

# Panasonic

BUSINESS

AW-HE42W [White Model]

AW-HE42K [Black Model]

HD Integrated Camera

For indoor use



30x Zoom and 1080 60p/50p\* 3G-SDI

Supported PTZ Camera



\*Actual output format is Full HD (1920 x 1080) 59.94p/50p.

# High-performance lenses and a variety of interfaces support a wide range of live video production environments



Suspended (Hanging) Style

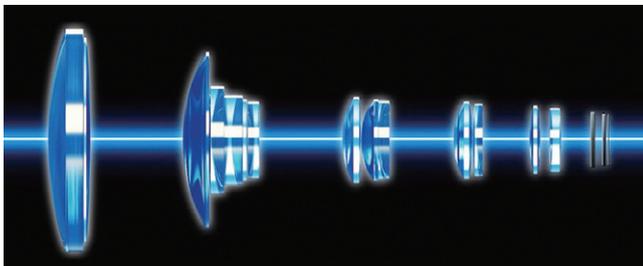


Stand-Alone (Desktop) Style

The AW-HE42W/K is a full HD camera with an integrated rotating base equipped with 3G-SDI and a variety of other output connectors. The four types of output interfaces and the genlock function support smooth large-scale shooting with multiple cameras. The camera is perfect for a wide range of environments, from recording and broadcast of lectures, to live streaming at concerts and other events.

## The Four Drive Lens System: Zoom with Incredible Image Quality

The camera is equipped with the Four Drive Lens System, where three zoom lenses and one focus lens are driven independently but simultaneously. Driving each of the four lenses individually enables reduction in lens size and drive range to achieve a reduced-size body with zoom of high image quality and magnification. Despite its compact size, the camera boasts optical 20x zoom and high performance, ultra-high-resolution 30x zoom.



\* Images are simulated.

## External Sync Signal Input Connector Plus Four Types of Output\*1 Connectors: HDMI, SDI, USB and LAN

Full HD video output is enabled with HDMI, SDI, USB and LAN. The camera is also equipped with an external sync signal\*1 input connector as well as BBS (Black Burst Sync) and tri-level sync. The camera enables flexible system construction ready to handle any purpose or environment.

### Supported formats with each output connector

HDMI	1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/25PsF, 1080/29.97p, 1080/25p, 720/59.94p, 720/50p
SDI	1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/25PsF, 1080/29.97p, 1080/25p, 720/59.94p, 720/50p
USB	1080/30p, 1080/25p, 1080/15p, 1080/12.5p, 1080/5p, 720/30p, 720/25p, 720/15p, 720/12.5p, 720/5p, 360/30p, 360/25p, 360/15p, 360/12.5p, 360/5p
LAN	For details, please see "List of Supported Multi-Streaming Outputs" on page 5.

\*1: External sync is through the SDI video signal. The HDMI and IP video signals cannot be synced.

## 1/2.3-type MOS Sensor

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

## High Performance Optical 20x Zoom Lens/ Super Resolution 30x Zoom

In addition to optical 20x zoom, ultra-high-resolution technology has enabled zoom of up to 30x while maintaining high resolution. The camera can also be set with 12x digital zoom\*2, or 1.4, 2.0, 4.0, 6.0 or 8.0 digital extender zoom.

\*2: Picture quality is lower with the digital zoom.



\* Images are simulated.

## Optical / Four-Axis Hybrid Image Stabilizer (OIS) for Shooting Stability

Image shake is reduced with both optical and digital 4-axis automatic stabilization that detects mounting surface vibration caused by audio equipment and opening/closing doors.

## 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\*3. The AW-HE42W/K can also be set to switch to the mode automatically depending on surrounding light levels.



\* Images are simulated.

\*3: Video output is monochrome.

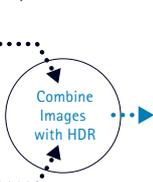
## Equipped with High Dynamic Range (HDR) Mode

In addition to conventional Dynamic Range Stretch (DRS) and Digital Noise Reduction (DNR), the AW-HE42W/K is equipped with High Dynamic Range (HDR) mode. When shooting and synthesizing two images with differing exposure times, the AW-HE42W/K can create video with high visibility that corrects for halation and black defects even under backlit conditions.

