SONY

4K/HD Ultra High Frame Rate Camera System

HDC-4800

4K Baseband Processor

BPU-4800

4K

SUPER MOTION

Open Up a New World of Live Production Shooting

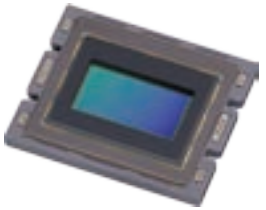
The HDC-4800, combined with its dedicated BPU-4800 4K Baseband Processor, delivers breathtaking 4K Ultra HD images at up to 8x (479.52 fps)/4x (239.76 fps) slow motion[*1] or Full HD at up to 16x (959.04 fps)/8x (479.52 fps) slow motion[*2] and features Full HD cutout and zoom capabilities. Used on its own, the HDC-4800 delivers 4K Ultra HD standard speed images or Full HD at up to 4x slow motion with outstanding high sensitivity as standard.
This all-in-one, fully networked 4K live ultra-high frame rate recording and playback system will be a game changer for broadcasting live events as well as live sports action.

*1 Optional SZC-4008 software is required.

*2 Optional SZC-2016 software is required.

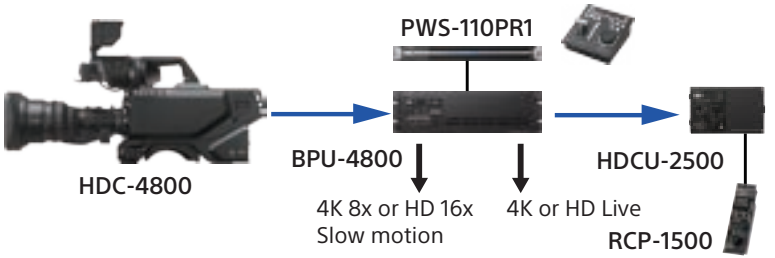
New 4K Imager for Live Sports and Multi-Camera Productions

The HDC-4800 has a new sophisticated Super 35 mm CMOS sensor with a global shutter system that lets the camera take full advantage of PL mount lenses. You'll enjoy stunning 4K images that capture fast-moving sports with incredible definition. For extra operational convenience, there's a motorized dual ND/CC filter that can be operated remotely for variable exposure control. It also provides support for B4 lenses via a supplied adaptor for HD production.



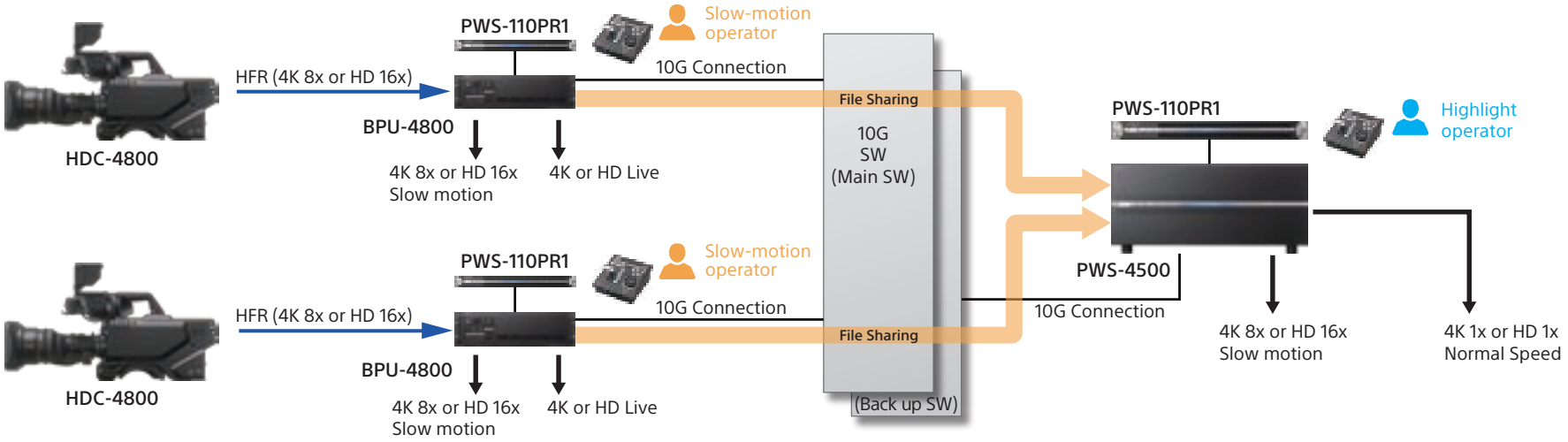
Every Split-Second Of Sporting Action, Captured In 4K

