Small and Versatile: 1/3-inch Full-HD MOS Integrated Pan-Tilt/Cameras with Production Quality HD/SD Video

HD Integrated Camera
AW-HE50S `NEW`
[SDI Model]

HD Integrated Camera
AW-HE50H `NEW`
[HDMI Model]

Wireless Remote Controller (option)
AW-RM50
*Two AA size batteries required (batteries not included)

Multi-interface Cable (option)
AW-CA20T6

H D	1080/50i,720/50p
S D	576/50i

⊙ 1/3-inch Full-HD MOS Sensor with 18x HD Optical Zoom & 10x Digital Zoom

⊙ Innovative Features Deliver Realistic, Production Quality HD Video

Dynamic Range Stretch (DRS)

The gamma curve and knee slope are optimized to match the contrast of each pixel in real time. This increases the dynamic range without affecting the normal pixels.

DRS OFF: With the iris expanded, this blown highlight appears on the blackboard

DRS OFF: With the iris contracted, a blocked shadow appears on the figure

DRS ON: Both highlights and shadows are clearly visible

Hybrid (2D/3D) Noise Reduction

The innovative Hybrid (2D/3D) Noise Reduction function also suppresses afterimages, even in difficult lighting conditions.

[dark place]
loss of resolution
afterimage

Without Noise Reduction
Some noise is evident when gain control is turned up

3D Noise Reduction Alone
Afterimage and some loss of resolution is seen

The Hybrid (2D/3D) Noise Reduction
Clearer images in difficult conditions

Flesh Tone Mode

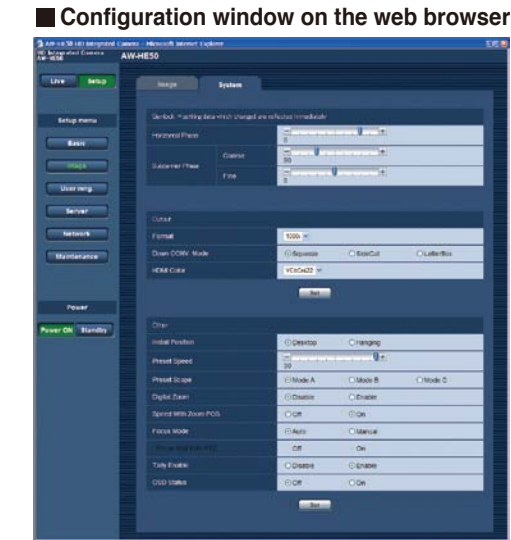Flesh Tone Mode produces a more pleasing and realistic picture.

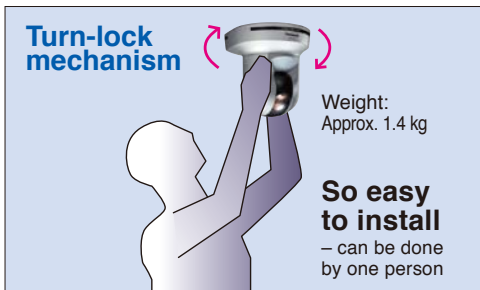**Flesh Tone Mode:OFF**   **Flesh Tone Mode:ON**

●The effectiveness may be affected by lighting, etc.

⊙ Setting camera menus with a PC

● Camera menus can be set up via a web browser by connecting the AW-HE50S/H to a PC.

■ Configuration window on the web browser

⊙ Quick integration, thanks to simple connections, IP control, and included Turn-lock mount

