Panasonic
BUSINESS
AK-UC4000
4K Studio Camera

A High End System Camera
Setting a New Standard in
4K/HD HDR Acquisition
A 4K studio camera with high video quality. Compatible with a 2/3 lens mount and contains a newly developed large 4.4K sensor.

This camera offers the high video quality that is only possible with a large sensor, along with a wide range of 4K acquisition with the latest functions such as HDR (HLG), BT.2020 and high-speed shooting*1. The camera keeps up with diversifying systems with features such as 12G-SDI, TICO*2, over SDI (4K over 3G-SDI) output and MoIP*3, making it suitable not only for studio production but for a wide range of operations such as sports and events. With high video quality and a system that can be adapted to various situations, this camera provides the level of high-end production that is needed in the 4K age.


![Camera Image](image-url)

**High Resolution**

This camera has a newly developed large 4.4K sensor. Beyond 4K sampling is used to achieve an ultra-high-definition resolution of 2000 TV lines.

**12G-SDI / TICO**

UHD 12G-SDI* output (x2) and TICO over SDI output (x1) included as a standard feature.

*Quad-Link 3G-SDI output is also available.

**High Speed**

Supports high-speed* 2x, 3x or 4x output in HD mode at 1080p, 1080i and 720p simultaneously with standard (1x) output.

* When in HD Hi-Speed mode. Requires a firmware upgrade scheduled for release in the fall of 2018.
**Large 4.4K sensor**

With a newly developed 4.4K sensor, it realizes ultra-high-definition resolution, high sensitivity, low noise and a wide dynamic range.

**B4 mount**

The 2/3" lens can be used without an external adapter, and the internal lens is specially designed for large sensors, ensuring high video quality. This acquisition method maximizes the effectiveness of incident light.

**2000-TV line resolution**

Beyond 4K sampling achieves a resolution of 2000 TV lines in the horizontal and vertical directions for a richly detailed picture of a wide range of subjects in a variety of settings.

**Supports 3 levels of high-speed output in HD mode**

High-speed capture at 1080p, 1080i and 720p is available for sports and other active settings. This feature achieves a richly detailed picture even for fast-moving subjects. 2x, 3x or 4x output can be selected for compatibility with various slow-motion servers.

* When in HD Hi-Speed mode. Requires a firmware upgrade scheduled for release in the fall of 2018.

**Future proof infrastructure in AK-UCU600 (CCU)**

This camera supports the uncompressed 12G-SDI output that is needed in the 4K age and enables 4K video to be transferred with one cable. Light compression technology called TICO*1 is also used, enabling 4K video to be sent by 3G-SDI without losing video quality, so that the current HD infrastructure can be used in 4K systems. It is also expected to support the next generation of MoIP (Media Over IP)*2.

*1: A codec developed by intoPIX. Stands for “Tiny Codec”.
*2: Optional feature, scheduled for release in the spring of 2019.
AK-UC4000 Key Features

High-quality video and excellent operability
With the AK-UCU600 Camera Control Unit (CCU), uncompressed long-distance transmission of 4K(HD) video signals via optical fiber is supported. The AK-HRP1000GJ/1005GJ Remote Operation Panels (ROP) are equipped with a color LCD display that provides excellent visibility and functions for quick response. This system achieves high-quality video and excellent operability. In cases where power is supplied by the CCU, it is possible to transmit at a long distance of up to approx. 2,000 m between the camera and the CCU. The distance can be extended up to 10,000 m** by providing a local power supply at the camera head and using general-purpose single mode optical fiber. Between the CCU and the ROP, in addition to a dedicated serial line, IP connection via LAN cable is also supported.

High sensitivity and low noise
The AK-UC4000 is equipped with a newly developed large-format 4.4K MOS sensor. Two shooting modes can be selected. In High Sense Mode, it is possible to obtain an SN ratio of 62 dB** or higher while also achieving F10 high sensitivity. the result is low-noise and high-image-quality video.

