

Ikegami

4K/HD PORTABLE
CAMERA SYSTEM

UHK-X700

Reach for Reality



UNICAM XE **4K**

REACH FOR REALITY

4K/HD PORTABLE
CAMERA SYSTEM

UHK-X700

The new UHK-X700 4K/HD Portable Camera System marks a significant leap forward in reaching for reality. A newly developed CMOS sensor combined with the latest digital signal processing technology from Ikegami brings even greater naturalness to the uncompromising 4K image quality of the UHK-X700.





EXPRESSION

Flawless Image, Unbridled Beauty

Photo by JRA



Natural Image Expression

A 3-CMOS optical system using a newly developed 2/3-inch CMOS sensor boasts an S/N of 62dB and a sensitivity of F11 (2160/50p)/F10 (2160/59.94p) in 4K. The high dynamic range of the sensor produces high-quality images with excellent color reproduction. The CMOS sensor incorporates a global shutter pixel architecture, enabling the camera to capture natural images even under challenging situations. Still frame replay of fast-moving objects is free from geometric distortion. And there are no flash bands when the camera is shooting under strobe lights or flashes from still cameras.

Rolling Shutter CMOS



Geometric Distortion

Global Shutter CMOS



No Rolling Shutter Artifacts with Global Shutter



Flash-Band



Multi Standard

In addition to 4K 2160p, the UHK-X700 supports various HDTV video formats such as 1080p, 1080i, and 720p.

| | | |
|----|-----------|---------------------------------------|
| 4K | 3840x2160 | 59.94p, 50p |
| HD | 1920x1080 | 59.94p, 50p |
| | 1920x1080 | 59.94i, 50i, 29.97p, 25p, 24p, 23.98p |
| | 1280x720 | 59.94p, 50p |

HDR and Wide Color Gamut

HDR is supported by the HLG (Hybrid Log Gamma) system as standard. Wide color gamut shooting conforms to ITU-R BT.2020, enabling natural and rich color expression. The camera is equipped with customizable preset gamma curves and preset matrices for BT.2020 and BT.709 color reproduction, enabling optimal adjustment of the camera image to match the requirement of the current production.

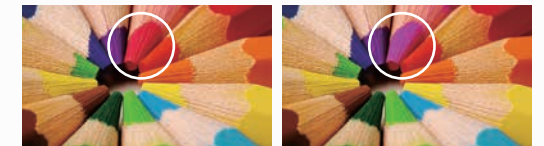


Standard Dynamic Range

High Dynamic Range

16-axis Color Corrector

This function independently adjusts the hue and saturation of specific colors. It permits subjective manipulation of one color without affecting the other colors in the scene.



FUNCTIONALITY

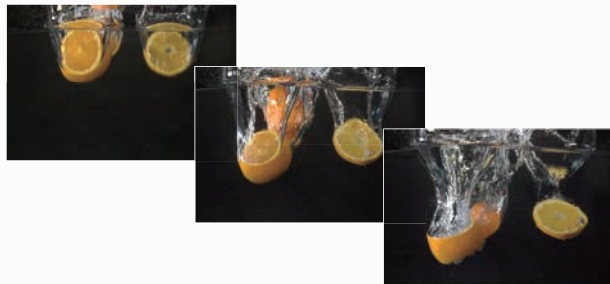
Pursuit of Functionality and Operability



High Frame Rate Capturing (Option)

With the HFR option, up to 2x speed in 4K and up to 8x speed in HD* is supported. This is effective when shooting fast-moving subjects such as sports.

