Panasonic

AK-UCX100
4K Studio Camera

Pursuing the Future of
Video Production with
Today's Creators

4K PROFESSIONAL HDR 12G SDI ST 2110 JPEG XS

Essential On-site Capabilities that Anticipate the Future

The AK-UCX100 4K Studio Camera delivers high-resolution video with excellent color reproduction for not only studio work and sports coverage, but also for today's increasingly sophisticated live event productions. The camera head supports 2 x 12G-SDI, SMPTE ST 2110, NDI® High Bandwidth and SRT for superior connectivity. In addition to meeting the demands for image quality in the field, Panasonic's new 4K Studio Camera is equipped to pave the way for futuristic video production in the coming IP era.

AK-UCX100
4K Studio Camera

POINT1
CCU-less Operation

The AK-UCX100 camera head can be operated without Camera Control Unit (CCU) because all video processing is in camera and necessary connections can be made directly to the camera head or through IP connectivity.
When operated without a CCU the AK-CFA100 Camera Fiber Adaptor can provide the same camera power as the CCU and pass fiber connectivity directly to the media networks.

POINT2
ST 2110 Standard Support

The camera is compatible with the SMPTE ST 2110 standard for high-quality, low-latency IP transmissions, and is also capable of 4K uncompressed and JPEG XS compressed transmissions. Furthermore, SMPTE ST 2022-7 compatibility enables redundant operation with or without a CCU.

POINT3
2000 TVL High Resolution

Equipped with a large 19.29-megapixel MOS sensor, the AK-UCX100 achieves a resolution of 2,000 TV lines (TVL), both horizontally and vertically, for exquisitely detailed reproduction.
In addition, the wide dynamic range and color gamut of HDR (HLG)/ BT. 2020 faithfully captures stage productions in full color for immersive video imagery.

Reliable Tag VLAN for CCU-less Operation

The Tag VLAN feature provides seamless functionality in CCU-less setups by splitting multiplexed video, audio and control signals into separate video/audio and control networks. This allows the camera head to be easily integrated into existing ST 2110 workflows.

Tag 1: Video + Audio
Tag 2: Control

VLAN 1: Video + Audio
VLAN 2: Control

High-bandwidth switch

Advanced Focus Assist Features Designed for Live Shooting

The AK-UCX100 is equipped with a high-precision focus indicator that visually guides focus points, along with a focus guide leveraging image-plane phase detection technology to display focus status using intuitive icons. These features enhance usability in live productions where every moment counts. Additionally, VF Shadow Boost enhances visibility by increasing the contrast of darker areas of the viewfinder.

Focus icon turns green when framed subject (background flower) is in focus.

Focus icon turns yellow when you shift the focus to another subject (foreground flowers), causing it to lose focus.

Focus icon turns green when accurate focus is achieved manually.

Moire Reduction

An HD optical low-pass filter* can be added to the FX filter slot. LED walls commonly used in today's live stage productions are prone to cause moire effect during shooting, so the HD optical low-pass filter enables the AK-UCX100 to minimize this effect and beautifully capture live performances incorporating LED walls. * Paid option

Without HD optical low-pass filter

With HD optical low-pass filter

FEATURES

· F10* (2000 lux) sensitivity with S/N ratio of 62 dB or higher * During Low Light Mode

· Simultaneous HDR/HLG (BT.2020) and SDR (BT.709) operation

· Built-in ND and FX filters

· Remote operation panel (ROP) for both AK-UCX100 and Panasonic PTZ cameras

· High-speed shooting up to 2x for 4K and 4x for HD

· Genlock input and reference output

· TSL5.0 tally input

· TRUNK (3G-SDI, LAN)

· 4K redundant connectivity via two SFP28 slots

Camera Fiber Adaptor for CCU-less Operation

AK-CFA100
Camera Fiber Adaptor

· Supplies power to a camera up to 2 km away via an optical composite cable
· Compact design with 2U half-size rack mount

Simultaneous 4K-HDR/HD-SDR operation, ST 2110 and IP standards including Dante®

AK-UCU710PSJ/ESJ (LEMO Connector Model)
AK-UCU710PJ/EJ (Tajimi Connector Model)
Camera Control Unit (CCU)
ST 2110 and Dante® I/Fs installed Model

