Panasonic

4K/IP Studio Camera System

AK-UC4000 Series
4K Studio Camera

AK-UCU700 Series
Camera Control Unit (CCU)

A New Standard in 4K IP Studio Camera System

A 4K studio camera with high video quality. Compatible with a 2/3 lens mount and contains a large 11.14-megapixel 4K image sensor.

The AK-UC4000 studio camera system for 4K video combines the quality of a large-format image sensor and advanced functions including HDR (HLG), BT.2020 and High Speed.*1 Paired with the new AK-UCU700 CCU, the system achieves IP conversion with diverse interfaces including 12G-SDI for 4K baseband production and efficient, high-quality IP-based workflow. In addition to SMPTE ST 2110,*2 this is the first studio camera system*3 to support the Dante®*4 audio network, NDI®*5*6 and SRT.*6 Panasonic Connect's highly flexible new studio camera system is the ideal platform for advanced video shooting in the 4K era.

*1: In HD High Speed mode. Requires firmware upgrade (coming soon). *2: Standard in AK-UCU710 and optional in AK-UCU700 (requires ST 2110 option AK-NP701G sold separately). *3: As of October 2023 launch, according to Panasonic Connect research. *4: Standard in AK-UCU710 and optional in AK-UCU700 (requires Dante® audio option AK-NP702G sold separately). Audinate®, the Audinate logo and Dante® are registered trademarks of Audinate Pty Ltd. *5: NDI® is a new protocol developed by NewTek, Inc. that supports IP video production workflow. NDI® is a registered trademark of NewTek, Inc. in the United States and other countries. *6: Requires Streaming option AK-NP703G sold separately.

High Resolution

This camera has a large 11.14-megapixel 4K image sensor. Beyond 4K sampling is used to achieve an ultra-high-definition resolution of 2000 TV lines.

Diverse Interfaces

Equipped with two standard UHD 12G-SDI outputs along with diverse IP interface options for easy conversion to IP (when paired with AK-UCU700 CCU).

High Speed

Supports high-speed 2x, 3x or 4x output in combination with AK-UCU700 series, in HD High-speed Mode. Achieved with a future firmware update.

AK-UC4000 Series

AK-UCU700 Series

AK-HRP1010GJ

AK-HRP1015GJ

AK-HRP250GJ

4K PROFESSIONAL HDR

12G SDI

ST 2110

4K Studio Camera

AK-UC4000GJ
(Tajimi connector model)

AK-UC4000GSJ
(LEMO connector model)

* Lens and viewfinder are optional.

Large image sensor

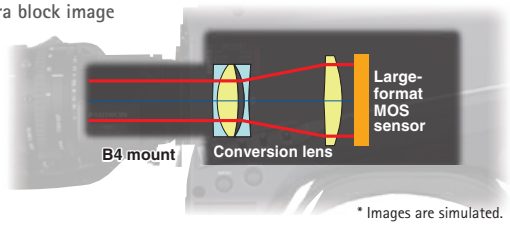
With a large 11.14-megapixel 4K image sensor, it realizes ultra-high-definition resolution, high sensitivity, low noise and a wide dynamic range.

■ Large image sensor

B4 mount

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

■ Camera block image

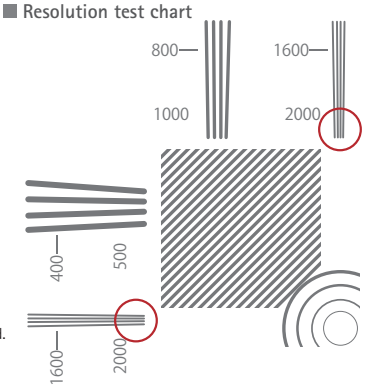


* Images are simulated.

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.

■ Resolution test chart



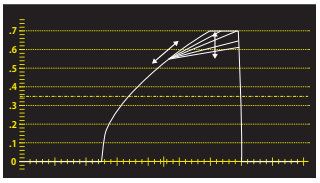
* Images are simulated.

HDR (High Dynamic Range) support

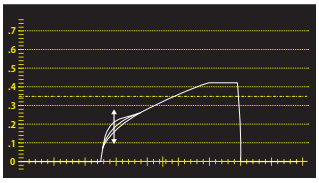
This mode provides rich gradation to render contrast, color and shadow in dark image areas that could not previously be reproduced due to blackout, thus resulting in more realistic image quality. It supports a variable HDR by adjusting the high dynamic range. In addition, it is possible to configure 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.