Turn-lock mechanism

Weight: Approx. 1.4 kg

So easy to install – can be done by one person

■ AW-HE50 Main Specifications

	AW-HE50S (SDI Model)	AW-HE50H (HDMI Model)
Image Elements	1/3-inch Full-HD MOS	
Lens	18x HD Zoom Lens F1.6 to 2.8 (f=4.7 to 84.6 mm,35 mm conversion: 36.9 mm to 664.5 mm)	
Focus	Auto/Manual switchable	
Horizontal Resolution	850 TV Lines (Center)	
Minimum Illumination	3 lx (50 IRE, F1.6, +36 dB)	
S/N	54 dB	
Gain Selection	0,3,6,9,12,15,18 dB/AGC 0 dB,6 dB,12 dB,18 dB (Internal digital mode)	
Shutter Speed	Step 1/100,1/250,1/500,1/1000,1/2000,1/4000,1/10000 Syncro-scan 60.24 Hz to 646.21 Hz	
Gamma	OFF,Low,Mid,High,Cinema	
White Balance	AWB A,AWB B,ATW	
Variable Chroma Levels	7 levels	
Scene Files	Full-Auto,Manual	
Color Bar	Full-Bar	
Output Format	HD: 1080/50i, 720/50p SD: 576/50i	
Video Output	HD/SD-SDI HD/SD analog component* Composite*	HDHDMI HD/SD analog component* Composite*
Interface — LAN	10BASE-T/100BASE-TX, IPv4 RJ45 x 1	
Interface — RS-422	AW-series protocol, plus selected third-party support*	
Synchronization System	Internal/External synchronization (BBS)	Internal synchronization
Rotation Range	Pan: -175 to +175 degrees, Tilt: -30 to +90 degrees	
Rotation Speed	Over 90 °/s (at maximum)	
Noise	NC40 (Moving normaly), NC40 (When Preset recalled)	
Stopping Accuracy	PAN/Tilt ±0.3 °	
Power Supply	DC12 V ±10 %, 1.3 A	DC12 V ±10 %, 1.2 A
Operating Temperature	0 ˚C to +40 ˚C	
Operating humidity	20 % to 90 % (no condensation)	
Dimensions (W x H x D)	160 mm x 178 mm x 166 mm [TBD] (excluding the cable cover and mounting brackets)	
Weight	Approx. 1.4 kg	
Standard Accessories	Mounting Bracket (for table or ceiling), Mounting Bracket (for main unit), Mounting Screws, AC Adaptor, Power Cable, Cable Cover	

● Be sure to use the included AC adaptor and power cable   *Breakout cable required

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■ AW-HS50 Main Specifications

Video Format	HD (1080/59.94i, 1080/50i, 1080/23.98PsF, 1080/24PsF, 720/59.94p, 720/50p) SD (480/59.94i, 576/50i)	
Video Processing	Y:Cb:Cr, 4:2:2 10 bit (8 bit for FMEM) RGB, 4:4:4 8 bit	
M/E	1 M/E	
Video Input	Standard: 4 SDI inputs (SDI-IN 1 to 4) Standard: 1 DVI-D output (DVI-IN) XGA (1024 x 768), WXGA (1280 x 768), SXGA (1280 x 1024), WSXGA+ (1680 x 1050), UXGA (1600 x 1200), WUXGA (1920 x 1200) Vertical frequency: 60 Hz 1080/50p, 1080/59.94p	
Video Output	Standard: 2 SDI outputs (SDI-OUT1 to 2 each, 2 output distribution for SDI-OUT1) Standard: 1 DVI-D output (DVI-OUT) XGA (1024 x 768), WXGA (1280 x 768), SXGA (1280 x 1024), WSXGA+ (1680 x 1050), UXGA (1600 x 1200), WUXGA (1920 x 1200) Vertical frequency: 60 Hz 1080/50p, 1080/59.94p	
Frame Memory	2 channels The image data in the Frame Memory is stored even when the power is off. Video processing for the Frame Memory is 8-bit. OSD, Frames, Labels, Tally indications, camera setting information, and Audio Level Meters for MultiViewer are not stored in the Frame Memory.	
Memory Function	Wipe Reset, PinP Preset Effect Dissolve Function	
Interface — LAN	10BASE-T/100BASE-TX (for IP control)	RJ45 x 1
Interface — TALLY/GPI	GPI INPUT x 5 channels GPI OUTPUT x 7 channels	D-sub 15 pin (female) x 1
Power Supply	DC12 V ±10 %, 2.5 A [TBD]	
Operating Temperature	0 ˚C to +40 ˚C	
Operating Humidity	10 % to 90 % (no condensation)	
Dimensions (W x H x D)	210 mm x 65 mm x 177 mm [TBD] (excluding protrusions)	
Weight	Approx. 1.4 kg [TBD] (without options)	
Standard Accessories	AC Adaptor, Power Cable	