AK-UCU700PSJ/ESJ (LEMO Connector Model)
AK-UCU700PJ/EJ (Tajimi Connector Model)
Camera Control Unit (CCU) Basic Model

· Uncompressed optical transmission up to approx. 2 km between camera and CCU[*1]
· Simultaneous HDR/SDR and HDR BT.2020/BT.709 outputs
· Up to 8 SDI outputs, including two 12G-SDI
· High-speed shooting up to 2x for 4K and 4x for HD

· 4K uncompressed and JPEG XS with ST 2110/NMOS option[*2]
· Redundant operation with two SFP28 connectors[*2]
· Dante®[*3] network audio connectivity and NDI® High Bandwidth[*4] and SRT[*4] streaming outputs

*1: When powered by CCU.
*2: Standard in AK-UCU710PSJ/ESJ/PJ/EJ. AK-UCU700PSJ/ESJ/PJ/EJ require AK-NP701G ST 2110 Option (sold separately). Optical communication modules not included. Third-party SFP28 modules must be purchased separately.
*3: Standard in AK-UCU710PSJ/ESJ/PJ/EJ. AK-UCU700PSJ/ESJ/PJ/EJ require AK-NP702G Dante® Audio Option (sold separately).
*4: Requires AK-NP703G Streaming Option (sold separately).

Accessories

As of May, 2025

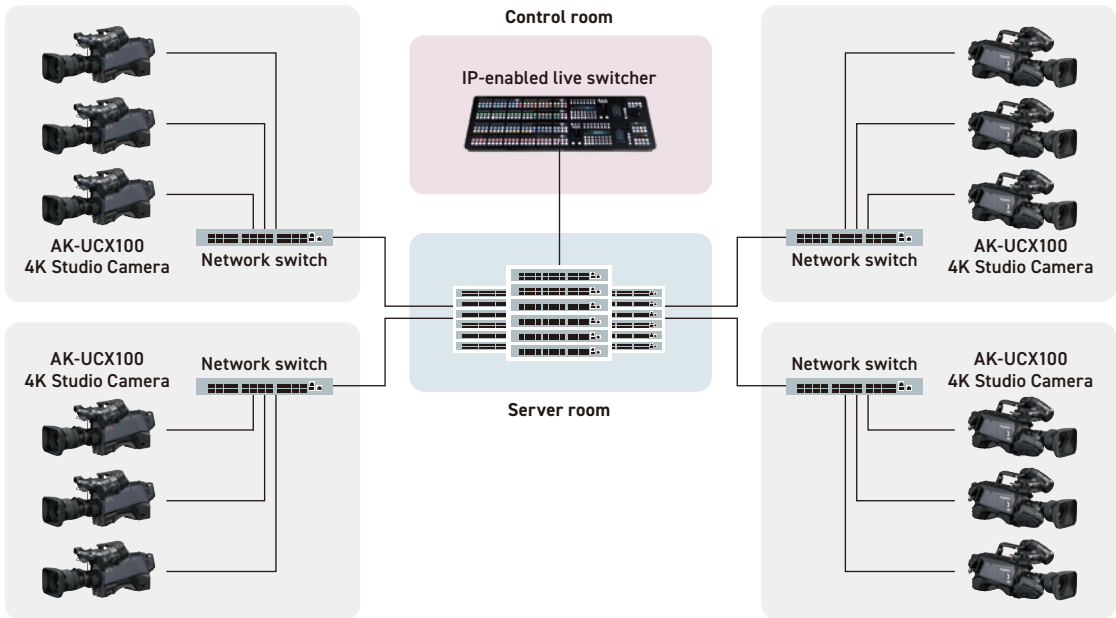| AK-HRP1010GJ AK-HRP1015GJ Remote Operation Panel (ROP)	AK-HVF100GJ 22.9cm [9inch] LCD Color Viewfinder	AK-HVF75GJ 17.8 cm (7 inches) LCD Color Viewfinder	AJ-CVF70GJ 1.78 cm (0.7 inches) Full HD OLED Color Viewfinder	AJ-CVF25GJ 87.6 mm (3.45 inches) Electronic HD Color Viewfinder
* The AK-UCX100 also supports AK-HRP1000GJ/ HRP1005GJ.				
AK-MSU1000GJ Master Setup Unit (MSU)	AK-HBU500 Camera Build-Up Unit	AG-MC200G XLR Microphone (monaural)	AJ-MH800G Microphone Holder	SHAN-TM700 Tripod Adaptor

