Features 30x optical zoom lens and support for PoE+* for outstanding operability and installation flexibility.
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. Adding the optional Feature Upgrade AW-SFU01G gives support for HD-IP video output, output of video and audio via USB, and SD card recording.

Newly Developed 1/2.3-type MOS Sensor

Equipped with a newly 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.

Equip with High Dynamic Range (HDR) Mode

In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE40 is 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 backlit 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, 29.97PsF, 1080/50p (HDMI model only), 25p, 50i, 25PsF, 720/59.94p, and 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

With the Feature Upgrade AW-SFU01G (optional), 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, encoding and recording. By adding AW-SFU01G, 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*1

With the AW-SFU01G (optional), 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*1

In addition to HD-SDI and HDMI output, production quality full HD video output via IP transmission is supported with the AW-SFU01G. The camera delivers up to four channels of IP streaming video (H.264), with a maximum quality level of 1080/60p at 24 Mbps*2. Simultaneous transmission to as many as 14 devices is also supported*3. Flexible system setup is possible to meet various application needs.

Transmit IP Video Without a Separate Encoder Reduces Cost and Simplifies Installation*1

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.

Supporting PoE+*7 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*8 can be transmitted to up to five terminals*2 per camera, or transmitted to up to 14 terminals*3 with the addition of AW-SFU01G.

Flexible IP Control Architecture Simplifies System Design and Operation*9

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’s via IP.

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

<table>
<thead>
<tr>
<th>Settings</th>
<th>H.264</th>
<th>CH1</th>
<th>CH2*4</th>
<th>CH3<em>4/CH4</em>5</th>
<th>CH5*6</th>
<th>CH6*7</th>
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<tr>
<td>Resolution</td>
<td>1920×1080</td>
<td>1280×720</td>
<td>640×360*9</td>
<td>1920×1080</td>
<td>1280×720</td>
<td>640×360*9</td>
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<tr>
<td>Frame rate</td>
<td>60 fps</td>
<td>30 fps</td>
<td>15 fps</td>
<td>60 fps</td>
<td>30 fps</td>
<td>15 fps</td>
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<tr>
<td>Bit rate</td>
<td>24 Mbps</td>
<td>12.5 Mbps</td>
<td>6 Mbps</td>
<td>24 Mbps</td>
<td>12.5 Mbps</td>
<td>6 Mbps</td>
</tr>
<tr>
<td>Voice transmission</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Depending on the output mode, certain restrictions apply.

Lecture Capture/Streaming System Example

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

Configuration Example

- Power source
- Control signal
- Video signal

For the latest information on supported OS/browsers, please refer to the "service and support" section on the Panasonic website (http://pro-av.panasonic.net/en/).

*1: When the optional AW-SFU01G is used. *2: 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. *3: Depends on your network environment. *4: Settable when HDR is "Off". *5: Settable when HDR is set to "Off" and the frame rate is other than 60fps (or 50fps). *6: Not settable when HDR is "Off". *7: Abbreviation of Power over Ethernet Plus. *8: Supports only SD video output. *9: Controller upgrade required. For details, please refer to the "service and support" section on the Panasonic website (http://pro-av.panasonic.net).
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*1. 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.

Optional Software That Adds Extra Functionality to The AW-HE40 Series
(Main functions added)
- Added HD-IP video output function enables IP transmission of full-HD video output and multi-streaming output.
- Added USB Video Class and USB Audio Class enable video and audio output via USB.
- Added microSD card recording function enables recording on a 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.

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

- Used in combination with an HD Integrated Camera*3.
- 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 HD Integrated Camera*3 to the tapped position.
- HD Integrated Camera*3 pan, tilt, and zoom can be easily controlled from an iPad.
- Up to 9 preset positions can be registered.

*1: Depending on the position of the pan and tilt, the unit itself may be reflected in the image.
*2: 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 (http://pro-av.panasonic.net/en/sales_o/camera/aw-hea10/).
*3: For information on the purchase of the optional software, please see Panasonic website (http://pro-av.panasonic.net/en/) “Software Download.”

System Configuration Example

Images simulated

Optional Software That Adds Extra Functionality to The AW-HE40 Series

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

*1: Depending on the position of the pan and tilt, the unit itself may be reflected in the image.
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*3: For information on the purchase of the optional software, please see Panasonic website (http://pro-av.panasonic.net/en/) “Software Download.”
Specifications

As of July, 2015

General

Power requirements
DC 12 V (Supplied AC adapter)
DC 4.2 V to 51 V (PoE+ power supply)

Current consumption
1.2 A (Supplied AC adapter) 0.4 A (PoE+ power supply)

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

Storage temperature
-20 °C to 50 °C (-4 °F to 122 °F)

Allowable humidity range
20 % to 90 % (no condensation)

Mass
Approx. 1.5 kg (3.3 lbs)

Dimensions (W x H x D)
160 mm x 188 mm x 108 mm
(6.3 inches x 7.4 inches x 4.3 inches)

Finish
AW-HE40HKP: Matt white
AW-HE40SKP: Matt black

Controller supported
AW-RP50  AW-RP120  AW-RP200

Power
DC 12 V, DC 48 V (IEEE802.3at standard)

Input and mic/line input

HD support
Stereo microphone (2.5 V or more)
Input impedance: Approx. 2 kΩ (balanced)
(L/R pair)
Supported microphones:
Stereo mic
Plug-in power: 0.3 W (switching via menu)

Output

Video output
HD [AW-HE40H] HDMI connector

LAN
LAN connector for IP control: [RI-4]
Equipped with straight/crossover cable auto detection function

