

Specifications

Camera Head SK-UHD7000-S11	
Model name	SK-UHD7000-S11 (59.94Hz), SK-UHD7000E-S11 (50Hz)
Image sensor	3-chips, 2/3-inch, CMOS image sensor with global shutter Effective pixels : 3,840 (H) x 2,160 (V)
Prism	F1.4
Optical Filter	1x motorized filter wheel ND (CLEAR, 1/4 ND, 1/16 ND, 1/64 ND)
ECC Filter	3200K, 4300K, 5600K, 7500K, FAW
Lens mount	B4 Bayonet
Horizontal resolution	4K : 2000 TVL (At center, 5% or higher modulation depth) HD: 1000 TVL (At center, 5% or higher modulation depth)
SNR	HD: 62dB typ. Mod. Dept. HD : 60% at 800TVL (27MHz)
Sensitivity (2000 lx, 3200 K, 89.9% reflectance)	4K : F10/59.94p, F11/50p HD: F10/59.94p, F11/50p
Minimum illumination	2 lx (at F1.4, GAIN: +24 dB)
Vertical Smear	No smear
Gain selection	L (low) -9/-6/-3/0 dB M (medium) 0/+3/+6/+9/+12/+15/+18/+21/ dB H (high) +3/+6/+9/+12/+15/+18/+21/+24 dB
Shutter	Preset : 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 second (59.94Hz) 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 second (50Hz) Lock scan : 1/60.53 to 1/1981 (59.94Hz) 1/50.39 to 1/2002 (50Hz) AES mode : Automatic video level control by shutter speed.
Geometric distortion	Negligible (excluding lens characteristics)
Registration Overall	0.01 % (excluding lens characteristics)
Dimensions	140(W) x 191(H) x 365(D) mm
Power supply voltage	DC 12 V (10.5 V to 17 V)
Temperature range	Performance maintenance -20 °C to +45 °C, -4 °F to +113 °F Operation -20 °C to +50 °C, -4 °F to +120 °F Storage -20 °C to +60 °C, -4 °F to +140 °F
Power Consumption	Approx. 70 W (without VF and lens)
MASS	Approx. 4.6 kg (without VF and lens)
Input & Output	MON OUT: BNC x1, HD/SD SDI with Character SDI OUT1/2: BNC x2, 12G/6G/3G/HD SDI MAIN out (12G/6G/3G/HD SDI), HD return out (HD SDI), or HD prompter out (HD SDI) SDI IN/OUT: BNC x1 MAIN out (3G/HD SDI), HD trunk in (3G/HD SDI, only when HD mode), or HD return in (HD SDI, only when standalone) PROMPT/GL: BNC x1 Analog prompter out (VBS, only when combined with CCU) Genlock in (Black-Burst/Tri-level, only when standalone) REMOTE: 4-pin Multi connector for remote control panel VF: 20-pin, LENS: 12-pin, MIC: 3-pin XLR, DC5V OUT: USB Type-A (DC5V/1.0Amax), Ethernet TRUNK: RJ-45, EARPHONE: φ3.5 Monaural Mini jack, CCU: SMPTE304M-SMPTE311M-type FOC (LEMO), AC230V OUT: 5-pin, INTERCOM: 5-pin XLR x2, MIC: 3-pin XLR x2, SCRIPT: 5-pin, RET CONT: 6-pin, SA connector: 15pin for Studio Adaptor (SA-1100-S1), DC IN: 4-pin XLR (DC12V)
Optional functions	· HFR Capturing at 3x and 4x HD (1080p/1080i) · SMPTE ST 2110 output from CCU · SNMP Agent software for RCP (factory change to RCP)

Camera Control Unit CU-UHD7000-S11		
Model name	CU-UHD7000-S11 (59.94Hz), CU-UHD7000E-S11 (50Hz)	
Power supply voltage	AC100~240V, 47~63Hz with auto-sensing	
Power consumption	300W approx. (AC operation, including SK-UHD7000-S11, VF-L20HD, and AUX POWER OUT 100VA)	
Operating temperature	0 °C to 40 °C (+32 °F to +104 °F)	
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)	
Dimensions	432(W) x 88(H) x 419(D) mm	
Mass	12 kg approx.	
Maximum Cable length	1km (with utility power 100VA), 2km (without utility power), 10km (Single mode fiber)	