■ HDR adjustment function

Knee adjustment (blown-out highlight control)

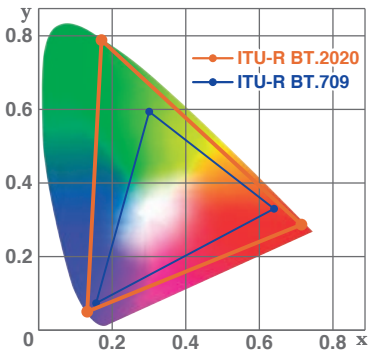


Black gamma adjustment (black defect control)



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.



AK-UC4000 Key Features

High-quality video and excellent operability

The Camera Control Unit (CCU)*1 enables uncompressed long-distance transmission of UHD & HD video signals via optical fiber. The AK-HRP1010GJ/HRP1015GJ Remote Operation Panels (ROP) are equipped with a high-visibility color LCD display. They also feature a range of functions for quick response, including the adoption of a color LCD touch panel on the AK-HRP1010GJ. 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*2 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 large 11.14-megapixel 4K image sensor. Two shooting modes can be selected. In High Sense Mode, it is possible to obtain an S/N ratio of 62 dB*3 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.

■ Skew reduction images

1/60 sec.

Normal mode (approx. 1/2)

Low skew mode (approx. 1/3)

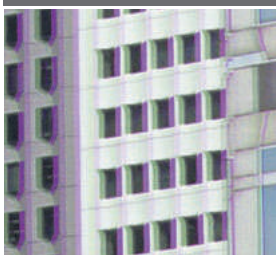
* Images are simulated.

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.*4

■ Images showing CAC (Chromatic Aberration Compensation) function effect

CAC OFF



CAC ON

* Images are simulated.

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.

Supports 3 levels of high-speed output*5 in HD mode

High-speed capture at 1080p, 1080i and 720p*6 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.

* Images are simulated.

*1: AK-UCU600 and AK-UCU700 series.
*2: Adverse conditions, additional patching and longer runs will require repeater devices.
*3: During HD output
*4: For software supporting Chromatic Aberration Compensation (CAC) file, please download from "Download/Software Download" on Panasonic website (https://pro-av.panasonic.net/en/)
*5: In HD High Speed mode. High speed mode of AK-UCU700 will be supported in the future.
*6: High-speed shooting at 720p available only when using AK-UCU600.

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 in 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.

■ Images showing Skin Tone Detail Correction effect

* Images are simulated.

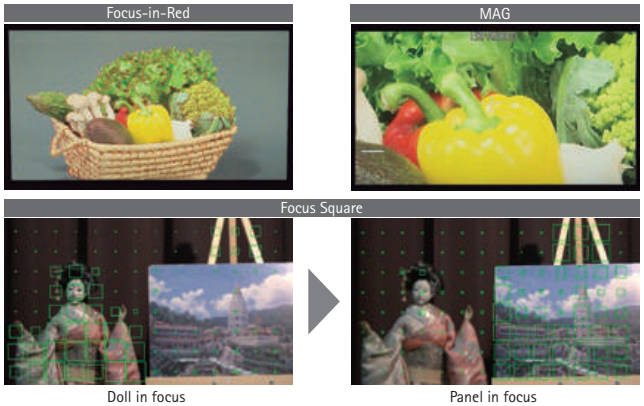
Servo control ND / CC filters

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*1. The Remote Operation Panel (ROP) can also be used to focus and zoom while using the digital lens.

■ Focus assist function examples



Doll in focus　　Panel in focus

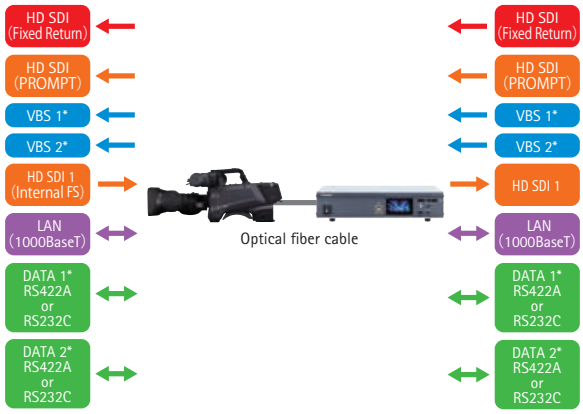
Camera standalone output formats

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.



* Only when connected to AK-UCU600 Series.

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.*2
- 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.
- 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.

■ Intercom Operation Panel

*1: For the compatible lenses, please contact the manufacturer.
*2: Adverse conditions, additional patching and longer runs will require repeater devices.

ST 2110 and Dante® I/Fs installed Model

AK-UCU710PSJ/ESJ (LEMO Connector Model)
AK-UCU710PJ/EJ (Tajimi Connector Model)

Basic Model

AK-UCU700PSJ/ESJ (LEMO Connector Model)
AK-UCU700PJ/EJ (Tajimi Connector Model)

Camera Control Unit (CCU) NEW

Supports simultaneous 4K HDR and HD SDR, plus ST 2110 and Dante® (industry first*1)

*Dante® is a registered trademark of Audinate Pty Ltd..