* with BSX-100



4K Video Output Direct from the Camera Head

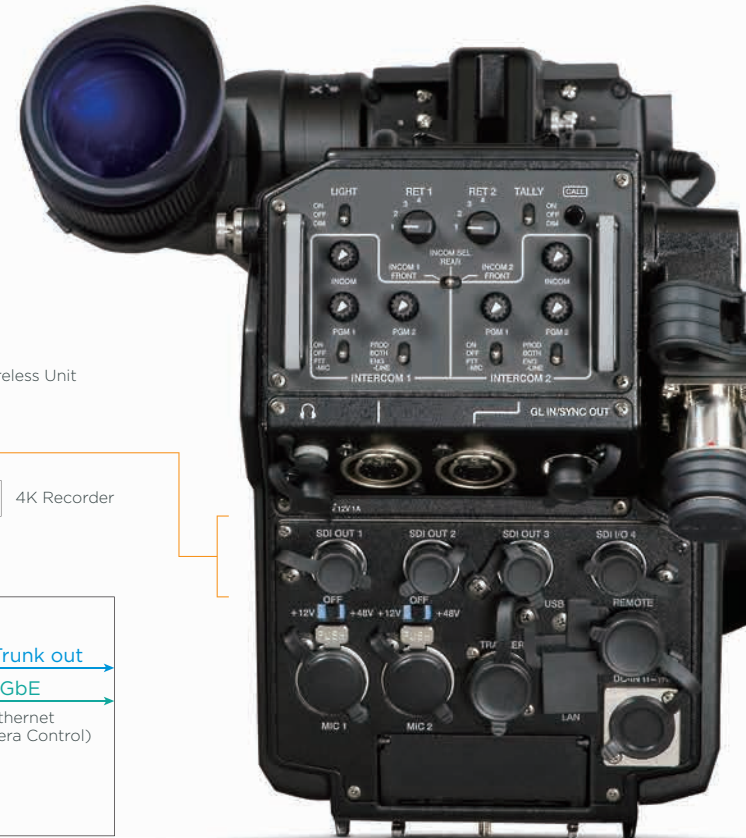
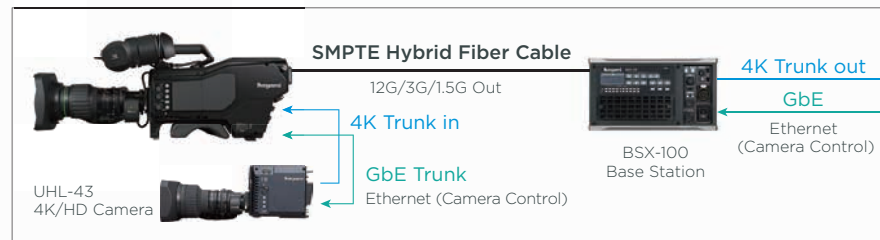
The integrated video processor enables self-contained operation in 4K. With 4K 12G-SDI and 3G/HD-SDI output, the UHK-X700 can utilize a wide range of video devices as accessories to enhance its operational capabilities.

Example of System: Camera Head



4K 12G-SDI Video Trunk (Option)

Utilizing a wide transmission bandwidth, the bi-directional 12G-SDI trunk line is available between the UHK-X700 and the BSX-100. Besides a main 4K image, the 4K Video Trunk (UHK-X700 to BSX-100, asynchronous signal) and the 4K QTV (BSX-100 to UHK-X700) can be transmitted at the same time on a Hybrid Fiber Optic cable.



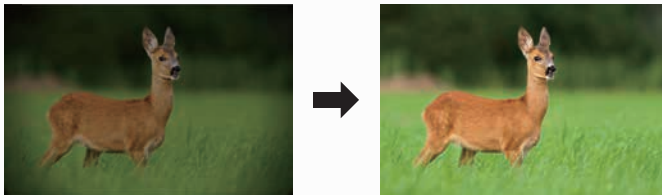


Remote Backfocus Adjustment

The OCP-300 can remotely adjust the backfocus of a zoom lens. The adjustment is accurate and easy with a large display for the video engineer, even when the camera head is located in an environment where it is hard to clearly see the VF or reach the backfocus on the lens.

* with supported lenses

Optical Vignetting Correction (OVC)



Automatic electronic compensation of F-drop and vignetting.

* with supported lenses

Various Viewfinder Functions

■ Focus Assist and other viewfinder functions

Contour extracted from the 4K image is displayed in the viewfinder to assist precise focusing. The size and color of the focusing area, and the color of the indicator, can be optimized by menu settings.



■ Function Reminder (VFL201D)

Don't be afraid of the assignable function switches. A gentle touch to the control lever will display the name of the assigned function on the VF screen.



■ Status Information on VF Screen:

- Markers
- Magnifying ratio of Digital-Extender
- Zoom and Focus Position
- Filter, AWB Memory, Etc.
- Optical Communication Status

Ergonomic Design

As the UHK-X700 is a portable camera, the weight distribution ratio has been totally refined from its predecessor model. A lower center of gravity and a well-balanced body help to reduce operator fatigue.



Wide adjustable range of shoulder pad



Shoulder pad is placed 30mm forward of the previous model



Improved field-of-view over the camera

ICCP • Ethernet

The system supports not only Ikegami's conventional one-by-one ICCP control, but also an Ethernet based control system, allowing customers to choose the camera control system based on their needs.

GbE Ethernet Trunk

An Ethernet data trunk line between the UHK-X700 and the base station supports the vast capacity of 1 Gbps. Hybrid Fiber Optic cable can be used as a part of an installation of the IP infrastructure.