You can capture the dynamic excitement of live sports in 4K Ultra slo-mo with the HDC-4800, together with its dedicated 4K baseband processor, the BPU-4800.
You can also shoot full-resolution 4K Ultra HD images at up to 8x or Full HD at 16x to reveal split-second action.
This all-in-one solution for ultra-high frame rate recording and playback makes it easier for broadcast production personnel to deliver the superb slo-mo coverage of sports and other live events that TV viewing audiences love.



Share Play: Efficient File Sharing Function over IP Networking

The Share Play function can be utilized when the system is configured with the PWS-4500 server connected to the HDC-4800 together with the BPU-4800 via the network.
Once clips have been recorded by the BPU-4800, the Share Play function enables these clips to be shared among all connected PWS-4500 servers. This delivers a more efficient workflow. For example, PWS-4500 server operators and highlight operators can view the clips in the BPU-4800, and can playback and output any of these clips from their own local server. There is no need to push or pull clips between different servers.



*An optional PWSK-4505 BPU Share Play Board is required to be installed in the PWS-4500.

Replay Function

Using just the HDC-4800 and BPU-4800 along with control devices*, you can create a powerful replay server system with intuitive GUI operation that includes slow-replay control, highlight editing, and touch-panel capabilities.

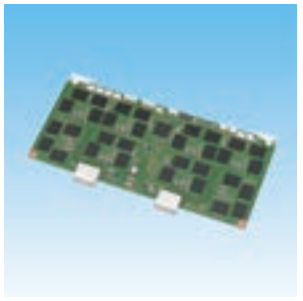
*The PWSK-4403 Control Panel, the PWS-100PR1 Production Control Station, and the PWS-110MG1 Media Gateway Station are required for the replay system.

HD Cutout Function

Powerful processing allows a Full HD high frame rate (HFR) image to be cut out from a 4K picture in real time. During replay, any portion of the captured image can be cropped to provide a close-up HD HFR image. This gives directors a powerful editorial tool to enrich live sports coverage with detailed analysis of the action.