Input/Output connector
RS-232C Mini DIN 8-pin (M) Mini DIN 8-pin (D Shut)
RS-422 CONTROL IN/OUT (RS-422) Mini DIN 8-pin

USB Mini-B port

SD card microSD card slot

Camera unit

Imaging sensors
1/3.3-type MOS

Lens
30 x zoom, F1.6 to F4.7
(4.3 mm (1/64 inches) to 128 mm (5/64 inches))
equivalent: 15 mm to 150 inches

Focusing
Switching between auto and manual

Focus distance
Entire zooming range 0.8 m (2.9 ft)
Wide end: 30 cm (0.33 ft)

Color separation optical system
On-chip color filter system

Minimum illumination
50 Hz: 0.7 lx (50 IRE, F1.6, 60 dB, 1/60 without accumulation)
50 Hz: 0.3 lx (50 IRE, F1.6, 60 dB, 1/60 with accumulation) [Frame Mix 6 dB]

Horizontal resolution
1500 TV lines (Tip area center)

Gain selection
Auto, 0 dB, 6 dB, 12 dB, 18 dB, 24 dB

Frame mix
Auto, Off, 6 dB, 12 dB, 18 dB, 24 dB

Electronic shutter speed
During: 1/10 to 1/60 (0.94 Hz) Fast: 1/50 to 1/250 (0.5 Hz)
During: 1/50 to 1/250 (0.5 Hz)

Synchro scan
50 Hz: 50 Hz to 67.5 Hz
50 Hz: 50 Hz to 57.0 Hz

Gamma
0.218 for 10-bit operation

White balance
Automatic, Manual, Cloudy, Sunny, Fluorescent, Daylight, Shade, Outdoor, AW protocol connecting cable

USB connection

This may vary depending on the operating environment.

Software application
USB Video Class Ver 2.0

Video compression format
Motion JPEG

Resolution
1080 x 1080, 1280 x 720, 640 x 360

Frame rate
Max 30 fps (System frequency 50 Hz)

Audio output
USB Audio Class Ver 1.0

Audio compression format
Linear PCM, 48 kHz, 16-bit, 2 channels

Supported operating system and Web browser

Windows
Microsoft® Windows® 8 Pro 64-bit/32-bit[1]
Microsoft® Windows® 8 Pro 64-bit/32-bit[2]

Mac
OS X 10.8 Safari 6.2
OS X 10.9 Safari 7.1 / OS X 10.10 Safari 8.0

Phone / Pad / iPod touch
iOS 8.3 Standard browser

Android
Android OS 4.4 Standard browser

USB connection

This may vary depending on the operating environment.

Video output
USB Video Class Ver 2.0

Video compression format
Motion JPEG

Resolution
1080 x 1080, 1280 x 720, 640 x 360

Frame rate
Max 30 fps (System frequency 50 Hz)

Audio output
USB Audio Class Ver 1.0

Audio compression format
Linear PCM, 48 kHz, 16-bit, 2 channels

Supported operating system
Windows OS 8.1 (x64), 8 (x64), 7 (x64), 7 (x32), Vista (x64), Vista (x32), XP (x64), XP (x32)

Other
Use of the desktop version of Internet Explorer (Internet Explorer for Windows UI is not supported) *11: Windows XP compatibility mode is not supported.

For the latest information on supported OS/browser, please refer to the "service and support" on the Panasonic website (http://pro-ap.panasonic.en/).

*1: May not be able to update the version of the controller so that the controller will support the unit.
*2: During Auto, 6 dB to 48 dB (6 dB step) are available for AGC Max Gain setting.
*3: During Auto, 0 dB, 6 dB, 12 dB and 18 dB are available for Auto F.Mix Max Gain setting.
*4: AW-HE40H only
*5: When the network function expansion software AW-SFU01G (optional) is used.
*6: To ensure safety, the unit must be secured using the mount bracket supplied.
*7: Depending on the pan or tilt position, the camera may be reflected in the image.
*8: During Auto 1/60 to 1/2000 [59.94 Hz]
*9: During Full Auto 1/25 to 1/2000 [50 Hz]
*10: The 64-bit version of Internet Explorer is not supported.
*11: Windows XP compatibility mode is not supported.
*12: The 64-bit version of Internet Explorer is not supported.
**System Camera Options**

**Feature Upgrade**
- AW-SFU01G

**Remote Camera Controller**
- AW-RP50
- AW-RP120G

**Wireless Remote Control**
- AW-RM50G

**Control Assist Camera**
- AW-HEA10W
- AW-HEA10K

**Remote Operation Panel**
- AK-HRP200G

**Compact Live Switcher**
- AW-HS50

**Direct Ceiling Mount Bracket**
- WV-Q105A

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**Rear View**

AW-HE40SW/SK

AW-HE40HW/HK

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**Bottom View**

- Through-hole for cable Ø40 mm (Ø 1-5/16 inches) (reference)
- Hole for mounting the main unit mounting screws
- Hole for checking the positioning
- Hook for mounting the drop-prevention wire
- Unit mounting area
- Mount bracket
- Hole for installing the WV-Q105A direct ceiling mount bracket Ø60 mm [Ø 2-3/8 inches]

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

[http://pro-av.panasonic.net/](http://pro-av.panasonic.net/)

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**Panasonic Corporation**

AVC Networks Company

2-15 Matsushita-cho, Kadoma, Osaka 577-8502

Japan

[http://pro-av.panasonic.net/](http://pro-av.panasonic.net/)

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**Countries and Regions**

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<td>Argentina</td>
<td>+54 11 4122 7200</td>
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<td>+973 252239</td>
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<td>Iran</td>
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**ISO 9001**

**ISO 14001**

**ISO 15189**

**ISO 15190**

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