Official Worldwide Olympic Partner

Panasonic

| 50 Hz | 2008/4 |

3CCD Convertible Cameras
Pan-tilt Systems
Compact Live switchers

Panasonic camera systems for a wide range of locations

Panasonic's extensive lineup enables configuration of the

You can configure peripheral components around a high image quality 3CCD convertible camera to achieve the ideal system for any application.

High resolution, high image quality Original key benefits such as the 12-bit A/D converter enable sophisticated image processing.

Flexible system configuration Panasonic's extensive lineup lets you create a system boasting

Broad selection of peripherals Enables optimum system configuration

3CCD Convertible Cameras

Panasonic's cameras offer high quality images by advanced

2/3-inch Bayonet Mount

AW-E860

16:9/4:3 Switchable Wide Image Shooting Camera

- 2/3" 3CCD high image quality
- Switchable 16:9/4:3 aspect ratios
- Horizontal resolution: 850 lines
- Signal to noise ratio: 65 dB (NTSC)/ 63 dB (PAL) (DNR on)
- High sensitivity: 2 000 lx, F11
- Minimum illumination: 0.4 lx, (F1.7, Night Eye H)
- Wide dynamic range: 600 %
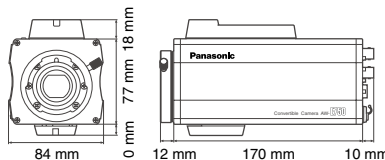- Compact size, light weight and low power consumption
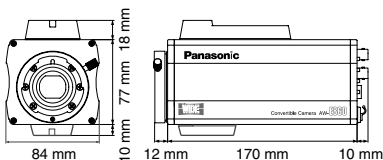
Power supply	DC12 V
Power consumption	Approx. 15.4 W
Dimensions (W x H x D)	84 mm x 95 mm x 192 mm (3-5/16 " x 3-3/4 " x 7-9/16 ")
Weight	Approx. 1.15 kg (2.5 lbs)

AW-E750

High Sensitivity, Wide Dynamic Range Camera

- 2/3" 3CCD high image quality
- Horizontal resolution: 850 lines
- Signal to noise ratio: 67 dB (NTSC)/ 65 dB (PAL) (DNR on)
- High sensitivity: 2 000 lx, F14
- Minimum illumination: 0.005 lx, 0.00005 lx (2-second CCD charge accumulation)
- Wide dynamic range: 600 %
- Compact size, light weight and low power consumption

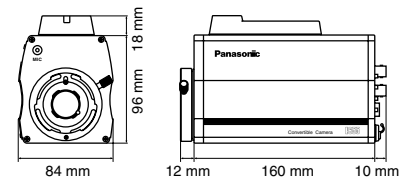| Power supply	DC12 V
Power consumption	Approx. 12.6 W
Dimensions (W x H x D)	84 mm x 95 mm x 192 mm (3-5/16 " x 3-3/4 " x 7-9/16 ")
Weight	Approx. 1.1 kg (2.4 lbs)

1/2-inch Bayonet Mount

AW-E655

Camera Equipped with Motor-driven Optical Filter

- 1/2" 3CCD high sensitivity
- Horizontal resolution: 850 lines
- Signal to noise ratio: 67 dB (NTSC)/ 65 dB (PAL) (DNR on)
- High sensitivity: 2 000 lx, F14
- Minimum illumination: 0.005 lx, 0.00005 lx (2-second CCD charge accumulation)
- Motor-driven optical filter (Normal, 1/16ND, 1/64ND, IR through) The AW-E655's optical filter rotates to facilitate its use as an infrared camera capable of shooting completely dark scenes from a distance.

Power supply	DC12 V
Power consumption	Approx. 12 W
Dimensions (W x H x D)	84 mm x 114 mm x 182 mm (3-5/16 " x 4-1/2 " x 7-3/16 ")
Weight	Approx. 1.2 kg (2.6 lbs)

2/3" Lenses for AW-E860/E750

AW-LZ17MD9A
- 17x MD zoom lens
- Focal length: 9 mm-153 mm (F1.9-2.6)

AW-LZ17ST9A
- 17x studio zoom lens
- Focal length: 9 mm-153 mm (F1.9-2.6)

1/2" Lenses for AW-E655/E650

AW-LZ16MD73
- 16x MD zoom lens
- Focal length: 7.3 mm-117 mm (F1.9-2.3)

optimum system for your needs.

Panasonic's exceptional reliability throughout.

**for a wide range of applications including program production.**

Digital Signal Processor (DSP) with clean Digital Noise Reduction (DNR) and 12 vector matrix masking.

AW-E650

High Sensitivity, High Image Quality Camera

• 1/2" 3CCD high image quality
• Horizontal resolution: 850 lines
• Signal to noise ratio: 67 dB (NTSC)/ 65 dB (PAL) (DNR on)
• High sensitivity: 2 000 lx, F14
• Minimum illumination: 0.005 lx, 0.00005 lx (2-second CCD charge accumulation)
• Compact size, light weight and low power consumption
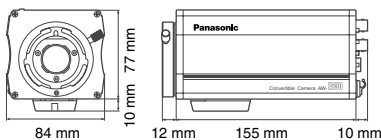
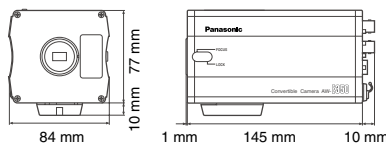| Power supply	DC12 V
Power consumption	Approx. 11.8 W
Dimensions (W x H x D)	84 mm x 77 mm x177 mm (3-5/16 " x 3-1/32 " x 7 ")
Weight	Approx. 0.92 kg (2.02 lbs)

1/3-inch C-Mount

AW-E350

Cost Effective C-Mount Lens Camera

• 1/3" 3CCD C-mount lens camera
• Horizontal resolution: 850 lines
• Signal to noise ratio: 66 dB (NTSC)/ 63 dB (PAL) (DNR on)
• High sensitivity: 2 000 lx, F9.5
• Minimum illumination: 0.015 lx, 0.00015 lx (2-second CCD charge accumulation)
• Compact size, light weight and low power consumption

Power supply	DC12 V
Power consumption	Approx. 11.3 W
Dimensions (W x H x D)	84 mm x 77 mm x 156 mm (3-5/16 " x 3-1/32 " x 6-1/8 ")
Weight	Approx. 0.8 kg (1.8 lbs)

Feature Cards

SDI Card
AW-PB504
Digital connecting card for video equipment with SDI input jack
• Output: Serial digital interface (SMPTE259M [4:2:2 SDI])
• Zoom/focus of the MD lens can be controlled by contact closure type pan-tilt head control or a controller without a pan-tilt head.
＊Lens control is not servo type control.

Studio Card
AW-PB305A
Studio camera system card
• Output: RGB, Y/Pr/Pb, Y/C, VBS
• 4-inch EVF (Zebra, safety zone, and center marker are included), and intercom input and output, and tally output compatible
• EVF interface bracket is included

SDI Studio Card
AW-PB506A
Studio and SDI Cards are integrated into one.
• SDI Output: SMPTE259M compatible
• View finder connector is mounted
• Intercom jack and intercom audio volume mounted on the EVF interface bracket
• EVF interface bracket is included

AW-LZ17ST66
• 17x studio zoom lens
• Focal length: 6.6 mm-114 mm (F1.5-1.9)

1/3" Lenses   for AW-E350

AW-LZ16MD55
• 16x MD zoom lens
• Focal length: 5.5 mm-88 mm (F1.4-1.8)

AW-LZ16ST55
• 16x studio zoom lens
• Focal length: 5.5 mm-88 mm (F1.4-1.8)

Lens Control kit

AW-LK30
• For MD (Motor Drive) Lenses
• Cable Length: 190 cm

WV-LK36
• For Studio Zoom Lens AW-LZ17ST9A AW-LZ17ST66

WV-LK35
• For Canon Zoom Lens

AW-LK50
• For Studio Zoom Lens AW-LZ16ST55

Pan-tilt Heads

Multiple types of pan-tilt heads are available for professional camera applications both indoors and outdoors.

Indoor

High Performance Pan-tilt Head
AW-PH400

A high performance, high speed, quiet pan-tilt head

- Pan range: 400 ° Tilt range: 300 °
- Maximum pan/tilt speed: 90 ° /sec (variable speed)
- Stop accuracy (±30 seconds) (0.008 °)
- Noise: Under NC30 (at 30 ° /sec)
- Maximum load: 8 kg (17.6 lbs)
- 10 tracing memories (Maximum time: 600 seconds)
- RS-232C controllable (Through AW-RP400)
- Tally lights are available

- Maximum control distance: 500 m (1 640 ft.) from AW-RP400 (Maximum 1 000 m (3 280 ft.) using protocol converter AW-IF400)
- Last position can be stored.
- Diagonal motion is possible.
- Optional camera rolling unit (AW-RL400) is available
- Teleprompter output
- Both broadcast and industrial motor driven lenses are acceptable.
- Power Supply (standard accessory) can be installed in pan-tilt head.

