

## UHC-8300

UHC-8300  
8K 3CMOS  
sensor Camera system  
UHCU-8300  
8K  
Camera Control  
Unit  
UKCU-8001 (8K ST  
2110 Interface)  
UZCU-  
SNMP80 (SNMP for 8K ST  
2110)  
UKCU-IP01F  
(Networked Media Interface)



### Overview

#### **A new landmark in broadcasting in 8K**

The world's first 8K television channel is already on air in Japan. And Sony is proud to be supporting this broadcasting landmark with the UHC-8300 system camera that enables an entire 8K Ultra HD workflow – from image capture to storage, editing, display and playout. The Sony 8K camera system consists of the combination of UHC-8300 camera head and UHCU-8300 camera control unit.

#### **Perfection in every detail**

At the heart of the UHC-8300 is the world's first 1.25-type 8K 3CMOS sensor, capturing pristine images with a resolution of 7680x4320 pixels and a signal to noise ratio of -62dB (at 1080/59.94i). It realizes the 8K picture capturing at high speed of 120p HDR. Along with this new generation image sensor, the newly developed F1.6 prism system is capable to support the BT.2020 wide colour space, allowing content creators to realise 8K images with unprecedented clarity, colour and realism.

The 4K signal dot-by-dot extracted from 8K captured image can be utilized for the monitoring in accurate focusing camera operation without any degradation.

### **8K adding more value to 4K production**

8K Ultra HD images captured with the UHC-8300 camera system can be downconverted to produce spectacular 4K UHD images, bursting with fine detail and colour. This allows content creators to add value to every production, ensuring that premium footage captured in 8K can be enjoyed by consumers on today's 4K HDR televisions and display devices. 8K images captured with the UHC-8300 can be enjoyed with native 7680x4320 pixel resolution on Sony's Crystal LED large-scale display system.

### **IP solutions for 8K system**

In addition to the NMI (Networked Media Interface Board): UKCU-IP01F, the 8K ST 2110 Interface Board: UKCU-8001 is available as an option product which works with LSM (Sony IP Live System Manage). The networked 8K ST 2110 system can be monitored by another license key option of SNMP: UZCU-SNMP80.

## Features

### **Advanced 8K interface**

Weighing just 7kg (approx.), the compact UHC-8300 camera head connects via a SMPTE fibre connection to the UHCU-8300 Camera Control Unit. The CCU outputs 8K 120p baseband signals over octal 12G-SDI based on SMPTE ST.2082-12. In parallel, simultaneous 4K and HD outputs are available over 12G/3G-SDI.

### **Made for tomorrow's workflows**

You're covered for today's production workflows as well as tomorrows. 8K Ultra HD images captured with the UHC-8300 can be stored and replayed as XAVC files

using Sony's PWS-4500 live server. Also, the 8K signal can be transmitted to Sony's XVS-8000/9000 switcher, and combined with Sony's IP converters. And with a growing choice of third-party display, switching and editing solutions already available from Sony and other manufacturers, the 8K Ultra HD ecosystem is growing fast.

### **Simultaneous 8K/4K/HD production in HDR and SDR**

Teamed with the UHCU-8300 Camera Control Unit, the UHC-8300 enables HDR production workflows with a choice of S-Log3, HLG Live and HLG BT.2100.

Broadcasters can also enjoy the benefits of Sony's SR Live, with simultaneous output of 8K, 4K and HD signals in HDR and SDR to suit a wide range of live production requirements.

### **New 8K lens mount**

A new 1.25-type lens mount system offers direct compatibility with specially developed 8K lenses from lens vendors. Current 4K lenses can also be used with a 1.25-type B4 lens mount adaptor.

### **Compatibility with current live production elements**

The UHC-8300 is compatible with current Sony live production system components including remote controllers, multi camera system units and viewfinders. So broadcasters and programme makers can realise fresh value from the current 4K/HD investments – today and tomorrow.

### **Real-time 4K cutout**

The extraordinary resolution of 8K UHD allows production teams to select a 4K cutout from a portion of images captured with the UHC-8300. Displayed on a 4K monitor, this allows critical inspection and confirmation of focus.

This can be done by dot-by-dot extraction from the captured 8K image without any degradation.

