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, 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

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.

* 1: Abbreviation of Power over Ethernet Plus. * 2: The software for the AW-HE40 series may need to be updated depending on the existing software version. For details, see the Panasonic website (https://pro-av.panasonic.net/). * 3: Picture quality is lower with the digital zoom. * 4: Video output is monochrome. * 5: Native output.
**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.

**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.

* Contact your local Panasonic vendor for further information.

**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* can be transmitted to up to 14 terminals*.

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

**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.

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*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: Depends on your network environment. *3: Settable when HDR is “Off”.

*4: Settable when HDR is set to “Off” and the frame rate is other than 60fps (or 50fps). *5: Not settable when HDR is “Off”.

*6: Abbreviation of Power over Ethernet Plus.

*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/).

*9: AC adaptor AW-PS551 (sold separately) is required for AW-RP120G.
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.

*1: Depending on the position of the pan and tilt, the unit itself may be reflected in the image.

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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

**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 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.*3

*2: When the web application version is used, Auto Tracking Software needs to be installed on an HTTP server.
*3: Up to four cameras per server can be controlled simultaneously.
*4: An iPad (sold separately) and a wireless AP (sold separately) are required. Please install the iPad application "PTZ Cntrl" (free). For details, please visit the Panasonic website [https://pro-av.panasonic.net/].

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Easy Wireless Control Using an iPad™ with a Control Assist Camera*5

- 95° wide-angle view from the Control Assist Camera is displayed on an iPad.
- Tapping the desired area on the wide-angle view displayed on the iPad turns the field of view of the 4K/HD Integrated Camera*6 to the tapped position.

*4: 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-hea10/].
*5: AW-HEA130/HN130 series, AW-U70/U70T series, AW-HEA40/HN40 series, and AW-HEA38/HN38 series only.
**General**

- **Supported operating systems:** Microsoft® Windows® 7 Professional SP1 64-bit/32-bit, Windows® Internet Explorer® 8.0 / 9.0 / 10.0 / 11.0
- **CPU:** When using 1080/60p [59.94 Hz] and 1080/50i [50 Hz] Intel® CoreTM i7 3.4 GHz or higher recommended

**Supported models Devices standards equipped with a USB 2.0 compatible port**

**Input/output**

- **Input:** LAN, RS-232C Mini DIN 8-pin (IN), Mini DIN 8-pin (OUT), HDMI, USB Mini-B port
- **Output:** HDMI, DC OUT 5V 0.5A (ADP-37B9U), RS-422A (RJ-45) connector, RS-232C Mini DIN 8-pin (OUT), Mini DIN 8-pin (OUT)

**Supports operating system and Web browser**

- Windows 10, Windows 8.1, Windows 8, Windows 7, and Internet Explorer® are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
- Apple, Inc. is a trademark of Apple Inc., registered in the U.S. and other countries.
- Apache, Mozilla, and OpenSSL are registered trademarks of the Apache Software Foundation.
- Linux is a registered trademark of Linus Torvalds.
- FreeBSD is a registered trademark of The FreeBSD Foundation.
- Solaris is a registered trademark of Oracle Corporation.
- SUSE Linux is a registered trademark of SUSE LLC.

**Specifications**

**Miscellaneous input**

- **Microphone input:** Stereo mini plug (3.5 mm)
- **Mic input:** Inter input: -48 dB, -50 dB

**Output**

- **Video output:** HDMI 1920 x 1080, 1280 x 720, 640 x 360
- **Audio output:** USB Audio Class Ver1.0

**Input/output connector**

- **LAN connector:** For IP control (RJ-45)
- **USB connection:** Support microphones: Stereo mic

**Functions and performance**

- **Camera unit:** Imaging sensor: 1/2.3-type MOS
- **Digital zoom:** 30x
- **Horizontal resolution:** 1000 TV lines Typ (Center area)
- **Vertical resolution:** 1000 TV lines Typ
- **Gamma:** Off, Normal (Low, Mid, High), Cinema
- **Electronic shutter speed:** 1/500 to 1/2000 [50 Hz], 1/750 to 1/2000 [59.94 Hz]
- **Frame rate:** max 30 fps (System frequency 59.94 Hz)
- **Resolution:** 1920 x 1080, 1280 x 720, 640 x 360
- **Video compression format:** Motion JPEG
- **Video output:** USB Video Class Ver1.0

**Accessories**

- **Bracket mounting screws (blind-head) M4 x 10 mm:** 4
- **Mount bracket for installation surface (Hanging* 8 / Desktop):** 1
- **Bracket for installation surface (Hanging* 8 / Desktop):** 1
- **Mount bracket for installation surface (Hanging* 8 / Desktop):** 1

**Required personal computer environment**

- **CPU:** When using 1080/60p [59.94 Hz] and 1080/50i [50 Hz] Intel® CoreTM i7 3.4 GHz or higher recommended Other than above Intel® CoreTM i5 2.4 GHz or higher recommended
- **Memory:** For Windows 1 GB or higher GB or higher for Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7 (64-bit edition)
- **For Mac:** 2 GB or more
- **Network function:** 10BAE-T or 10BAE-TX port x 1
- **Image display function:** Resolution: 1024 x 768 pixels or more
- **Supported operating system:** Internet Explorer® 11.0, Microsoft® Windows® 8.1, Windows® 8, Windows® 7, and Internet Explorer® are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
- **Android:** is a trademark of Google Inc.