Connectors (SDI INPUT/OUTPUT)		
INTERCOM (HEAD SET)	Talk: -60dBm Receive: 0dBu Max+15dB	XLR-5pin (female)
COMMUNICATION - INTERCOM	0dBm/600Ω (4Wire) or 0dBu or -15dBu/200Ω (2Wire) Clear-com, RTS complied	D-sub 25p
- PGM	0dBm/600Ω	
- R/G TALLY	DC voltage or contact supply	
REMOTE 1/2/3	REMOTE 1/2: 1.5Vp-p(4pin), REMOTE 3: RJ-45	
Ethernet TRUNK	10Mbps	RJ-45
MIC REMOTE - MIC GAIN CTL IN - TALLY OUT	0/5V Open collector	D-sub 15p
GENLOCK IN	Black burst 0.45Vp-p/75Ω or HD Tri-level sync 0.6Vp-p/75Ω (loop through)	BNC (x2)
MIC OUT 1/2	0dBm/600Ω	XLR-3pin
TALLY OUT	Red / Green : Contact or DC supply (24V / 10mA)	D-sub 9p
WFM CONTROL	WFM CTL0 -7 0/5V	D-sub 15p
12G SDI OUT (1/2/3/4)	12G / 6G / 3G / HD SDI (3X/4x1080p/1080i/720p HFR option), SMPTE ST 2082-1, SMPTE ST 2081-1, SMPTE 424/425M Lv-A/B, SMPTE 292M	BNC (x4)
SDI OUT (1/2/3/4/5/6)	3G / HD / SD SDI (3X/4x1080p/1080i/720p HFR option), SMPTE 424/425M Lv-A/B, SMPTE 292M, SMPTE 259M-C	BNC (x6)
MOIP-1/2 IN/OUT ST-2110*	4K (12G/6G) or 2K (3G/1.5G) or 3xHFR or 4xHFR	
PIX / WFM OUT	3G / HD / SD SDI, SMPTE 424/425M Lv-A, SMPTE 292M, SMPTE 259M-C	BNC (x2)
SDI I/O (1/2) (MAIN out or RET.B in)	3G / HD / SD SDI, SMPTE 424/425M Lv-A, SMPTE 292M, SMPTE 259M-C	BNC (x2)
RET IN (1/2/3/4)	3G / HD / SD SDI, SMPTE 424/425M Lv-A,	BNC (x4)
RET.B IN (1/2)	SMPTE 292M, SMPTE 259M-C	BNC (x2)
PROMPT IN	VS or VBS 1Vp-p/75Ω (loop through)	BNC (x2)

* if CU7K board Installed

2-inch Color Viewfinder VF-L20HD	
Display device	2-inch color TFT LCD (16:9)
Number of pixels	960(H) x 540(V)
Functions	Bright, Contrast, Peaking, knobs VR front-facing Diopter
Internal tally	Red / Green
Tally switch	Tally switch OFF, NORMAL, HIGH
Power consumption	Approx. 5.0 W (at Heater-OFF), 6.5 W (at Heater -ON)
Operating temperature	-20 to +45°C
Brightness	220 cd/m2 (typ.)

7-inch LCD Full HD Viewfinder HDF-700H-S1/S2	
Panel type/size/aspect ratio	TFT LCD / 7-inch / 16:9
Picture resolution	1920 (H) x 1080 (V)
Viewing angle	178°(H), 178°(V)
Brightness/contrast/Color reproduction	450 cd/m2, Contrast:1.100:1, Color 16.7M
Function	Brightness, Contrast, Peaking, Focus Assist, Marker, Waveform, Vector Scope
TALLY	Red/Green
Weight/Power consumption	app.1Kg / app.12W
Operation temperature	-20°C to +45°C
EXTERNAL SDI IN	BNC x 1
Viewfinder adaptors option	HK700 / HK900 / HK1000 / AT-951-S2

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CAUTION : To ensure safe operation, please read the instruction manual before using this product.