Skew reduction realized through high-speed scans
This camera’s normal and low skew reading speeds are around 1/2 and 1/3 of those on a standard camera (1/60 of a second) respectively. The skewing characteristic of MOS sensors has been reduced by reading out the MOS sensor signal at high speed.

Chromatic Aberration Compensation (CAC)
This exclusive technology utilizes communication between the lens and camera to deploy for a sophisticated algorithm that will automatically compensate for the registration error caused by lens chromatic aberration, and minimize the circumjacent blur.*3

HDR (High Dynamic Range) support
This mode provides rich gradation to render contrast, color and shadow in dark image areas that could not previously be reproduced due to blackout, thus resulting in more realistic image quality. It supports a variable HDR by adjusting the high dynamic range. In addition, it is possible to configure a system supporting simultaneous HDR/SDR in order to handle production environments with both. SDR image can be adjusted over exposed by offset gain and knee function adjusts bright image as well as HDR.

ITU-R BT.2020
This camera is compatible with BT.2020, a color space that can recreate almost every color in the natural world, enabling a wider range of color expression.

Shockless gain
It is possible to smoothly transition the image changes that occur when gain is changed. In addition, with the 0.1 dB step master gain adjustment function, you can fine tune the adjustments to match the scene being shot.

*1: Adverse conditions, additional patching and longer runs will require repeater devices.
*2: During HD output
*3: For software supporting Chromatic Aberration Compensation (CAC) file, please download from “Software download” on Panasonic website: https://pro-au.panasonic.net/en/
Diverse color correction functions

In addition to EBU and NTSC preset color matrix, camera users can save two custom specified linear matrix tables, and additionally tune the saturation and hue individual colors with 12-pole color correction system. Specific skin tones can also be adjusted in addition to the primary secondary and tertiary colors in the 12-pole system.

Skin Tone Detail Correction

Tone down wrinkles and blemishes on air personalities to beautifully shoot natural skin tones. While designed to soften skin tones the skin tone detail feature can be applied to any hue phase so it could likewise be used to soften areas of other colors (such as green grass). The skin tone detail feature can define three independent skin tone ranges to manage different light levels or different people on camera. Skin tone-get feature finds a specific color in frame to simplify the set up process.

Servo control ND / CC filters

The cameras are equipped with filters for a variety of shooting environments. [ND filters] CAP, Through, 1/4, 1/16, 1/64. [CC filters] Cross, 3200 K, 4300 K, 6300 K, Diffusion

Focus assist functions

Quick and accurate focusing is supported with focus assist functions such as Focus Bar (indicates focus level), Focus-in-Red (uses color to indicate areas in focus), MAG (magnifies central portion), and Square (shows focus status of screen as a whole). Lenses with auto focus and focus assist capabilities are also supported*. The Remote Operation Panel (ROP) can also be used to focus and zoom while using the digital lens.

Camera standalone output formats

For camera head output (HD-SDI 1/HD-SDI 2), it is possible to select 1080p, 1080i, and 720p.

Extensive video and data transmission (TRUNK) functions

Since video and data can be transmitted between the camera and a Camera Control Unit (CCU) using optical fiber cable alone, system expansion to match operation conditions is possible.
- HD-SDI (CCU → camera) two lines, VBS (CCU → camera) two lines: Can be used for monitoring with prompter, fixed return or camera [studio floor monitor], etc.
- HD-SDI (camera → CCU) one line: This line can be used to transmit an additional video signal of a handheld or remote camera to the studio. Since the camera video input is equipped with a frame synchronizer, asynchronous video signals can also be used.
- LAN (1000BaseT) one line*: To be used to control external devices and remote cameras by IP protocol. Transmission of streaming video is also supported.
- DATA (RS422A or RS232C) two lines: Can be used to transfer lens and pedestal position data in a virtual system.

