Panasonic BUSINESS

AW-HE40SW/ SK [SDI Model]
AW-HE40HW/ HK [HDMI Model]
HD Integrated PTZ Camera
For indoor use

Features 30x optical zoom lens and support for PoE+* for outstanding operability and installation flexibility

*Abbreviation of Power over Ethernet Plus.
Full HD camera with integrated pan–tilt for lectures, meetings and a wide variety of applications.

The AW-HE40 series of integrated full HD cameras performs in a wide variety of onsite shooting applications that require high-quality video, such as conferences, lecture capture and other events, thanks to its high-performance zoom, wide angle of view and outstanding color reproducibility. In addition to IP video transmission, support for PoE+ enables power to be supplied via a LAN cable. The result is installation flexibility. It also supports HD-IP video output, output of video and audio via USB, and SD card recording.

Developed 1/2.3-type MOS Sensor

Equipped with a developed 1/2.3-type MOS sensor and DSP (Digital Signal Processor) for high sensitivity and high resolution.

High Performance Optical 30x Zoom Lens/ Super Resolution 40x Zoom

In addition to a 30x optical zoom, the AW-HE40 series can zoom up to 40x while maintaining high resolution thanks to Super Resolution technology. It also features a 16x digital zoom and a 1.4x digital extender, which enables the AW-HE40 series to shoot in large conference halls and classrooms.

Night Mode (supports automatic switching)

Switching to Night Mode makes shooting possible even in low light conditions in which shooting is normally difficult, such as when observing wildlife. The AW-HE40 series can also be set to switch to the mode automatically depending on surrounding light levels.

Equipped with High Dynamic Range (HDR) Mode

In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE40 series are newly equipped with High Dynamic Range (HDR) mode. When shooting and synthesizing two images with differing exposure times, the AW-HE40 series can create video with high visibility that corrects for halation and black defects even under backlight conditions.

Outputs Still Image During Preset Movements; Supports One–Camera Operations

The new Freeze During Preset function enables 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.

Either SDI Model or HDMI Model Can Be Selected To Match Usage Needs

Supports 1080/59.94p (HDMI model only), 29.97p, 59.94i, 25p, 50i, 50p video formats. Flexible operation in line with the application is made possible by a lineup that includes an SDI output model (AW-HE40SW/SK), optimal for video content production, and an HDMI output model (AW-HE40HW/HK), optimal for video streaming, both of which come in two body colors (white and black) that can be selected depending on the usage environment.

Video/Audio Output with USB

USB Video Class and USB Audio Class are supported. This enables video and audio output via USB so the cameras can be used as high-image-quality Web cameras for Web conferencing, distance learning, and other applications utilizing communication software.

Audio Input Function

The AW-HE40 series also supports audio input, embedding and encoding. Audio output to IP is also supported. The ALC (Audio Automatic Level Control) in the original AW-HE40 series can be switched ON/OFF and an equalizer function can be used. By reducing low-frequency sound from air conditioners, projectors, and other devices, it is possible to emphasize and increase the clarity of the spoken words.
microSD Card Recording Function

MicroSD card recording is supported. Camera video and audio can be recorded in MP4 format on microSD card (sold separately) inserted into the unit. In addition, using an IP network, it is possible to externally control recording start/stop and download the recorded files.

Full HD Video Output Via IP Transmission

In addition to HD-SDI and HDMI output, production quality full HD video output via IP transmission is supported. The camera delivers up to four channels of IP streaming video (H.264), with a maximum quality level of 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.

List of Supported Multi-Streaming Outputs (When IP output priority is selected*)

<table>
<thead>
<tr>
<th>Settings</th>
<th>CH1</th>
<th>CH2</th>
<th>CH3/CH4</th>
<th>CH5-CH8</th>
<th>CH9-CH16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>1920 x 1080</td>
<td>1280 x 720</td>
<td>640 x 360</td>
<td>320 x 180</td>
<td>320 x 180</td>
</tr>
<tr>
<td>Frame rate</td>
<td>60 fps</td>
<td>30 fps</td>
<td>25 fps</td>
<td>25 fps</td>
<td>25 fps</td>
</tr>
<tr>
<td>Bit rate</td>
<td>Up to 24 Mbps</td>
<td>Up to 12 Mbps</td>
<td>Up to 12 Mbps</td>
<td>Up to 12 Mbps</td>
<td>Up to 12 Mbps</td>
</tr>
<tr>
<td>Voice transmission</td>
<td>Yes (AAC 48 kHz)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

NDI|HX Compatibility for Excellent Video Streaming Quality

The AW-HE40 series 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.