Camera Rolling Unit
AW-RL400

With Camera Rolling Unit

- Power is supplied from AW-PH400.
- Convertible cameras are mountable
- Controlled by AW-RP400.

Power supply	DC24 V
Power consumption	Approx. 24 W
Maximum load	4 kg (8.8 lbs)
Rotation range	380 ° (±190 °)
Maximum speed	60 ° /s
Weight	Approx. 3.9 kg (8.8 lbs)
Dimensions(W x H x D)	205 mm x 198 mm x 260 mm (8-1/16 " x 7-13/16 " x 10-1/4 ")

Indoor Pan-tilt Head
AW-PH405

A compact pan-tilt head for heavy load

- High pan-tilt speed: 45 ° /sec
- Quiet motion: Noise level under NC35 (at 30 ° /sec)
- Stop accuracy (±3 minutes) (0.05 °)
- Maximum load: 15 kg (33.1 lbs) (using with a camera, a lens and a teleprompter)
- Pan range: 300 ° Tilt range: 300 °
- 50 preset positions and 10 tracing memories (Maximum time: 300 sec) are available when using the pan-tilt head controller AW-RP655.*

- Maximum control distance:
  1 500 m (4 920 ft.)...AW-RP400 + AW-IF400 (optional protocol converter)
  1 000 m (3 280 ft.)...AW-RP655/RP555
- A removable tally light is available on the pan-tilt head.
- RS-232C controllable (through Panasonic controllers)
- Professional motor drive lenses and broadcast ENG lenses*** can be connected.

* You can't use tracing memories if you use the AW-RP400 in combination with the AW-IF400.
** Use together with the AW-IF400 if you use the AW-RP400.
*** Use an optional cable if you use a broadcast ENG lens.

Indoor Pan-tilt Head
AW-PH360

With AK-HC1500 and AK-LZ20M85

A compact pan-tilt head with a wide pan-tilt range

- Pan angle: 300 ° Tilt angle: 190 °
- High performance: Quiet (Under NC30)
  Pan speed (30 ° /sec) / Tilt speed (25 ° /sec)
- Stop accuracy (±3 minutes) (0.05 °)
- Smooth starts and stops with soft landing function

- 50 preset memories
- Maximum load: 4 kg (8.8 lbs)
- Maximum control distance 500 m (1 640 ft.) from AW-RP400*
  1 000 m (3 280 ft.) from AW-RP655/RP555
- RS-232C interface
  * AW-PH360 requires Power Supply AW-PS300A.

Power Supply
AW-PS300A

Power supply	AC120 V/4.9 A, AC220 V to 240 V*
Dimensions(W x H x D)	210 mm x 51 mm x 275 mm (8-1/4 " x 2 " x 10-13/16 ")
Weight	Approx. 2.2 kg (4.8 lbs)

* The values vary depending on the region.

Outdoor

Outdoor Pan-tilt Head
AW-PH650

Waterproof design for stable shooting despite the rain

- Pan angle: 320 ° (±160 °) Tilt angle: +50 ° -90 °
- High performance: Quiet (Under NC40)
  Pan speed (20 ° /sec) Tilt speed (20 ° /sec)
- In addition to zooming, panning and tilting functions, heater, wiper and defroster functions for the housing can also be controlled by the controller.
- 50 preset memories
- Maximum load: 10 kg (22 lbs)
- Maximum control distance: 1 000 m (3 280 ft.)
- Camera housing, power supply and cables are included with the AW-PH650.

- Accessories: power cable (approx. 30 m (98 ft.), control cable (approx. 10 m (32.8 ft.), camera cable (approx. 0.4m (1.312 ft.) for C-CAM/AK-HC910/HC1500)

Housing

Dimensions(W x H x D)	246 mm x 314 mm x 685 mm (9-11/16 " x 12-3/8 " x 26-15/16 ")
Weight	Approx. 18 kg (39.7 lbs)

Power Supply

Dimensions(W x H x D)	200 mm x 131 mm x 280 mm (7-7/8 " x 5-3/16 " x 11-1/16 ")
Weight	Approx. 4.2 kg (9.3 lbs)

Power Supply

Pan-tilt systems for multiple cameras ready for a wide range of applications.

Multi-function Controller

AW-RP655

High performance multi-function controller with full camera control function

- Controls maximum five cameras and five pan-tilt heads without hub unit.
- Full camera control by LCD menu
- Control speed can be adjusted by the angle of the operation lever and high speed and low speed mode can be switched.
- 50 pre-set memories per camera
- Ergonomically designed joystick controller
- 10 tracing memories (Maximum time: 300 sec)
- Maximum control distance from controller to pan-tilt head: 1 000 m (3 280 ft.) (AW-PH360,AW-PH650) This controller can control an AW-PH400 by using a protocol converter (AW-IF400).
- The motion direction of the operation lever can be reversed.
- Two additional controllers can be connected.
- This controller can be placed on a desk or mounted in a rack.
- Power Supply AW-PS505A is required.

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 9.0 W
Dimensions(W x H x D)	420 mm x 52 mm x 220 mm (16-1/2 " x 2-1/16 " x 8-11/16 ")
Weight	Approx. 3.5 kg (7.7 lbs)
Accessories	Rack mounting adapters (5U) x 2 Mounting screws (M4 x 8 mm) x 4

Compact Size Controller

AW-RP555

Compact controller with full camera control function

- Controls up to five cameras and five pan-tilt heads.
- Full camera control by camera menu
- Speed of controls can be adjusted by the angle of the operation lever.
- 10 pre-set memories per camera
- Maximum control distance from pan-tilt head to controller: 1 000 m (3 280 ft.) (AW-PH360,AW-PH650)
- With a protocol converter (AW-IF400), this controller can control the AW-PH400.
- The motion direction of the operation lever can be reversed or changed.
- This controller can be placed on a desk or mounted in a rack. (The position of input and output connectors can be changed by 90 degrees)
- Power Supply AW-PS505A is required.

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 9.0 W
Dimensions(W x H x D)	210 mm x 58 mm x 177 mm (8-1/4 " x 2-5/16 " x 7 ")
Weight	1.4 kg (3.08 lbs)
Accessories	Rack mounting adapters (5U) x 2 Mounting screws (M4 x 8 mm) x 4

Pan-tilt Controller

AW-RP400

Joystick controller can be changed for seesaw controller. (Standard accessory)

Seesaw controller

High performance controller for professional and broadcast use

- Changeable zoom/focus controller (joystick/seesaw)
- Joystick with camera roll control
- 50 preset positions
- 5 pan-tilt heads control
- Zoom/Focus/Pan/Tilt speed control
- Tally/Intercom function
- 10 minutes tracing memory (60 seconds x 10 positions)*
- RS232C interface
- Maximum control distance:500 m (1 640 ft.)**
- Cross control by two controllers
- Camera control inputs (AW-CB400)
- +DC12 V operation (Power Supply AW-PS505A is required.)

∗　This function does not work for AW-PH405/PH650.
∗∗ Maximum 1 000 m (3 280 ft.) by using the Protocol Converter AW-IF400.

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 13 W
Weight	Approx. 3.8 kg (8.4 lbs)
Dimensions(W x H x D)	320 mm x 85 mm x 266 mm (12-5/8 " x 3-3/8 " x 10-1/2 ")
Accessories	Zoom switch x 1, Plug (D-SUB 15pin) for tally/INCOM system x 1 set, Rack-mounting adapters x 2, Mounting screws (M4 x 8 mm) x 4

Availability of the tracing memory function

	AW-PH400	AW-PH405	AW-PH360	AW-PH650
AW-RP655	●	●	●	●
AW-RP555	–	–	–	–
AW-RP400	●	–	●*	–

∗ When you use it with AW-IF400, activating the extended distance transmission function is required.

Remote Operation Panel

AW-CB400

Remote control panel enabling full control of up to five cameras

- Controls five cameras
- Full camera control
- +DC12 V operation*
- Tally/Intercom function**

∗ Power is supplied from AW-RP400.
  Power supply AW-PS505A is required for controlling cameras directly
  (Maximum control distance: 1 000m (3 280 ft.))
∗∗ Intercom function is not available if the AW-CB400 is connected directly to the camera.

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 3.8 W
Weight	Approx. 1.4 kg (3.08 lbs)
Dimensions(W x H x D)	100 mm x 85 mm x 266 mm (4" x 3-3/8" x 10-7/16")
Accessories	Pan-tilt controller connection cable (10 m (32.8 ft.))