Bright Shooting (Long Exposure)



Dark Shooting (Short Exposure)



\* Images are simulated.

## Outputs Still Image During Preset Movements; Supports One-Camera Operations

The 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.

### With Freeze During Preset function OFF and ON

OFF



\* Images are simulated.

ON Preset movement starts



Preset movement ends



← Outputs the last frame of the camera image before it starts preset

## Audio Input Function

The AW-HE42W/K also supports audio input, embedding and encoding. Audio output to IP is also supported. The ALC (Audio Automatic Level Control) in the AW-HE42W/K 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

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.

### Supported formats for micro SD (recording):

1080/59.94p, 1080/50p, 1080/29.97p, 1080/25p,  
720/59.94p, 720/50p, 720/29.97p, 720/25p

## Full HD Video Output Via IP Transmission

IP transmission as well as HDMI, SDI and USB output are supported to enable IP video output of up to 60 frames per second. Multi-streaming output (H.264 streaming) of up to four channels\*2 per camera and video transmission to up to 14 terminals are supported\*3, enabling a variety of system layouts as needed for the application.

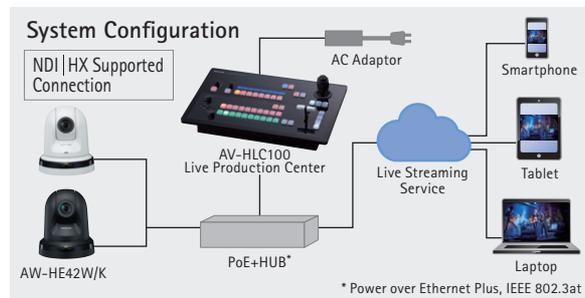


\*For the Multi-Streaming Output Format Table, see page 5.

## NDI |HX Compatibility for Excellent Video Streaming Quality

The AW-HE42W/K can be upgraded to an NDI|HX compatible model if purchasing a license from the Panasonic website ([https://pro-av.panasonic.net/en/ndihx\\_support/index.html](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.



\* Power over Ethernet Plus, IEEE 802.3at

## 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.

\*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/en/>).

### Camera Control Screen (PC)



Live Screen

### Mobile Terminal Screen



\* Images are simulated.

## Other Functions

- Equipped with a night mode for shooting with low light levels.
- Equipped with an optical ND filter.
- USB Video Class 1.0, USB Audio Class 1.0 supported.
- PoE+ enabled for charging via a LAN cable.
- Up to 100 AW-HE42W/K units can be controlled from a single Remote Camera Controller via IP connection.
- Control of up to five Remote Camera Controllers is enabled for a single AW-HE42W/K.
- Equipped with a RS422 remote terminal, serial control of up to five AW-HE42W/K units is enabled from the controller.
- Preset memory holds up to 100 positions.
- Freeze, color temperature settings, digital extender and other functions can be set to user assignable buttons of the Panasonic controller.
- Equipped with the RS232C remote terminal (standard serials communication). Daisy chain connection enables control of up to seven AW-HE42W/K units.
- Up to four AW-HE42W/K units can be controlled via wireless remote control (AW-RM50G, sold separately).
- Equipped with a turn lock mechanism for easy installation.

\*1: There may be instances where it is not possible to record in the same format as the output video.

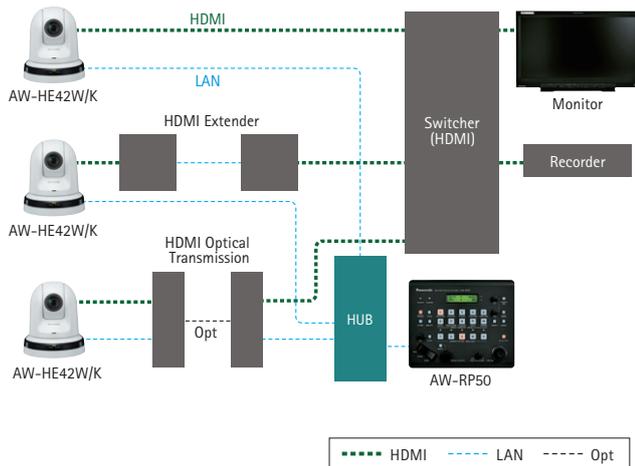
\*2: 1920 x 1080 60 fps output is 1ch display only. For 2ch or more, display is max. 30 fps. Also, JPEG output is up to 3ch.