Detailed settings and functions optimized for operability

- Color temperature display and adjustment function (2000 K to 15000 K variable).
- Transmission of up to 10,000 m possible using single fiber.*3
- It is possible to save camera settings, such as video adjustments, on an SD memory card. Firmware version upgrades are also supported.
- A lens file function to save flare and shading values.
- Support for IP streaming and IP control.
- The NewTek Software “NewTek AutoLink for Panasonic PTZ**4, which is available on the Internet, allows Panasonic professional cameras equipped with IP streaming to be automatically detected from NewTek TriCaster® and IP series Video Mix Engine on the network, enabling direct use of IP streaming from the cameras with these NewTek products.
- DC12 V 2.5 A and 1.0 A output as a standard feature. This can be used as a power source for large lenses, prompters, and sub-monitors.
- There are four user buttons (enabling function selection) on the camera head and four on the viewfinder. They support rapid shooting by the camera operator.

Intercom connection

With two independent intercom lines, in addition to Intercom 1 and Intercom 2 switching, an Intercom 1 and 2 mix mode has been added and can be selected to observe the situation. With the Intercom front/rear switch and front volume, it is possible to adjust the intercom audio level even when the camera is being used from the shoulder.
Camera System

AK-UCU600PJ/UCU600EJ
AK-UCU600PSJ/UCU600ESJ

Camera Control Unit (CCU)

The CCU supports not only UHD and HD simultaneous output, but also enables high-speed output\(^1\) up to 240p in HD mode to be performed simultaneously with standard (1x) output, while still having a compact size.

AK-UCU600PJ/ AK-UCU600EJ [Tajimi connector model]
AK-UCU600PSJ/ AK-UCU600ESJ [LEMO connector model]

Contains a dual UHD 12G-SDI system, and supports 3G-SDI quad link with quadrant or two-sample interleave.

- Optical fiber transmission of uncompressed video signals over a distance of approx. 2,000 m between camera and CCU\(^2\)
- The compact, lightweight unit measures 2U in height and is rack-mountable.

**Supported formats**

<table>
<thead>
<tr>
<th>Format</th>
<th>12G/6G/3G/1.5G Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHD</td>
<td>2840x2160/59.94p, 50p, 29.97p, 25p, 23.98p, 29.97p(^3), 25p, 23.98p(^3) over 59.94i</td>
</tr>
<tr>
<td>3G</td>
<td>1080/59.94p, 50p, 59.94i, 50i, 23.98p over 59.94i, 29.97p(^3), 25p, 23.98p(^3) over 59.94i</td>
</tr>
<tr>
<td>1.5G</td>
<td>1080/59.94p-240fps, 180fps, 120fps, 1080/59.94p-200fps, 150fps, 100fps, 1080/59.94p-120fps, 180fps, 120fps, 1080/59.94p-100fps, 150fps, 100fps</td>
</tr>
<tr>
<td>HD High Speed(^4)</td>
<td>720/59.94p-240fps, 180fps, 120fps, 720/59.94p-200fps, 150fps, 100fps</td>
</tr>
</tbody>
</table>

- Supports IP streaming (100 Base-T).
- SD memory card can be used for saving user files and updating firmware versions.
- Dual uncompressed 12G-SDI output.
- Supports TICO\(^5\) over SDI (4K over 3G-SDI) output (4K signal can be transferred by a conventional 3G-SDI cable).
- Supports 1080p\(^6\) and 720p. In addition to standard output, high-speed output\(^1\) at 2x, 3x or 4x can be selected according to the specifications of the server.
- Supports HDR/SDR simultaneous output and HDR BT.2020/BT.709 simultaneous output.
- 12G-SDI output and TICO\(^5\) over SDI (4K over 3G-SDI) output are compatible with the AK-UC3000\(^6\).

AK-HRP1000GJ*1
AK-HRP1005GJ*1

Remote Operation Panel (ROP)

Expand operation scope with two size options: a full operation panel and a simplified panel. These compact operation panels also support PoE\(^2\) and IP control.

