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AW-HE40SW/SK [SDI Model] AW-HE40HW/HK [HDMI Model] HD Integrated Camera

AW-HE40SW/AW-HE40HW Suspended (Hanging) style For indoor use

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

> AW-HE40SK/AW-HE40HK Stand-alone (Desktop) style For indoor use

Panasonie



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-guality 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+*1 enables power to be supplied via a LAN cable*2. The result is installation flexibility. It also supports 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*3 and a 1.4x digital extender, which enables the AW-HE40 series to shoot in large conference halls and classrooms.





Super Resolution (iA Zoom)

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*4.



The AW-HE40 series can also be set to switch to the mode automatically depending on surrounding light levels.

* Images are simulated

*Images are simulated

Equipped with High Dynamic Range (HDR) Mode

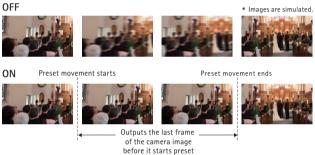
In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE40 is newly equipped with High Dynamic Range (HDR) mode. When shooting and synthesizing two images with differing exposure times, the AW-HE40 series can create video with high visibility that corrects 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 enableds 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.

With Freeze During Preset function OFF and ON



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

Supports 1080/59.94p (HDMI model only), 29.97p*⁵, 59.94i, 29,97PsF, 1080/50p (HDMI model only), 25p*5, 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 encodina.

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 (http://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.

-10mi



Full HD Video Output Via IP Transmission

In addition to HD-SDI and HDMI output, production guality 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*1. Simultaneous transmission to as many as 14 devices is also supported*2. Flexible system setup is possible to meet various application needs.

Reduces Cost and Simplifies Installation

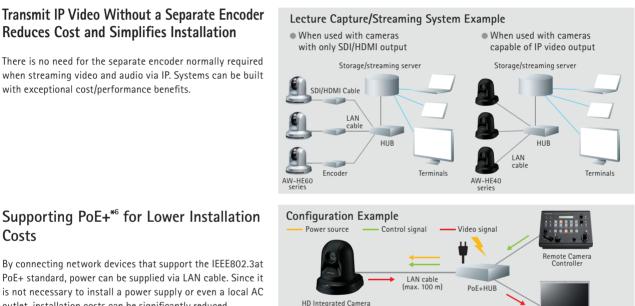
with exceptional cost/performance benefits.

H.264 IPEG Settings CH2*3 CH3*3/CH4*4 CH1/CH2/CH3 CH1 1920×1080*4/ 1920×1080/ 1280×720/ 1280×720/ 1280×720*3/ Resolution 1280×720*3 640×360/ 640×360/ 640×360/ 640×360* 320×180 320×180 320×180*3 59.94 Hz 5 fps/ 15 fps/ 30 fps/ 60 fps 5 fps/15 fps/30 fps 5 fps/15 fps/30 fps 5 fps/15 fps/30 fps Frame rate 5 fps/12.5 fps/25 fps 50 Hz 5 fps/ 12.5 fps/ 25 fps/ 50 fps 5 fps/12.5 fps/25 fps 5 fps/12.5 fps/25 fps Bit rate Up to 24 Mbps Voice tra Yes (AAC48 kHz) PoF+ Yes

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

*Depending on the output mode, certain restrictions apply

AW-HE40 series



Supporting PoE+*6 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*1.

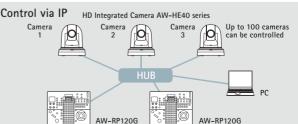
*For the latest information on supported OS/browsers, please refer to the "service and support" section on the Panasonic website (http://pro-av.panasonic.net/en/)



PC

Flexible IP Control Architecture Simplifies System Design and Operation*8

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.



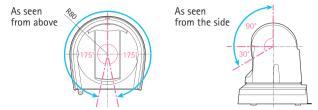
*1: 1920 x 1080 60 fps output is 1ch display only. For 2ch or more, display is max. 30 fps. Also, JPEG output is up to 3ch. *2: Depends on your network environment. *3: Settable when HDR is "Off".

*4: Settable when HDR is set to "Off" and the frame rate is other than 60 fos (or 50 fos), *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 (http://pro-av.panasonic.net).