BSX-100

4K / HD BASE STATION

The BSX-100 is a base station that enhances the functions, performance, and operational capabilities of the UHK-X700. It is compact and light weight, with 3U height and half-rack width. Supporting both 4K and HD formats, it is ideal for simulcast production and smooth transition from HD to 4K environments.



Front



Rear

Compatible with 4K & HD Cameras (Option)

The BSX-100 can support both the UHK-X700 and "Unicam HD" HDTV camera models, HDK-99 and HDK-73 (4K/HD Multi type).

4K & HD Simulcast

The BSX-100 has a total of 11 outputs as standard, including 4K output via 12G-SDI and 3G-SDI/HD-SDI output.

Maximum Transmission Distance

The BSX-100 extends the UHK-X700 up to 3.5 km (11,483 ft.) with a Hybrid Fiber Optic cable. In the Single Fiber mode, the cable length reaches up to 10 km (32,808 ft.).

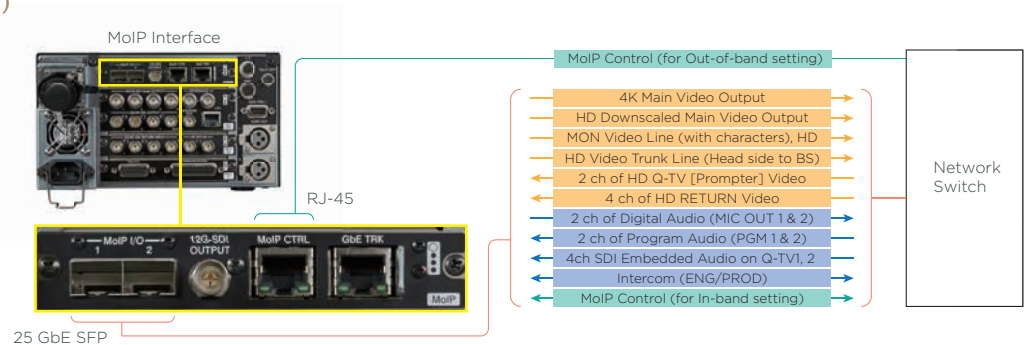
*Depends on operating conditions.

Compact and Light Weight

3U height and half-rack width.

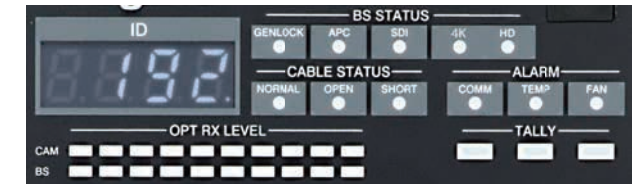
MoIP Interface (Option)

By replacing the standard 12G-SDI output module, an optional MoIP interface compliant with SMPTE ST2110 is supported. A dedicated Ethernet port compliant with JT-NM TR-1001 is provided for out-of-band MoIP control.



Front Information Display

LED indicators can monitor the communication status between the camera head and the BS as well as the operational status. In the 7-segment LED display, the status of the device can be checked without entering the OSD menu, including system format, IP address (divided into octets), software version, and error information.