Camera Control Unit (CCU)			SMPTE ST 2110			Dante® Audio	NDI®	SRT
			4K	HD	JPEG XS			
ST 2110 and Dante® Installed Model	LEMO	AK-UCU710PSJ AK-UCU710ESJ	√ Standard	√ Standard	√ Standard	√ Standard	Sold separately Streaming option (AK-NP703G)	
	Tajimi	AK-UCU710PJ AK-UCU710EJ						
Basic Model	LEMO	AK-UCU700PSJ AK-UCU700ESJ	Sold separately ST 2110 option (AK-NP701G)			Sold separately Dante® audio option (AK-NP702G)		
	Tajimi	AK-UCU700PJ AK-UCU700EJ						

Supports 4K/HDR operation and HD high-speed shooting

- Uncompressed optical transmission between camera and CCU over distances up to about 2,000m.*2
- Simultaneous output of HDR and SDR or HDR BT.2020 and BT.709.
- Eight standard SDI outputs, including two 12G-SDI outputs.
- High-speed shooting: Up to 4x in HD.*3

■ Supported formats

UHD	3840 x 2160/59.94p, 50p, 29.97p*4, 25p*4, 23.98p*4
HD	1080/59.94p, 50p, 59.94i, 50i, 29.97p*4, 29.97PsF*4, 25p*4, 25PsF*4, 23.98p*4, 23.98PsF*4, 23.98p over 59.94i*4
HD High Speed*3	1080/59.94p-240fps, 180fps, 120fps, 1080/50p-200fps, 150fps,100fps, 1080/59.94i-240fps, 180fps,120fps, 1080/50i-200fps, 150fps, 100fps

Supports 3 independent IP interfaces

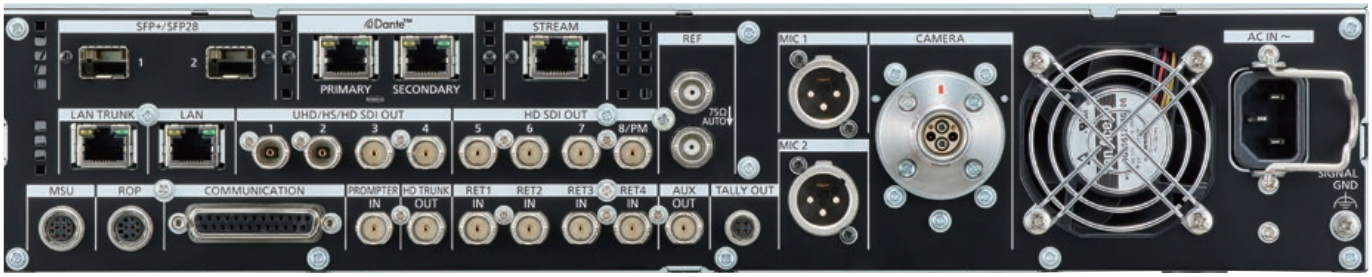
- Uncompressed or JPEG XS 4K/HD IP transmission with ST 2110/NMOS option.*5
- Redundant operation with two SFP28 terminals.*5
- The industry's first*1 support for Dante®*6 network audio, as well as NDI®*7*8 and SRT for streaming.

SFP+/SFP28*5 (AK-NP701G) | Dante®*6 (AK-NP702G) | Streaming*8 (AK-NP703G)

Color LCD touch panel

- 3.5-inch color LCD touch panel for intuitive operation and viewing camera output without requiring an external monitor.
- PC web browser can be used to remotely configure settings.

Rear View (When all options are installed)



*1: First studio camera system to support Dante® audio networks, NDI® and SRT as of October 2023, according to Panasonic Connect research.
*2: When power is supplied from CCU.
*3: To be supported through firmware update. HD High Speed mode is available when using AK-UC4000 studio camera.
*4: Future support planned.
*5: Standard in AK-UCU710PSJ/ESJ/PJ/EJ and optional in AK-UCU700PSJ/ESJ/PJ/EJ (requires ST 2110 option AK-NP701G sold separately).
Optical communication module is not included. A third-party optical module must be purchased separately.
*6: Standard in AK-UCU710PSJ/ESJ/PJ/EJ and optional in AK-UCU700PSJ/ESJ/PJ/EJ (requires Dante® audio option AK-NP702G sold separately).
*7: NDI® is a new protocol developed by NewTek, Inc. that supports IP video production workflow. NDI® is a registered trademark of NewTek, Inc. in the United States and other countries.
*8: Requires AK-NP703G Streaming option sold separately.