- Two models: 1/4 rack size (AK-HRP1000GJ) and 1/5 rack size (AK-HRP1005GJ).
- LCD panels with enhanced visibility.
  - AK-HRP1000GJ: 8.3 cm (3.5 inches) (VGA)
  - AK-HRP1005GJ: 8.1 cm (3.2 inches) (VGA)
- Camera serial control and IP control (RU45 LAN cable) are possible.
- Supports PoE\(^2\), which can supply power via LAN cable (CAT5e or faster).
- Functions for studio camera scene file registration and retrieval.
- Equipped with SD memory card slot for saving user files, scene file and updating firmware versions.

*1: Requires firmware version 4.50 or later. For more details, please see “Service and Support” on the following website: https://pro-av.panasonic.net/en/.

*2: Abbreviation of Power over Ethernet.

*3: Requires a firmware upgrade scheduled for release in the fall of 2018.

*4: Requires a firmware upgrade scheduled for release in the fall of 2018.
AK-HVF100GJ
22.9 cm (9 inches) LCD Color Viewfinder

Equipped with newly designed tilt mechanism and extensive functions such as focus assist and external video input.

- High-resolution 22.9 cm (9 inches) color LCD panel displays full HD 1920 x 1080 pixels
- Focus assist functions (Focus-in-Red, Focus Bar*)
- Detail depends on zoom ratio*1
- External HD-SDI input (3G-SDI) (1080i)
- External DC input (+12 V DC)
- Four assignable function buttons
- Contrast, brightness, and peaking are adjustable
- Pan, tilt, and lift structure used

*1: When connected to AK-UC4000.

AK-MSU1000GJ*
Master Setup Unit (MSU)

Controls up to 99 CCU units via IP

- IP and serial connections supported.
  - IP connection: Up to 99 units
  - Serial connection: Up to six units
- 17.8 cm (7 inches) Touch Panel LCD
- Video monitoring function
- HD-SDI input (Monitoring) (1080i)
- Power DC12 V (DC10 V - DC17 V) or PoE+*2 (via PoE+ Hub)

*1: Requires firmware version 4.50 or later. For more details, please see “Service and Support” on the following website (https://pro-av.panasonic.net/en/).
*2: Abbreviation of PoE+ (Power over Ethernet).

AK-HBU500GJ
Build-up Unit

Enables use of large studio-use lens.

- Smooth camera mounting/removal possible
- Precise optical axis (horizontal/vertical) adjustment structure
- Rear control panel equivalent to that of a large camera
- DC OUT 12V 7.5 A (XLR4-pin)/DC OUT 1.5 A (4-pin)
### Other accessories

- **AJ–CVF50G**
  - 38.1 mm (1.5 inches) HD EVF

- **AJ–HVF21KG**
  - 50.8 mm (2 inches) HD EVF
  - 59.94 Hz/50 Hz Switchable
  - Not available in some areas.

- **AG–CVF15G**
  - 87.8 mm (3.45 inches) Color HD EVF
  - Open two ways for LCD monitor viewing

- **AK–HVF70G**
  - 17.8 cm (7 inches) LCD Color Viewfinder

- **AJ–MC700P**
  - Microphone Kit (monaural)

- **AW–PS551**
  - AC Adaptor

- **SHAN–TM700**
  - Tripod Adapter

### System Configuration

[Diagram of system configuration]

1. **AK-HVF100G**
   - 22.9 cm (9 inches)
   - LCD Color Viewfinder

2. **AK–UCU600PJ/UCU600ESJ/UUCU600PSJ**
   - Camera Control Unit

3. **SHAN–TM700**
   - Tripod Adaptor

4. **AK-HRP1000GJ/AKHRP1005GJ**
   - Remote Control Cable

5. **AK-HBU500GJ**
   - Master Setup Unit

6. **Master Setup Unit**

7. **Optical Fiber multi Cable**
   - Max 2,000 m

8. **SD memory card**

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*1: For software supporting Chromatic Aberration Compensation (CAC) file, please download from “Software download” on Panasonic website: [https://pro-av.panasonic.net/en/](https://pro-av.panasonic.net/en/)

*2: A power cable is included with the AC Adaptor.