### IP solutions

The IP based network connection makes much advanced flexible total system, and it can be realized even in 8K world. The 8K ST 2110 interface board, UKCU-8001 is optionally available. It can be monitored by SNMP activated with a license key of UZCU-SNMP80. An NMI (Networked Media Interface board), UKCU-IP01F option product is also available. Either IP board can be installed to the CCU, UHCU-8300.

## Specifications

### UHC-8300 Camera Head General

|   |   |
|---|---|
| Power Requirement and Consumption Current | 240Vdc, 1.0A (max.)<br>12Vdc, 9.5A (max.)   |
| Operating Temperature                     | -20°C to +45°C<br>-4°F to +113°F  |
| Storage Temperature                       | -20°C to +60°C -4°F to +140°F   |
| Dimensions (W x H x D)*1                  | 167 x 299 x 396 mm<br>6 5/8 x 11 7/8 x 11 3/4 inches<br>*1 The values for dimensions are approximate and excluding the protrusions. |
| Mass                                      | (Body) Approx. 7.0 kg<br>(Body) Approx. 15 lb 7 oz  |

### UHC-8300 Camera Head Camera Section

|  |  |
|--|--|
| Pickup Device  | 3-chip 1.25-inch type CMOS   |
| Resolution   | 8K: 7680 x 4320 (H x V)  |
| Spectrum System  | F1.6 prism system  |
| Lens Mount   | 1.25-inch type bayonet mount, ARIB TR-B37  |
| Built-in Filters   | CC: A; 3200K(Clear), B; 4300K, C; 6300K, D; Cap ND: 1; Clear, 2; 1/4ND, 3; 1/16ND, 4; 1/64ND                           |
| Sensitivity<br>(at 2000 lx, 3200K, 89.9% reflectance)                                  | F8 (8K 59.94p), F9 (8K 50p)  |
| Noise Level  | -62dB (1080/59.94i)  |
| Horizontal Resolution<br>(8K: Center of the picture at Modulation depth 5% or higher.) | 3,840 TV lines   |
| Gain   | -6, -3, 0, 3, 6, 9, 12 dB  |
| Shutter Speed  | 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (59.94 mode)<br>1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (50 mode) |

## UHC-8300 Camera Head Input/Output

CCU

Optical/electrical multi-

|                   |  |
|-------------------|--|
|                   | connector (x1)   |
| Lens              | 12-pin (x1)  |
| Viewfinder        | 20-pin (x1), for HDVF  |
| Audio Input (CH1) | XLR type: 3-pin, female (x1)<br>MIC IN: -60dBu (Up to -20dBu can be set by using menu or UHCU-8300), balanced<br>LINE IN: +4dBu, balanced                    |
| Audio Input (CH2) | XLR type: 3-pin, female (x1)<br>MIC IN: -60dBu (Up to -20dBu can be set by using menu or UHCU-8300), balanced<br>LINE IN: +4dBu, balanced                    |
| Intercom          | 1: XLR type 5-pin, female (x1)<br>2: XLR type 5-pin, female (x1)   |
| Earphone Output   | Stereo mini jack (x1)  |
| DC Input          | XLR-type 4-pin (x1), DC 10.5 V to 17 V   |
| DC Output         | 4-pin (x1), DC 10.5 V to 17 V (max. 0.5A)*2<br>2-pin (x1), DC 10.5 V to 17 V (max. 2.5A)*2<br><br>*2 May be limited, depending on load and input conditions. |
| SDI 1 Output      | BNC (x1) SMPTE ST2082-10<br>12G-SDI Out, ST424/425-1<br>3G-SDI Out, ST292-1 HD-SDI Out or HD Prompter Out<br><br>selectable                                  |

|                    |   |
|--------------------|---|
| SDI 2 Input/Output | BNC type (x1) SMPTE ST292-1, HD-SDI Out or HD Video Trunk In selectable |
| Monitor Output     | BNC (x1) SMPTE ST292-1, HD-SDI Out                                      |
| SYNC Output        | BNC (x1) HD-Sync, SD-Sync Out   |
| Prompter Output    | BNC (x1) 1Vp-p, 75Ω   |
| Return Control     | 6-pin (x1) for CAC-6  |
| For Future Use     | 8-pin (x1)  |
| Tracker            | 10-pin (x1)   |
| MAG Control        | 14-pin (x1)   |
| Crane              | 12-pin (x1)   |
| Network Trunk      | 8-pin (x1), RJ-45   |
| USB                | USB 2.0 type-A 4-pin (x1) for USB Memory                                |

