SONY

BPU-4500

4K / HD baseband processor unit for IP network



Overview

The BPU-4500 is a baseband processor unit equipped with IP interfaces as standard, which enables IP live production for 4K/HD in combination with PWS-4500 4K/HD XAVC server.

The BPU-4500 works with 4K/HD cameras such as HDC-4300 or PMW-F55 with CA-4000 to route 4K signals while supporting IP network or enabling long-distance transmission using standard SMPTE fibre cables or single mode fibre solution.

The BPU-4500 generates 4K and HD signals at a similar colour matrix to match to the current Sony HD camera system. Working with the HDCU-2000/2500 Camera Control Units permits the same system operation as the current HDC camera system, including Genlock, Return Video signal, Tally, Intercom and Sony RCPs/MSUs, which provides a future-proofed migration path for customers.

This product contains pre-installed software and requires the purchase of licence keys to activate some functions.

Features

An advanced baseband processor unit with IP interfaces
The BPU-4500 is equipped with the IP interfaces as standard (three outputs with individual redundant outputs), which enables the IP live production for 4K/HD in combination with the PWS-4500 4K/HD XAVC server. It can handle broadcast quality HD and 4K video, audio, synchronisation signals and control data across the IP network, which increases operational efficiency. While the IP signals are output, the SDI signals can be output from the BPU-4500 simultaneously in order to integrate the BPU-4500 seamlessly with your existing SDI infrastructure.

Routes 4K signals from HDC-4300 camera, PMW-F55 camera fitted with CA-4000 or F65 camera fitted with SKC-4065
The BPU-4500 works with the HDC-4300 three 2/3-inch 4K imagers camera, or the CA-4000 attached to the PMW-F55 Super 35mm 4K CMOS sensor camera, or the SKC-4065 attached to the F65 Super 35mm 8K CMOS sensor SRMASTER camera to route 4K signals. The BPU-4500 generates 4K and HD signals at the same colour reproduction to match to the current Sony HD camera system. 4K and HD signal outputs simultaneously, supporting ITU-R BT.2020.

4K fibre transmission up to 2,000 m as standard, with extension possible up to 5,000m
The 4K Live system works across standard SMPTE fibre cables for distances up to 2,000 m. By using the single mode fibre solution – which consists of HDCE-100 extension adaptor for the camera, HKCU-SM100 extension adaptor for the camera control unit and a single mode fibre cable – a maximum distance of 5,000 m between a camera and the BPU-4500 is achieved.

High Frame Rate signal processing to a maximum 4K 100/120P, HD 400/480P (Optional software: SZC-4002)

The camera allows High Frame Rate (HFR) capturing up to 100/120 frames per second at 1080/50P and 1080/60P in 4K resolution (3840 x 2160). Signals are processed in the BPU-4500 and passed to the PWS-4500 4K/HD server to replay them as super slow-motion.

HD cut out functionality (Optional software: SZC-2001)
It is possible to cut out a Full HD image from the 4K picture in real-time, allowing, for example, for the camera to be in a fixed camera position and operator free giving a wide view of the action, an area of which can be selected by the director.

Can operate without HDCU-2000/2500 CCU
The BPU-4500 works without the HDCU-2000/2500 CCU by supplying power to the PMW-F55 and CA-4000 side locally. Alternatively, supplying power to the BPU-4500 through the HDCE-100 is possible. The BPU-4500 has Reference signal and Return signal inputs and supports RCP control.

Specifications

General	
Power requirement	100 V to 240 V AC, 50/60 Hz
Current consumption	2 A (max)
Operating temperature	5 °C to 40 °C (41 °F to 104 °F)
Storage temperature	–20 °C to +60 °C (–4 °F to +140 °F)
Mass	Approx. 8.8 kg (19 lb 6.4 oz)

Input/output connectors	
CAMERA	Optical fiber connector (1)
CCU	Optical fiber connector (1)
REMOTE	8-pin multi-connector (1)
LAN	8-pin (1)

Input connectors	
AC IN	100 V to 240 V AC (1)
SDI1, SDI2	BNC type (2) 3G-SDI: SMPTE ST424/425 Level-B, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 ohms, 1.485 Gbps/1.4835 Gbps
REFERENCE IN	BNC type (1) HD: SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 ohms SD: Black burst (NTSC: 0.286 Vp-p, 75 ohms/PAL: 0.3 Vp-p, 75 ohms)

Output connectors

3G/HD SDI OUTPUT (SLOT1)	BNC type (4) 3G-SDI: SMPTE ST424/425 Level-A, 0.8 Vp-p, 75 ohms, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 ohms, 1.485 Gbps/1.4835 Gbps 3G-SDI/HD-SDI selectable
3G/HD SDI OUTPUT (SLOT2)	BNC type (8) 3G-SDI: SMPTE ST424/425 Level-A, 0.8 Vp-p, 75 ohms, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 ohms, 1.485 Gbps/1.4835 Gbps 3G-SDI/HD-SDI selectable
3G/HD SDI OUTPUT (SLOT3)	BNC type (2) 3G-SDI: SMPTE ST424/425 Level-A, 0.8 Vp-p, 75 ohms, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 ohms, 1.485 Gbps/1.4835 Gbps 3G-SDI/HD-SDI selectable
HD SDI OUTPUT (SLOT4)	BNC type (2) HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 ohms, 1.485 Gbps/1.4835 Gbps
REFERENCE OUT	BNC type (1) HD: SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 ohms SD: Composite sync, 0.3 Vp-p, 75 ohms HD SYNC/SD SYNC selectable
NMI-LAN (SLOT1)	SFP+ (2)
NMI-LAN (SLOT2) / NMI-LAN (SLOT3/4)	10G BASE-** (using SFP+ transceiver module)

Supplied accessories

Supplied accessories	Number plates (1 set) Operation Guide (1) Operation Manual (CD-ROM) (1)

Optional accessories

Optional accessories	United States and Canada: Plug holder B (2-990-242-01) Other areas: Plug holder C (3-613-640-01) United States and Canada: Power cord set (1-551-812-XX) Other areas: Power cord set (1-782-929-XX) CCA-5-3 (3 m) and CCA-5-10 (10 m) connection cables SFP+ module Maintenance manual

Related equipment

Related equipment	MW-F55 Solid-state Memory Camcorder F65 Digital Motion Picture Camera CA4000 Camera System Adaptor HDC4300 Color Camera HDCU2000/2500 HD Camera Control Unit RCP-1000 series Remote Control Panel MSU-1000/1500 Master Setup Unit CNA-1 Camera Control Network Adaptor

Related products



CA-4000

4K fibre transmission camera adaptor



HDC-4300

4K/HD System Camera



HDCE-100

Single mode fibre adapter for HSC and HDC fibre cameras



SZC-4001 / SZC-4001M / SZC-4001W

4K Upgrade for HDC-4300



SZC-4002 / SZC-4002M / SZC-4002W

HFR Upgrade for F65, F55 and HDC-4300



SZC-2001 / SZC-2001M / SZC-2001W

HD Cut-Out Upgrade for BPU Series products



HDC-P43

4K/HD POV Camera



HDRC-4000

HDR Production Converter Unit

Gallery







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