*3: With the use of a serial remote control cable AJ-C10050GJ, power for ROP is supplied from a CCU.

*4: When AK-USU100GJ is connected to AK-UCU600PJ/UCU600ESJ/UUCU600PSJ/UUCU600ESJ via serial cable, AW–PS551 or PoE+ HUB is required.

*5: Requires firmware version 4.50 or later. For more details, please see “Service and Support” on the following website:[https://pro-av.panasonic.net/en/].
## Specifications

### AK–UC4000GJ/UC4000GSJ

- **Power Supply**: DC 12 V (when using an external power supply) AC 240 V, 50 Hz/60 Hz (when connecting to an AK–UC4000PJ/ AK–UC4000EJ/AK–UC4000PSJ/AK–UC4000ESJ)

- **Power Consumption**: 119 W (maximum for the camera only, when connecting to an external 12 V, 360 W (when connecting to an AK– UC4000PJ/AK–UC4000EJ/AK–UC4000PSJ/AK–UC4000ESJ)

- **Operating Temperature**: −10 °C to 45 °C (14 °F to 113 °F) (Preheating required under a temperature 0 °C (32 °F) or below)

- **Storage Temperature**: −20 °C to 60 °C (−4 °F to 140 °F)

- **Operating Humidity**: 85% or less (relative humidity)

- **Weight**: Approx. 4.5 kg (9.90 lb) (body only)

- **Dimensions (W x H x D)**: Body only 151 mm x 267 mm x 371.5 mm (5-1/2 inches x 10-1/2 inches x 14-1/2 inches) (excluding protrusions)

- **Pickup Device**: 11.14 million pixels, MOS x 1

- **Optical Filter**: CC: 3200 K, 4300 K, Cross Diffusion ND: CAP, Clear, 1/4, 1/16, 1/64

- **Lens mount**: 2/3-type bayonet

- **Sensitivity**: Two shooting modes
  - [HIGH SENS]: F10 [59.94 Hz](50 Hz)
  - [NORMAL]: Fs [59.94 Hz](50 Hz)
  - 2000 lx, 3200 K, when white reflectivity is 89.9%

- **Horizontal Resolution**: 4K: 2000 TV lines or above (center) AK–UC4000PJ/AK–UC4000EJ/AK–UC4000PSJ/ AK–UC4000ESJ output
  - HD: 1000 TV lines or above (center)

- **S/N**: 62 dB or above

- **Horizontal Modulation**: 50% or above (27.5 MHz)

- **Gain switching**: [NORMAL]: –6, –3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36 [HIGH SENS]: –6, –3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36

- **Shutter speed**:
  - [59.94]/[59.94p] mode: 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
  - [29.97p] mode: 1/16, 1/15, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
  - [25p] mode: 1/16, 1/15, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000

- **<HD-SDI1> terminal**: BNC x 1 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω

- **<HD-SDI2> terminal**: BNC x 1 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω

- **<AUX> terminal**: BNC x 1 Functions as <HD TRUNK> terminal/<PROMPTER2> terminal by switching the setting in the menu
  - <HD TRUNK>: 1.5G-SDI: 0.8 V [p-p], 75 Ω
  - <PROMPTER2>: VBS signal 1 V [p-p], 75 Ω

- **<G/L IN/PROMPTER OUT> terminal**: BNC x 1
  - <G/L IN>: Tri-level SYNC or BB (black burst)
  - <PROMPTER OUT>: VBS signal 1 V [p-p], 75 Ω
  - Functions as <G/L IN> when standalone, and as <PROMPTER OUT> when connecting to an AK–UC4000PJ/AK–UC4000EJ/ AK–UC4000PSJ/ AK–UC4000ESJ

- **<MIC 1> terminal**: XLR x 1, 3-pin (female)
  - <LINE>:/MIC/>:/48 V: switchable For <MIC>, <PRDN>/:<REAR>: switchable
  - <LINE>: 0 dBu, 4 dBu menu selection available
  - <MIC>: −60 dBu, −40 dBu, or −20 dBu menu can be selected

