Compatible with various outdoor environments and applications
Outdoor integrated remote camera that maintains stable recording performance in the toughest of environments

Outdoor housing and camera, lens, and pan head are integrated in this remote camera system. The camera is equipped with the same Digital Signal Processor (DSP) and 1/2.86 type full HD 3MOS sensors as in the AW-HE130W/K. High sensitivity, high S/N ratio, and high resolution are achieved by advanced video processing.

In addition to the functions of the AW-HE130W/K, mechanisms needed for shooting outdoors are enhanced as well. Flexible operation is achieved by features compatible with tough outdoor environments such as resistance to water and dust, wind pressure, and severe salt damage, as well as hot environments.

1/2.86-type 3MOS sensors
For high-level video capture and production.
Equipped with the same 1/2.86-type full HD 3MOS sensors and DSP (Digital Signal Processor) as AW-HE130W/K, AW-HR140 realizes high sensitivity, a high S/N ratio and high resolution through the use of advanced video processing.

High Performance 20x Zoom Lens/1.4x Digital Extender Zoom
In addition to a sharp, fast F1.6, 20x optical zoom lens, the AW-HR140 is equipped with an innovative 1.4x digital extender that can increase the effective focal length of the lens by 40% while delivering smooth, high resolution video.

Haze Reduction Function
For installations in places where haze tends to occur, this function performs correction for a subject with low contrast to make the image clearer. Three settings can be selected for the compensation level.
- White-tinged images are reduced and overall contrast is improved.
- Intensity of haze reduction effect can be adjusted manually according to the density of haze.
- Haze reduction level can be selected from three stages: low, mid, and high.

Resistance to wind pressure
All functions are guaranteed to operate in wind speeds of up to 15 m/s. Basic performance is maintained at wind speeds of up to 50 m/s without destruction of the camera.

Resistance to severe salt damage and compatibility with hot environments
Aluminum and other metal parts are coated to protect against severe salt damage, enabling installation in seaside areas subject to salt air. PBT/PPS plastic is employed for the exterior, giving excellent heat resistance.

PBT (Polybutylene Terephthalate): Excellent long-term thermal stability
PPS (Polyphenylene Sulfide): High heat resistance and excellent abrasion resistance

Defroster for temperatures down to −15 ºC (5 ºF)
Frosting, icing, and condensation are prevented by heating in environments as cold as −15 ºC (5 ºF). Even in blizzards, snow that hits the glass surface melts off to maintain visibility.

Lens wiper
The lens part is kept clear even when used in harsh environments. The wiper can be controlled by a remote camera controller (AW-RP120G/RP50) if connected to the control terminal of a commercially available washer unit from the camera’s washer control terminal.

*Images are simulated
**Industry's first professional camera** with pan/tilt mechanism vibration compensation function; Dynamic Image Stabilizing System (D.I.S.S.)

In addition to stabilization by conventional optical image stabilization (OIS) technology, shaking is also corrected by D.I.S.S. to enable smooth recording outdoors. Such shaking could include that from impacts and vibration due to recording outdoors or being installed under certain conditions and that during pan/tilt rotation operations.

*According to our research, as of April 2017.*

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**Transmit IP video without a separate encoder reduces cost and simplifies installation**

By connecting to network devices that support the IEEE802.3bt Draft ver.2.0 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.

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**Dynamic Range Stretch (DRS) / Hybrid Digital Noise Reduction (Hybrid DNR)**

Black defects, halation and washed-out colors are minimized for video images with a visually broad dynamic range (DRS). In addition, with Hybrid Digital Noise Reduction (Hybrid DNR), two types of noise reduction, 2D and 3D, are used together to enable clear video capture under a wide range of lighting conditions, with minimal after-image blurring or image degradation.

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**Equipped with Night Mode for infrared shooting**

The AW-HR140 can deliver high-quality monochrome video in total darkness, when the camera’s Night Mode is used in conjunction with an optional IR illuminator.

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**Supports multiple formats for flexible output**

In addition to typically supported formats, the camera as well as other cameras designed for indoor-use supports multiple output formats required for specialized applications, including 1080/29.97p, 1080/25p, 1080/23.98p. Remote control video capture can now be more easily performed for specialized applications such as teleproduction, and scientific research.

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**3 Auto Tracking White Balance (ATW) modes (Slow/Normal/Fast)**

In addition to the conventional tracking speed (normal), Slow Mode for gently tracking color temperature changes outdoors, and Fast Mode for quick tracking have been added.