Remote Control Unit (RCU)

AW-RC600

Basic camera controls on the front panel and full camera control by camera menu

- Composite, Y/C and component (Y/Pb/Pr, R/G/B) outputs
- By using RCU cable (AW-CA50A26) and extension cables (WV-CA26T26, WV-CA26U/15/30/100), this unit can control a camera at a maximum distance of approx. 100 m (328 ft.) (with viewfinder AW-VF64)
- Camera power can be supplied by this RCU.
- Equipped with tally/intercom, AUX (for line view) inputs, and contact-closure type pan-tilt head control input terminal (15-pin D-sub)

(Rear view)

Power supply	AC120 V/AC220 V to 240 V*
Power consumption	Approx. 67 W
Dimensions(W x H x D)	420 mm x 88 mm x 250 mm (16-1/2 " x 3-7/16 " x 9-13/16 ")
Weight	Approx. 5.6 kg (13.2 lbs)
Accessory	Power cable x 2, Rack angle handles x 2, Rack-mount angles x 2, Rack angle handle fixing screws x 4, Mounting screws x 4

∗ The values vary depending on the region.

Cable Compensation Unit

AW-RC400

- Five channels compensation
- Composite, Y/C, Y/Pb/Pr, R/G/B (Composite, Y/C, Y/Pb/Pr, R/G/B video signals can be compensated by maximum 500 m (1 640 ft.))
- +DC12 V operation (Power Supply AW-PS505A is required.)

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 9 W
Weight	Approx. 3.7 kg (8.2 lbs)
Dimensions(W x H x D)	420 mm x 88 mm x 250 mm (16-1/2 " x 3-7/16 " x 9-13/16 ")
Accessories	Rack-mount angles x 2, Mounting screws (M4 x 8 mm) x 4

Compact Live Switcher

Compact Live Switcher
AW-SW350

High quality five input live switcher for multi use

- Five inputs (composite and Y/C) in compact body (half rack size)
- Three program outputs and one preview output
- Selectable bus switching system
- 10 bit, 5-channel frame synchronizer/genlock system are switchable
- Frame capture, soft wipe and linear key
- +DC12 V operation
- Tally and intercom function
- Power Supply AW-PS505A is required.

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 16 W
Dimensions(W x H x D)	210 mm x 86 mm x 176 mm (8-1/4 " x 3-3/8 " x 6-15/16 ")
Weight	Approx. 2.2 kg (4.8 lbs)
Accessories	Tally/Intercom connector x 5, Rack mounting clamp x 2, Connection bracket, Screw kit, Image transfer setup CD

Cable/Other Peripheral

Cables

Name	Number	Connection apparatus		Length	Note
Cable joint adapter	WV-CA26T26	AW-E750 etc.	WV-CA26U15 etc.		Connects AW-CA50A26 to longer lengths
Studio cable (26P-26P)	WV-CA26U15 / 30 / 100	AW-E750 etc.	AW-RC600	15 m, 30 m, 100 m	
Lens extension cable	AW-CA12T12A	AW-E750 etc.		0.15 m	12P-12P
RCU cable	AW-CA50A26	AW-E750 etc.	AW-RC600	15 m	
RGB cable	AW-CA50T6	AW-E750 etc.	Moniotor, VTR etc.	5 m	BNCx5 + S terminal
RS-232C pan-tilt cable	AW-CA28T9	AW-PH360	PC.	5 m	A pan-tilt head is controlled by a PC.
RS-232C camera control cable	AW-CA50T9	AW-E750 etc.	PC.	10 m	A camera is controlled by a PC.
Camera control cable	AW-CA50T8	AW-E750 etc.	AW-CB400	10 m	
Pan-tilt cable kit	AW-CAK4H1	AK-HC1500	AW-PH400/PH405	0.7 m/3 m	Pan-tilt cable: 0.7 m, Control cable: 3 m
Pan-tilt cable	AW-CA15H29	AK-HC1500	AW-PH400/PH405	0.7 m	
Lens cable for Fujinon ENG lens	AW-CA4FLZ	Fujinon ENG (RD) lens	AW-PH400/PH405	0.8 m	for AK-HC1500/AW-E860
Lens cable for Canon digital lens	AW-CA4DLZ	Canon ENG digital lens	AW-PH400/PH405	0.8 m	for AK-HC1500/AW-E860
Lens cable for Canon analog lens	AW-CA4ALZ	Canon ENG analog lens	AW-PH400/PH405	0.8 m	for AK-HC1500/AW-E860
Pan-tilt control extension cable	AW-CA24T24	AW-PH650	AW-RP655/RP555/RP400	20 m	

Other Peripherals

Protocol Converter

Protocol Converter
AW-IF400

- High performance pan-tilt head (AW-PH400) can be controlled by controllers (AW-RP555, AW-RP655) by using this protocol converter (AW-IF400). (Max.control distance: 1 500 m (4 920 ft.).
- Outdoor pan-tilt head (AW-PH650) can be controlled by a high performance controller (AW-RP400) by using this protocol converter (AW-IF400). (Max.control distance: 1 500 m (4 920 ft.).
- By using protocol converter AW-IF400, control distance between AW-PH400 & AW-RP400 can be extended up to 1 000 m (3 280 ft.).
- Power Supply AW-PS505A is required.

(Rear view)

Power supply	DC12 V
Power consumption	Approx. 1.5 W
Dimensions(W x H x D)	145 mm x 30 mm x 85 mm (5-11/16 " x 1-3/16 " x 3-3/8 ")
Weight	Approx. 0.4 kg (0.88 lbs)

Public Telephone Line Connecting Adapter/ RS232C Distribution Adapter
AW-DU600

Enables remote control of camera and pan-tilt head

- Power Supply AW-PS505A is required.
- Using a public telephone line enables remote control of camera and pan-tilt head through the AW-RP555/ RP655 series models and a PC.
- Up to five sets of camera and pan-tilt heads can be controlled with the distribution function.
- Directly controllable pan-tilt and zoom/focus.
- ※ The product is not available in some areas.
- ※※ A modem is required.

Power Supply
AW-PS505A

The unit can supply power to Convertible cameras, Live switchers, the AW-RP655, AW-RP555, AW-DU600 and other units.

Power supply	AC120 V/AC220 V to 240 V＊
Power consumption	Approx.76 W
Dimensions (W x H x D)	132 mm x 51 mm x 275 mm (5-3/16 " x 2 " x 10-13/16 ")
Weight	Approx. 1.6 kg (3.5 lbs)
Accessories	DC cable with 4-pin Canon connector (for AW-RP400.etc.): Approx. 2 m (6.5 ft.) DC cable with ø5.5 plug (for AW-RC400.etc.): Approx. 3 m (9.8 ft.) DC cable with ø6.5 plug (for convertible cameras): Approx. 3 m (9.8 ft.)

＊ The value vary depending on the region.

4" B/W Viewfinder
AW-VF64

＊ Aspect ratio: 4:3 only

Power supply	DC12 V (supplied from camera head)
Power consumption	Approx. 9 W
Dimensions (W x H x D)	128 mm x 158 mm x 330 mm (5-1/16 " x 6-1/4 " x 12-15/16 ")
Weight	Approx. 1.6 kg (3.5 lbs)
Accessories	Mounting base x 1, Mounting screw x 2

Indoor Event Shooting

Quiet, accurate and high speed pan-tilt motion for event shooting

Key points

- Compact size camera and pan-tilt head
- Quiet, accurate and high speed pan-tilt head
- Pre-set memory function
- Multi-function control
- Maximum control distance: 1 000 m (3 280 ft.)

Parliament/Hall

Many cameras and quiet pan/tilt-heads can be controlled from several control rooms.

Convertible cameras (AW-E750/E655/E650) can shoot in dark settings such as parliament, halls or theaters thanks to high sensitivity (Minimum illumination: 0.005 lx).
By using the Multi-function Controller AW-RP655 and five cameras, a total of 250 pre-set memories (50 presets per camera) can memorize 250 seats in a conference hall.

System example

Camera Head AW-E650 ·············· 5
16 x Zoom Lens AW-LZ16MD73 ········ 5
Pan-tilt Head AW-PH360 ············· 5
Power Supply AW-PS300A ············ 5
Multi-function Controller AW-RP655 ···· 2
Power Supply AW-PS505A ············ 3
Cable Compensation Unit AW-RC400 ·· 1
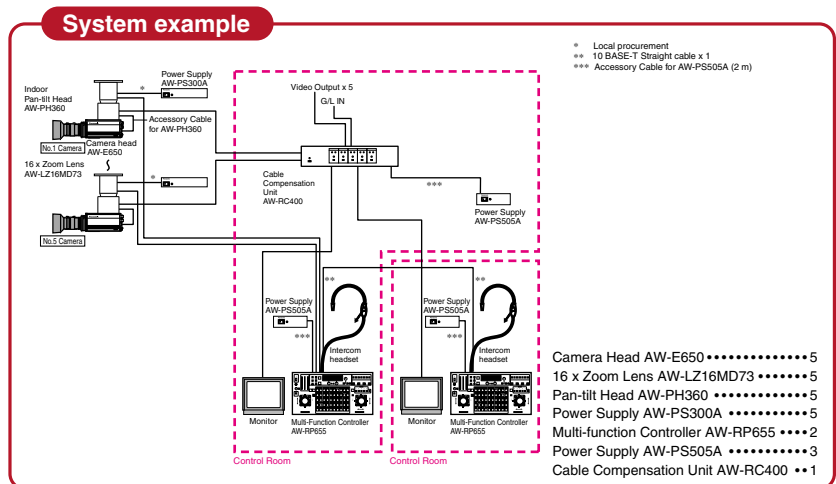
Address/Sports Relay

Compact size camera and pan-tilt head can be controlled in small event shooting spaces.