BKGD	Wipe/DVE pattern	Wipe x 13
	Transition Type	Cut, Mix, Wipe (including DVE)
FTB	Selectable Materials	Black, White, CBGD, FMEM1, FMEM2
KEYER	Number of Keys	1
	Key Type	Linear key, Luminance key, Chroma key
	Transition Type	Mix
PinP	Number of PinP	1
	Transition Type	Mix
	BUS Transition	Yes (Mix)
AUX BUS	Number of AUX BUS	1
	Selectable Materials	SDI-IN1 to 4, DVI-IN, CBGD, BLACK, FMEM1, FMEM2, PGM, PVW, KOUT, CLN, MV
	BUS Transition	Yes (Mix)
Input Function	Frame Synchronizer	SDI-IN1 to 4, DVI-IN (DVI-IN is always-on)
	Freeze	SDI-IN1 to 4, DVI-IN
	Dot by Dot	SDI-IN1 to 4
	Video Processing	SDI-IN1 to 4
	Up-converter	SDI-IN3, IN4
Output Function	MultiViewer	Single Screen Display Labels, Tally indication, Split-screen (the screen may be split into 4, 5a/5b, 6a/6b, 9 and 10a/10b sections) MV frames, Labels, Tally indications, camera setting information, and Audio Level Meters are not shown on SDI-OUT1.
	OSD	Single Screen Display SDI-OUT2,DVI-OUT (unshown on SDI-OUT1) The MultiViewer frames are cleared when the borders between the OSD and the split-screen of MultiViewer cross.
	Audio Level Meter	SDI embedded audio 1 ch, 2 ch

● Specifications and functions are subject to change without notice.
● The image on the screen is a composite image. ●Composite images, photographs, and illustrations are included for reference use only.

Panasonic
ideas for life

HD Integrated Camera AW-HE50S/H
Compact Live Switcher AW-HS50
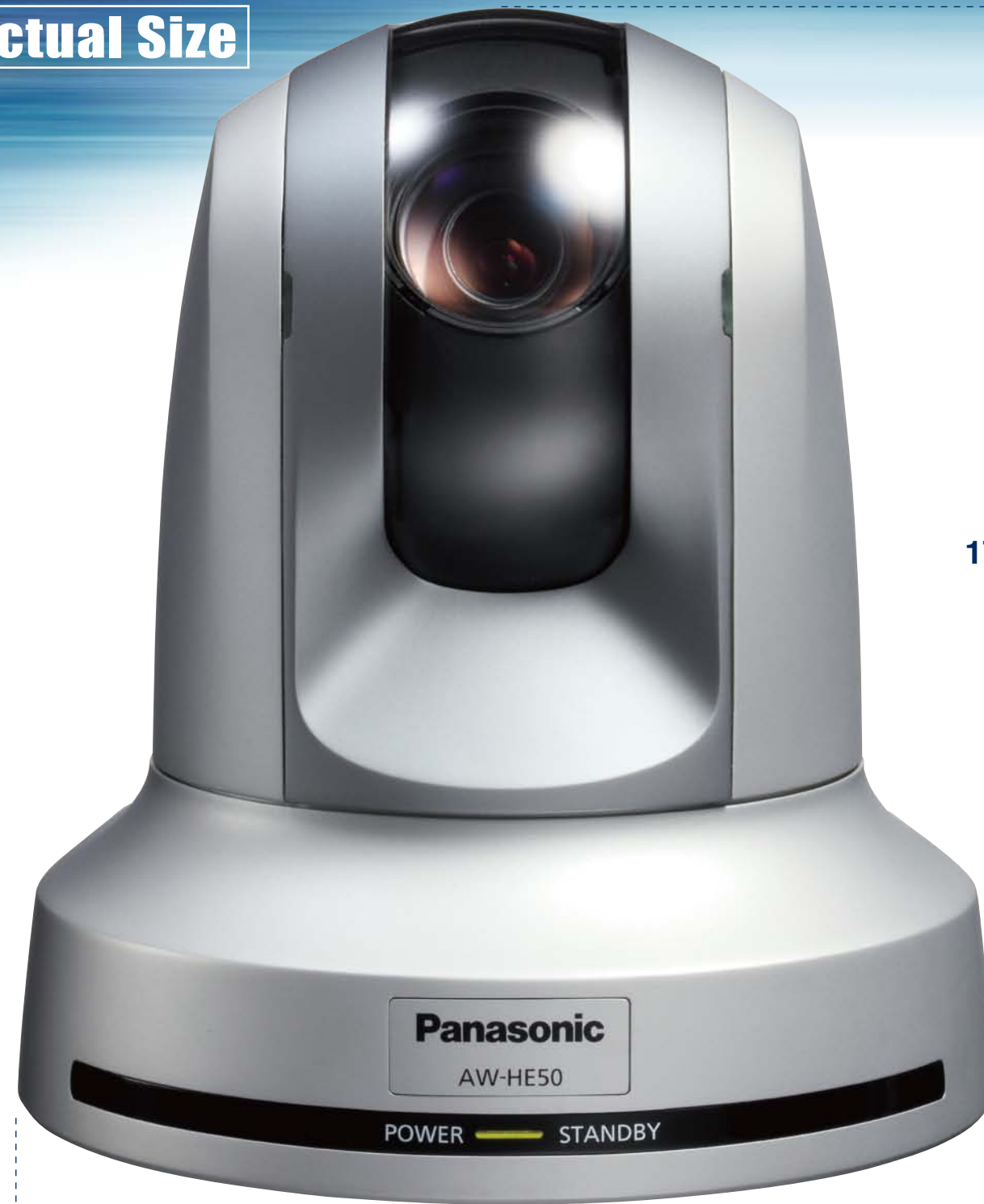**Remote Camera Controller** AW-RP50