\*3: Depends on your network environment.

## Application Examples

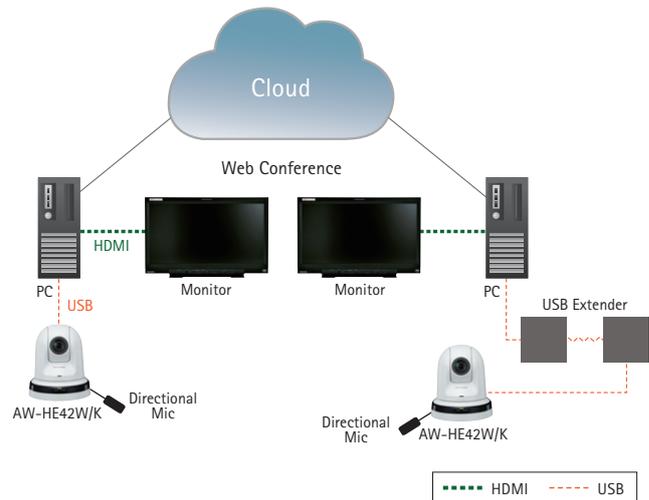
### Application : Video Production

An AW-HE42W/K can be effectively added to an existing studio switcher. The compact camera boasts excellent cost performance for building a television program filming system for professional applications.



### Application : Web Conferencing

An AW-HE42W/K with high image quality zoom can be installed in at web conferences in large venues. The PTZ virtual USB driver (free software) enables other remote cameras connected via LAN to be used as USB cameras.



## Optional Software

\*Connection with the AW-HE42W/K is planned for future support. Contact your sales representative for further information on when support will be available for this feature. Use may require a software version update.

As of June, 2019

### Auto Tracking Software Key

A 30-day Free Trial is Available

#### AW-SF100/AW-SF200

- 2 Additional Licenses AW-SF202
- 3 Additional Licenses AW-SF203

- High-performance "facial recognition" and high-accuracy "human body detection" utilizing deep learning technology achieve smooth auto tracking regardless of where the person is facing.\*1\*2
- AW-SF100 allows a single PTZ camera to be controlled on either a stand-alone or web application version.
- AW-SF200 enables simultaneous auto tracking and centralized control of multiple cameras.\*3

\*1: Use may require a software version update.

\*2: May be limited by the performance of your server or PC. For further information, please see "Download / Software Download" on the Panasonic website <<https://pro-av.panasonic.net/>>.

\*3: Up to four cameras per server can be controlled simultaneously.

### PTZ Control Center

Free Software

- 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

Free Software

- 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.

\* For further information on the optional software, please see "Download / Software Download" on the Panasonic website <<https://pro-av.panasonic.net/>>.

## System Camera Options

\*Connection with the AW-HE42W/K is planned for future support. Contact your sales representative for further information on when support will be available for this feature. Use may require a software version update.

As of June, 2019

#### Control Assist Camera AW-HEA10W/K



#### Live Production Center AV-HLC100



#### Remote Camera Controller AW-RP150GJ



#### Remote Camera Controller AW-RP50



#### Remote Operation Panel (ROP) AK-HRP1000GJ AK-HRP1005GJ



#### Wireless Remote Control AW-RM50G

(\*AA, \*R6\* or \*LR6\* battery x 2 are not included.)