Quiet indoor pan-tilt system with no disturbing noise.
The pan-tilt head and camera are compact, as well as extremely quiet.
The videographer does not need to move around the hall, and is able to shoot without disturbing the scene.
Ideal for wedding or religious ceremonies where the atmosphere and mood are very important.

System example

Camera Head AW-E650 ··············· 3
16 x Zoom Lens AW-LZ16MD73 ········ 3
Pan-tilt Head AW-PH360 ············· 3
Power Supply AW-PS300A ············ 3
Multi-function Controller AW-RP555 ···· 1
Power Supply AW-PS505A ············ 3
Cable Compensation Unit AW-RC400 ·· 1
Compact Live Switcher AW-SW350 ···· 1
DVCPRO VTR AJ-SD755 ·············· 1
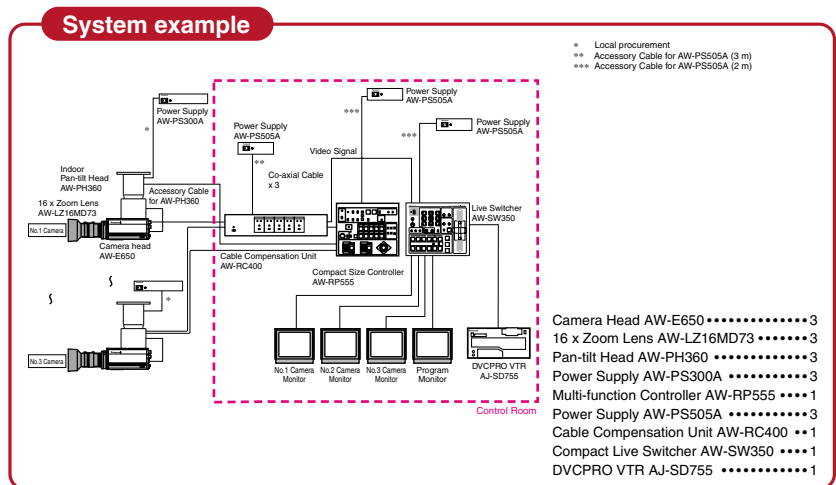
Remote Studios

Content production at small, cost effective studios

Key points

- Many cameras can be used in a small studio.
- SDI video system by SDI card (AW-PB504)
- One operator can control many cameras and pan-tilt heads.
- Quiet pan-tilt motion for shooting in a quiet studio

Remote Studio

A single camera operator can control three cameras in a quiet studio.

One control panel controls three cameras and pan-tilt heads in the studio. By using compact pan-tilt heads, many cameras can be controlled in a small studio. Using the compact live AW-SW350 switcher also enables an operator to produce independently creative images with wipes and other special effects.

System example


```
*     Local procurement
**    Accessory Cable for AW-PS505A (3 m)
***   Accessory Cable for AW-PS505A (2 m)
```

Power Supply AW-PS300A
Indoor Pan-tilt Head AW-PH360
16 x Zoom Lens AW-LZ16MD73
Accessory Cable for AW-PH360
Camera head AW-E650
No.1 Camera
No.3 Camera
Control Room
Power Supply AW-PS505A
Power Supply AW-PS505A
Co-axial Cable x 3
Cable Compensation Unit AW-RC400
Compact Size Controller AW-RP555
Live Switcher AW-SW350
Video Output
Video Output
DVCPRO VTR AJ-SD755
No.1 Camera Monitor
No.2 Camera Monitor
No.3 Camera Monitor
Program Monitor
Microphone
Audio Mixer
Equalizer
Audio Amplifier
Speaker

Camera Head AW-E650	3
16 x Zoom Lens AW-LZ16MD73	3
Pan-tilt Head AW-PH360	3
Power Supply AW-PS300	3
Multi-function Controller AW-RP555	1
Power Supply AW-PS505A	1
Cable Compensation Unit AW-RC400	1
Compact Live Switcher AW-SW350	1
DVCPRO VTR AJ-SD755	1

CATV Studio

High quality image SDI recording system for minimizing deterioration of video images.

When equipped with the AW-PB504 SDI card, Panasonic convertible cameras can be easily integrated into a SDI broadcast system to record high quality video with little degradation. Panasonic cameras are an ideal choice for professional studio use.
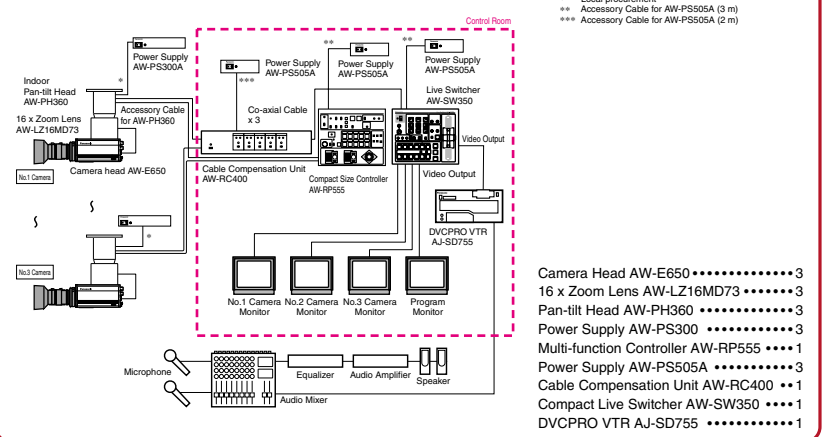
System example


```
*     Camera Connection Cable included with the AW-PH405.
**    Coaxial cable x 3,  10BASE-T Straight Cable x 1
***   Accessory Cable for AW-PS505A (3m)
```

Sync Generator
Video Distribution Amp
VDA
For Cameras
For Digital Switcher
17 x Zoom Lens AW-LZ17MD9A
Camera Head AW-E860
Insert SDI Card
SDI Card AW-PB504
Control Room
AJ-SD755
AJ-YA455P(SDI Input/Output Unit)
Digital Switcher
SDI
DVCPRO VTR
Output
SDI Monitor
Teleprompter
Indoor Pan-tilt Head AW-PH405
No.1 Camera
Cable Compensation Unit AW-RC400
Power Supply AW-PS505A
Insert SDI Card
Monitor
Teleprompter
No.2 Camera
Control Panel AW-RP555
Power Supply AW-PS505A
Power Supply AW-PS505A

Camera Head AW-E860	2
SDI Card AW-PB504	2
16 x Zoom Lens AW-LZ17MD9A	2
Pan-tilt Head AW-PH405	2
Multi-function Controller AW-RP555	2
Power Supply AW-PS505A	3
Cable Compensation Unit AW-RC400	1
SDI Input Unit for DVCPRO VTRAJ-YA455	1
DVCPRO VTR AJ-SD755	1
Teleprompter	2

Production systems

Studio systems can be configured using optional studio cards.

- 3CCD (2/3", 1/2" or 1/3") high quality camera
  Resolution: 850 lines, S/N 67 dB (NTSC)/
  65 dB (PAL)(DNR ON)
  : 860 lines, S/N 65 dB (NTSC)/
  63 dB (PAL)(DNR ON)
- Two types of studio card: Analog (Composite, Component) output card/SDI output card
- Intercom, viewfinder, lens control kit and RCU (remote control kit) can be used for studio system.

Production Studio

A convertible camera can be used as a production studio camera by inserting an SDI studio card.
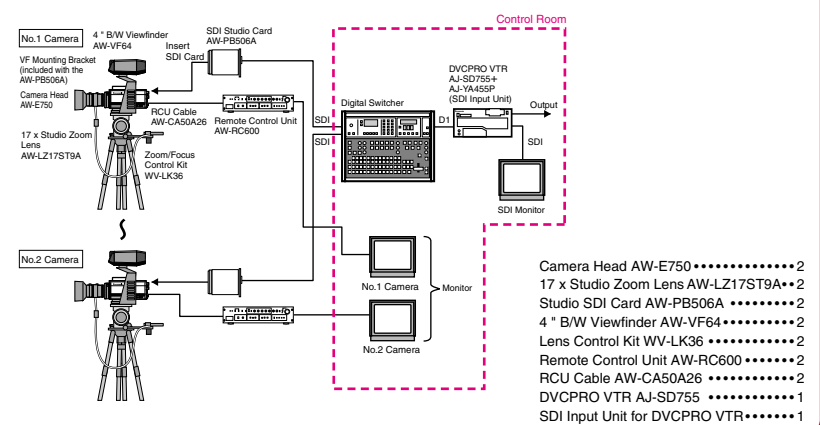

The 2/3" high quality camera AW-E860 or AW-E750 with the SDI studio card AW-PB506A (with two SDI outputs) can be used as high quality studio cameras in production houses or community stations.