Exceptional Pan-tilt Performance for Smooth Shooting Over a Wide Area*1

The pan range of $\pm 175^{\circ}$ and the tilt range of -30° to $+90^{\circ}$ 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.

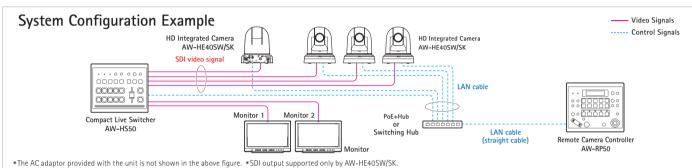


* 1. Depending on the position of the pan and tilt, the unit itself may be reflected in the image.

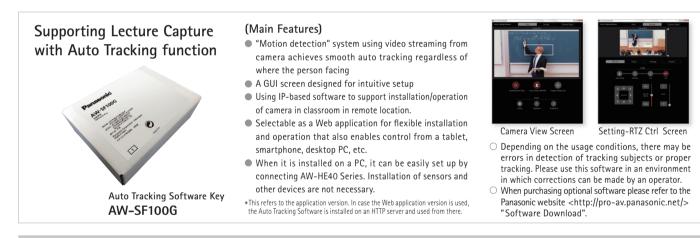
Other Functions

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.



*The camera unit automatically recognizes straight cables and cross cables connected to the LAN terminal



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



Approx. 30°

Control Assist Camera AW-HEA10W

Approx. 45



Control Assist Camera AW-HEA10K

- Used in combination with an HD Integrated 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*³ turns the field of view of the HD Integrated Camera*4 to the tapped position.
- HD Integrated Camera*⁴ pan, tilt, and zoom can be easily controlled from an iPad.
- Up to 9 preset positions can be registered.
- *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 (http://pro-av.panasonic.net/en/sales_o/camera/aw-hea10/).
- * 4: AW-HE130W/K, AW-HE40 series, and AW-HE60 series only. When used with the AW-HE60 series, in some cases an AW-HE60 series software upgrade will be necessary.