AK-HRP1010GJ[*1]
AK-HRP1015GJ[*1]
AK-HRP250GJ[*1]

[*1] Not available in some arias.

Remote Operation Panel (ROP)

Compact operation panels that support IP control and PoE[*2] power supply.

- Three models : 1/4 rack size (AK-HRP1010GJ), 1/5 rack size (AK-HRP1015GJ) and 1/4 rack size (AK-HRP250GJ).
- LCD panels with enhanced visibility.
  AK-HRP1010GJ: 8.9 cm (3.5 inches) (VGA)
  Equipped with a color LCD touch panel
  AK-HRP1015GJ: 8.128 cm (3.2 inches) (WVGA)
- Camera serial control and IP control (RJ45 LAN cable) are possible.
- IP connection and PoE[*2] power supply are supported. The AK-HRP1015GJ/HRP250GJ are equipped with a robust LAN terminal connector.
- 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.
- Camera control is enabled via direct connection to the 4K Studio Camera.

AK-HRP1010GJ AK-HRP1015GJ AK-HRP250GJ

Rear View

AK-HRP1010GJ

AK-HRP1015GJ/HRP250GJ

*1: Use requires the latest software version update. For more details, please see "Service and Support/PASS" on the following website(https://pro-av.panasonic.net/en/).
*2: Abbreviation of Power over Ethernet.

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 pixel
- Focus assist functions (Focus-in-Red, Focus Bar[*1])
- Detail depends on zoom ratio[*1]
- External HD-SDI (3G-SDI) input
- External DC input (+12 V DC)
- Four assignable function buttons
- Contrast, brightness, and peaking are adjustable
- Pan, tilt, and lift structure used

■ Lift structure image

Moves up and down

Rear View

*1: When connected to AK-UC4000.

AK-MSU1000GJ[*1]

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 unit
- 17.8 cm (7 inches) Touch Panel LCD
  Video monitoring function
- HD-SDI Input (Monitoring) (1080i)
- Power:DC12 V(DC10 V - DC16 V) or PoE+[*2] (via PoE+ Hub)

Rear View

*1: Use requires the latest software version update. For more details, please see "Service and Support/PASS" on the following website(https://pro-av.panasonic.net/en/).
*2: Abbreviation of 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)

Side View

■ Rear control panel

* It may require to replace lens mount parts at using a specific 4K lens. Please contact your dealer for more details.

■ Other accessories

AJ-CVF70GJ
1.78 cm (0.7 inches) Full HD OLED Color Viewfinder
- 0.7-inch Full HD OLED panel

AJ-CVF25GJ
87.6 mm (3.45 inches) Electronic HD Color Viewfinder
- Two eyepiece opening/closing positions

AK-HVF75GJ
17.8 cm (7 inches) LCD Color Viewfinder
- New LCD panel

AJ-MC700P
Super-Directional Electret Capacitor Microphone (monaural)
- Attaches to viewfinder with microphone holder

