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

For indoor use

AW-HE130W
AW-HE130K
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.

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.

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.

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.

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.

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.

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.

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.

*1: Native output. *2: OVER 59.94i. *3: Your monitor may recognize the signal as 59.94i. *4: Your monitor may recognize the signal as 50i. *5: 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).
**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 1920×1080/60p at 24 Mbps*. Simultaneous transmission to as many as 14 devices is also supported. Flexible system setup is possible to meet various application needs.

**NDI|HX Compatibility for Excellent Video Streaming Quality**

The AW-HE130W/K can be upgraded to an NDI|HX compatible model if purchasing a license from the NewTek website [https://pro-av.panasonic.net/en/ndihx_support/index.html]. Highly efficient NDI|HX compatibility enables excellent broadcast streaming by encoding and transmitting high-quality video in real time. This technology eliminates the need for IP decoders, allowing input to be sent directly to the switcher.

* Contact your local Panasonic vendor for further information.

**Supporting POE+** 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.

**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 (https://pro-av.panasonic.net).

**Flexible IP Control Architecture Simplifies System Design and Operation**

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 1ch.

*2: 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 (https://pro-av.panasonic.net).

*5: AC adaptor AW-PS551 (sold separately) is required for AW-RP120G.
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 ±175° and a tilt range of -30° to 210°. The newly developed pan-tilt drive provides high-speed operation at maximum 60°/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.

System configuration example

Supporting Lecture Capture with Auto Tracking function

Auto Tracking Software Key

AW-SF100/AW-SF200
2 Additional Licenses AW-SF202
3 Additional Licenses AW-SF203

A 30-day Free Trial is Available

AW-SF200 Main View

(Main Features)

- Motion detection and face detection technologies using video streaming from camera achieve smooth auto tracking regardless of where the person is facing.
- GUI designed for intuitive operation.
- Operation with IP connection enables installation/control of cameras in remote classroom.
- AW-SF100 allows a single PTZ camera to be controlled on either a stand-alone or web application version.
- The stand-alone version is easy to set up by installing software on a PC*1 and connecting HD integrated cameras; installation of sensors and other devices are not necessary.
- The web application version enables camera control from a tablet, smartphone, desktop PC, etc.
- AW-SF200 enables simultaneous auto tracking and centralized control of multiple cameras.*2

*1: When the web application version is used, Auto Tracking Software needs to be installed on an HTTP server.
*2: Up to four cameras per server can be controlled simultaneously.

- The face recognition function is based upon the face recognition software developed by PUX Corporation. Depending on the shooting environment, the system may not be able to detect or track the target correctly. Please use this software in an environment where the adjustment work can be performed by the operator to deal with errors in detection and auto tracking. There is a 30-day free trial available for the Auto Tracking Software. Please read carefully the precautions for this software and check it works correctly in your operating environment before you purchase "Auto Tracking Software Activation Key". For further information, please see "Software Download" on the Panasonic website <https://pro-av.panasonic.net/>.

Optional Software

PTZ Control Center

- Intuitive GUI with the capability to control multiple cameras.
- Image quality adjustment and pan-tilt-zoom control on a GUI.
- Easy to recall presets by clicking preset buttons with thumbnails.

PTZ Virtual USB Driver

- High quality video perfect for web conferencing, utilizing a PTZ camera on the network as a USB camera.
- Automatic detection of connected cameras, and network settings supported.

Easy Wireless Control Using an iPad*3 with a Control Assist Camera*4

- 95° wide-angle view from the Control Assist Camera is displayed on an iPad.
- Tapping the desired area of the wide-angle view displayed on the iPad turns the field of view of the 4K/HD Integrated Camera*5 to the tapped position.
- 3: An iPad (sold separately) and a wireless AP (sold separately) are required. Please install the iPad application "PTZ Cntrl" (free). For details, please visit Panasonic AW-HEA10W/K website (https://pro-av.panasonic.net/en/sales_o/camera/aw-hea10w/).
- 4: AW-HE130/HE400 series, AW-UE70/UE100 series, AW-HE40/MN40 series, and AW-HE130/HN38 series only.
Specifications

As of April, 2018

**Power requirements**
DC 12 V (AC adapter supplied) DC 42 - 57 V (PoE+ power supply)

**Current consumption**
1.8 A (AC adapter supplied), 0.6 A (PoE+ power supply)

**Ambient operating temperature**
0 °C to 40 °C (32 °F to 104 °F)

**Storage temperature**
-20 °C to 55 °C (4 °F to 122 °F)

**Allowable humidity ranges**
20 % to 90 % (no condensation)

**Mass**
Approx. 3.1 kg (6.8 lb) (excluding mount bracket)

**Dimensions (W x H x D)**
183 mm x 220 mm x 234 mm (7.1/8 inches x 8.7/8 inches x 9.1/8 inches) (excluding protrusions, cable cover, direct ceiling mount bracket)

**Finish**
AW-HE130PFW/HE130WE: Pearl white
AW-HE130PFW/HE130KE: Metallic black

**Controller supported**

**Computer requirements**

<table>
<thead>
<tr>
<th>CPU</th>
<th>Intel® Core® i3 2 DUO 2.4 GHz or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>For Windows: 1 GB or more 2 GB or more for 64-bit editions of Microsoft® Windows® 8, Microsoft® Windows® 8.1, Microsoft® Windows® 8, and Microsoft® Windows® 7) For Mac: 2 GB or more</td>
</tr>
<tr>
<td>Network function</td>
<td>10BASE-T or 100BASE-TX port x 1</td>
</tr>
<tr>
<td>Image display</td>
<td>Resolution: 1024 x 768 pixels or more</td>
</tr>
<tr>
<td>Color generation</td>
<td>True Color 24-bit or more</td>
</tr>
</tbody>
</table>