50 Series

The Compact New 50 Series: Production Quality Video with IP Network Control

HD Integrated Camera
AW-HE50S/H

Remote Camera Controller
AW-RP50

Compact Live Switcher
AW-HS50

Actual Size

178 mm

160 mm

Panasonic AW-HE50
POWER — STANDBY

■ Rear
AW-HE50S   **AW-HE50H**

Full rack size with the AW-RP50 and AW-HS50 positioned alongside each other

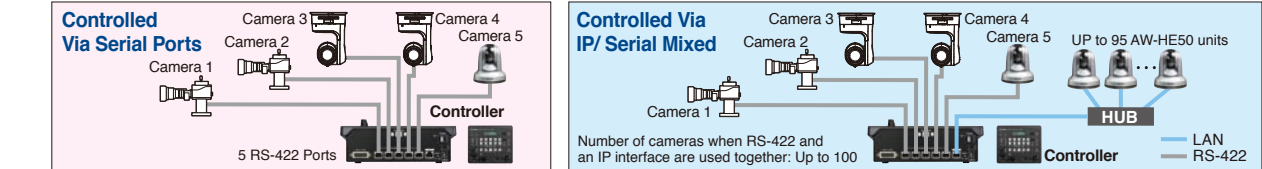## Small and Powerful: An Easy-to-Use Camera Controller with Great Features

Remote Camera Controller
AW-RP50 NEW

● **Simple to connect and operate, with both IP and Serial control functions**
- Up to a hundred AW-HE50S/H units can be controlled via IP connections when using Ethernet hubs.
- IP addresses are automatically assigned to the AW-HE50S/H or AW-HS50 by the Automatic IP Address Setup function.
- One remote camera can be controlled simultaneously by up to five AW-RP50 units via an IP connection.
  Various settings for the AW-RP50 can be configured with a PC (configuration software supplied).
  ● IP-control performance depends on network conditions.
  ● Video signals cannot be transmitted via IP.

Conventional
Each camera could not be operated by multiple controllers

Controlled Via IP
Each camera can be operated by multiple controllers

● **Serial Control also Supported**
- Up to 5 existing Panasonic pan-tilt heads*, integrated cameras** and box cameras*** such as the AW-HE50S/H, etc. can be linked using the serial control (RS-422 protocol).
  * Compatible models: AW-PH405, AW-PH400, AW-PH360, AW-PH650 ** Compatible model: AW-HE100
  *** Compatible models: AK-HC1800, AK-HC1500, AW-HE870, AW-E860, AW-E750, AW-E655, AW-E350

Controlled Via Serial Ports
5 RS-422 Ports

Controlled Via IP/ Serial Mixed
Number of cameras when RS-422 and an IP interface are used together: Up to 100
UP to 95 AW-HE50 units
LAN
RS-422

● **Linking the AW-HS50 to IP control enables highly efficient and stress-free operations**
- The camera setting information (such as iris and gain) acquired by the unit is displayed through the AUX output of the switcher or on the split-screen of MultiViewer.
- Acquires the ON AIR tally information of the switcher and lights the tally LED on the panel.
- Bus images can be changed by linking them to the camera selection (control bus targets: AUX, PVW, PinP, KEY-F).
- The switcher's MultiViewer screen can be changed to the camera image full screen with a one-touch button operation.
  *Control bus target: AUX only
- Parameters such as the PinP position of the switcher can be changed with the pan/tilt lever.

Conventional
Previously, single operator system control was hard to achieve.

Controlled Via IP
50 Series Switcher and Controller linked for streamlined operation.