System example

Camera Head AW-E750 ••••••••••••2
17 x Studio Zoom Lens AW-LZ17ST9A ••2
Studio SDI Card AW-PB506A ••••••••2
4 " B/W Viewfinder AW-VF64 ••••••••2
Lens Control Kit WV-LK36 ••••••••••2
Remote Control Unit AW-RC600 ••••••••2
RCU Cable AW-CA50A26 ••••••••••••2
DVCPRO VTR AJ-SD755 ••••••••••••1
SDI Input Unit for DVCPRO VTR••••••••1

College Studio

A simple, cost effective studio system can be configured by inserting a studio card.

A compact, easy to operate, low-cost system can be set up by inserting a Studio card into the camera, which is ideal for small size studios in schools, companies, etc.

System example

∗ Accessory Cable for AW-PS505A (3 m)

Camera Head AW-E350 ••••••••••••2
16 x MD Zoom Lens AW-LZ16MD55••••2
Studio Card AW-PB305A ••••••••••••2
4 " B/W Viewfinder AW-VF64 ••••••••2
Lens Control Kit AW-LK30 ••••••••••2
Remote Control Unit AW-RC600 ••••••••2
RCU Cable AW-CA50A26 ••••••••••••2
DVCPRO VTR AJ-SD755 ••••••••••••1
Live Switcher AW-SW350 ••••••••••••1
Power Supply AW-PS505A ••••••••••••1
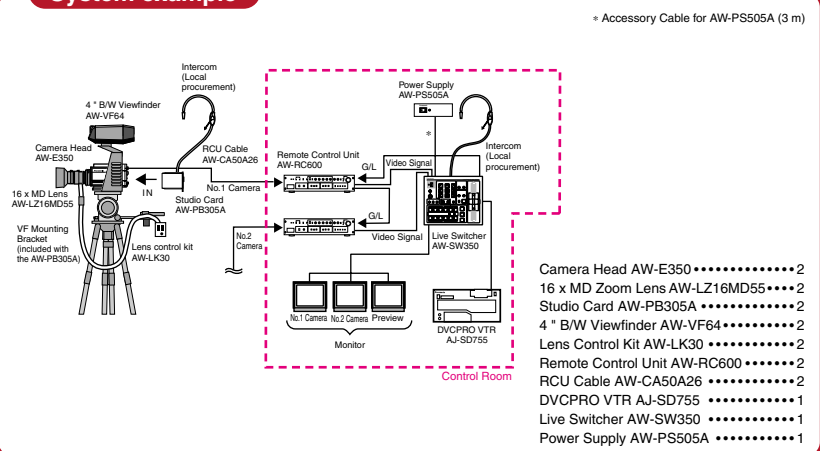
Multi-purpose systems

High quality images indoors and out make them ideal for everything from live sports coverage to use as ceiling cameras.

High speed pan-tilt system

High speed and accurate camera operation can be achieved.

By using the high speed (90 ° /s) pan-tilt head AW-PH400 and high quality controller AW-RP400, high-level camera operation for sports relays or music video production can be achieved.

System example

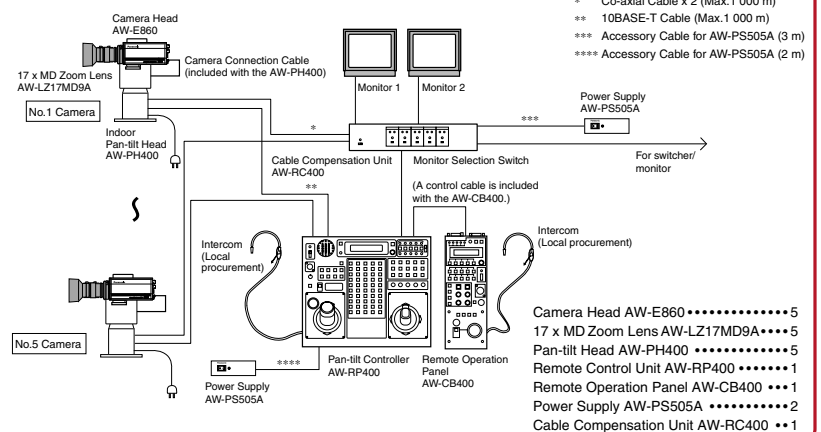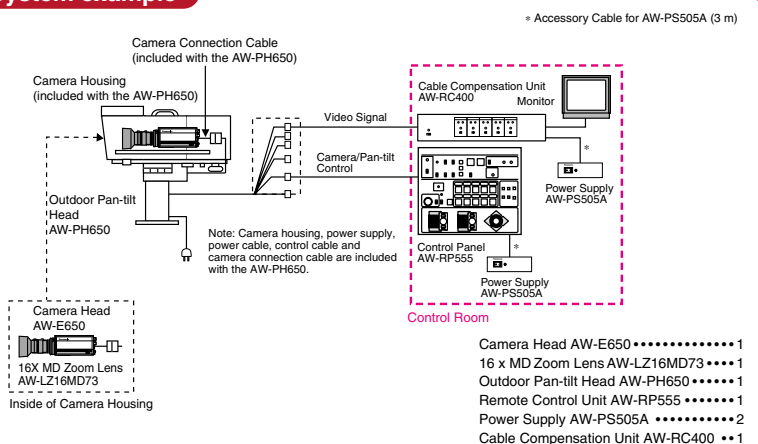* Co-axial Cable x 2 (Max.1 000 m)
** 10BASE-T Cable (Max.1 000 m)
*** Accessory Cable for AW-PS505A (3 m)
**** Accessory Cable for AW-PS505A (2 m)

Camera Head AW-E860
17 x MD Zoom Lens AW-LZ17MD9A
Camera Connection Cable (included with the AW-PH400)
No.1 Camera
Monitor 1   Monitor 2
Power Supply AW-PS505A
Indoor Pan-tilt Head AW-PH400
Cable Compensation Unit AW-RC400
Monitor Selection Switch
For switcher/ monitor
(A control cable is included with the AW-CB400.)
Intercom (Local procurement)
Intercom (Local procurement)
No.5 Camera
Power Supply AW-PS505A
Pan-tilt Controller AW-RP400
Remote Operation Panel AW-CB400

Camera Head AW-E860 •••••••••••••• 5
17 x MD Zoom Lens AW-LZ17MD9A •••• 5
Pan-tilt Head AW-PH400 •••••••••••• 5
Remote Control Unit AW-RP400 ••••••• 1
Remote Operation Panel AW-CB400 ••• 1
Power Supply AW-PS505A •••••••••••• 2
Cable Compensation Unit AW-RC400 •• 1