Specifications

As of June, 2019

GENERAL	Power requirements	DC 12 V (Supplied AC adaptor) DC 42 V to 57 V (PoE+ power supply)	Output format	HD	1080:59.94p/50p 1080:59.94i/50i 1080:29.97p/25p 1080:29.97PsF/25PsF 720:59.94p/50p		
	Current consumption	1.3 A (Supplied AC adaptor) 0.5 A (PoE+ power supply)		Synchronization system	Internal synchronization/External synchronization (BBS, Tri-level sync)		
	Ambient operating temperature	0 °C to 40 °C (32 °F to 104 °F)		Image stabilization	Optical /4-axis hybrid image stabilizer for stable		
	Storage temperature	-20 °C to 50 °C (-4 °F to 122 °F)		<b>[USB connection]</b>	* This may vary depending on the operating environment.		
	Allowable humidity ranges	20 % to 90 % (no condensation)		Video output	USB Video Class Ver1.0		
	Mass	Approx. 1.5 kg (3.30 lb)		Video compression format	Motion JPEG		
	Dimensions (W x H x D)	160 mm x 186 mm x 179 mm (6-5/16 inches x 7-41/128 inches x 7-3/64 inches) (excluding protrusions, direct ceiling mount bracket)		Resolution	1920 x 1080, 1280 x 720, 640 x 360		
	Finish	[AW-HE42W] Pearl white [AW-HE42K] Metallic black		Frame rate	max 30 fps (59.94 Hz) max 25 fps (50 Hz)		
	Controller supported*	AW-RP150GJ*, AW-RP50, AK-HRP1000GJ*, AK-HRP1005GJ*		Audio output	USB Audio Class Ver1.0		
	Power	DC 12 V IN, PoE+ (IEEE802.3at standard)		Audio compression format	Linear PCM, 48 kHz, 16-bit, 2 channels		
INPUT	Mic/line input	Stereo mini-jack (ø3.5 mm)	FUNCTIONS AND PERFORMANCE	Transfer modes (JPEG)	1920x1080/1280x720/640x360 59.94 Hz: 30fps/15fps/5fps, 50 Hz: 25fps/12.5fps/5fps		
		Input impedance: Approx. 2 kΩ (unbalanced)		Supported models	Devices standardly equipped with a USB 2.0 compatible port		
		[Mic input]		<b>[Pan-tilt head unit]</b>	Installation method	Stand-alone (Desktop) or suspended (Hanging)**	
		Supported microphones: Stereo mic (plug-in power, on/off switching via menu) Supplied voltage: 2.5 V ± 0.5 V Mic input level: -60 dBV ± 3 dBV (0 dB=1 V/Pa, 1 kHz) [Line input]		Pan/tilt operation speed	Maximum speed during preset: 300°/s Maximum speed during manual: 90°/s		
Input level: -10 dBV ± 3 dBV	Panning range	±175°					
G/L IN	BBS (Black Burst Sync) signal and tri-level sync supported (BNC x 1)		Tilting range	-30° to 90°**			
	Quietness		During preset: NC40 or less During manual: NC35 or less				
OUTPUT	Video output	HDMI connector * HDCP is not supported. * VIERA Link is not supported.	<b>[Camera/pan-tilt head control]</b>				
	3G/HD-SDI OUT	Compliant with the SMPTE424/SMPTE292M standards/75 Ω (BNC x 1)	IP connecting cable	When connecting through a hub: LAN cable* (category 5 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 5 or above), max. 100 m (328 ft)			
INPUT/ OUTPUT	Input/ Output connector	LAN	LAN connector for IP control (RJ-45)	AW protocol connecting cable	LAN cable* (category 5 or above, straight cable), max. 1000 m (3280 ft)		
		RS-232C	Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT)	Standard protocol connecting cable	Mini DIN 8-pin cable, male		
		RS-422	CONTROL IN RS422A (RJ-45)	<b>[SD card recording]</b>			
		USB	Mini-B port	SD card recording	MPEG-4 AVC file standard compliant (MP4)		