Optional Accessories

OTM-10GSR1
SFP+ Transceiver Module



SKC-MEM4
Internal Memory Array

J-712-156-0A
Camera Test Charts

HDLA-1500/1505/1507
Large Lens Adaptor

Adapter Plate

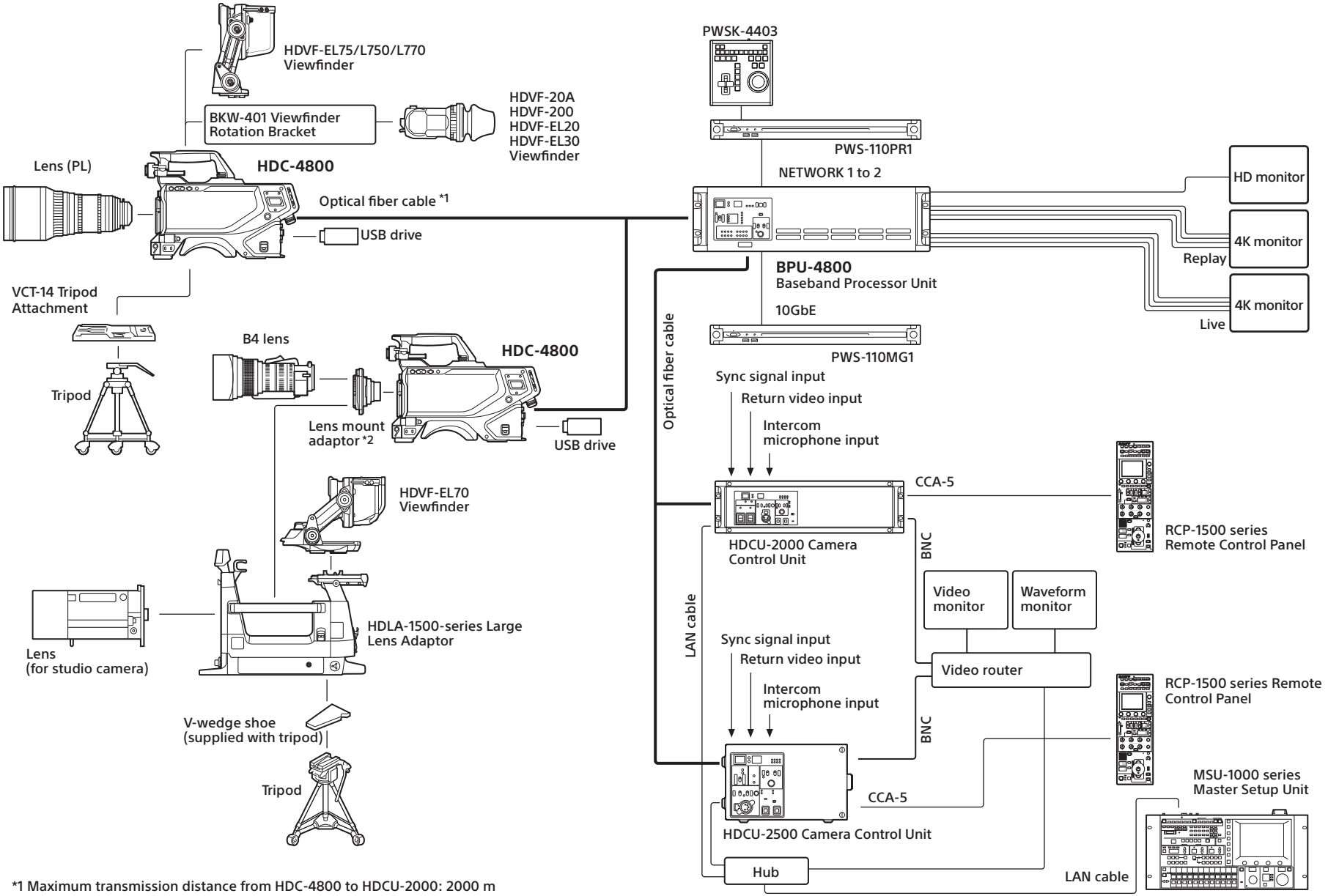
To incorporate a lens support when mounting a longer, heavier lens, you can attach the Vocas BP-18 19 mm Balance Plate to the HDC-4800 by fixing the Vocas Adapter Plate (item code: 0490-0030) under the camera.

Upgrade Software

SZC-4008	Support Software for 4K HFR
SZC-4008M	Support Software for 4K HFR (30-day limited period)
SZC-4008W	Support Software for 4K HFR (7-day limited period)
SZC-2016	Support Software for HD HFR
SZC-2016M	Support Software for HD HFR (30-day limited period)
SZC-2016W	Support Software for HD HFR (7-day limited period)