ACCESSORIES

Viewfinder



VFL701D
7-inch Full HD LCD Color
Viewfinder



VFL201D
2-inch LCD Color
Viewfinder

Control Panel



MCP-300
Master Control Panel



OCP-300
Operation Control Panel



VCP
Virtual Control Panel



VMP
Virtual Master Control Panel

System Expander Tripod Plate

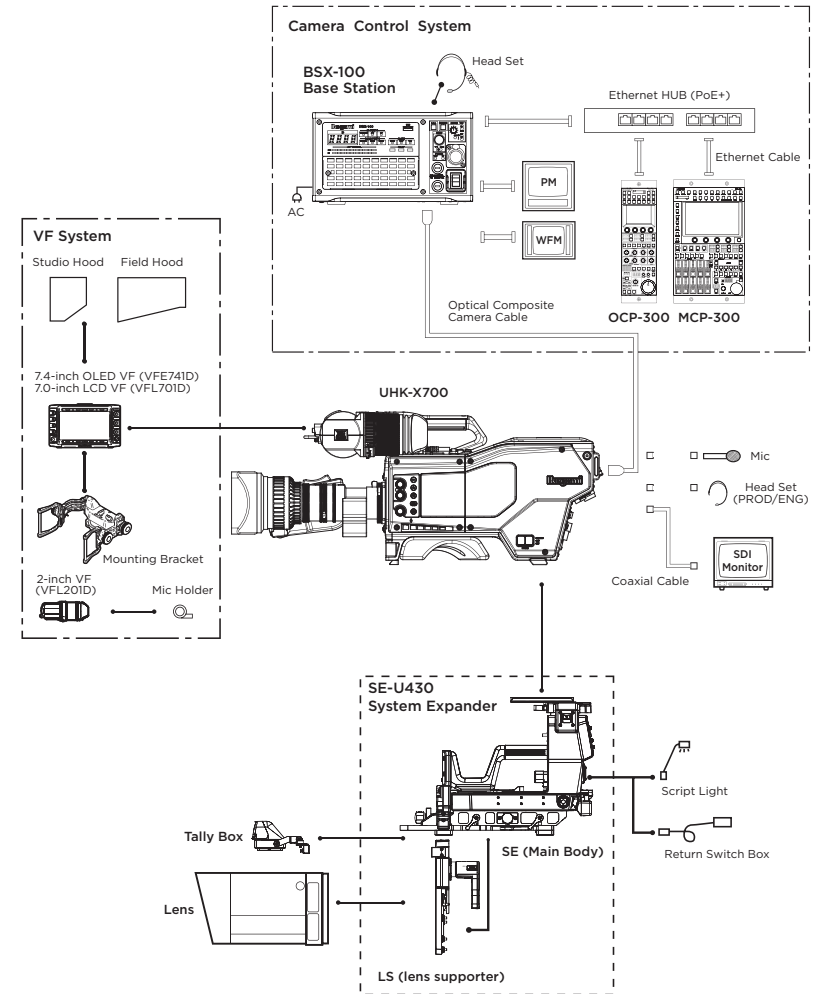


SE-U430
System Expander



T-430
Tripod Plate

SYSTEM DIAGRAM



Specifications

UHK-X700

| Camera Head | | | | | | |
|--|---|--------|--------|--------|-------|--------|
| Image Sensor | 2/3-inch CMOS Sensor with Global Shutter Architecture | | | | | |
| Optical System | 2/3-inch 3-sensor, RGB Prism | | | | | |
| Lens Mount | B4 | | | | | |
| Effective Resolution | 3840 (H) x 2160 (V) | | | | | |
| Optical Filters (Servo Controlled) | 1 | 2 | 3 | 4 | 5 | |
| | ND | CLR | 1/4 | 1/8 | 1/16 | 1/64 |
| | CC | 3200 K | 4300 K | 6300 K | Cross | Option |
| S/N Ratio | 4K: 62 dB or better HD: 62 dB or better | | | | | |
| Limiting Resolution | 4K: 2000 TVL or more HD: 1000 TVL or more | | | | | |
| Sensitivity (2000 lux, 89.9% Reflection) | 4K: F10 / 59.94p F11 / 50p HD: F10 / 59.94p F11 / 50p | | | | | |
| Gain-up | -6, -3, 0, +3, +6, +9, +12 dB | | | | | |
| Gamma Curves | OFF, 0.35, 0.4, 0.45, HLG, Custom 1-5 | | | | | |
| Electronic Shutter | 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000 and Variable Shutter | | | | | |

| General Specifications | |
|-----------------------------------|---|
| Input Voltage | +11 to 17 V DC |
| Ambient Temperature | Operation: -20 °C to +45 °C (-4 °F to +113 °F) Storage: -30 °C to +60 °C (-22 °F to +140 °F) |
| Operation Humidity | 30 % to 90 % *non condensation |
| Dimensions (Excluding protrusion) | W 148.5 x H 243 x D 340 mm W 5.9 x H 9.6 x D 13.4 inches |
| Weight (Camera Head) | Approx. 5 kg Approx. 11 lb |
| Power Consumption (Camera Head) | 85W Max. in self-contained operation |

| Video I/O (Rear Panel) | Designation | | | |
|--------------------------|------------------|--------|----------------------------------|--|
| Video Out | SDI OUT 1-3 | 3x BNC | 12G / 3G / HD SDI | SMPTE ST2082, SMPTE 424 / 425M (Lv-A / B) SMPTE 372M, SMPTE292M |
| Video In / Out | SDI I/O 4 | 1x BNC | 12G / 3G / HD SDI | SMPTE ST2082, SMPTE 424 / 425M (Lv-A / B) SMPTE 372M, SMPTE292M |
| Reference Video In / Out | GL IN / SYNC OUT | 1x BNC | In: Tri-Sync BB Out: Tri-Sync | SMPTE ST274, 0.6 V p-p, 75 Ω NTSC 0.286 V p-p, 75 Ω / PAL 0.3 V p-p, 75 Ω SMPTE ST274, 0.6 V p-p, 75 Ω |