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KOKUSAI DENKI

Newest 2/3inch GS-CMOS Sensor 4K/HD Camera

SK-UHD7000-S11 CU-UHD7000-S11

4K UHD

HDR
HIGH DYNAMIC RANGE

4K UHD : Optional License up-grade from HD





Wide Space to Hold.

DC Power connection and operation switch on Left- Back side.



Debut SK-UHD7000-S11

The camera embodies state of the art like evolving creature.

- > Global Shutter and Native Upgradable 4K Production Camera.
- > Live -Field and Studio Broadcasting.
- > UHD/HD,HDR/ SDR, BT-2020 / BT-709 Simultaneous Operation.
- > High Frame Rate and HD/UHD up-grade license by option.
- > MOIP connection by CCU MOIP Option.



Newest GS-CMOS Full Native 4K UHD

Our new, premium 4K flagship broadcast camera, the SK-UHD7000-S11 is our most sophisticated broadcast camera designed to support 4K UHD/HD/HDR.

KOKUSAI DENKI's SK-UHD7000-S11 Newly designed Full 4K. Employing a new generation of 3 Global Shutter CMOS RGB sensors with over 8 million pixels each, the SK-UHD7000-S11 provides outstanding, sensitivity, color resolution, contrast and ultra-low-noise video. The optical format is the television industry standard 2/3-inch B4 Bayonet mount.

This has a wider spectral bandpass to allow the achievement of ITU-R BT.2020 color gamut specifications.



Back lit and Convenient Layout.

Operational Switch efficiently arranged.



Evolving Feature

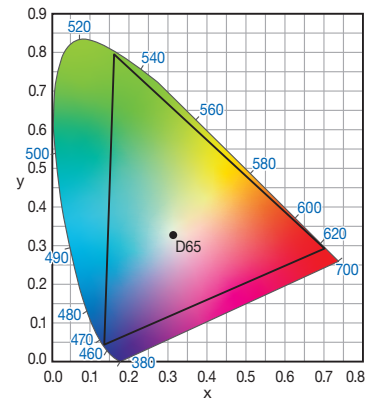
New Design Concept

- > One piece Body.
Ergonomic shape and balance are provided with a larger carrying handle, Low center of gravity. Viewfinder return and intercom controls are conveniently placed on the carrying handle.
- > 70W Low power consumption by adopting the latest device. Adoption of high efficiency power supply and high efficiency heat dissipation structure.
- > UHD and multi-format HDTV SDI video with embedded audio are output directly from the camera head to support jib crane, Spidercam® and Steadicam® applications.
- > Independent and unswitched Trunk RJ-45 LAN connector provided for robotic interface and other command-through application requirements.

Wide Color Gamut and High Dynamic Range

The new optical system in the SK-UHD7000-S11 is comprised of HDR Global Shutter CMOS sensors and a wide-bandwidth color spectrum prism that provides outstanding Wide Color Gamut and HDR outputs.(HLG & PQ & S-LOG3)

Live program productions are now possible with simultaneous HDR/SDR workflow. While operating in HDR mode the SK-UHD7000-S11 camera system can switch the UHD and HDTV outputs between ITU-R BT-709 and ITU-R BT.2020 wide color gamut. The SDR video has separate shading controls from the HDR output provided via user menus and on the remote-control panel.



For High End Full 4K Studio/Field Production

- New developed signal processing technology using high speed and large capacity FPGA enable High End Full 4K transmission.
- > KOKUSAI DENKI's SK-UHD7000-S11 achieves Native 2000TVL 4K and 1000TVL HD-SDI with 60% Modulation depth.
 - > Low-noise circuit technology provides a high signal to noise ratio. Even at high gain, clear images are obtained.
 - > Advanced image handling and adjustment functions.
 - > Extensive User-Friendly Features.