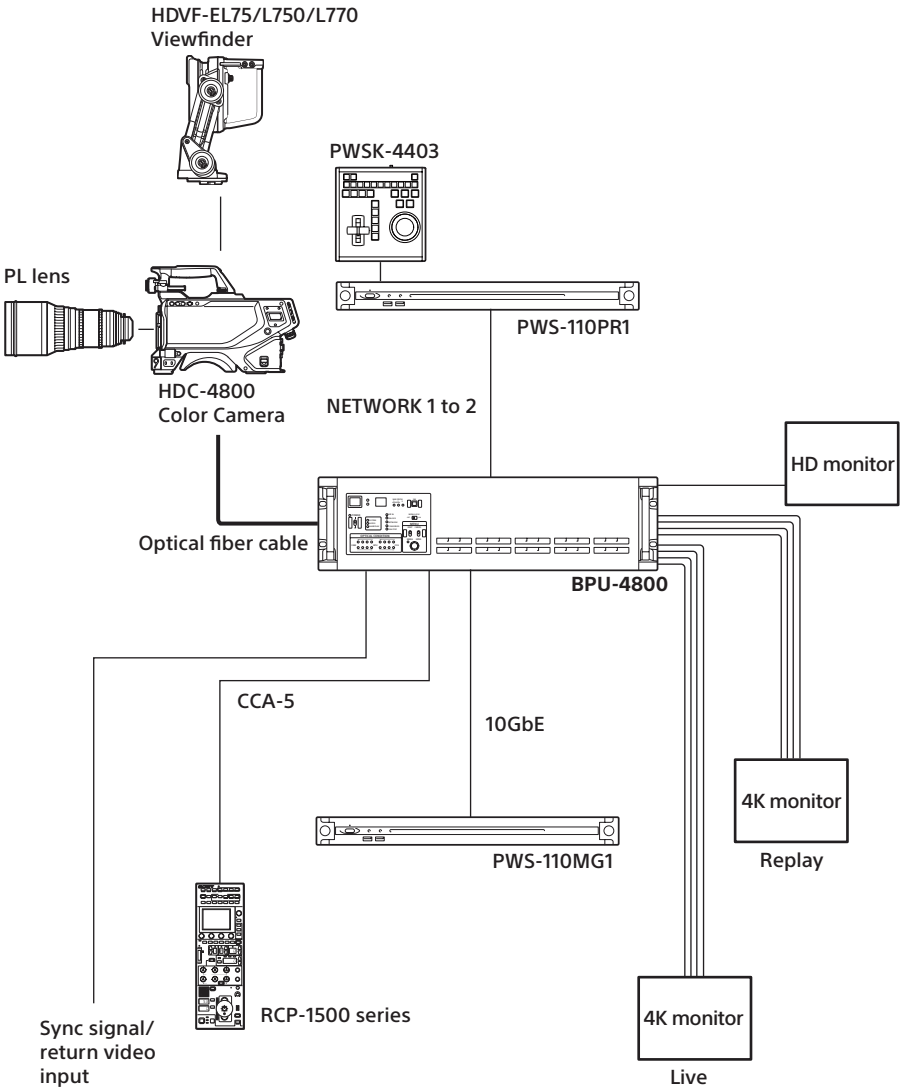
System Configuration Examples

HDC-4800 connection example



*1 Maximum transmission distance from HDC-4800 to HDCU-2000: 2000 m
*2 When operating in HD format at 8×/16× speed.