### Rear View

- **<MIC 2> terminal**: XLR x 1, 3-pin (female)
  - <LINE>:/MIC/>:/48 V: switchable For <MIC>, <PRDN>/:<REAR>: switchable
  - <LINE>: 0 dBu, 4 dBu menu selection available
  - <MIC>: −60 dBu, −40 dBu, or −20 dBu menu can be selected

- **<HD TRUNK> terminal**: VBS signal 1 V [p-p], 75 Ω

- **<MIC terminal (front)>**: XLR x 1, 3-pin (female)
  - Switchable with <MIC 1> terminal

- **<INTERCOM1> terminal**: XLR x 1, 5-pin (female)

- **<INTERCOM2> terminal**: XLR x 1, 5-pin (female)

- **<EARPHONE> terminal**: Stereo mini jack x 1

- **<OPT FIBER> terminal**: Optical composite connector x 1, Tajimi/LEMO

- **<LINE> terminal**: 12-pin x 1

- **<VF> terminal**: 20-pin x 1

- **<VF> terminal (rear)**: 29-pin x 1

- **<DC IN> terminal**: XLR x 1, 4-pin, DC 12 V

- **<DC OUT 12 V 1 A> terminal**: 4-pin x 1

- **<RET CTRL> terminal**: 6-pin x 1

- **<EXT I/O> terminal**: 20-pin x 1, DC 12 V 0.5 A

- **<REMOTE> terminal**: 10-pin x 1

- **<TRUNK> terminal**: 12-pin x 1

- **<DC OUT> terminal**: 2-pin x 1, DC 12 V 2.5 A

- **<LNAV> terminal**: RJ-45 x 1

- **<USB2.0> terminal (host)**: Type A connector, DC 5 V 0.5 A

- **Build-up terminal**: 20-pin x 1
Specifications

AK-UCU600PJ/UCU600EJ/UCU600PSJ/UCU600ESJ

Power Supply
AK-UCU600PJ/UCU600EJ/UCU600PSJ: 100 V - 120 V AC, 50/60 Hz
AK-UCU600ESJ: 100 V - 240 V AC, 50/60 Hz.

Power Consumption
500 W (Without camera connected: 90 W)

Power Supply to a Camera
240 V AC (tolerance: ±5%), 1.46 A, 50/60 Hz

Operating Temperature
0 °C to 40 °C (32 °F to 104 °F)

Humidity
10% to 90% (no condensation)

Weight
Approx. 18.4 lb

Dimensions (W x H x D)
424 mm x 88 mm x 401 mm (16-3/8 inches x 3-7/8 inches x 15-13/16 inches)

LAN
Power Supply 12 V DC (when camera is connected)*

LAN
4-7/16 inches (4 inches x 15-3/16 inches x 102 mm x 385 mm x 113 mm)

AK-MSU1000GJ

Power Supply
12 V DC (DC input range: 10 V - 16 V DC)
42 V - 57 V DC (PoE+ power supply)

Power Consumption
1.6 A (Power supply: 12 V DC)
0.6 A (PoE+ power supply)

Operating Temperature
0 °C to 40 °C (32 °F to 104 °F)

Humidity
90% or less

Storage Temperature
-20 °C to 60 °C (-4 °F to 140 °F)

Weight
Approx. 4.0 kg (8.82 lb)

Dimensions (W x H x D)
482 mm x 222 mm x 81.5 mm (18-1/2 inches x 8-3/4 inches x 3-7/8 inches)

Adjustment Functions
Scene file, ND filter, CF filter, Color temperature (COLOR TEMP), Master gain (MASTER GAIN), Shutter (SHUTTER), Master pedestal (MPFRED) Iris (IRIS), Camera selection

CCU Control
RS422 or IP

Maximum Cable Length
When CCU is connected: 50 m (164 ft)

AK-HVF100GJ

Dimensions (W x H x D)
4-7/8 inches (3-1/4 inches x 14 inches x 82 mm x 355 mm x 124.4 mm)