## UHC-8300 Camera Head Supplied Accessories

|                      |   |
|----------------------|---|
| Supplied Accessories | <ul style="list-style-type: none"> <li>Operation manual CD-ROM (x1) JP, GB, CS</li> <li>Cable clamp belt (x1)</li> <li>Camera number label (x1)</li> <li>Screws +B3 (x2) for cable clamp belt</li> <li>Lens mount cap (x1)</li> </ul> |
|----------------------|---|

## UHCU-8300 CCU General

|                           |   |
|---------------------------|---|
| Power Requirement         | AC 100 to 127V, 200V to 240 V, 50/60 Hz   |
| Consumption Current       | AC IN 1: 4.0A (max.)<br>AC IN 2: 6.2A (max.)  |
| Operating Temperature     | 5°C to +40°C<br>41°F to +104°F  |
| Storage Temperature       | -20°C to +60°C<br>-4°F to +140°F  |
| Dimensions (W x H x D) *1 | 482 (440) x 221 x 500 mm<br>19 (17 1/2) x 8 3/4 x 19 3/4 inches   |
| Mass                      | Approx. 24 kg<br>Approx. 52 lb 15 oz  |
| Video Signal              | 8K 4320: 119.88p, 100p, 59.94p, 50p (SQD-2SI, 2SI-2SI)<br>4K 2160: 59.94p, 50p (2SI, SQD, Level-A/B)<br>HD 1080: 59.94p, 59.94i, 50p, 50i |
| *1                        | The values for dimensions are approximate and excluding the protrusions.  |

## UHCU-8300 CCU Input/Output

|        |                           |
|--------|---------------------------|
| Camera | Optical Fiber (x1)        |
|        | D-sub 50-pin, female (x1) |



|                        |   |
|------------------------|---|
| Intercom/Program/Tally | <ul style="list-style-type: none"> <li>• INTERCOM (PROD/ENG), 4Wire/RTS/Clear-Com, 0 dBu</li> <li>• PGM 2 systems, -20/0/+4 dBu</li> <li>• TALLY (R, G, Y)</li> <li>• FLAG</li> </ul> |
|------------------------|---|

|                       |   |
|-----------------------|---|
| RCP/CNU               | 8-pin multi connector, female (x1)                  |
| Trunk                 | 12-pin, female (x1)<br>RS-232C or RS-422A, 1 system |
| LAN                   | 8-pin (x1), RJ-45                                   |
| Network Trunk         | 8-pin (x1), RJ-45                                   |
| Focus Demand          | 20-pin, female (x1)                                 |
| MAG Control           | 14-pin, female (x1)                                 |
| NMI-LAN (Option: TBD) | QFSP+ (x2), 40G Base-SR (by transceiver module)     |
| USB                   | USB 2.0 type-A 4-pin (x1) for USB Memory            |

## UHCU-8300 CCU Input

|    |   |
|----|---|
| AC | AC 100 to 127V, 200V to 240 V (x2)        |
|    | BNC type (x8)<br>12G-SDI, SMPTE ST2082-10 |

|                             |   |
|-----------------------------|---|
| 4K Return                   | 3G-SDI, SMPTE ST424/425-5,<br>2 systems   |
| HD Return                   | BNC type (x4)<br>3G-SDI, SMPTE ST424/425-1<br>HD-SDI, SMPTE ST292-1, 4<br>systems   |
| Reference                   | BNC type (x2), In:<br>HD: SMPTE ST274, Tri-Level<br>Sync, 0.6 Vp-p, 75 Ω<br>SD: Black Burst (NTSC: 0.286<br>Vp-p, 75 Ω / PAL: 0.3 Vp-p, 75<br>Ω)<br>Out: Loop-Through |
| Prompter                    | BNC type (x1), In: VBS, 1.0<br>Vp-p, 75 Ω, 1 system   |
| HD Prompter                 | BNC type (x1)<br>HD-SDI: SMPTE ST292-1  |
| <b>UHCU-8300 CCU Output</b> |   |
| 8K (SLOT-1)                 | BNC type (x16)<br>12G-SDI: SMPTE ST2082-<br>10/12, 2 systems for<br>59.94p/50p, 1 system for<br>119.88p/100p<br>3G-SDI: SMPTE ST424/425-1,<br>1 system                |
| 4K MAG (SLOT-2)             | BNC type (x4)<br>12G-SDI: SMPTE ST2082-10<br>3G-SDI: SMPTE ST424/425-5  |
|                             | BNC type (x8)   |