Extension mode connection example



Specifications

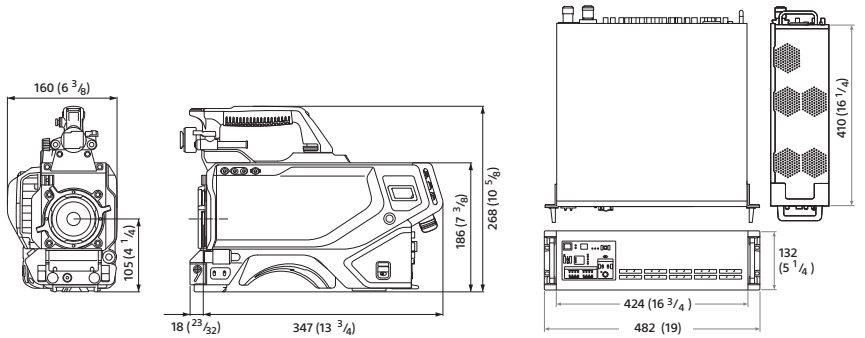
HDC-4800		
General		
Power requirements		240 V AC, 1.4 A (max.), 180 V DC, 1.0 A (max.), 12 V DC, 9.5 A (max.)
Operating temperature		–20 °C to +45 °C (–4 °F to +113 °F)
Storage temperature		–20 °C to +60 °C (–4 °F to +140 °F)
Mass		Approx. 5.0 kg (11 lb 0.37 oz) (Unit only)
Imaging element		
Imaging element		S-35 mm CMOS image sensor
Method		Single chip
Effective resolution		QFHD: 3840 (horizontal) × 2160 (vertical)
		HD: 1920 (horizontal) × 1080 (vertical)
Electrical characteristics		
Sensitivity		T5.6 (at 2000 lx with 89.9% reflectance. For 4K/59.94P (8×))
Image S/N		HD/59.94i: –62 dB
Horizontal resolution		2000 TVL (4K: screen centered) 5% or higher modulation
Geometric distortion		Negligible (not including lens distortion)
Optical system specifications		
Built-in filters	Color temperature conversion filters	A: 3200K (clear), B: 4300K, C: 6300K
	ND filters	1: Clear, 2: 1/4 ND, 3: 1/16 ND
Input/output connectors		
BPU		Optical/electrical multi-connector (LEMO 3K.93C connector) (x1)
LENS		12-pin (x1)
VF		20-pin (x1)
AUDIO IN CH1, CH2		XLR 3-pin, female (1 each)
		When AUDIO switch is set to MIC: –60 dBu (can be selected up to –20 dBu by menu or HDCU2000/2500 operations), balanced When AUDIO switch is set to LINE: 0 dBu, balanced
INTERCOM 1, INTERCOM 2		XLR 5-pin, female (1 each)
EARPHONE		Stereo minijack (x1)
DC IN		XLR 4-pin (x1), 10.5 V to 17 V DC
DC OUT		4-pin (x1), 10.5 V to 17 V DC, max. 0.5 A (This may be limited by the imposed load or inputs.)
		2-pin (x1), 10.5 V to 17 V DC, max. 2.5 A (This may be limited by the imposed load or inputs.)
SDI 1, SDI 2		BNC (x1 each)
SDI-MONI		BNC (x1)
TEST OUT		BNC (x1)
PROMPTER		BNC (x1), 1 Vp-p, 75 Ω
PROMPTER2		BNC (x1), 1 Vp-p, 75 Ω
RET CTRL		6-pin (x1)
REMOTE		8-pin (x1)
TRACKER		10-pin (x1)
CRANE		12-pin (x1)
USB USB 2.0		Type A 4-pin (x1) (for connecting USB drive)
NETWORK TRUNK		RJ-45 type 8-pin (x1)
Supplied accessories		
Before Using this Unit (1 set), Operating Instructions (CD-ROM) (1), Lens mount adaptor (1), Cable clamp belt (1 set), Camera number label (1), Screws (+B3×8) (2)		

BPU-4800	
General	
Power requirement	100 V to 127 V/200 V to 240 V AC, 50/60 Hz
Current consumption	4.5 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.	16.5 kg (36 lb 6.0 oz)
Dimensions (W x H x D)	424 x 132 x 410 mm (16 3/4 x 5 1/4 x 16 1/4 inches)