Power Supply
DC 12 V (supplied from camera or XLR)

Power Consumption
18 W

Operating Temperature
0 °C to 45 °C (32 °F to 113 °F)

Operating Humidity
10% – 85% (no condensation)

Weight
Approx. 2.6 kg (5.73 lbs.) (not including hood) / Approx. 3.0 kg (6.61 lbs.) (including hood)

Dimensions (W x H x D)
340 mm x 234 mm x 193 mm (13-1/32 inches x 9-7/32 inches x 9-1/8 inches)

Display Panel
22.3 cm (8.0 inches)

Number of Pixels
1920 x 1080 (FHD)

Display Color
Approx. 16.77 million colors

Operation
<POWER> switch, <MENU> button, <SELECT> dial button, <F1> - <F5> buttons, <BRIGHT> knob, <CONTRAST> knob, <PEAKING> knob, <INPUT> switch

Connector
Camera I/F connector (D-sub 29 pins x 1) / SDI IN connector (BNC x 1)

[DC IN] Connector
XLR 3-pin connector

Supported Signal Format
CAM: 1080/59.94i, 1080i50i, 1080/59.94p, 1080i50p, 1080/59.94, 1080/50i, 720/59.94p, 720/50p

AK-HBU500GJ

Power Supply
12 V DC (when external power is supplied)
240 V AC 50 Hz/60 Hz (when CCU is connected)

Power Consumption
70 W (when external power is supplied)
165 W (when CCU is connected)

Operating Temperature
-10 °C to 45 °C (14 °F to 113 °F)

Operating Humidity Range
85% or less (relative humidity)

Storage Temperature
-20 °C to 60 °C (-4 °F to 140 °F)

Weight
Approx. 12.8 kg (28.22 lb) (unit only)

Dimensions (W x H x D)
300 mm x 417 mm x 510 mm (11-13/16 inches x 20-1/8 inches x 20-1/16 inches)

Camera Number Display
1 to 15 (depending on system settings)

LENS I/F Connector
36-pin x 1

CAMERA I/F Connector
20-pin x 1

[DC IN] Connector
XLR 1 x 1, 4-pin, 12 V DC

[DC OUT 12 V 1.5 A]
Connector
4-pin x 1

[DC OUT 12 V 7.5 A]
Connector
XLR 1 x 1, 4-pin

AK-HRP1000GJ/HRP1005GJ

Power Supply
12 V DC (Power supply from camera: 10 V - 16 V DC)
42 V - 57 V DC (PoE power supply)

Power Consumption
0.51 A (Power supply from camera: 10 V - 16 V DC)
0.15 A (PoE power supply)

Operating Temperature
0 °C to 40 °C (32 °F to 104 °F)

Humidity
90% or less

Storage Temperature
-20 °C to 60 °C (-4 °F to 140 °F)

Weight
Approx. 1.7 kg (3.7 lb) / Approx. 1.5 kg (3.3 lb)

Dimensions (W x H x D)
102 mm x 365 mm x 113 mm (4 inches x 14-1/2 inches x 4-7/8 inches)
32 mm x 355 mm x 124.4 mm (1-1/4 inches x 14 inches x 4-7/8 inches)

Camera/CCU Control
Control signals (camera, CCU control)
Power supply 16 V DC (when CCU is connected)**, 12 V DC (when camera is connected)**

Maximum Cable Length
When camera connected: 20 m (65.5 ft)
When CCU is connected: 50 m (164 ft)

*: Depending on the setting, only one of them can be selected at one time.
**: The BB (black burst) signal and tri-level sync signal of the reference input are recognized automatically.
*: Requires a firmware upgrade scheduled for release in the fall of 2018.
*: IP video cannot be transmitted when [CCU MODE] is set to [2160/23.98p], [2160/23.98PsF], [1080/23.98p], or [1080/23.98PsF].
*: Can be provided from CCU

As of March, 2018
Please refer to the latest Non-linear Compatibility Information, P2 Support, Download and Service Information, etc. at the following Panasonic web site.

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