AW-PS551
AC Adaptor

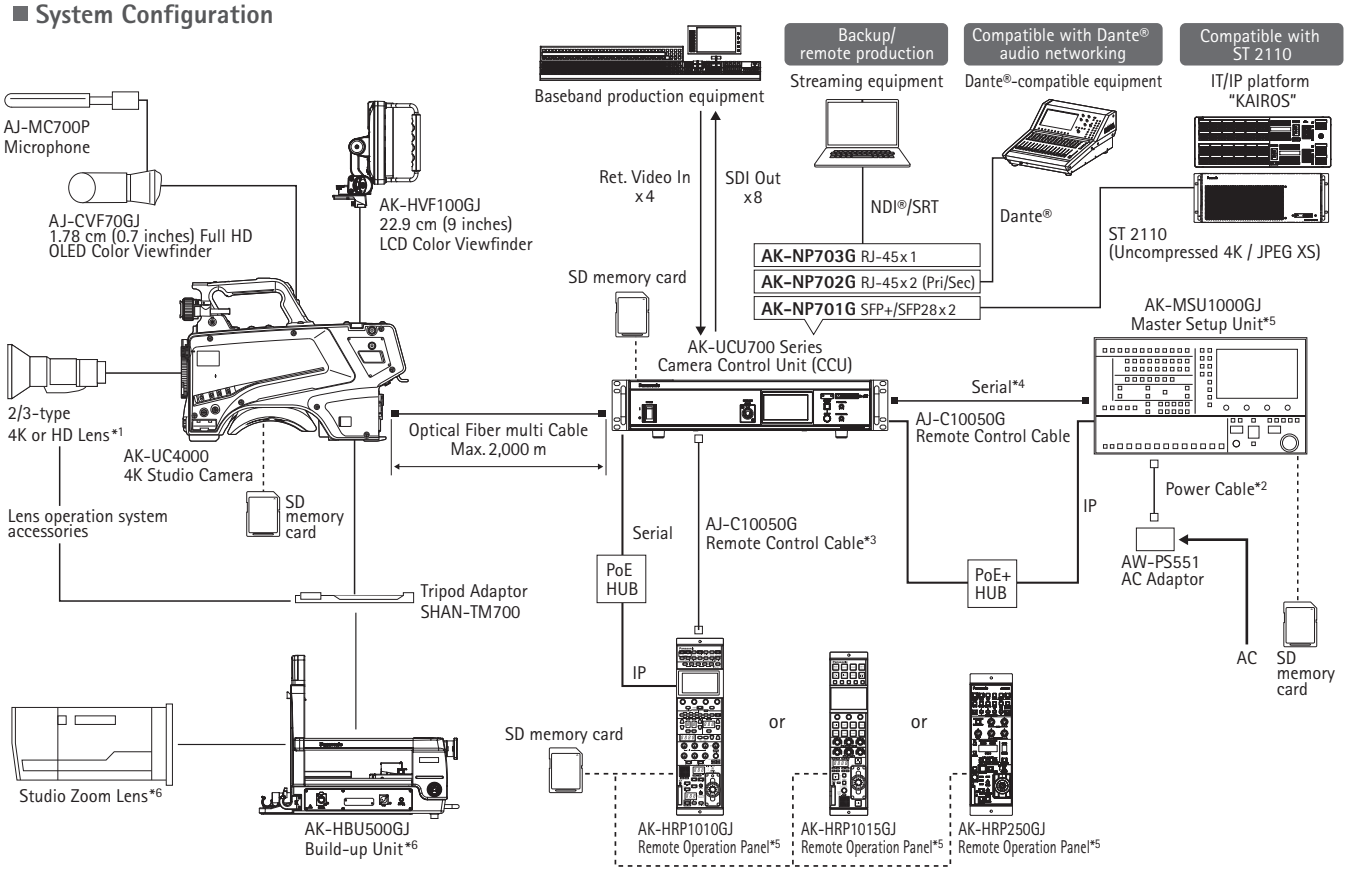
*For AK-MSU1000GJ. Can not use for power supply to AK-UC4000.

SHAN-TM700
Tripod Adaptor

AJ-MH800G
Microphone Holder

AJ-C10050G
Remote Control Cable (50 m / 164 feet)
- 10-pin cable for ROP/MSU

■ System Configuration



*1: For software supporting Chromatic Aberration Compensation (CAC) file, please download from "Download/Software Download" on Panasonic website: 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-C10050G, power for ROP is supplied from a CCU.
*4: When AK-MSU1000GJ is connected to AK-UCU700 Series via serial cable, AW-PS551 or PoE+ HUB is required.
*5: Use requires the latest software version update. For more details, please see "Service and Support/PASS" on the following website(https://pro-av.panasonic.net/en/).
*6: It may require to replace lens mount parts at using a specific 4K lens. Please contact your dealer for more details.

Specifications

As of March, 2024

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-UCU600PJ/AK-UCU600EJ/AK-UCU600PSJ/AK-UCU600ESJ)
Power Consumption	119 W (maximum for the camera only, when connecting to an external 12 V) 360 W (when connecting to an AK-UCU600PJ/AK-UCU600EJ/AK-UCU600PSJ/AK-UCU600ESJ)
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 (5-31/32 inches x 10-17/32 inches x 14-21/32 inches) (excluding protrusions)
Pickup Device	11.14 million pixels, MOS x 1
Optical Filter	CC: 3200 K, 4300 K, 6300 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)/F11 (50 Hz) [NORMAL]: F6 (59.94 Hz)/F7 (50 Hz) 2000 lx, 3200 K, when white reflectivity is 89.9%
Horizontal Resolution	4K: 2000 TV lines or above (center) AK-UCU600PJ/AK-UCU600EJ/AK-UCU600PSJ/AK-UCU600ESJ 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	•[59.94i]/[59.94p] mode: 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 •[29.97p] mode: 1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 •[23.98p] mode: 1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 •[50i]/[50p] mode: 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 •[25p] mode: 1/48, 1/50, 1/60, 1/96, 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], 75Ω <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-UCU600PJ/AK-UCU600EJ/AK-UCU600PSJ/AK-UCU600ESJ
<MIC 1> terminal	XLR x 1, 3-pin (female) <LINE>/<MIC>/<+48 V> switchable For <MIC>, <FRONT>/<REAR> switchable <LINE>: 0 dBu, +4 dBu menu selection available <MIC>: –60 dBu, –40 dBu, or –20 dBu menu can be selected
<MIC 2> terminal	XLR x 1, 3-pin (female) <LINE>/<MIC>/<–48V> switchable <LINE>: 0 dBu, +4 dBu menu selection available <MIC>: –60 dBu, –40 dBu, or –20 dBu menu can be selected
<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
<LENS> 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
<LAN> 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