Upgrade Software License

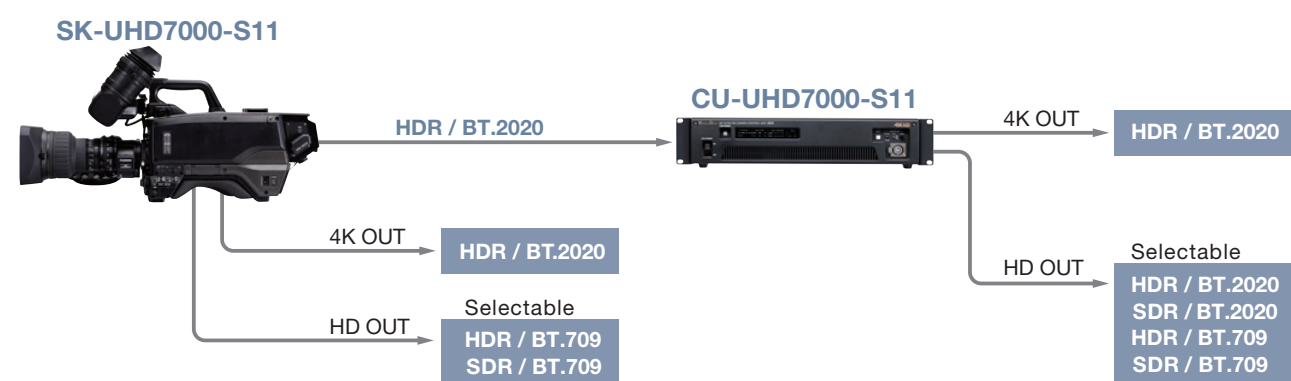
4K and High Frame Rate(HFR) function can be enabled by Permanent or Days-Limited license.

4K/2K Wireless Camera System

SK-UHD7000-S11 with integrated RF system with Mesh Intercom option



Output Variation



Camera Control System

CU-UHD7000-S11 Camera Control Unit

CU-UHD7000-S11 has 12G/6G-SDI outputs for 4K(3840x2160) video, and 3G/HD/SD-SDI outputs for converted HD/SD video. External 3G/HD/SD-SDI return video can be displayed on camera viewfinder through built-in cross-converted and frame-synchronizer.

CU-UHD7000-S11 has independent 4K and HD processor to output HDR/SDR simultaneously and control detail enhancement for down-converted HD.

CU-UHD7000-S11 has 4 programmable output BNCs for UHD. They can be switched between UHD single-link 12G, dual-link 6G or QUAD HD. The HDTV cut-out of the UHD signal can be selected and positioned by the control panel and is assigned to the UHD outputs of the CCU.

System Format can be switch to 3x or 4xHD(3G/1.5G) HFR (150p/150i/ 200p/200i) if optional Software license are installed.

Control Panel

RU-1500JY Features

- > 3.5inch LCD touch panel and LED switch and rotary encoder.
- > Lens iris, master black and preview switch can be controlled by a large, easy-to-use joystick control.
- > One touch color temperature control function, the RU-1500JY is ideal for Studio and OB-VAN use.
- > Adjustment and file data (read/ write) from SD memory card.
- > IP Control Interface. SNMP agent (option)
- > Back lit function for dark lighting environment operation. (RU-1500JY-S3)

RU-1000VR Features

- > Small and Simple control.
- > Main function of Filters, Gain, RB Gain, RGB Black, Master Black, Iris and others are controlled directly.
- > One touch color temperature control function.