|                     |   |
|---------------------|---|
| 4K (SLOT-3)         | 12G-SDI: SMPTE ST2082-10<br>3G-SDI: SMPTE ST424/425-5,<br>2 systems   |
| 4K Monitor (SLOT-4) | BNC type (x4)<br>12G-SDI: SMPTE ST2082-10<br>3G-SDI: SMPTE ST424/425-5  |
| HD (SLOT-5)         | BNC type (x4)<br>3G-SDI: SMPTE ST424/425-1<br>HD-SDI: SMPTE ST292-1<br>3G-SDI/HD-SDI, character<br>signal selectable                                  |
| Sync                | BNC type (x1)<br>HD SYNC: SMPTE ST274, tri-<br>level sync, 0.6 Vp-p, 75 Ω<br>SD SYNC: composite sync, 0.3<br>Vp-p, 75 Ω<br>HD SYNC/SD SYNC selectable |
| Audio CH-1, CH-2    | XLR 3-pin, male (x2), 0/-<br>20/+4 dBu  |

## UHCU-8300 CCU Supplied Accessories

|                      |  |
|----------------------|--|
| Supplied Accessories | Tally number plate (x1 set)<br>Operation manual CD-ROM<br>(x1), JP, GB, CS |
|----------------------|--|

## UKCU-IP01F Option Interface General

|                          |              |
|--------------------------|--------------|
| Power Requirement        | DC 12V       |
| Power consumption (Max.) | 70 W         |
| Operating                | 5°C to +40°C |

|                       |  |
|-----------------------|--|
| Operating Temperature | 5 °C to +40 °C<br>41°F to +104°F   |
| Storage Temperature   | -20°C to +60°C<br>-4°F to +140°F   |
| Dimensions (W x D) *1 | 340 x 237 mm<br>13 1/2 x 9 3/8 inches                                    |
| Mass                  | Approx. 2 kg<br>Approx. 4 lb 6.5 oz                                      |
| *1                    | The values for dimensions are approximate and excluding the protrusions. |

## UKCU-IP01F Option Interface Output

|           |  |
|-----------|--|
| Output *2 | QSFP+, conforms to 40GBASE-SR/LR       |
| *2        | Transceivers, QSFP+, are not included. |

## UKCU-IP01F Option Interface Supplied Accessories

|                      |  |
|----------------------|--|
| Supplied Accessories | Operation manual CD-ROM (x1), JP, GB, CS |
|----------------------|--|

## UKCU-8001 Optional Interface General

|           |   |
|-----------|---|
| UKCU-8001 | ST 2110 Interface Board<br>* further information adding later |
|-----------|---|

## UZCU-SNMP80 Optional Software General

UZCU-SNMP80

SNMP Agent Software

Note: The specifications of UKCU-8001 and UZCU-SNMP80 will be available later date.

Related products



### HDVF-L750

Full HD 7-inch LCD viewfinder



### MSU-1000

Master setup unit, multi camera remote control panel for HDC / HSC cameras (horizontal type)



### HDVF-L770

Full HD 7-inch LCD viewfinder, adjustable with large handle



### RCP-1500

Joystick type of Remote Control Panel for HDC/HSC/HXC series cameras. 4 units in 19-inch EIA rack.



### RCP-1501

Dial type of Remote Control Panel for HDC/HSC/HXC series cameras. 4 units in 19-inch EIA rack.



### MSU-3000

Master setup unit, multi camera remote control panel for system cameras (horizontal type)



### RCP-3501

Remote-control panel for HDC/HSC/HXC series cameras



### RCP-3500

Remote-control panel for HDC/HSC/HXC series cameras



### HDRC-



### MSU-3500



### MSU-1500



### VCT-14

## 4000

HDR Production  
Converter Unit

Master setup unit,  
multi camera  
remote control  
panel for system  
cameras (vertical  
type)

Master setup unit,  
multi camera  
remote control  
panel for HDC / HSC  
cameras (vertical  
type)

TRIPOD ADAPTOR  
FOR PORT.  
CAMERAS/CAMC.

## Gallery



