA*, *R6* or *LR6* battery x 2 are not included.)		Compact Live Switcher <b>AW-HS50</b>		Direct Ceiling Mount Bracket <b>WV-Q105A</b>	

Please refer to the latest Information, etc. at the following Panasonic web site.



<http://pro-av.panasonic.net/>

# Panasonic®

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JQA-0443



Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)