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 slow motion or Full HD at up to 16x slow motion and features Full HD cutout and zoom capabilities.
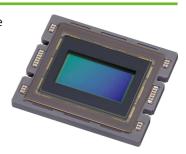This all-in-one, fully networked 4K live ultra-high frame rate recording and playback system will be a game changer for broadcasting live events as well as live sports action.

Newly Developed 4K Imager Brings New Capabilities to 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.
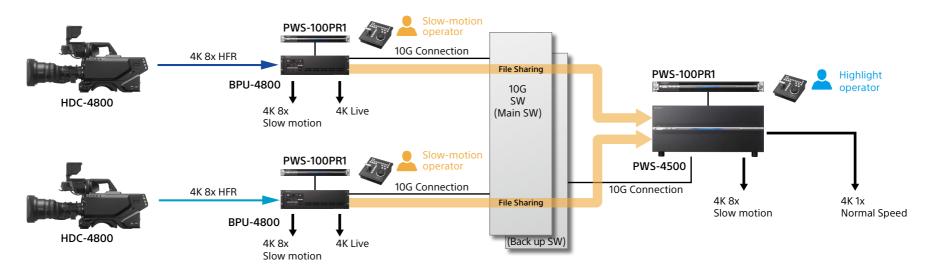You'll enjoy stunning 4K images that capture fast-moving sports with incredible definition. For extra operational convenience, there's a motorized dual ND/CC filter that can be operated remotely for variable exposure control. It also provides support for B4 lenses via a supplied adaptor for HD production.

Share Play: Efficient File Sharing Function Via 10 GbE 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-100MG1 Media Gateway Station are required for the replay system.
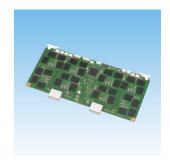

HD Cutout Function

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
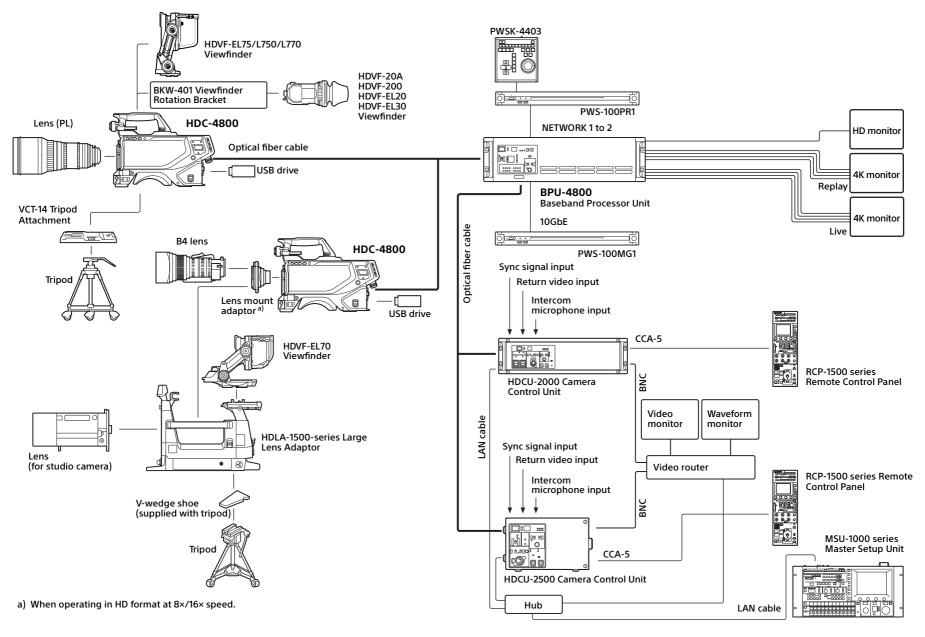

J-712-156-0A
Camera Test Charts

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.
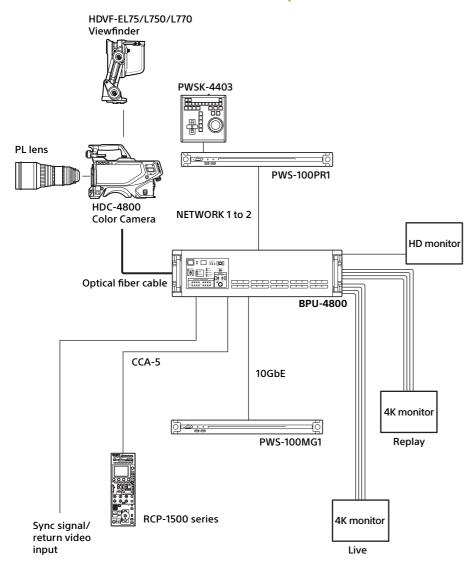

Adapter Plate

4

System Configuration Examples

HDC-4800 connection example

HDVF-EL75/L750/L770 Viewfinder

BKW-401 Viewfinder Rotation Bracket

HDVF-20A
HDVF-200
HDVF-EL20
HDVF-EL30
Viewfinder

Lens (PL)

HDC-4800

Optical fiber cable

USB drive

VCT-14 Tripod Attachment

Tripod

B4 lens

HDC-4800

Lens mount adaptor a)

USB drive

HDVF-EL70 Viewfinder

Lens (for studio camera)

HDLA-1500-series Large Lens Adaptor

V-wedge shoe (supplied with tripod)

Tripod

PWSK-4403

PWS-100PR1

NETWORK 1 to 2

BPU-4800
Baseband Processor Unit

10GbE

PWS-100MG1

Optical fiber cable

Sync signal input

Return video input

Intercom microphone input

CCA-5

HDCU-2000 Camera Control Unit

BNC

LAN cable

Sync signal input

Return video input

Intercom microphone input

HDCU-2500 Camera Control Unit

CCA-5

Hub

HD monitor

4K monitor

Replay

4K monitor

Live

RCP-1500 series Remote Control Panel

Video monitor

Waveform monitor

Video router

BNC

RCP-1500 series Remote Control Panel

MSU-1000 series Master Setup Unit

LAN cable

a) When operating in HD format at 8×/16× speed.

Extension mode connection example

HDVF-EL75/L750/L770 Viewfinder

PWSK-4403

PL lens

HDC-4800 Color Camera

PWS-100PR1

NETWORK 1 to 2

HD monitor

Optical fiber cable

BPU-4800

CCA-5

10GbE

4K monitor

PWS-100MG1

Replay

4K monitor

Sync signal/ return video input

RCP-1500 series

4K monitor

Live

Specifications

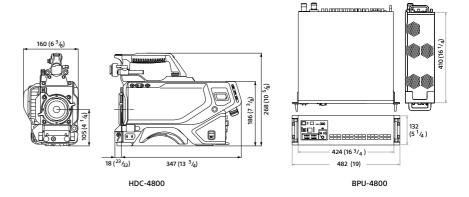| HDC-4800	
General	
Power requirements	240 V AC, 1.4 A (max.), 180 V DC, 1.0 A (max.), 12 V DC, 9.5 A (max.)
Operating temperature	–20 °C to +45 °C (–4 °F to +113 °F)
Storage temperature	–20 °C to +60 °C (–4 °F to +140 °F)
Mass	Approx. 5.0 kg (11 lb 0.37 oz) (Unit only)
Imaging element	
Imaging element	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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