SD card	microSD card slot	Video compression format		MPEG-4 AVC/H.264 High Profile			
<b>[Camera unit]</b>		Audio compression format		AAC-LC (48 kHz, 16 bit, 2 ch, 128 kbps)			
Imaging sensors	1/2.3-type MOS		Recording format / Bit rate	59.94 Hz	1920x1080/59.94p (Up to 28 Mbps), 1920x1080/29.97p (Average 15 Mbps/Average 10 Mbps/Average 6 Mbps), 1280x720/59.94p (Average 15 Mbps), 1280x720/29.97p (Average 8 Mbps/Average 4 Mbps/Average 2 Mbps/Average 1 Mbps), 1920x1080/50p (Up to 28 Mbps)		
Lens	Motorized 20x zoom, F1.8 to F3.6 [f=4.08 mm (5/32 inches) to 81.6 mm (3-7/32 inches); 35 mm (1-3/8 inches) equivalent; 29.5 mm (1-5/32 inches) to 612.0 mm (24-3/32 inches)]			50 Hz	1920x1080/25p/Average 15 Mbps/Average 10 Mbps/Average 6 Mbps, 1280x720/50p/Average 15 Mbps, 1280x720/25p/Average 8 Mbps/Average 4 Mbps/Average 2 Mbps/Average 1 Mbps		
Focus	Switching between auto and manual			<b>[Network]</b>			
Focus distance	Entire zooming range: 1.5 m (4.92 ft) Wide end: 10 cm (0.33 ft)			Transfer modes	JPEG	1920x1080, 1280x720, 640x360, 320x180, 59.94 Hz (30fps/15fps/5fps)**, 50 Hz (25fps/12.5fps/5fps)**	
Color separation optical system	On-chip color filter system		H.264		1920x1080, 1280x720, 640x360, 320x180, 59.94 Hz (60fps*/30fps/15fps/5fps)**, 50 Hz (50fps*/25fps/12.5fps/5fps)**		
Minimum illumination	59.94 Hz	0.7 lx (50 IRE, F1.8, 48 dB, 1/60 without accumulation) 0.35 lx (50 IRE, F1.8, 48 dB, 1/30 with accumulation [Frame Mix 6 dB])			Supported protocol	IPv4	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTMP/RTCP, FTP, DHCP, DNS, NTP, IGMP, UPnP, ICMP, ARP, RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
	50 Hz	0.7 lx (50 IRE, F1.8, 48 dB, 1/50 without accumulation) 0.35 lx (50 IRE, F1.8, 48 dB, 1/25 with accumulation [Frame Mix 6 dB])				IPv6	TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTMP/RTCP, FTP, DHCPv6, DNS, NTP, ICMPv6(MLD), RTSPoverTCP, RTSPoverHTTP, SSL(TLS), MultiCast/UniCast
Horizontal resolution	HD: 1000 TV lines Typ (Center area)		i-OS, Android support	JPEG image display			
Gain selection*2	Auto, 0 dB to 48 dB (3 dB step)		ACCESSORIES	Mount bracket for installation surface (Hanging*10 / Desktop): 1 Drop-prevention wire (already attached to the unit): 1 Bracket mounting screws (bind-head) M4 x 10 mm: 4 Main unit mounting screw (with flat washer, spring washer) M3 x 6 mm: 1 Power cable (1.5 m [4.92 ft]): 1 AC adaptor: 1 CD-ROM: 1			
Frame mix*3	Auto, Off, 6 dB, 12 dB, 18 dB, 24 dB						
ND filter	Auto*, Through, 1/4, 1/16, 1/64						
Electronic shutter speed	During Auto	1/60 to 1/2000 (Auto Slow Shutter: Off) [59.94 Hz]					
		1/30 to 1/2000 (Auto Slow Shutter: On) [59.94 Hz]					
		1/50 to 1/2000 (Auto Slow Shutter: Off) [50 Hz]					
		1/25 to 1/2000 (Auto Slow Shutter: On) [50 Hz]					
Synchro scan	During Manual	1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [59.94 Hz]					
		1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [50 Hz]					
Gamma	Off, Normal (Low, Mid, High), Cinema						
White balance	ATW, AWB A, AWB B, ATW, 3200K, 5600K, VAR (2400K to 9900K)						
Chroma amount variability	±3 step						
Scene file	Full Auto, Manual1, Manual2, Manual3						