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**Supporting PoE++* for lower installation cost**

By connecting to network devices that support the IEEE802.3bt Draft ver.2.0 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.

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**Freeze During Preset function**

The Freeze During Preset function can freeze the video during preset playback. The immediate preceding still image is output during preset movements so that the swiveling movement is not displayed, making operations possible with one camera.

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**Monitoring by IP control using PC, Mac and mobile terminals**

Using an IP browser, such as Internet Explorer or Safari, it is possible to set up and control the camera from a remote location. This feature simplifies the management of cameras around a campus, or across a worldwide enterprise network. IP video monitoring and remote camera control can also be performed from mobile terminals such as an iPhone, iPad or Android devices.

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**Diagram Example**

*Images are simulated*

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**Without D.I.S.S.**

**With D.I.S.S.**

*Images are simulated*

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**Lecture capture/Streaming System Example**

* Images are simulated

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**Without D.I.S.S.**

**With D.I.S.S.**

*Images are simulated*
Intelligent Functions
Intelligent functions significantly reduce time and effort for adjustment during remote video acquisition.

Auto Tracking White Balance Function
This function automatically adjusts the white balance as the color temperature gradually changes during outdoor shootings.

Automatic Gain Control (AGC)
Variable gain is automatically controlled in dark scenes.

Other Intelligent Functions
• Auto Iris Control
• Auto Digital Shutter
• Auto ND Filter

Exceptional Pan-Tilt mechanism performance for smooth moves
Thanks to a highly evolved pan-tilt design, the AW-HR140 achieves smoother and more natural movement during on-air shots. The pan-tilt head also has a wide shooting range*, with a pan range of ±175° and a tilt range of -30° to 210°. The newly developed pan-tilt drive provides high-speed operation at maximum 60°/s, excellent response to remote control operation, and highly precise stop control. These features combine to accurately capture fast-action sports scenes or smooth concert footage. The camera also achieves the low noise level during operation, at NC45 or less at a pan-tilt speed of 60°/s.

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

Flexible IP Control Architecture Simplifies System Design and Operation
Up to 100 x AW-HR140 cameras can be controlled via IP from a single AW-RP120G, AW-RP50, or PC. An AW-HR140 can also be simultaneously controlled by up to five AW-RP120G or AW-RP50’s via IP.

Control Via IP
HD Integrated Camera AW-HR140

■ Other functions
• RS422 remote terminal allows up to five units to be controlled via serial control from a controller
• Audio line input function
• Power can be supplied to SDI/Fiber conversion module (DC 12 V outlet)
• Preset memory can hold up to 100 positions

Optical fiber system/audio connection using PoE++

■ System example

Serial control

IP control

Optical fiber system/audio connection using PoE++

* The AC adaptor provided with the unit is not shown in the above figure.

According to the position of the pan and tilt, its own unit may be reflected in the image.

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Optical fiber system/audio connection using PoE++

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According to the position of the pan and tilt, its own unit may be reflected in the image.
### Specifiers

**GENERAL**

**Power Requirements**
DC 12 V to 21.8 V (DC IN connected)
DC 42 V to 57.2 V (PoE++ power supply)

**Current Consumption**
3.1 A to 5.5 A (DC IN connected)
1.2 A (PoE++ power supply)

**Ambient Operating Temperature**
-10 °C to 50 °C (5 °F to 122 °F) [ Temperature is required when -5 °C (23 °F) or less]

**Ambient Operating Humidity**
10% to 90% (no condensation)

**Storage Temperature**
-20 °C to 55 °C (4 °F to 131 °F) [rho (L) to 131 °F)

**Storage Humidity**
10% to 55% (no condensation)

**Mass**
Approx. 30.9 kg (68 lb 14 lb)

**Dimensions (W x H x D)**
258 mm x 357 mm x 397 mm
(10-1/8 inches x 14-1/16 inches x 15-5/8 inches)
(including protrusions and cable cover)

**Finish**
Silver, salt resistant coating

**Waterproof and Dust Proof**
IP66 compliant

**Maximum Permissible Wind Speed**
15 m/sec (54 km/h or more)

**Wiper**
Installed as standard

**Hanger**
Installed as standard

**Defroster**
Installed as standard

**Controller Supported**
AVH-RP120G, AVH-RP50, AX-RP200G

**Camera Unit**

**Imaging Sensors**
1/2.86-type Full-HD 3MOS

**Lens**
Optical zoom 20x (digital zoom 2x to 4x)
(4.5 mm to 90 mm; 35 mm equivalent: 12.13 mm to 462.5 mm)

**ISO Sensitivity**
0.6, 8, 12, 18, 24, 32, 40, 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000

**Minimum F Number**
F1.4

**Electro Optical Axis**
Pan: ±175°
Tilt: ±30°

**Synchronization System**

**Input Impedance**
High impedance

**Input**

- 2 channels, XLR balanced input
- Volume variable range: –50 dB to +12 dB (selectable in menu)