**Supported operating systems and web browsers**

<table>
<thead>
<tr>
<th>For Windows:</th>
<th>Microsoft® Windows® 8.1 Pro 64-bit / 32-bit +, Windows® Internet Explorer® 10.0 +, Microsoft® Windows® 8 Pro 64-bit / 32-bit + Windows® Internet Explorer® 10.0 +, Microsoft® Windows® 7 Professional SP1 64-bit / 32-bit +, Windows® Internet Explorer® 11.0 / 10.0 / 9.0 / 8.0 *2</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Mac:</td>
<td>OS X 10.9, Safari 7.0.2, OS X 10.8.5, Safari 6.2.1</td>
</tr>
<tr>
<td>For iPhone, iPad, iPod touch:</td>
<td>iOS 7.1, Standard web browsers</td>
</tr>
<tr>
<td>For Android:</td>
<td>Android OS, Standard web browsers</td>
</tr>
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**Other**
CD-ROM drive (for using the Operating Instructions and various software) Adobe® Reader® (for viewing the Operating Instructions on the CD-ROM)

**Specifications**

As of April, 2018

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</tr>
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<tbody>
<tr>
<td>For Mac:</td>
<td>OS X 10.9, Safari 7.0.2, OS X 10.8.5, Safari 6.2.1</td>
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<tr>
<td>For iPhone, iPad, iPod touch:</td>
<td>iOS 7.1, Standard web browsers</td>
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**Other**
CD-ROM drive (for using the Operating Instructions and various software) Adobe® Reader® (for viewing the Operating Instructions on the CD-ROM)

**Net Worth**
NC35 or less

**Gain selection**
Auto, 0 dB to 36 dB

**Frame rate**
0 dB, 6 dB, 12 dB, 18 dB, 24 dB

**Electronic shutter speed**
59.94 Hz to 642.21 Hz

**Gamma**
HD, SD, FILMLIKE1, FILMLIKE2, FILMLIKE3

**White balance**

**Chroma amount variability**
OFF, 99 % to 40 %

**Scene file**
Scene1, Scene2, Scene3, Scene4

**IP connecting cable**
When connecting through a hub:
LAN cable category 5 or above, straight cable, max. 100 m (328 ft)
When a hub is not used:
LAN cable category 5 or above, crossover cable max. 100 m (328 ft)

**RP connecting Cable**
LAN cable category 5 or above, straight cable, max. 100 m (328 ft)

**Pan/Tilt head unit**

<table>
<thead>
<tr>
<th>Camera unit</th>
<th>Imaging sensors</th>
<th>1/2.8-type Full-HD MOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lens</td>
<td>Motorized 20 zoom, F1.6 to F3.4 (f=4.5 mm to 90 mm; 35 mm equivalent: 32.13 mm to 642.5 mm)</td>
<td></td>
</tr>
<tr>
<td>Focus</td>
<td>Switching between auto and manual</td>
<td></td>
</tr>
<tr>
<td>Focus distance</td>
<td>Entire zooming range: 800 mm (2.62 ft) Wide end: 400 mm (1.31 ft)</td>
<td></td>
</tr>
<tr>
<td>Color separation optical system</td>
<td>3MOS</td>
<td></td>
</tr>
<tr>
<td>Minimum illumination</td>
<td>2 lx (50 %, F1.6, 36 dB)</td>
<td></td>
</tr>
<tr>
<td>Horizontal resolution</td>
<td>1020 TV lines, Typ (Center area)</td>
<td></td>
</tr>
</tbody>
</table>

**Synchronization system**
Internal/External synchronization (BBU/Invert sync)

**Pan-tilt operation speed**
0.08° to 90°/s

**Panning range**
±175°

**Tilting range**
–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: https://pro-au.panasonic.net. *2: This cannot be configured when the format is 1080/25p, 1080/25PsF, 1080/59.94p, 1080/59.94PsF, 1080/50p, 1080/50PsF, 1080/25p, 1080/50p, 1080/25psF, 1080/50psF. *3: The 64-bit version of Internet Explorer® is not supported. *4: Over 59.94i. *5: Four monitor may recognize the signal as 59.94i. *6: Four monitor may recognize the signal as 50i. *7: 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). *8: To ensure safety, the unit must be secured using the mount bracket supplied. *9: Use of an STP (shielded twisted pair) cable is recommended. *10: Depending on the pan or tilt position, the camera may be reflected in the image.
**Rear view**

**Bottom view**

**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 (blind-head) M4 x 10 mm
- Main unit mounting screw (with flat washer, spring washer) M3 x 6 mm
- Hole for checking the positioning
- Cables for mounting the mount bracket

**System Camera Options**

**Live Production Center**
AV–HLC100

**Control Assist Camera**
AW–HEA10W
AW–HEA10K

**Remote Camera Controller**
AW–RP50
AW–RP120G

**Remote Operation Panel**
AK–HRP200G

**Wireless Remote Control**
AW–RM50G

**Direct Ceiling Mount Bracket**
WV–Q105A

**For more information, please visit Panasonic web site**
https://pro-av.panasonic.net/

*Specifications are subject to change without notice.*