4K Ultra HD Television Production Camera SK-UHD7000-S11



CU-UHD7000-S11 12G-SDI Camera Control Unit



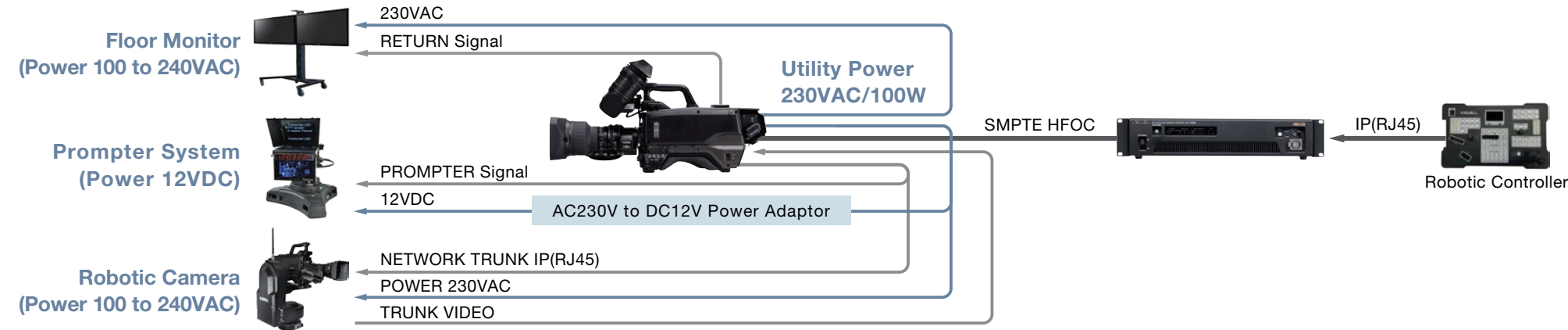
CU-UHD7000-S11 12G-SDI and ST-2110 Interface



CU-IP7000 MOIP BOX

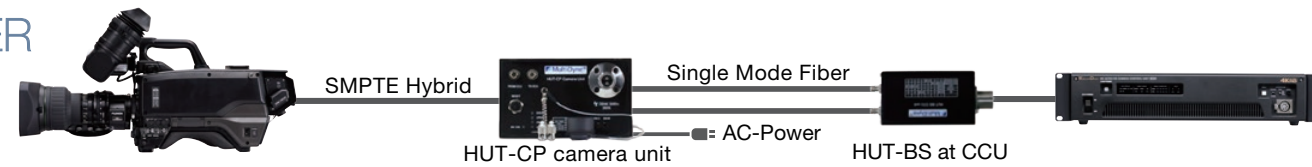
Application

Utility Power Out (100W) ,Ethernet Trunk &Video Trunk)



SINGLE MODE FIBER-DARK FIBER

Camera powered over SMPTE Hybrid cable up to 1KM - Single Fibre over 10KM



Accessories

SU-1000 MASTER SETUP UNIT

- > Control 12 cameras TCP Control or 128 cameras IP Control or PC Control.
- > Menu Structure same as RU-1500JY Remote Control Panel –easy to use.



7-inch LCD Color Full HD Viewfinder HDF-700H-S1/S2

- > Nature 16:9 format 7 inch LCD.
- > Super Wide Viewing angle: Up & Down/ Left & Right
- > High density display : Max. number of pixel :1920(H)x1080(V)
- > Focus assist, Peaking.
- > Waveform, Vector scope, Zebra, Audio level meter, Marker-Multi Display.
- > Easy operation of pan-tilt mechanism.