\* 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: "Auto" is available when "Scene" setting is "Full Auto".  
\* 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: The frame rate may be lower than the setting depending on the operating conditions.  
\* 9: When the image resolution is "640x360" or "320x180", 60fps or 50fps cannot be selected for the frame rate.  
\* 10: To ensure more safety, AW-HE42W/K can be secured by using the direct ceiling mount bracket (WV-Q105A).

List of Supported Multi-Streaming Outputs (When priority mode "IP" is selected)

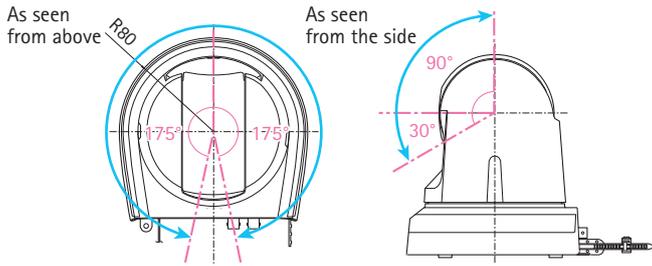
Settings	H.264				JPEG		
	CH1	CH2*1	CH3*1	CH4*2	CH1	CH2	CH3
Resolution	IP selected	1920x1080	1280x720		1920x1080*2		
		1280x720*1 640x360*3	640x360	320x180	1280x720*1 640x360 320x180*1		
Frame rate	IP selected	59.94 Hz	30/15/5 fps		30/15/5 fps		
		50 Hz	50/25/12.5/5 fps		25/12.5/5 fps		
Bit rate	up to 24 Mbps otherwise						
Voice transmission	Yes (AAC48 KHz)						
PoE+	Yes						

\* Depending on the output mode, certain restrictions apply.

\* 1: Settable when HDR is "Off".  
\* 2: Settable when HDR is set to "Off" and the frame rate is other than 60fps (or 50fps).  
\* 3: Not settable when HDR is "Off".

## Panning and Tilting Range

- Pan  $\pm 175^\circ$ , Tilt  $-30^\circ$  to  $90^\circ$
- Max. speed  $90^\circ/s$
- Noise criterion is 35 or lower



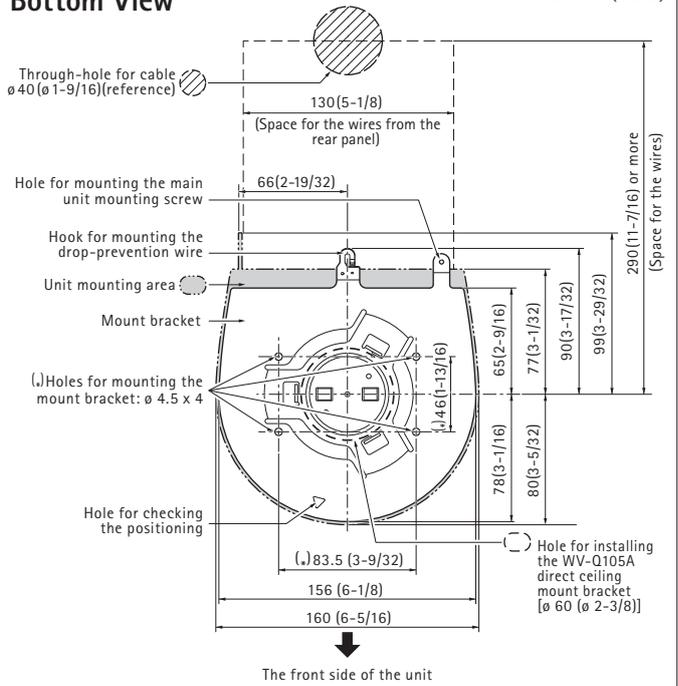
\* 1: Depending on the position of the pan and tilt, the unit itself may be reflected in the image.

## Rear View



## Bottom View

Unit: mm(inches)



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\* Specifications are subject to change without notice.

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



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



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