SMPTE ST 2110 Support for IP Era

Designed for reliable IP-based workflows in both studio and live productions, the AK-UCX100 supports SMPTE ST 2110 for uncompressed 4K video transmission. It also incorporates JPEG XS, ensuring visually lossless video with low latency for smooth performance even in bandwidth-constrained environments.
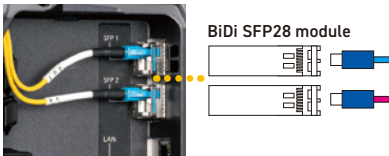
■ Centralized management of multiple studios with ST 2110 workflow
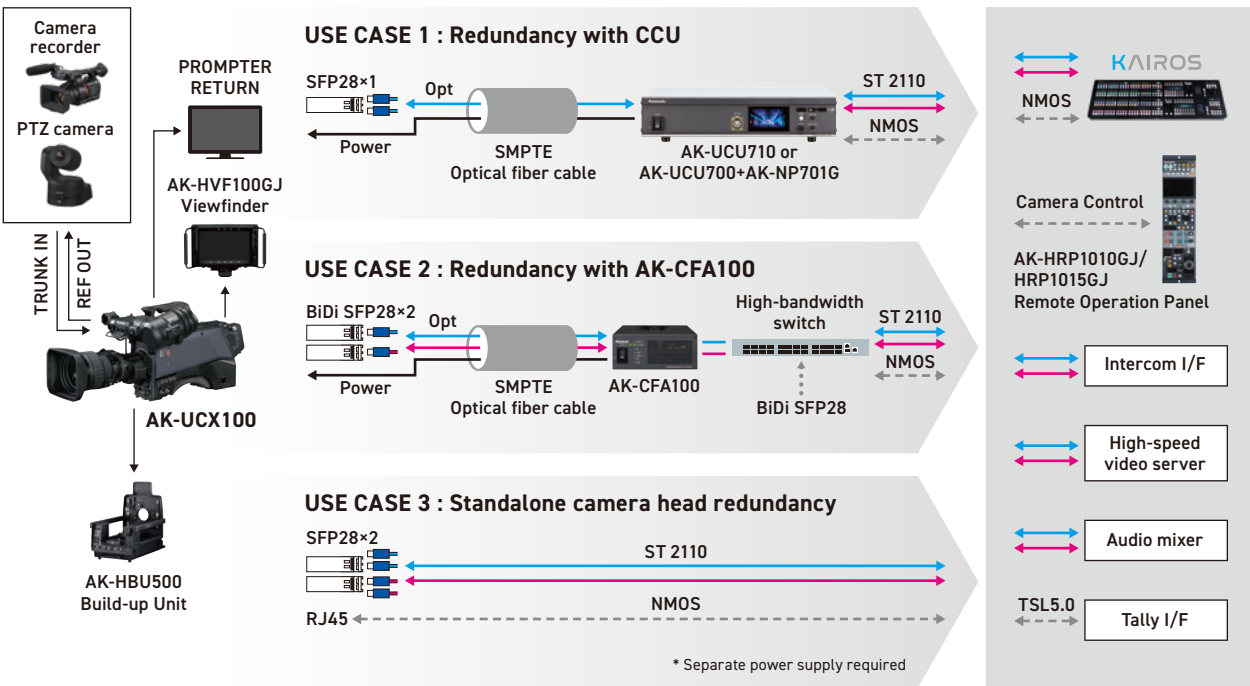

4K Redundant Connections

If redundant ST 2110 networks are deployed the AK-UCX100 enables up to 4K redundant connections through its dual SFP28 slots. Redundant operation can be achieved using a BiDi SFP28 module in conjunction with the AK-CFA100 Camera Fiber Adaptor. Alternatively, standalone redundant operation of the camera head is possible by using a standard SFP28 module for direct fiber cable connection.