Camera Control Unit (CCU)
AK-UCU710PSJ/UCU710ESJ/UCU710PJ/UCU710EJ
AK-UCU700PSJ/UCU700ESJ/UCU700PJ/UCU700EJ

Power Supply	100 V - 240 V AC, 50 Hz/60 Hz
Power Consumption	550 W (Without camera connected: 130 W)
Capacity for Supplying Power to a Camera	AC 240 V, 1.46 A, 50 Hz/60 Hz
Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Humidity	10 % to 90 % (no condensation)
Weight	AK-UCU710: Approx. 9.3 kg (20.46 lb) AK-UCU700: Approx. 9.1 kg (20.02 lb)
Dimensions (W x H x D)	424 mm x 88.5 mm x 400 mm (16-11/16 inches x 3-15/32 inches x 15-3/4 inches) (excluding protrusions)
Video Output	3G/HD-SDI: 5 lines
	12G/6G/3G/HD-SDI: 2 lines
	HD-SDI: 1 line (shared with picture monitor output)
HD TRUNK Output	3G/HD-SDI: 1 line
AUX Output	3G/HD-SDI: 1 line
Return Input	3G/HD-SDI: 4 line
HD TRUNK (Prompter) Input	3G/HD-SDI: 1 line
Reference Input	BB (black burst) / tri-level: 1 line (automatic termination, connect to upper connector; BB signal and tri-level signal automatically recognized, with loop-through output)
Microphone Output	0 dBm/600 Ω, 2 lines (XLR, 3-pin, male)
Communication	Intercom input/output (ENG/ PROD, 0 dBm, 600 Ω (4 W) / 1 V [p-p], 200 Ω (RTS), 4 W / RTS / CLRCOM): 2 lines
	PGM input (0 dBm/600 Ω): 2 lines
	Tally input (red, green, yellow): 1 input each
Tally Output	Tally output (red, green) Alarm output Output from each of the open collectors
ROP	RS-422 1 line, 16 V DC output
MSU	RS-422 1 line, GPI for control
LAN TRUNK	1 line
LAN	1 line
LCD monitor	3.5 inch color LCD monitor, touch panel supported
ST 2110 (Only AK-UCU710)	SFP+/SFP28 x 2 * Standard in AK-UCU710 and optional in AK-UCU700 (requires ST 2110 option AK-NP701G sold separately).
Dante® (Only AK-UCU710)	RJ45 x 2 * Standard in AK-UCU710 and optional in AK-UCU700 (requires Dante® audio option AK-NP702G sold separately).

Specifications

As of March, 2024

Remote Operation Panel (ROP) AK-HRP1010GJ/HRP1015GJ/HRP250GJ

	AK-HRP1010GJ	AK-HRP1015GJ	AK-HRP250GJ
GENERAL			
Power Supply	12 V DC (Power supply from camera/CCU: 10 V - 16 V DC) 42 V - 57 V DC (PoE power supply)	12 V DC (Power supply from camera: 10 V - 16 V DC) 42 V - 57 V DC (PoE power supply)	
Power Consumption	0.9 A (Power supply from camera/CCU: 10 V - 16 V DC) 0.3 A (PoE power supply)	0.44 A (Power supply from camera: 10 V - 16 V DC) 0.11 A (PoE power supply)	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 (3.75 lb)	Approx. 1.5 kg (3.3 lb)	Approx. 1.4 kg (3.08 lb)
Dimensions (W x H x D)	102 mm x 385 mm x 113 mm (4 inches x 15-3/16 inches x 4-7/16 inches)	82 mm x 355 mm x 124.4 mm (3-1/4 inches x 14 inches x 4-7/8 inches)	92 mm x 308 mm x 67 mm (3-5/8 inches x 12-1/8 inches x 2-5/8 inches)
Camera/CCU Control	Control signals (camera, CCU control) Power supply 16 V DC (when CCU connected)*, 12 V DC (when camera connected)*		
Maximum Cable Length	When camera connected: 20 m (65.7 ft) When CCU connected: 50 m (164 ft)		
Monitor			
LCD Monitor	LCD color monitor, touch panel support	LCD color monitor	–
Input/Output Section			
<CCU> connector	10-pin, male x 1		
<PREVIEW> connector	9-pin, female x 1		
<LAN> connector	RJ-45 x 1	RJ-45 x 1 (equipped with a robust LAN terminal connector)	