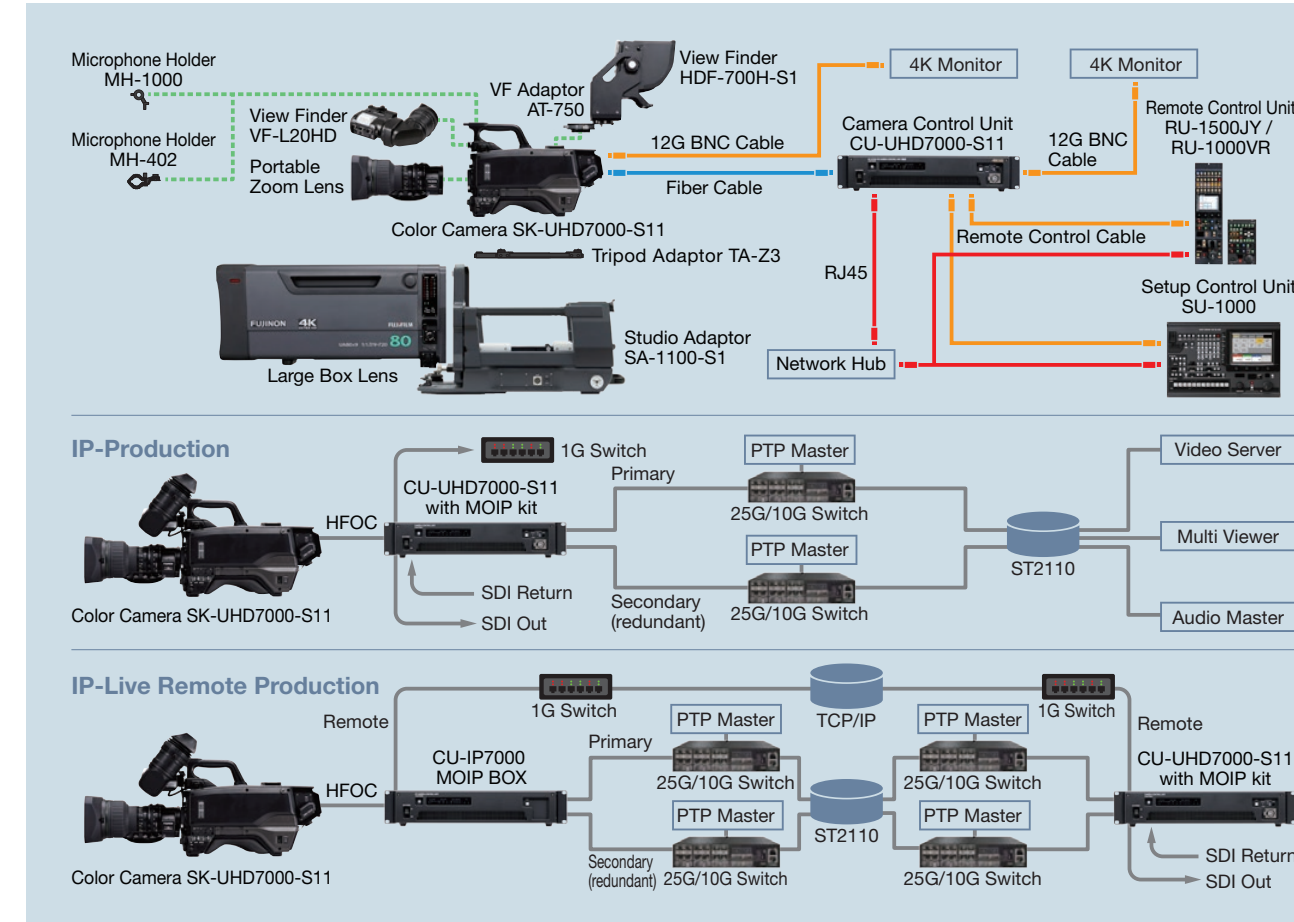


2-inch LCD Color ENG Viewfinder VF-L20HD

- > 2-inch color LCD panel with the built-in heater.
- > Lower lag in lower temperature environment.
- > Auto switchable 1080 59.94i/50i for common use in worldwide.



System Configuration



Digital Fiber Optic Transmission

The SK-UHD7000's digital signal processing technology harnesses the full UHD bi-directional data transmission. The SK-UHD7000 employs uncompressed high throughput data rates using standard SMPTE 311M type Hybrid Fiber-optic cables for long-distance connections between the camera and the control unit. Installations employing Single Mode (SM) fiber can be used without any type of special power adapters. Both the camera and CCU can utilize SM fiber individual strand runs within a facility. When local camera power is applied, full digital fiber-optic signals are transported between the camera and CCU.

Media Over IP- MOIP System Configuration

CCU with optional CU7K-MOIP-Interface kit enables ST-2110 25G/10G, 4K/2K/HFR uncompressed or compressed (JPEG-XS) video transmission with NMOS control and PTP synchronization.

CU-IP7000 MOIP BOX For ST-2110 Live Remote Production

CU-IP7000 enables ST-2110 25G/10G, 4K/2K/HFR uncompressed or compressed (JPEG-XS) IP transmission and can be used together with MOIP TX/RX capability Camera Control Unit CU-UHD7000-S11 as a pair.

Dimensions