Input/output connectors	
CAMERA	Optical/electrical multi-connector (LEMO 3K.93C connector) (x1)
CCU	Optical/electrical multi-connector (LEMO 3K.93C connector) (x1)
REMOTE (RCP/CNU)	8-pin multi-connector (x1)
LAN	8-pin (x1)
SHARE PLAY	1/2 SPF+ (x2)
REMOTE1/2	RJ-45 (x1)
GPIO (25P)	25-pin D-Sub, female (x1)
NETWORK1 to 2	RJ-45 (x2), 1000BASE-T
MAINTENANCE	USB (x1)
NETWORK	SFP+ (x1), 10GBASE-SR/LR (Add-in Card)
Input connectors	
AC IN	100 V to 127 V/200 V to 240 V AC (x2)
SDI1, SDI2	BNC (x2), 3G-SDI: SMPTE ST424/425 Level-A/B, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 Ω, 1.485 Gbps/1.4835 Gbps
REFERENCE IN	BNC (x1) HD: SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 Ω SD: Black burst (NTSC: 0.286 Vp-p, 75 Ω/, PAL: 0.3 Vp-p, 75 Ω)
TIMECODE INPUT	BNC (x1), 0.5 Vp-p to 5 Vp-p, 10 kΩ
DIGITAL AUDIO (AES/EBU) INPUT	BNC (x4), CH 1/2 to CH 7/8, AES/EBU format, unbalanced Note: When connecting devices for AES/EBU signal input/output, use a cable whose length is less than 300 meters (984 feet).
Output connectors	
3G SDI OUTPUT (SLOT1 LIVE)	BNC (x8) 3G-SDI: SMPTE ST424/425 Level-A/B, 0.8 Vp-p, 75 Ω, 2.970 Gbps/2.967 Gbps
3G/HD SDI OUTPUT (SLOT1 REPLAY)	BNC (x8) 3G-SDI: SMPTE ST424/425 Level-A/B, 0.8 Vp-p, 75 Ω, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 Ω, 1.485 Gbps/1.4835 Gbps 3G-SDI/HD-SDI selectable
3G/HD SDI OUTPUT (SLOT2 LIVE)	BNC (x2) 3G-SDI: SMPTE ST424/425 Level-A/B, 0.8 Vp-p, 75 Ω, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 Ω, 1.485 Gbps/1.4835 Gbps 3G-SDI/HD-SDI selectable
3G/HD SDI OUTPUT (SLOT2 REPLAY)	BNC (x2) 3G-SDI: SMPTE ST424/425 Level-A/B, 0.8 Vp-p, 75 Ω, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 Ω, 1.485 Gbps/1.4835 Gbps, 3G-SDI/HD-SDI selectable
HD SDI OUTPUT (SLOT3 LIVE)	BNC (x1) HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 Ω, 1.485 Gbps/1.4835 Gbps
HD SDI OUTPUT (SLOT3 REPLAY)	BNC (x1) HD-SDI: SMPTE ST292, 0.8 Vp-p, 75 Ω, 1.485 Gbps/1.4835 Gbps
REFERENCE OUT	BNC (x1) HD: SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 Ω SD: Composite sync, 0.3 Vp-p, 75 Ω, HD SYNC/SD SYNC selectable
NMI-LAN (SLOT1 LIVE) NMI-LAN (SLOT1 REPLAY) NMI-LAN (SLOT2)	SFP+ (x2), 10G BASE-** (using SFP+ transceiver module)
TIMECODE OUTPUT	BNC (x1), 1.5 Vp-p, low impedance
DIGITAL AUDIO (AES/EBU) OUTPUT	BNC (x4), CH 1/2 to CH 7/8, AES/EBU format, unbalanced
Supplied accessories	
Number plates (1 set), Before Using this Unit (1), Operating Instructions (CD-ROM) (1), Cable, RJ45-DSUB, Part No. 1-848-424-12 (SONY) (1)	

Dimensions

Unit: mm (inches)



HDC-4800

BPU-4800

4K Baseband Processor BPU-4800

Rear

SONY

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