Supporting PoE+ for Lower Installation Costs

By connecting network devices that support the IEEE802.3at PoE+ standard, power can be supplied via LAN cable. Since it is not necessary to install a power supply or even a local AC outlet, installation costs can be significantly reduced.

IP Control with Image Monitoring Using PC, Mac and Mobile Terminals

Using an IP browser, the camera can be controlled from a remote location, and IP video monitoring and remote camera control can be performed from a PC, Mac or mobile terminal such as an iPhone, iPad or Android device, enabling easy operations. IP video*7 can be transmitted to up to 14 terminals*4.

Flexible IP Control Architecture Simplifies System Design and Operation*

Up to 100 x AW-HE40 series cameras can be controlled via IP from a single AW-RP120G/RP50 or PC. An AW-HE40 series can also be simultaneously controlled by up to five AW-RP120G/RP50 controllers via IP.

*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: Settable when HDR is “Off”. *3: Settable when HDR is “Off” and the frame rate is other than 60fps (or 50fps). *4: Not settable when HDR is “Off”. *5: Settable when HDR is “Off”. *6: Depending on your network environment. *7: Supports only SD video output. *8: Controller upgrade required. For details, please refer to the “service and support” section on the Panasonic website (https://pro-av.panasonic.net/).

* Contact your local Panasonic vendor for further information.
Exceptional Pan-tilt Performance for Smooth Shooting Over a Wide Area*1

The pan range of ±175° and the tilt range of -30° to +90° cover a wide shooting area. Pan and tilt operate at a maximum speed of 90°/second and respond quickly to remote control operation. They operate quietly at a sound level of NC35 or lower.

Other Functions
- Preset memory up to 100 positions.
- Functions such as freeze during preset, digital extender zoom and 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 seven units can be controlled via daisy chain connection.
- 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.

Other Features
- Equipped with a PoE+ hub and remote camera controller (sold separately).
- Up to four units can be controlled with a wireless remote controller (AW-RM50G sold separately).
- 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 seven units can be controlled via daisy chain connection.
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System Configuration Example

Optional Software

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

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™ with a Control Assist Camera*5

- Used in combination with a 4K/HD Integrated Camera*5.
- 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.
- *4: An iPad (sold separately) and a wireless AP (sold separately) are required. Please install the iPad application “PTZ Ctrll” (free). For details, please visit Panasonic AW-HEA10W/K website (https://pro-av.panasonic.net/en/sales_ocamera/aw-hea10w).

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- 95° wide-angle view from the Control Assist Camera is displayed on an iPad.
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- The iPad application “PTZ Ctrll” can be downloaded for free from the App Store. This application enables control of pan, tilt, zoom, focus, iris, and gain. For details, please visit the Panasonic AW-HEA10W/K product site (https://pro-av.panasonic.net/en/sales_ocamera/aw-hea10w).
Specifications
As of April, 2018

**General**

- **Power requirements**: DC 12V (Supplied AC adapter) / DC 4.2V to 5.7V (PoE+ power supply)
- **Current consumption**: 1.2 A (Supplied AC adapter) / 0.4A (PoE+ power supply)
- **Ambient operating temperature**: 0 °C to 40 °C (32 °F to 104 °F)
- **Storage temperature**: -20 °C to 60 °C (-4 °F to 140 °F)
- **Allowable humidity range**: 20% to 90% (no condensation)

**Dimensions (W x H x D)**

- 160 mm x 186 mm x 160 mm (6-1/2 inches x 7-1/4 inches x 6-1/2 inches)

**Finish**

- [AW-HE40HKPJ9], [AW-HE40SKPJ9], [AW-HE40HKEJ9], [AW-HE40SWEJ9] Metallic black
- [AW-HE40HWPJ9], [AW-HE40SWPJ9], [AW-HE40HWEJ9], [AW-HE40SWEJ9] Pearl white

**Weight**

- Approx. 1.5 kg (3.3 lb)

**i-OS, Android support**

- JPEG image display
- Resolution JPEG 1920 x 1080, 1280 x 720, 640 x 360 max. 30 fps

**Specs**

- **CPU**: Intel CoreTM i7 3.4 GHz or higher
- **Memory**: 4 GB or more
- **Network**
  - 10/100/1000BASE-TX, 10/100/1000BASE-T
  - LAN cable *7 (category 5e or above), max. 100 m (328 ft)
  - When connecting through a hub: 10/100/1000BASE-T
  - Power cable (1.5 m [4.92 ft]): 1
  - Main unit mounting screw (with flat washer, spring washer)  M3 x 6 mm: 1