* Can be provided from CCU

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 (18-31/32 inches x 8-3/4 inches x 3-7/32 inches) (including mounting brackets and dial heights)
Adjustment Functions	Scene file, ND filter, CC filter, Color temperature (COLOR TEMP), Master gain (MASTER GAIN), Shutter (SHUTTER), Master pedestal (MPED), Iris (IRIS), Camera selection
CCU Control	RS422 or IP
Maximum Cable Length	When CCU is connected: 50 m (164 ft)

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 (16-7/16 inches x 20-1/16 inches x 11-13/16 inches)
Camera Number Display	1 to15 (depending on system settings)
LENS I/F Connector	36-pin x 1
CAMERA I/F Connector	20-pin x 1
[DC IN] Connector	XLR 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 x 1, 4-pin

AK-HVF100GJ

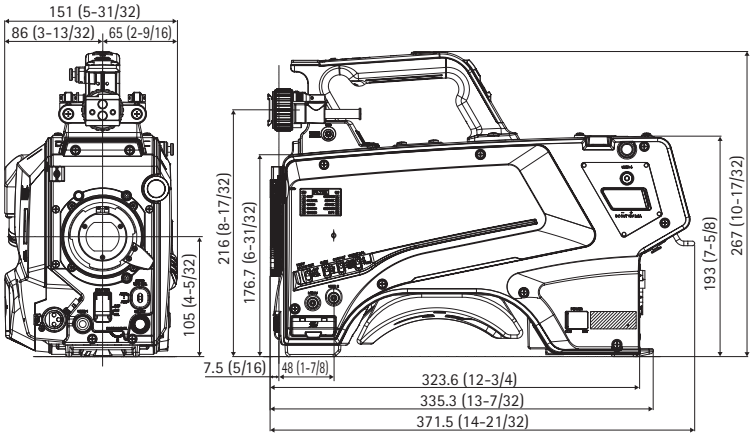
Power Supply	DC 12 V (supplied from camera or XLR)
Power Consumption	18 W
Operating Temperature	0 °C to 45 °C (32 °F to 113 °F)
Operating Humidity	10% – 85% (no condensation)
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Weight	Approx. 2.6 kg (5.73 lbs.) (not including hood) / Approx. 3.0 kg (6.61 lbs.) (including hood)
Dimensions (W x H x D)	340 mm x 234 mm x 193 mm (13-13/32 inches x 9-7/32 inches x 7-5/8 inches) (not including hood) 340 mm x 234 mm x 231 mm (13-13/32 inches x 9-7/32 inches x 9-1/8 inches) (including hood)
Display Panel	22.9 cm (9.0 inches)
Number of Pixels	1920 x 1080 (FHD)
Display Color	Approx. 16.77 million colors
Operation	<POWER> switch, <MENU> button, <SELECT> dial button, <F1>/<F2>/<F3>/<F4> 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 4 pins x 1)
Supported Signal Format	CAM: 1080/59.94i, 1080/50i SDI: 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p

Dimensions

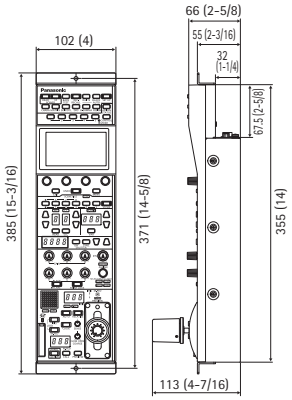
As of March, 2024

Unit: mm(inches)