Images simulated

Specifications

									As of January, 2010
GENERAL	Power requirements			ipplied AC adaptor) 57 V (PoE+ power supply)		Chroma amou	nt variability	±3 step	
	Current consumption		1.2 A (Supplied AC adaptor)			Scene file		Full Auto, Manual1, Manual2, Manual3 1080:59.94p/50p*4	
	Ambient oner	ting temperature	0.4 A (PoE+ power supply)			Output format		HD	1080:59.94i/50i 1080:29.97p/25p
	Storage tem		- 0 °C to 40 °C (32 °F to 104 °F) -20 °C to 50 °C (-4 °F to 122 °F)						1080:29.97PsF/25PsF
		midity ranges		% (no condensation)					720:59.94p/50p
	Mass		Approx. 1.5 kg (3.30 lb)			Synchronization system		Internal sy	nchronization
	141022		160 mm x 186 mm x 166 mm			[USB conne	ection] *		y depending on the operating environment.
	Dimensions (W x H x D) Finish Controller supported*1		 (6-5/16 inches x 7-41/128 inches x 6-17/32 inches) [excluding protrusions, direct ceiling mount bracket] [AW-HE40HWP], [AW-HE40SWP],[AW-HE40HWE], [AW-HE40SKE] Pearl white [AW-HE40HKP], [AW-HE40SKP],[AW-HE40HKE], [AW-HE40SKE] Metallic black AW-RPSO, AW-RP120, AK-HRP200 DC 12 V IN, PoE+ (IEEE802.3at standard) 			Video output			Class Ver1.0
						Video compres	ssion format	Motion JPE	
					l white black	Resolution	Resolution		30, 1280 x 720, 640 x 360
						Frame rate			; (System frequency 59.94 Hz) ; (System frequency 50 Hz)
	Power					Audio output			Class Ver1.0
-			Stereo mini-jack (ø3.5 mm)			Audio compression format			1, 48 kHz, 16-bit, 2 channels
			Input impedance: Approx. 2 k Ω (unbalanced) [Mic input] Supported microphones: Stereo mic			Supported models			andardly equipped with a USB 2.0 compatible port
INPUT						[Pan-tilt head unit]			and the second
INTOT	Mic/line inp	ut		ower, on/off switching via menu)		Installation method		Stand-alor	e (Desktop) or suspended (Hanging) ^{*5}
				ltage: 2.5 V ± 0.5 V evel: -60 dBV ± 3 dBV					speed during preset: 300°/s
			[Line input] Input Ievel: -10 dBV ± 3 dBV			Pan/tilt operation speed			speed during manual: 90°/s
						Panning range		±175°	
OUTPUT	Video	HDMI		 HDMI connector not supported. * VIERA Link is not supported. 		Tilting range		-30° to 90°	*6
UUIPUI	Video output HD SDI OUT			j] Compliant with the SMPTE292M standards/75 Ω(B)	NC x 1)	Quietness			set: NC40 or less nual: NC35 or less
		LAN		ctor for IP control (RJ-45) ith straight/crossover cable auto detection function	FUNCTIONS	[Camera/pa	n-tilt head	l control]	
	Input/	RS-232C		-pin (IN) Mini DIN 8-pin (OUT)	AND PERFORMANCE			When connecting through a hub:	
INPUT/ OUTPUT	Output	RS-422		N RS422A (RJ-45)				LAN cable*7 (category 5 or above),max. 100 m (328 ft) When using a PoE+ hub:	
001101	connector	USB	Mini-B port			IP connecting cable		LAN cable ^{*7} (category 5e or above),max. 100 m (328 ft)	
	SD card		microSD card slot 1/2.3-type M0S						b is not used: ⁻⁷ (category 5 or above),max. 100 m (328 ft)
	[Camera unit]					AW protocol connecting cable			⁷ (category 5 or above,straight cable), max. 1000 m (3280 ft)
	Imaging sensors					Standard protocol			
	Lens		Motorized 30x zoom, F1.6 to F4.7 [[=4.3 mm (11/64 inches] to 129 mm(5-5/64 inches); 35 mm (1-3/8 inches) equivalent: 31.6 mm (1-31/128 inches)to 962.0 mm (37-7/8 inches)] Switching between auto and manual			connecting cable [SD card recording]		WINI DIN 8	-pin cable, male
					es)]	SD card type			C (4 GB to 32 GB), micro SDXC (64 GB to 128 GB), s 10 or higher
	Focus distan	Enous distance		Entire zooming range:1.2 m (3.94 ft)		System frequency		59.94 Hz/5	50 Hz
			Wide end: 10 cm (0.33 ft)			Video compression format		MPEG-4 A	VC/H.264 High Profile
	Color separa optical syste	Color separation		On-chip color filter system		Audio compression format		AAC-LC (4	8 kHz, 16 bit, 2 ch, 128 kbps)
						SD card recording		MPEG-4 A	VC file standard compliant (.MP4)
	Minimum illumination		0.7 lx (50 IRE, F1.6, 48 dB,1/60 without accumulation) 0.35 lx (50 IRE, F1.6, 48 dB,1/30 with accumulation[Frame Mix 6 dB]) 0.7 lx (50 IRE, F1.6, 48 dB,1/50 without accumulation)		i dB])	Recording format		1920 x 108	80/59.94p, 1920 x 1080/50p, 1920 x 1080/29.97p, 80/25p, 1280 x 720/59.94p, 1280 x 720/50p,
FUNCTIONS AND PERFORMANCE		50 Hz		35 lx (50 IRE, F1.6, 48 dB,1/25 with accumulation[Frame Mix 6 dB])				1280 x 720/29.97p, 1280 x 720/25p	
	Horizontal resolution		1000 TV lines Typ (Center area)			[Network]			
	Gain selection*2 Frame mix*3		Auto, 0 dB to 48 dB (3 dB step)			Resolution	JPEG		< 360), QVGA (320 x 180) max.30 fps 30, 1280 x 720, 640 x 360, 320 x 180 max.30 fps
			Auto, Off, 6	6 dB, 12 dB, 18 dB, 24 dB		nesolation	H.264		30, 1280 x 720, 640 x 360, 320 x 180 max.50 fps
	Electronic shutter speed		During Full Auto	1/30 to 1/2000 [59.94 Hz] 1/25 to 1/2000 [50 Hz]		Supported protocol	IPv4	TCP/IP, UDI	P/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, i, NTP, IGMP, UPnP, ICMP, ARP, RTSPoverTCP,
			During Auto	1/60 to 1/2000 [59.94 Hz] 1/50 to 1/2000 [50 Hz]				RTSPoverH	TTP, SSL(TLS), MultiCast/UniCast P/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, DHCPv6, DNS,
			1/100, 1/250, 1/500, 1/1000, 1/2000, During 1/4000, 1/10000 [59.94 Hz] Manual 1/120, 1/250, 1/500, 1/1000, 1/2000,				IPv6	NTP, ICMPv	6(MLD), RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
					i-OS, Android		JPEG imag	• *	
-			1/4000, 1/10000 [50 Hz]			Mount bracket for installation surface (Hanging ¹⁸) Desktop): 1 Drop-prevention wire (already attached to the unit): 1 Bracket mounting screws ((with flat washer, spring washer) M3 x 6 mm: 1			
	Synchro scan		59.94 Hz : 59.94 Hz to 660.09 Hz 50 Hz : 50.00 Hz to 570.12 Hz		ACCESSORIES				
	Gamma		Off, Normal (Low, Mid, High), Cinema			Power cable (1 AC adaptor: 1			
	White balance		AWB A, AWB B, ATW, 3200K,5600K, VAR (2400K to 9900K)			CD-ROM: 1			