Weather/traffic information camera

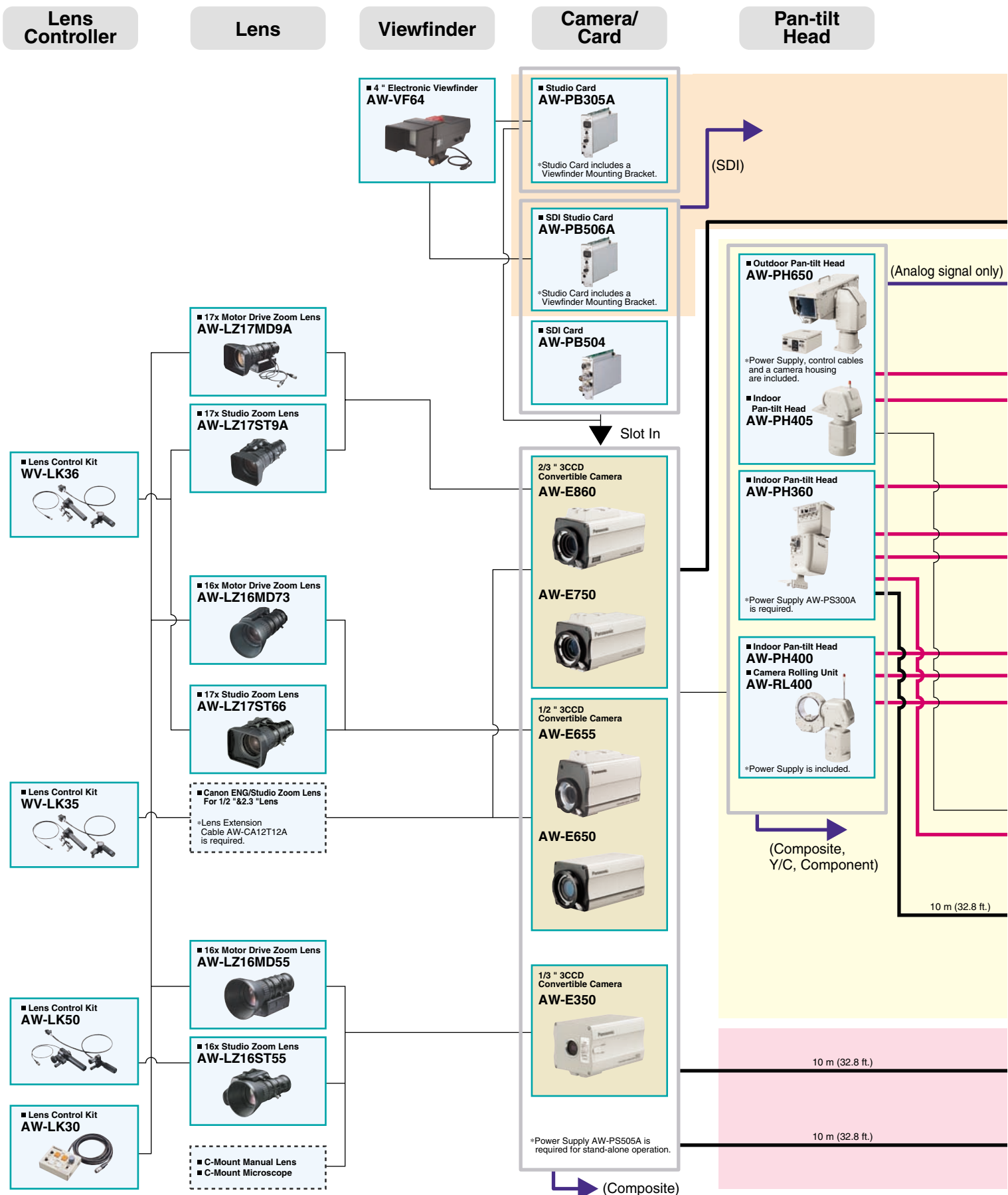### High quality images can be supplied in any weather conditions.

Weather/traffic camera system with a waterproof, outdoor pan-tilt head.
The camera can be operated by remote control via a PC connection to enable projection of faraway situations on the monitor.

System example

* Accessory Cable for AW-PS505A (3 m)

Camera Connection Cable (included with the AW-PH650)
Camera Housing (included with the AW-PH650)
Cable Compensation Unit AW-RC400   Monitor
Video Signal
Camera/Pan-tilt Control
Power Supply AW-PS505A
Outdoor Pan-tilt Head AW-PH650
Note: Camera housing, power supply, power cable, control cable and camera connection cable are included with the AW-PH650.
Control Panel AW-RP555
Power Supply AW-PS505A
Control Room
Camera Head AW-E650
16X MD Zoom Lens AW-LZ16MD73
Inside of Camera Housing

Camera Head AW-E650 •••••••••••••• 1
16 x MD Zoom Lens AW-LZ16MD73 •• 1
Outdoor Pan-tilt Head AW-PH650 ••••••• 1
Remote Control Unit AW-RP555 ••••••• 1
Power Supply AW-PS505A •••••••••••• 2
Cable Compensation Unit AW-RC400 •• 1

Product configuration diagram

Shooting section

Lens Controller	Lens	Viewfinder	Camera/Card	Pan-tilt Head

■ 4 " Electronic Viewfinder
AW-VF64

■ Studio Card
AW-PB305A
*Studio Card includes a Viewfinder Mounting Bracket.

→ (SDI)

■ SDI Studio Card
AW-PB506A
*Studio Card includes a Viewfinder Mounting Bracket.

■ SDI Card
AW-PB504

(Analog signal only)

■ Outdoor Pan-tilt Head
AW-PH650
*Power Supply, control cables and a camera housing are included.

■ Indoor Pan-tilt Head
AW-PH405

■ 17x Motor Drive Zoom Lens
AW-LZ17MD9A

■ 17x Studio Zoom Lens
AW-LZ17ST9A

Slot In

2/3 " 3CCD Convertible Camera
AW-E860

AW-E750

■ Indoor Pan-tilt Head
AW-PH360
*Power Supply AW-PS300A is required.

■ Lens Control Kit
WV-LK36

■ 16x Motor Drive Zoom Lens
AW-LZ16MD73

■ 17x Studio Zoom Lens
AW-LZ17ST66

■ Indoor Pan-tilt Head
AW-PH400
■ Camera Rolling Unit
AW-RL400
*Power Supply is included.

■ Canon ENG/Studio Zoom Lens For 1/2 "&2.3 "Lens
*Lens Extension Cable AW-CA12T12A is required.

1/2 " 3CCD Convertible Camera
AW-E655

AW-E650

■ Lens Control Kit
WV-LK35

→ (Composite, Y/C, Component)

10 m (32.8 ft.)

■ 16x Motor Drive Zoom Lens
AW-LZ16MD55

■ Lens Control Kit
AW-LK50

■ 16x Studio Zoom Lens
AW-LZ16ST55

1/3 " 3CCD Convertible Camera
AW-E350

■ Lens Control Kit
AW-LK30

■ C-Mount Manual Lens
■ C-Mount Microscope

*Power Supply AW-PS505A is required for stand-alone operation.

→ (Composite)

10 m (32.8 ft.)

10 m (32.8 ft.)

Control section

Control Unit

Live Switcher

Studio System

- RCU Cable
AW-CA50A26 (15 m (49 ft.))

- RCU Cable Joint Adapter
WV-CA26T26

- Studio Extension Cable
WV-CA26U15 (15 m (49 ft.))
WV-CA26U30 (30 m (98 ft.))
WV-CA26U100 (100 m (328 ft.))

- Remote Control Unit
AW-RC600

(Composite, Y/C)

(Composite, Y/C, Component)

- Live Switcher
AW-SW350

*Power Supply AW-PS505A is required.

Pan-tilt Control System

- Video Cable
Coaxial Cable (Max. 500 m (1 640 ft.)) **

- Cable Compensation Unit
AW-RC400

*Power Supply AW-PS505A is required.

(Composite, Y/C, Component)

Max. 1 000 m (3 280 ft.)

Max. 1 000 m (3 280 ft.) | **AW-IF400** | Max. 500 m (1 640 ft.)

- Compact Size Control Panel
AW-RP555
*Power Supply
AW-PS505A
is required.

- Multi-Function Control Panel
AW-RP655
*Power Supply
AW-PS505A
is required.

Max. 1 000 m (3 280 ft.)

Max. 500 m (1 640 ft.)

Max. 500 m (1 640 ft.) | **AW-IF400** | Max. 500 m (1 640 ft.)

- Pan-tilt Control Panel
AW-RP400
*Power Supply
AW-PS505A
is required.

10 m (32.8 ft.)

Max. 500 m (1 640 ft.) | **AW-IF400** | Max. 1 000 m (3 280 ft.)

Max. 500 m (1 640 ft.)

Max. 500 m (1 640 ft.) | **AW-IF400** | Max. 500 m (1 640 ft.)

***

- Remote Operation Panel
AW-CB400
*Power Supply AW-PS505A
is required for connecting
cameras directly.

PC Control Cable
AW-CA50T9

RS232C Cable (For extension: RS-422 conversion)

RS232C Cable

Other Peripherals

- Power Supply
AW-PS505A

*Power cables are included.

- Protocol Converter
AW-IF400

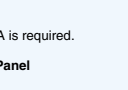*Power Supply AW-PS505A is required.

Dial-up Adapter Control

(Direct Control)

- Dial-up Adapter
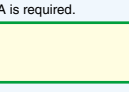(Public Telephone Line Connecting Box/
RS232C Distribution Box)
AW-DU600
*Power Supply
AW-PS505A
is required.

- Compact Size Control Panel
AW-RP555
*Power Supply AW-PS505A is required.

- Multi-Function Control Panel
AW-RP655
*Power Supply AW-PS505A is required.

Modem
*Use a factory-approved
modem.

(Telephone Line)

Modem
*Use a factory-approved
modem.

- RS-232C Control Cable
AW-CA28T9

- Dial-up Adapter
(Public Telephone Line Connecting
Box/RS232C Distribution Box)
AW-DU600
*Power Supply
AW-PS505A
is required.

RS232C Cable (For extension: RS-422 conversion)

Camera Control System

- RS-232C Camera Control Cable
AW-CA50T9 (D-Sub 9pin 10 m (32.8 ft.))

RS232C Cable (For extension: RS-422 conversion)

- Personal Computer
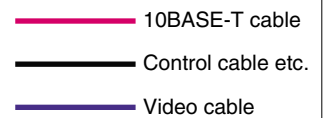
- Camera Control Cable
AW-CA50T8 (10 m (32.8 ft.))