* SFP28 module included as standard

BiDi SFP28 module

■ Redundancy operation configuration (examples)

Specifications

AK-UCX100

General

Power Supply	DC 12 V (when using an external power supply) AC 240 V, 50 Hz/60 Hz (AK-UCU710PSJ/ESJ/PJ/EJ, AK-UCU700PSJ/ESJ/PJ/EJ, AK-CFA100 in connected)
Power Consumption	119 W (maximum, when connecting to an external 12 V and including supply to an externally connected devices) 360 W (maximum, when AK-UCU710PSJ/ESJ/PJ/EJ, AK-UCU700PSJ/ESJ/PJ/EJ, AK-CFA100 is connected and including supply to an externally connected devices)
Ambient Operating Temperature	-10 °C to 45 °C (14 °F to 113 °F) (Preheating required under a temperture 0 °C (32 °F) or below)
Ambient Operating Humidity	85% or less (relative humidity)
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Weight	Approx. 4.55 kg (10.03 lbs.) (body only, excluding the accessories)
Dimensions (W x H x D)	Body only 157 mm x 267 mm x 371.5 mm (6-3/16 inches x 10-17/32 inches x 14-21/32 inches) (excluding protrusions)

Camera unit

Pickup Device	19.29 million pixels, MOS Sensor
Optical Filter	ND: CLEAR, 1/2, 1/4, 1/16, 1/64 FX: CLEAR, CLEAR (OP*), CROSS, Diffusion, CAP * Option: HD Low Pass filter
Lens Mount	2/3-type bayonet
Sensitivity	Two shooting modes [LOW LIGHT]: 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%
S/N	62 dB or above
Horizontal Resolution	4K: 2000 TV lines or above (center) HD: 1000 TV lines or above (center)
Gain Switching	-6, -3, 0, 3, 6, 9, 12, 15, 18
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
System Format	3840 x 2160/59.94p/50p/29.97p/25p/23.98p 1920 x 1080/59.94p/50p/29.97p/25p/23.98p

Video Input/Output

<SDI OUT 1> Terminal	BNC x 1 12G/6G/3G/1.5G-SDI: 0.8 V[p-p], 75 Ω
<SDI OUT 2> Terminal	BNC x 1 12G/6G/3G/1.5G-SDI: 0.8 V[p-p], 75 Ω
<TRUNK IN> Terminal	BNC x 1 3G/1.5G-SDI: 0.8 V[p-p], 75 Ω
<G/L IN/REF OUT> Terminal	BNC x 1 <G/L IN>: Tri-level SYNC pr black burst <REF OUT>: black signal without burst

Audio Input/Output

<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, -20 dBu menu selection available
<MIC 2> Terminal	XLR x 1, 3-pin, female <LINE> / <MIC> / <+48 V> switchable <LINE>: 0 dBu, +4 dBu menu selection available <MIC>: -60 dBu, -40 dBu, -20 dBu menu selection available
<MIC> Terminal (front)	XLR x 1, 3-pin, female Switchable with <MIC 1> terminal

Intercom

<INTERCOM 1> Terminal	XLR x 1, 5-pin, female
<INTERCOM 2> Terminal	XLR x 1, 5-pin, female
<EARPHONE> Terminal	Stereo mini jack x 1, 3-pin

Other Input/Output

<OPT FIBER> Terminal	Optical composite connector x 1
<SFP 1> Terminal	SFP28 x 1
<SFP 2> Terminal	SFP28 x 1
<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
<DC OUT 12 V 2.5 A> Terminal	2-pin x 1
<LAN> Terminal	RJ-45 x 1
<USB3.0 HOST> Terminal	Type C connector (USB Power Delivery*)
Build-up Terminal	20-pin x 1

* Support via firmware update planned

AK-UCX100 Rear View

AK-CFA100 Rear View

AK-UCU700 Series Rear View (When all options are installed)

* NDI® is a video connectivity technology and is registered as a trademark by Vizrt NDI AB in the United States and other countries. * Dante® is a registered trademark of Audinate Pty Ltd.

Panasonic®

For more information, please visit Panasonic web site

*Specifications are subject to change without notice.

SP-C-UCX100ENU4