* 1: It may be necessary to upgrade 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: To ensure safety, the unit must be secured using the mount bracket supplied. * 6: Depending on the pan or tilt position, the camera may be reflected in the image. * 7: Use of an STP (shielded twisted pair) cable is recommended. * 8: To ensure more safety, AW-HE40S/H can be secured by using the direct ceiling mount bracket (WV-Q105A).

Required personal computer environment

As of January, 2016

When using 1080/60p [59.94 Hz] and 1080/50p [50 Hz] Intel® CoreTM i7 3.4 GHz or higher recommended Other than above Intel® CoreTM2 Duo 2.4 GHz or higher recommended					
For Windows	1 GB or higher (2 GB or higher for Microsoft® Windows® 8.1, Microsoft® Windows® 8, Microsoft® Windows® 7 64-bit edition)				
For Mac	2 GB or more				
10BASE-T or 100BASE-TX port x 1					
Resolution: 1024 x 768 pixels or more Color generation: True Color 24-bit or more					
Microsoft® Windows® 8.1 Pro 64-bit/32-bit* ⁹ Windows® Internet Explorer® 11.0 ^{*9} Windows Microsoft® Windows® 8 Pro 64-bit/32-bit* ⁹ Windows® Internet Explorer® 10.0 ^{*9} Microsoft® Windows® 7 Professional SP1 64-bit/32-bit* ¹⁰ Windows® Internet Explorer® 8.0 / 9.0 / 10.0 / 11.0* ¹¹					
Mac	OS X 10.8 Safari 6.2 / OS X 10.9 Safari 7.1 / OS X 10.10 Safari 8.0				
iPhone / iPad / iPod touch	touch iOS 8.3 Standard browser				
Android	Android OS 4.4 Standard browser				
CD-ROM drive (for using the Operating Instructions and various software) Adobe® Reader® (for viewing the Operating Instructions on the CD-ROM)					
	Other than above Intel® Cor For Windows For Mac 10BASE-T or 100BASE-TX p Resolution: 1024 x 768 pixe Windows Mac IPhone / iPad / iPod touch Android CD-ROM drive (for using th				

* 9 : Use the desktop version of Internet Explorer. (Internet Explorer for Windows UI is not supported.) * 10: Windows® XP compatibility mode is not supported. * 11: The 64-bit version of Internet Explorer® is not supported.

For the latest information on supported OS/brower, please refer to the "service and support" on the Panasonic website (http://pro-av.panasonic/en/). ●Microsoft®, Windows®, Windows® 7, Windows® 8, Windows® 8.1 and Internet Explorer® are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries. ●Apple, Mac, OS X, iPhone, iPod Touch, iPad, and Safari are registered trademarks of Apple Inc., in the United States and other countries. ●Android™ is a trademark of Google Inc.



System Camera Options

As of January, 2016



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

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

Panasonic

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[Countries and Regions]

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