**Output**

- Embedded audio output level: 75 ± 12 dB; 12 dB; 25 dB; 40 dB (selectable in menu)
- Sampling frequency: 44.1 kHz (synchronized to video)
- Quantization bit-rate: 24-bit (LPCM)
- Audio compression format (RI): G.726, AAC-LC (High quality)

**Input**

- 12V IN
- XLR connector

**Output Connector**

- 5B IN
- BNC connector

**Audio Input**

- mini XLR connector (line input)
- 1: INPUT1 Common, 2: INPUT1 HOT, 3: INPUT1 COLD, 4: INPUT2 Common, 5: INPUT2 HOT, 6: INPUT2 COLD

**Outage**

- HD-SDI OUT
- SMPTE424M/SMPTE292 standards
- OD output is possible from the SDI OUT (IPM connector but not from the SDI OUT 2 connector)

**Input/Output**

- RS-422
- CONTROL IN RS-422A
- EXT

**Pan/Tilt Head Unit**

**Installation Method**
Stand-alone (Desktop) or suspended (Hanging)

**Pan Range**
Maximum speed 60°/s or higher

**Tilting Range**
- 30° to 210°
- Depending on the pan or tilt position, the camera may be reflected in the image.

**Quaintness**
60°/s (NCC or less)

**Vibration Reduction**
D.S.S. (Dynamic Image Stabilizing System)

**Accessories**

- Hexagonal bolt
- M8 x 30 mm: 4
- M8 washer: 4
- SPR: 4
- Cable cover: 1
- Wrench: 1
- Mounting screw (with hexagonal socket, for unit)

**Specifications**

* Specifications are subject to change without notice.

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### Computer Requirements

**CPU**

Intel® Core™ i5 2 DUO 2.4 GHz or more recommended

**Memory**

For Windows
1 GB or more (2 GB or more for 64-bit editions of Microsoft® Windows® 10, Microsoft® Windows® 8.1, Microsoft® Windows® 8, and Microsoft® Windows® 7)

**For Mac**
2 GB or more

**Network Function**

For Windows
10BASE-T or 10BASE-TX port x 1

**Image Display**

Resolution: 1024 x 768 pixels or more

**Color Generation**

True Color 24-bit or more

**Supported Operating Systems and Web Browsers**

- For Windows
  - Microsoft® Windows® 10 Pro 64-bit / 32-bit *1
  - Microsoft® Windows® 8.1 Pro 64-bit / 32-bit *1
  - Microsoft® Windows® 8 Pro 64-bit / 32-bit *1
  - Microsoft® Windows® 7 Professional SP1 64-bit / 32-bit *2

- For Mac
  - OS X 10.11 Safari 9.0.5 / OS X 10.10 Safari 8.0.4 / OS X 10.9 Safari 7.0.2 / 05 X 10.8 Safari 6.1.2

- For Other
  - Adobe® Reader® (for viewing the operating instructions available on the website)

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*1 Use the desktop version of Internet Explorer. (Internet Explorer for Modern UI is not supported.)
*2 Windows® XP compatibility mode is not supported.
*3 The 64-bit version of Internet Explorer® is not supported.

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

**Other**

- Microsoft® Windows®, Windows® 8, Windows® 8.1, Windows® 10 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, iPads, and Safari are registered trademarks of Apple Inc., in the United States and other countries.
- Android® is a trademark of Google Inc.
System Camera Option

Remote Camera Controller
AW-RP50

Remote Camera Controller
AW-RP120G
(AC adaptor(DC12 V) is required separately.)

Remote Operation Panel
AK-HRP200G

Compact Live Switcher
AW-HS50

Dimensions

(Unit: mm (inch))

Rear view

Remote Operation Panel
AK-HRP200G

Remote Camera Controller
AW-RP120G

Operation-verified 3rd party devices

[GeoVision]
PoE Adapter
GV-PA901

* Specifications are subject to change without notice.

For more information, please visit Panasonic web site

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

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

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