■AW-RP50 Main Specifications

Remote Camera Control	Protocol		IPv4,RS422 (Panasonic AW series protocol)	LAN	10BASE-T/100BASE-TX (for IP control)	RJ45 × 1
	Connection		Serial : Up to 5 cameras		TO PAN/TILT HEAD	RS-422 (for Serial control)	RJ45 × 5
			IP : Up to 100 cameras	Interface	TALLY/GPI	TALLY INPUT × 5 channels	D-sub 15 pin (female) × 1
	Adjustment functions		Pan/Tilt (Joystick),Zoom (Seesaw Switch), Focus, Iris, Gain, Pedestal, Shutter, Detail,White Balance (Auto, Adjust R/B Gain),Black Balance(Auto, Adjust R/B Pedestal),Switch scene files			GPI INPUT × 4 channels	
					GPI OUTPUT × 4 channels	
				Operating Temperature	0 °C to 40 °C	
				Operating Humidity	10 % to 90 % (no condensation)	
	Connection		IP : 1	Power Supply	DC12 V ±10 %, 0.5 A [TBD]	DC IN × 1
Switcher Control	Supported Switcher		AW-HS50	Dimensions (W×H×D)	210 mm × 65 mm × 177 mm [TBD] (excluding protrusions)	
	Linkage		Camera Send,Tally Receive,Switcher BUS selection	Weight	Approx. 1.1 kg [TBD] (without options)	
			Pan/Tilt (Joystick)(PinP positioning etc...)	Standard Accessories	AC Adaptor, Power Cable	
					● Be sure to use the included AC adaptor and power cable	

Actual Size

Panasonic Remote Camera Controller AW-RP50

R GAIN : -150 — F1
B GAIN : -150 — F2

POWER   ALARM
MENU   PAGE
CAMERA OSD
F1   F2   EXIT
CAMERA

GAIN/PED | R/B GAIN | R/B PED | AWB/ABB | SHUTTER
DETAIL | SCENE/MODE | CAMERA | SETUP | SYSTEM
PRESET MEMORY / MENU

STORE   DELETE
USER 1   USER 2

CAMERA STATUS / SELECTION

IRIS   AUTO
PT ACTIVE

TELE   ZOOM   WIDE   FOCUS   LOW   HI   PTZ/FOCUS SPEED   PAN/TILT

177 mm
210 mm
65 mm

SIGNAL GND
ON   POWER

TALLY / GPI   TO PAN / TILT HEAD   5 4 3 2 1   LAN   12 V IN   BOOT   SV   NM

Small and Professional: A High-Performance HD/SD Live Switcher with Built-in MultiViewer

Compact Live Switcher
AW-HS50 NEW

HD 1080/59.94i,1080/50i, 1080/23.98PsF,1080/24PsF 720/59.94p,720/50p
SD 480/59.94i,576/50i

● **5 inputs and 3 outputs**
- Standard features include 5 inputs (4 HD/SD-SDI, DVI-D) and 3 outputs (2 HD/SD-SDI, 1 DVI-D).

● **MultiViewer display functionality comes installed as standard**
- The built-in MultiViewer can display up to ten image windows at one time on a single monitor, including program, preview, inputs, and more!

● **Audio Level Meter Display Function**
- Embedded audio levels of SDI inputs can be displayed. (1 ch, 2 ch)

Audio Level Meter

● **Bus Transition Functions**
- Cut and Mix transitions are available through AUX bus and PinP bus.

● **Frame Synchronizers on All Inputs**
- Frame Synchronizer is embedded in all inputs. This enables asynchronous video signals to be switched without glitches. (SDI-IN1 to 4 10 bit, DVI-IN 8 bit)

● **More Powerful Features**
- 2 Switchable Up-converters. (SDI-IN3, IN4)
- Color Correction on SDI Inputs (SDI-IN1 to 4) for convenient matching of video sources.
- Dot-by-Dot feature on 4 inputs (SDI-IN1 to 4) enables insertion of SD images into HD frames with virtually no image distortion.
- 13 wipe patterns, plus PinP, Chroma/Linear Key, Aux Bus.

13 wipe patterns

Circle   Heart   Star   Flower
Border ON/ OFF, Color, Wide, and Blur are selectable

Actual Size

Panasonic Compact Live Switcher AW-HS50

POWER   ALARM   LINK   USER 1 3   USER 2 4   SHIFT   OSD/TIME   OSD ON

AUX | PinP | KEY-F/S | MIX | WIPE | PinP ON | KEY ON | FTB ON
BUS DELEGATION   TRANSITION TYPE

KEY-S   AUX
A   SHIFT
PGM | PVW | KEY OUT | CLN | MV
1 6 | 2 7 | 3 8 | 4 9 | 5 10

KEY-F   PinP   AUX
B   SHIFT

CUT
AUTO
BKGD

177 mm
210 mm
65 mm

SIGNAL GND
ON   POWER

TALLY / GPI   SDI OUT   2 1   DVI OUT   DVI IN   4 3 2 1 SDI IN   LAN   12 V IN   BOOT   SV   NM