**Chroma amount variation:** ±3 step

**Scene file:** Full Auto, Manual1, Manual2, Manual3

**Output format:** HD 1080/50i [50Hz], 1080/50p [50Hz], 1080/60p [50Hz], 720p [50Hz]

**Frame rate:** max 25 fps (System frequency 50 Hz)

**Audio output:** USB Audio Class Ver1.0

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

**Supported models Devices standards equipped with a USB 2.0 compatible port**

**[Pan-tilt head unit]**

- **Installation method:** Stand-alone (Desktop or suspended (Hanging)**
- **Pan-tilt head unit:** Mounting method: Stand-alone (Desktop or suspended (Hanging)**
- **Pan-tilt head unit:** Mounting method: Stand-alone (Desktop or suspended (Hanging)**
- **Max speed during manual:** 90°/s
- **Max speed during manual:** 90°/s
- **Max speed during manual:** 90°/s

**[Camera/pan-tilt head control]**

- **IP connecting cable:** When connecting through a hub:
  - LAN cable*: (category 5e or above)/max. 100 m (328 ft)
  - When using a PoE+ hub:
  - LAN cable*: (category 5e or above)/max. 100 m (328 ft)
  - When a hub is not used:
  - LAN cable*: (category 5e or above)/max. 100 m (328 ft)
  - All protocol connecting cable:
  - LAN cable*: (category 5e or above)/straight/cable), max. 1000 m (3280 ft)

**[SD card recording]**

- **SD card type:** microSD (4 GB to 32 GB), microSD (64 GB to 128 GB)
- **SD card format:** Speed class 10 or higher

**Network**

- **Recording function:** 1080:50i/50p, 1080:25i/25p, 720:50p/50i, 720:25p/25i
- **Accessories:** Jacket mount for installation surface (Hanging*7 / Desktop): 1
- **Protection screws (blind-head) M4 x 10 mm:** 4
- **Bracket mounting screws (blind-head) M4 x 10 mm:** 4
- **Max speed during manual:** 90°/s
- **Max speed during manual:** 90°/s
- **Max speed during manual:** 90°/s

**Other**

- **CD-ROM drive:** (for viewing the Operating Instructions and various software)
- **Android:** for viewing the Operating Instructions (on the CD-ROM)

**Note:**

- 1: It may be necessary to upgrade the version of the controller so that the controller will support the unit. 2: During Auto, 6 to 48 (2 to 16) stop position are available for AGC Max Gain setting.
- 3: During Auto, 0, 6, 12, 18 and 24 are available for 720/50p Max Audio Gain setting. 4: AGC (Auto Gain Control) can be adjusted only to ensure safety, the unit must be secured using the mount brackets supplied.
- 5: Depending on the pan or tilt position, the camera may be reflected in the image. *6: Use of an STP (shielded twisted pair) cable is recommended.
- 7: To ensure more safety, AW-HE40 series can be secured using the direct ceiling-mount bracket (WV-Q105A).

**As of April, 2018**
Rear View

AW-HE40SW/SK

AW-HE40HW/HK

System Camera Options

As of April, 2018

Live Production Center
AV-HLC100

Control Assist Camera
AW-HEA10W/K

Remote Camera Controller
AW-RP50

Remote Camera Controller
AW-RP120G

Remote Operation Panel
AK-HRP200G

Wireless Remote Control
AW-RM50G

Compact Live Switcher
AW-HS50

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.

Panasonic Corporation
Connected Solutions Company
2-15 Matsuba-cho, Kadoma, Osaka 571-8503 Japan
https://pro-av.panasonic.net/

[Countries and Regions]
Argentina +54 11 4122 7200
Australia +61 (0) 2 9491 7400
Brazil +55 11 3889 4005
Canada +1 905 624 5010
China +86 10 6515 8828
Hong Kong +852 2313 0888
Czech Republic +420 (0) 903 447 757
Denmark +45 43 20 08 57
Egypt +20 2 23938151
Finland, Latvia, Lithuania, Estonia +358 (9) 521 52 53
France +33 (0) 1 47 91 64 00
Germany, Austria, Switzerland +49 (0) 603 931837
Greece +30 210 96 32 30
Hungary +36 (1) 382 60 60
India +91 1160 425 1860
Indonesia +65 6277 7294
Iran (Vida) +98 21 22271463
(Panasonic Office)+98 21 22271463
Italy +39 02 6788 367
Jordan +962 6 8559001
Kazakhstan +7 727 330 8808
Korea +82 2 2106 6641

Kuwait +96 562431385
Lebanon +96 11665657
Malaysia +60 3 7683 7668
Mexico +52 55 5488 1000
Mongolia +976 7011577
Netherlands, Belgium +31 11 640 2729
New Zealand +64 9 972 0100
Norway +47 67 91 79 00
Pakistan +92 21 111 567 111
Palestine +972 2 2988750
Panama +507 229 2955
Philippines +65 6277 7294
Poland +48 (22) 338 1100
Portugal +351 21 425 77 04
Romania, Albania, Bulgaria, Macedonia +40 (0) 729 164 387
Russia & CIS +7 495 9804206
Saudi Arabia +966 (1) 4780499
Singapore +65 6277 7294
Slovak Republic, Croatia, Serbia, Bosnia, Montenegro, Slovenia +382 11 3131622
South Africa +27 11 3131622
Spain +34 (94) 425 93 00

Sweden +46 (0) 8 292 54 40
Taiwan +886 2 2227 6214
Thailand +66 2 731 8886
Turkey +90 216 578 3700
U.A.E. (for All Middle East) +971 4 8682142
Ukraine +380 44 4893437
U.K. +44 (0) 1344 70 69 13
U.S.A. +1 877 803 8492
Vietnam +84 96 203 77 00

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