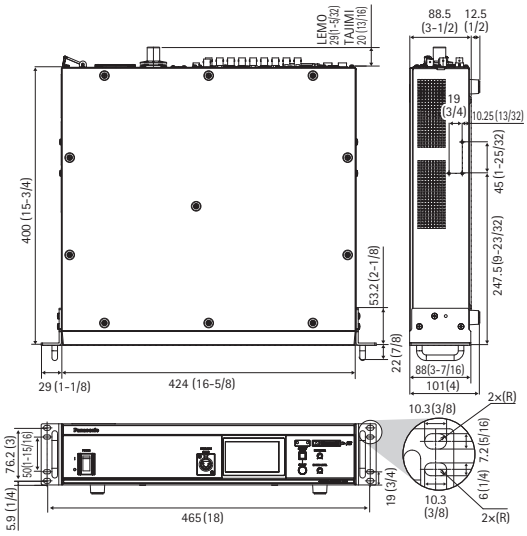
AK-UC4000GJ/UC4000GSJ



AK-HRP1010GJ

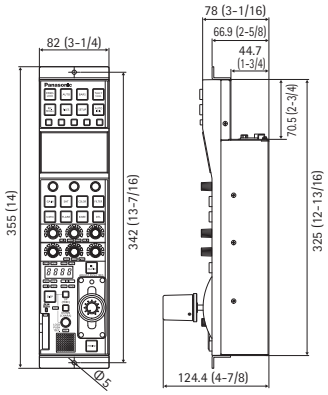


AK-UCU710PSJ/UCU710ESJ/UCU710PJ/UCU710EJ
AK-UCU700PSJ/UCU700ESJ/UCU700PJ/UCU700EJ

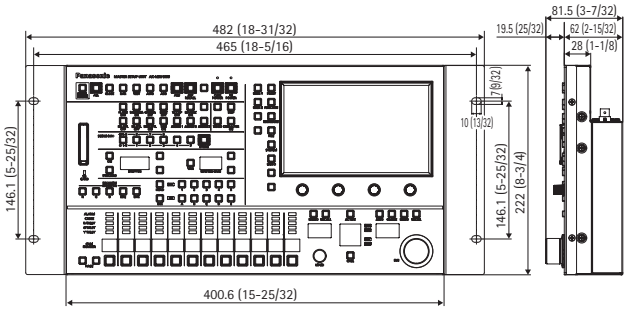


* Dimensions are for LEMO connector model.

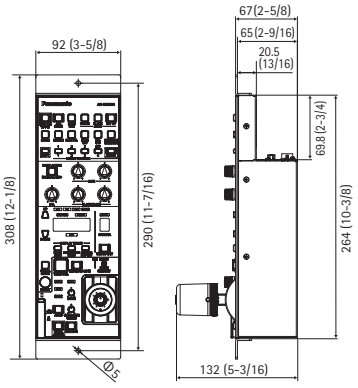
AK-HRP1015GJ



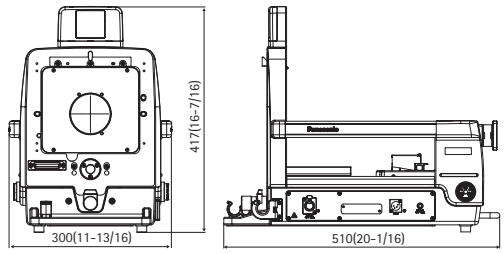
AK-MSU1000GJ



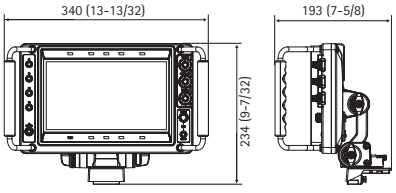
AK-HRP250GJ



AK-HBU500GJ



AK-HVF100GJ



AK-UC4000GJ/GSJ Rear View

■ Interface option for CCU

ST 2110 interface option for AK-UCU700PSJ/ESJ/PJ/EJ

SMPTE ST 2110 JPEG XS

AK-NP701G
ST 2110 option

ST 2110 option to be attached to the rear terminal of AK-UCU700*

- Compatible with SMPTE ST 2110, AMWA NMOS IS-04 and IS-05.
- Redundant connection via SFP+/SFP28 slots x 2 (25-FEC/25G/10G switching).
- Uncompressed 4K/FHD or JPEG XS with visually lossless image quality.

* Available as standard feature on the AK-UCU710.

Dante® audio interface option for AK-UCU700PSJ/ESJ/PJ/EJ

Dante®

AK-NP702G
Dante® audio option

Dante® audio option to be attached to the rear terminal of AK-UCU700*

- Compatible with the Dante® digital audio network system.
- Redundant connection via RJ45 slots x 2 (primary, secondary).
- Audio input/output such as camera microphone output (2ch) and return audio input from intercoms or digital mixers.

* Available as standard feature on the AK-UCU710.

Streaming I/O option for AK-UCU700PSJ/ESJ/PJ/EJ, AK-UCU710PSJ/ESJ/PJ/EJ

Coming Soon

High Bandwidth NDI® Compatible

SRT Compatible

AK-NP703G
Streaming option

Streaming I/O options such as NDI® and SRT to be attached to the rear terminal of AK-UCU700/UCU710

- Compatible with high bandwidth NDI® and SRT (Secure Reliable Transport).
- Return video signal/prompter signal (switching) input and output from camera main line/monitor/TRUNK (switching).
- RJ45 x 1

* Audinate®, the Audinate logo and Dante® are registered trademarks of Audinate Pty Ltd.
* NDI® is a new protocol developed by NewTek, Inc. that supports IP video production workflow. NDI® is a registered trademark of NewTek, Inc. in the United States and other countries.

Panasonic®

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

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