10BASE-T Cable (Max. 1 000 m (3 280 ft.))

- Remote Operation Panel
AW-CB400
*Power Supply AW-PS505A
is required for connecting
cameras directly.

(Composite, Y/C, Component)

———— 10BASE-T cable
———— Control cable etc.
———— Video cable

** By turning on the compensation switch of pan-tilt head, it can be extended up to 1 000 m (3 280 ft.)   *** The control cable is included in the AW-CB400.

Panasonic also makes it easy to switch from conventional

As the demand for HD production systems continues to grow,
Panasonic is there to support you.
Panasonic's HD models offer the flexibility for use with
conventional SD systems, while making you more familiar
with the HD production environment.

Monitoring and low-light recording

Weather information camera

2/3-inch Bayonet Mount

Multi-purpose HD Box Camera
AK-HC1500

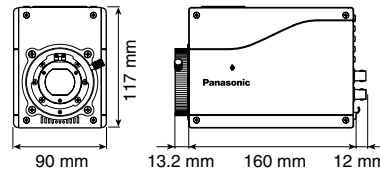**Global multi-format HD/SD compatibility in a compact unit designed for a wide range of applications.**

The camera is compatible with multiple formats at worldwide.
What's more, original Panasonic devices such as the 14-bit A/D converter, newly developed DSP and 2/3-inch IT-3CCD assure exceptional image quality and reliability. As well as being ideal for a wide range of applications, this high cost performance HD camera helps assure an easy transition from an SD system to an HD system.

∗ This camera can be mounted with Fujinon HD 2/3" bayonet mount lenses or Canon HD 2/3" bayonet mount lenses.

2/3-inch Lens

AK-LZ20M85
• 20x Zoom Lens
• Focal length:
 8.5 mm-170 mm (F1.8-2.7)

117 mm
90 mm   13.2 mm   160 mm   12 mm

For more details please consult a separate brochure.

Multi-format Live Switcher
AV-HS400

HD/SD format compatible, compact live switcher with a built-in multiviewer display function.

Multi-format HD/SD compatibility lets you meet changing needs as production switches to HD worldwide. It also helps assure a trouble-free transition from conventional SD operation to HD operation. Better still, it comes standardly equipped with a wide range of effect functions and a multiviewer display function allowing you to output up to 10 images on to a single monitor.
It flexibly responds to a variety of environments from live operation to full-scale studio production.

Option Boards

SDI INPUTS
AV-HS04M1
• INPUTS:HD/SD-SDI x2
 (BNC)(Built-in Up-converter)

ANALOG INPUTS
AV-HS04M2
• INPUTS:HD/SD Analog Component x2
 (Y/Pb/Pr)(Built-in Up-converter)

DVI INPUTS
AV-HS04M3
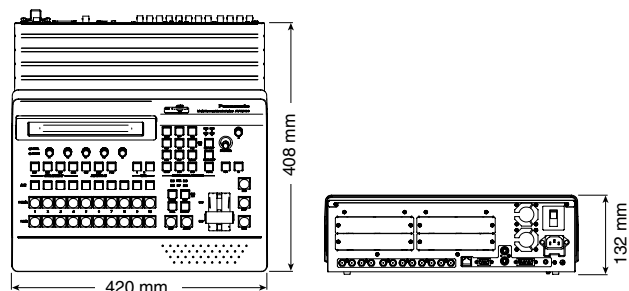• INPUTS:DVI-I x2(Built-in Scaler)

ANALOG OUTPUTS
AV-HS04M4
• OUTPUTS:Analog Component x2
 (Y/Pb/Pr)

DVI/ANALOG OUTPUTS
AV-HS04M5
• OUTPUTS:DVI-I x1, Analog x1

408 mm
420 mm
132 mm

For more details please consult a separate brochure.

News remote studio camera

Sports relays

System example

HD camera ideal for live sports coverage and other broadcast applications.

System example

Multi format HD Multi-purpose Camera AK-HC1500

PC

Monitor

Pan-tilt Cable AW-CAK4H1

Multi-format Live Switcher AV-HS400

20x Zoom Lens AK-LZ20M85

Co-axial Cable(HD-SDI)

A control cable (3 m) is included with the AW-CAK4H1.

Pan-tilt Head AW-PH400

10BASE-T

Power Supply AW-PS505A

Power Supply AW-PS505A

Pan-tilt Control Panel AW-RP400

Camera Control Panel AK-HRP150

Camera Head AK-HC1500 ••••••••••••• 1
20x Zoom Lens AK-LZ20M85 •••••••• 1
Indoor Pan-tilt Head AW-PH400 ••••••• 1
Pan-tilt Control Unit AW-RP400 •••••••• 1
Camera Control Unit AK-HRP150 •••••• 1
Power Supply AW-PS505A •••••••••••• 2
Pan-tilt control cable AW-CAK4H1 ••••• 1
Multi-format Live Switcher AV-HS400 ••• 1

Combining the AK-HC1500 HD Multi-Format Camera with the high-speed, exceptionally quite AW-PH400 Pan-Tilt System lets you shoot and record high-definition, broadcast-quality images.
And with the AV-HS400 Live Switcher, you can use transitions and versatile titling effects for results with incredible presence.
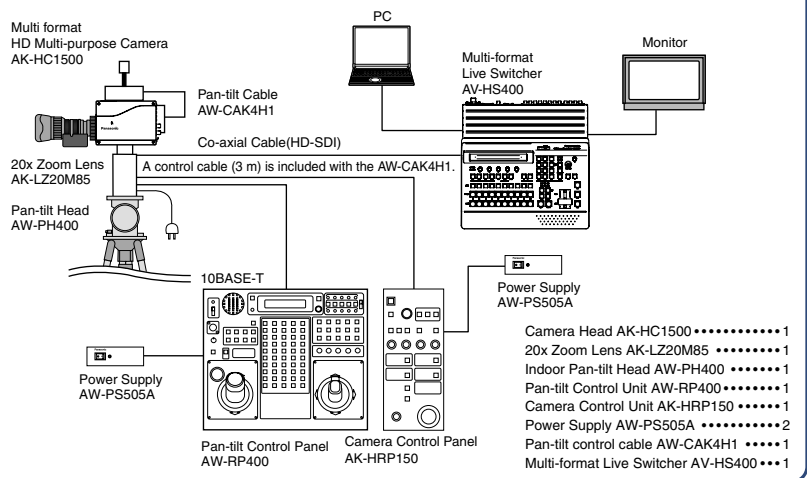
■AK-HC1500 specifications

CCD	2/3 " 1.0-megapixel IT-3CCD
Image sensing method	GBR Image sensing method
Total number of pixels	1 370(H)x744(V)
Effective number of pixels	1 280(H)x720(V)
Optical prism	F1.4 Prism
Optical filter	(ND) 100 %, 25 %, 6.3 %, 1.6 %
Lens mount	2/3" Bayonet type
Output format	1080: 60i/59.94i/50i/30psF/29.97psF/25psF/24psF/23.98psF 720: 60p/59.94p/50p
Sensitivity	F10.0 at 2 000 lx, 3 200 K, white reflection rate 89.9 %
Minimum Illumination	0.015 lx (F1.4 / 68 dB)
Gain	72 dB
S/N	54 dB
Smear	Less than -130 dB
M.T.F.	45 % (27.5 MHz, 720 p / 60 p)
Synchronize System	Internal and external synchronization (Tri-level SYNC/Black Burst)
Input	GENLOCK: BNC x 1, Interface: Mini D-sub 15pin terminal
Output	HD-SDI: BNC x 1
Input/output	Lens aperture connector, lens zoom focus connector
Storage temperature	-20 ˚C to 60 ˚C (-4 ˚F to 140 ˚F)
Operating temperature	0 ˚C to 40 ˚C (32 ˚F to 104 ˚F)
Power supply	DC12 V
Power consumption	Approx. 17 W
Dimensions(WxHxD)	Approx. 90 mm x 117 mm x 160 mm (3-9/16 " x 4-5/8 " x 6-5/16 ")
Weight	Approx. 1.5 kg (3.3 lbs)

■AV-HS400 specifications

Video processing	Video format	SD (480/59.94i, 576/50i) HD (1080/59.94i, 1080/50i, 720/59.94p, 720/50p)
	Video processing	<Y:Cb:Cr>4:2:2 10 bit, <RGB>4:4:4 8 bit
Input	Video	<Standard>4 inputs, <Option>A maximum of 4 inputs
	Key	Assign one out of video inputs
	DSK	Assign one out of video inputs
	Reference	Black burst/TRI (loop through) x1
Output	Video	<Standard>4 outputs, <Option>A maximum of 4 outputs
	Reference	Loop through x1 (Genlock), or Black burst x2 (internal synchronization)
WIPE/DVE	Pattern	WIPE x12, Squeeze x11, SLIDE x8, 3D DVE x12(3 directions)
Transition	Transition method	FADER, AUTO
	Transition type	Cut, mix, wipe (including DVE), background and key can be selected.
KEYER	Key source	BUS
	Key fill	BUS, MATTE
	Key mode	Linear key, Lum key, Chroma key (key only)
PIP	Transition method	AUTO (PIP only)
	Transition type	MIX
Interface	Serial (EDITOR)	Dsub9pin x1:RS-422 (GVG protocol compatible)
	Tally output	Dsub15pin x1, open collector output
	GPI	ø 3.5 Stereo mini jack
	LAN	10 Mbps x1 (Service purpose)
Removable media	SD memory card slot	1 (for transferring still image files and providing an upgrade capability)
Operating temperature / Humidity		0 ˚C to +40 ˚C (32 ˚F to 104 ˚F) /10 % to 90 % (no condensation)
Power / Power consumption		AC 120 V / Approx. 98 W
Dimensions(W x H x D)		420 mm (16-1/2") x 132 mm (5-3/16") x 408 mm (16-1/8") (*excluding protrusions)
Weight		Approx. 6.4 Kg (14.1 lbs): without options Approx. 7.2 Kg (15.9 lbs): with options

＊ Features and specifications in this document are subject to change without notice due to continual improvements.