| I/O (Top Handle) | Designation | | | |
|------------------|-------------|--------|-------------|--|
| Video Out | SDI OUT | 1x BNC | 3G / HD SDI | SMPTE 424 / 425M (Lv-A / B) SMPTE 372M, SMPTE 292M |

| Other I/O | Designation | | | |
|---------------------------|-------------|--------------|------------------------------|---------------------|
| Hybrid Fiber Camera Cable | - | LEMO 3K Type | | SMPTE 304M |
| Microphone | MIC 1 | XLR-3F | Input Level: | -60 to +4 dBu |
| | MIC 2 | XLR-3F | Phantom Power | Off / +12 V / +48 V |
| Audio Out | PGM | XLR-3 | Option | |
| Tracker | TRACKER | 20-pin | for an optional Breakout Box | |
| USB 2.0 | USB | 1x Type-A | for USB Stick | |
| Ethernet Trunk | LAN | 1x RJ-45 | | |
| System Expander | - | | for SE-U430 | |

Design and specifications are subject to change without notice

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BSX-100

| Video I/O | Designation | | |
|------------|---------------------|---|--|
| Video In | RET | 4x BNC | 4-input or 2-input with Active Loop-through |
| | HD QTV | 2x BNC | 2-input or 1-input with Active Loop-through |
| | 4K QTV | 1x BNC | 12G-SDI, OUT 3-4 of 12G OUT * |
| | MoIP (RET, QTV) | 2x SFP | Option, 10G (HD) / 25G (4K) SMPTE ST2110 Compliant |
| Video Out | OUT 1-4 | 4x BNC | 4K 3G-Quad Link (2SI) or HD |
| | OUT 5-8 | 4x BNC | HD, OUT 8 is for MON Video |
| | 12G OUT 1-4 | 4x BNC | 4K 12G-SDI or 3G-Quad Link (2SI) |
| | MoIP (4K / HD Main) | 2x SFP | Option, 10G (HD) / 25G (4K) SMPTE ST2110 Compliant |
| | HD TRUNK | 1x BNC | HD-SDI, OUT 5-7 |
| | 4K TRUNK | 1x BNC | 12G-SDI, OUT 3-4 of 12G OUT * |
| | REFERENCE | 2x BNC | Tri Level Sync or BB, Active Loop-through |
| SYNC / AES | 1x BNC | Tri Level Sync or Digital Audio out (AES / EBU) * Configurable by menu setting | |

| Other I/O | Designation | | |
|----------------------------|---------------|--------------|--------------------------------|
| Hybrid Fiber Camera Cable | - | LEMO 3K Type | SMPTE 304M |
| System I/F | COMMUNICATION | D-Sub 25-pin | Intercom, PGM Audio & Tally In |
| Mic Gain Remote | REMOTE | D-Sub 15-pin | Enable / Fine Gain / Step Gain |
| Data Trunk CH-1 | DATA TRK-1 | D-Sub 9-pin | RS-422 |
| Data Trunk CH-2 | IF | 12-pin | RS-422, Preview, etc. |
| Ethernet Trunk | GbE TRK | 1x RJ-45 | Gigabit Ethernet Trunk |
| Tally Out | TALLY OUT | 5-pin | |
| Audio Out | AUDIO OUT-1 | XLR-3M | Analog Microphone Output |
| | AUDIO OUT-2 | XLR-3M | Analog Microphone Output |
| Command Control | OCF | 8-pin | CP Connector |
| | LAN | 1x RJ-45 | ICCP on Ethernet |
| NMOS Control (MoIP Option) | MoIP CTRL | 1x RJ-45 | JT-NM TR-1001 |

| General Specifications | |
|-----------------------------------|---|
| Input Voltage | 100 to 240 V AC ±10 % |
| Power Consumption | Max. 100 VA (4K-STD type, BS only) |
| Ambient Temperature | Operation: 0 °C to +40 °C (32 °F to +104 °F) Storage: -30 °C to +60 °C (-22 °F to +140 °F) |
| Operation Humidity | 30 % to 90 % *non condensation |
| Dimensions (Excluding protrusion) | W 216 x H 123.6 x D 417.2 mm W 8.5 x H 4.9 x D 16.4 inches |
| Weight | Approx. 7 kg / Approx. 15.5 lb |



U462B233-1B