**Function & Performance**

- **Gain selection**: Auto, 0 dB to 48 dB (3 dB step)
- **Horizontal resolution**: 1000 TV lines Typ (Center area)
- **Electronic shutter speed**: 1/50 to 1/2000 [50 Hz]
- **Focus**: Switching between auto and manual
- **Color separation optical system**: On-chip color filter system
- **Minimum illumination**: 0.7 x 50 IRE, F1.6, 60 Hz (1/60Hz) with 1/60 Hz to 1/200 Hz (AC: 50Hz)
- **Microphone**: Stereo mic (plug-in power, on/off switching via menu)
- **Speaker output**: 6 W (4Ω)
- **Internal synchronization**: Internal synchronization

**Control connection**

- **LAN cable**: 10BASE-T or 100BASE-TX port x 1
- **Video**: HDMI [AW-HE40/HK] HDMI connector
- **USB**: Mini B-port
- **Micro SD card**: microSD card slot

**Audio**

- **Audio compression format**: Linear PCM, 48 kHz, 16-bit, 2 channels
- **Audio output**: USB Audio Class Ver1.1

**Image display**

- **Image display function**: Resolution: 1024 x 768 pixels or more      Color generation: True Color 24-bit or more

**LAN**

- **LAN connector**: for IP control (RJ-45)

**Video compression**

- **Video compression format**: Motion JPEG
- **Resolution**: 1920 x 1080, 1280 x 720, 640 x 360
- **Frame rate**: max 30 fps (System frequency 30 Hz)
- **Audio output**: USB Audio Class Ver1.1
- **Audio compression format**: Linear PCM, 48 kHz, 16-bit, 2 channels

**Mount bracket**

- **Mount bracket for installation surface (Hanging* 8 / Desktop): 1
- **Mount bracket for installation surface (Hanging* 8 / Desktop): 1

**Power supply**

- **Supplied voltage**: 2.5 V ± 0.5 V
- **Mic/line input**: (plug-in power, on/off switching via menu)
- **Input impedance**: Approx. 2 kΩ (unbalanced)
- **Output**: RS-422 CONTROL IN RS422A (RJ-45) connector
- **LAN**: LAN connector for IP control (RJ-45)
- **Video output**: HDMI (Supports EDID and CEC)
- **Audio output**: USB Audio Class Ver1.1

**i-OS, Android support**

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- JPEG image display
- Resolution JPEG 1920 x 1080, 1280 x 720, 640 x 360 max. 30 fps
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- **Audio compression format**: Linear PCM, 48 kHz, 16-bit, 2 channels

**Support model**

- **Mount bracket for installation surface (Hanging* 8 / Desktop): 1

**Supported operating system and web browser**

- **Windows**: Microsoft® Windows® 8.1 Pro 64-bit, 32-bit**, Microsoft® Windows® 8 Pro 64-bit, Microsoft® Windows® 8 Pro 32-bit
- **Operating system**: Microsoft® Windows® 7 Professional 64-bit/32-bit**, Microsoft® Windows® 7 Professional 64-bit/32-bit**
- **iPod/iPhone/iPad**: iOS 6.1 Standard browser
- **Android**: Android OS 4.4 Standard browser

**Required personal computer environment**

**CPU**

- When using 1080i/60p [59.94 Hz] and 1080p [60 Hz] Intel® CoreTM i7 3.4 GHz or higher recommended

**Memory**

- Other than above Intel® CoreTM2 Duo 2.4 GHz or higher recommended

**Network**

- For Windows 1 GB or higher 2 GB or more for Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7 (64-bit edition)

- For Mac 2 GB or more

**User interface**

- For the latest information on supported OS/browser, please refer to the "service and support" on the Panasonic website (https://pro-av.panasonic.net).
- *: A platform with the most up-to-date features. **: A platform that is no longer supported.
- *: A platform that is no longer supported. **: A platform that is no longer supported.
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As of April, 2018

System Camera Options

<table>
<thead>
<tr>
<th>Camera Type</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live Production Center</td>
<td>AV-HLC100</td>
</tr>
<tr>
<td>Control Assist Camera</td>
<td>AW-HEA10W/K</td>
</tr>
<tr>
<td>Remote Camera Controller</td>
<td>AW-RP50</td>
</tr>
<tr>
<td>Wireless Remote Control</td>
<td>AW-RM50G</td>
</tr>
<tr>
<td>Compact Live Switcher</td>
<td>AW-HS50</td>
</tr>
<tr>
<td>Direct Ceiling Mount Bracket</td>
<td>WV-Q105A</td>
</tr>
</tbody>
</table>

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

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

* Specifications are subject to change without notice.