■ Camera specifications (NTSC<PAL>)

		AW-E860	AW-E750	AW-E655	AW-E650	AW-E350
Image elements		2/3 " IT-3CCD		1/2 " IT-3CCD		1/3 " IT-3CCD
Pixels	Total elements	Approx.510 000 <595 728>	Approx.410 000 <470 000>			
	Effective elements	Approx.460 000 <538 200>	Approx.380 000 <440 000>			
Imaging area (H x V)		9.6 mm x 5.4 mm (2/3" 16:9) (16:9/4:3 switchable)	8.8 mm x 6.6 mm (equivalent to 2/3 ")	6.4 mm x 4.8 mm (equivalent to 1/2 ")		4.8 mm x 3.6 mm (equivalent to 1/3 ")
Scanning system		2:1 interlaced NTSC system <2:1 interlaced PAL system>				
Scanning frequency		Horizontal=15.734 kHz,Vertical=59.94 Hz <Horizontal=15.625 kHz, Vertical=50 Hz>				
Lens mount		2/3 " Bayonet Mount		1/2 " Bayonet Mount		1/3 " C Mount *
Optical filter		None		1/16ND,1/64ND,Normal, IR Through	None	
Synchronize system		Internal/external synchronization				
Standard illumination		2 000 lx, F11	2 000 lx, F14			2 000 lx, F9.5
Minimum illumination		0.4 lx (F1.7, Night Eye H)	0.005 lx (F1.4)	0.00005 lx (F1.4) (2-sec. CCD accumulation)		0.015 lx (F1.4) 0.00015 lx (F1.4) **
Signal-to-noise ratio		65 dB (DNR on) <63 dB (DNR on)>	67 dB (DNR on) <65 dB (DNR on)>			66 dB (DNR on) <63 dB (DNR on)>
Horizontal resolution		850 lines (high-band DTL ON, centre area)				
Registration		0.05 % (entire screen, excluding effects of lens)				
Image enhancer		Horizontal/vertical				
White balance		AWC A,AWC B(R/B gain,painting),AT W,3 200 K,5 600 K preset				
Black balance		Auto (R/B pedestal, painting function)				
Color bar		SMPTE color bar (setup 0/7.5IRE) <full>				
Shutter speed		OFF,1/100 <1/120>,1/250,1/500,1/1 000,1/2 000,1/4 000,1/10 000 Synchro-scan ELC				
Gain		Manual: max. 42 dB (0 to 30 dB in steps, Night Eye H/L) Auto: max. 42 dB (AGC 0 to 30 dB, Night Eye/H)	Manual: max. 72 dB (0 to 30 dB in steps, Night Eye/H, Digital Gain 0 to 30 dB in 6 dB steps) Auto: max. 42 dB (AGC 0 to 30 dB, Night Eye/H)			
Iris		Auto (Manual by RCU control)				
Video output		<Composite> 1.0 Vp-p/75 Ω (BNC,D-sub 50p), <Y/C> Y: 1.0 V p-p/75 Ω ; C: 0.286 Vp-p<0.3 Vp-p>/75 Ω (burst)(D-sub 50p), <Y/Pr/Pb> Y: 1.0 Vp-p/75 Ω ; Pr,Pb: 0.7 Vp-p<0.525 Vp-p>/75 Ω (D-sub 50p), <RGB> G: 1.0 Vp-p/75 Ω ; RB: 0.7 Vp-p/75 Ω (D-sub 50p)				
Power supply		DC 12 V				
Power consumption		Approx. 15.4 W	Approx. 12.6 W	Approx. 12 W	Approx. 11.8 W	Approx. 11.3 W
Operating temperature		-10 °C to 45 °C (14 °F to 113 °F)				
Weight		Approx. 1.15 kg (2.5 lbs)	Approx. 1.1 kg (2.4 lbs)	Approx. 1.2 kg (2.6 lbs)	Approx. 0.92 kg (2.02 lbs)	Approx. 0.8 kg (1.8 lbs)
Dimensions (W x H x D)		84 mm x 95 mm x 192 mm (3-5/16 " x 3-3/4 " x 7-9/16 ")	84 mm x 95 mm x 192 mm (3-5/16 " x 3-3/4 " x 7-9/16 ")	84 mm x 114 mm x 182 mm (3-5/16 " x 4-1/2 " x 7-3/16 ")	84 mm x 77 mm x 177 mm (3-5/16 " x 3-1/32 " x 7 ")	84 mm x 77 mm x 156 mm (3-5/16 " x 3-1/32 " x 6-1/8 ")

∗ The lens should be within 4.3 mm from the lens mount face. Otherwise, there is a risk of damaging the camera unit.
∗∗ 2-sec.CCD charge accumulation.

■ Pan-tilt head specifications

	Indoor pan-tilt head			Outdoor pan-tilt head
	AW-PH400	AW-PH405	AW-PH360	AW-PH650
Pan-tilt range/speed	Pan: 400 °(90 °/s), Tilt: 300 °(90 °/s)	Pan: 300 °(45 °/s), Tilt: 300 °(45 °/s)	Pan: 300 °(30 °/s), Tilt: 190 °(25 °/s)	Pan: 320 °(20 °/s), Tilt: 145 °(20 °/s)
Repeatability	±30 seconds (0.008 °)	±3 minutes (0.05 °)	±3 minutes (0.05 °)	Less than ±5 °
Noise level	Under NC30 (at 30 °/s)	Under NC35 (at 30 °/s)	Under NC30	Less than NC40
Maximum load	8 kg (17.6 lbs)	15 kg (33.1 lbs)	4 kg (8.8 lbs)	10 kg (22 lbs)
Maximum control distance	1.5 km(AW-RP655/RP555 with AW-IF400), 1 km(AW-RP400 with AW-IF400), 500 m(AW-RP400)	1.5 km(AW-RP400 with AW-IF400), 1 km(AW-RP655/RP555)	1 km(AW-RP655/RP555), 500 m(AW-RP400), 1km(AW-RP400 with AW-IF400)	1.5 km(AW-RP400 with AW-IF400), 1 km(AW-RP655/RP555)
Power supply	AC120 V/AC220 V to 240 V *	AC120 V/AC220 V to 240 V *	DC12 V	AC120 V/AC220 V to 240 V * (Power supply)
Power consumption	Approx. 145 W	Approx. 120 W	1.3 A(pan-tilt head only)	Approx. 120 W
Operating temperature	0 °C to 45 °C (32 °F to 113 °F)	-5 °C to 45 °C (23 °F to 113 °F)	-10 °C to 45 °C (14 °F to 113 °F)	-20 °C to 45 °C (-4 °F to 113 °F)
Dimensions(W x H x D)	315 mm x 534 mm x 188 mm (12-3/8 " x 21 " x 7-3/8 ")	319 mm x 416 mm x 168 mm (12-9/16 " x 16-3/8 " x 6-5/8 ")	130 mm x 244 mm x 192 mm (5-1/8 " x 9-5/8 " x 7-9/16 ")	Head: 237 mm x 511 mm x 213 mm (9-5/16 " x 20-1/8 " x 8-3/8 ")
Weight	10.2 kg (22.5 lbs)	10.0 kg (20.0 lbs)	3.5 kg (7.7 lbs)	Head: 19 kg (41.9 lbs)

∗ The values vary depending on the region.

∗ Features and specifications are subject to change without notice due to continual improvements.
∗ Weight and dimensions shown are approximate.

Panasonic

[Countries and Regions]

Argentina	+54 1 308 1610	Kuwait	+965 481 2123	Sweden	+46 (8) 680 26 41
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