

PDW-HD1500

Top-of-the-range XDCAM HD deck recording HD material at up to 50Mb/s onto Dual Layer, full range of AV and IT interfaces



The XDCAM production system was first introduced in 2003, offering revolutionary file-based acquisition onto optical Professional Disc. In 2005, XDCAM HD was launched with camcorders and decks recording high definition pictures at up to 35 Mb/s onto the same 23 GB Professional Discs.

At IBC 2007, Sony demonstrated the latest development of products to expand of the XDCAM HD line up - the PDW-700 camcorder and the PDW-HD1500 deck.

The PDW-HD1500 will record and replay XDCAM HD 50 Mb/s 4:2:2 data onto 50 GB Dual-layer Professional Disc. With interfaces including i.LINK and Ethernet, the PDW-HD1500 can operate at the heart of small or large scale file-based networked systems. VTR-like JOG/shuttle operation and video interfaces including HD-SDI and SD-SDI also makes the PDW-HD1500 ideal for operation in more traditional vide-based installations.

The PDW-HD1500 has been designed to increase the appeal of XDCAM HD for high-end applications such as drama, documentary and natural history and for mainstream entertainment programmes that required a prestige quality look.

File-based acquisition onto Professional Disc, with thumbnail and proxy operation will also make the PDW-HDW-1500 ideal for networked applications where speed of production is a critical.

Features

The PDW-HD1500 will be the most highly specified recorder within the XDCAM HD line up. The main features announced at IBC 2007 are as follows:

High definition recording using MPEG-2 422P@HL compression at 50Mb/s data rate

Support for existing XDCAM HD and XDCAM SD formats

8 channels of digital audio

Dual-layer Disc (50GB) and Single-layer Disc (23.3GB) support

Dual optical pick-up for higher speed file transfer

4.3-inch colour LCD

VTR-like JOG/SHUTTLE operation

TBC control (via front panel and remote)

Compact and lightweight at 6.3kg and half-rack width

AC, DC or battery powered

Built-in up/down converter and 1080/720 cross converter

HD up-conversion from SDI input (recording)

HD/SD conversion and cross conversion output between 1080 and 720 (playback)

Ethernet interface (100Base-T)

i.LINK interface

Technical Specifications

General	
Dimensions (W x H x D)	210 x 132 x 396 mm (8 3/8 x 5 1/4 x 15 5/8 inches)
Mass	Approx. 6.5 kg (14 lb 5 oz)
Power requirements	100 V to 240 V AC, 50/60 Hz 12 V DC
Power Consumption	AC: 80 W, DC: 65 W, SAVEMODE(DC): 55 W
Operating temperature	+5 to 40°C (+41 to 104°F)
Storage temperature	-20 to +60°C (-4 to +140°F)

Humidity	25 to 90% (relative humidity)
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Recording format	<p>Video</p> <p>MPEG HD422 (CBR: 50 Mb/s) MPEG HD(*1) -HQ mode (VBR, maximum bit rate: 35 Mb/s) -SP mode (CBR, 25 Mb/s) -LP mode (VBR, maximum bit rate: 18 Mb/s) (Playback only) MPEG IMX(*2) (CBR, 50/40/30 Mb/s) DVCAM(*2) (CBR, 25 Mb/s)</p> <p>Proxy Video</p> <p>MPEG-4</p> <p>Audio</p> <p>MPEG HD422: 8 ch/24 bits/48 kHz MPEG HD(*1): 4 ch/16 bits/48 kHz MPEG IMX(*2): 4 ch/24 bits/48 kHz or 8 ch/16 bits/48 kHz DVCAM(*2): 4 ch/16 bits/48 kHz</p> <p>Proxy Audio</p> <p>A-law: 8 ch/8 bits/8 kHz</p>
Recording/Playback time	<p>MPEG HD422, 50 Mb/s: Approx. 95 min. (PFD50DLA), Approx. 43 min. (PFD23A) MPEG HD(*1), 35 Mb/s: More than 145 min. (PFD50DLA), More than 65 min. (PFD23A) MPEG HD(*1), 25 Mb/s: Approx. 190 min. (PFD50DLA), Approx. 85 min. (PFD23A) MPEG IMX(*2), 50 Mb/s: Approx. 100 min. (PFD50DLA), Approx. 45 min. (PFD23A) MPEG IMX(*2), 40 Mb/s: Approx. 120 min. (PFD50DLA), Approx. 55 min. (PFD23A) MPEG IMX(*2), 30 Mb/s: Approx. 150 min. (PFD50DLA), Approx. 68 min. (PFD23A) DVCAM(*2), 25 Mb/s: Approx. 185 min. (PFD50DLA), Approx. 85 min. (PFD23A)</p>

Search speed (in color)	<p>Jog mode</p> <p>-1 to +1 time normal speed</p> <p>Variable speed</p> <p>-2 to +2 times normal speed</p> <p>Shuttle mode</p> <p>-20 to +20 times normal speed</p> <p>F.Fwd/Rev</p> <p>-35/+35 times normal speed</p>
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Signal Inputs

Reference input	BNC x 2 (including loop through), HD Tri-level sync (0.6 Vp-p/75 ohms/negative) or SD blackburst/composite sync (0.286 Vp-p/75 ohms/negative)
Analogue audio (line)	XLR 3-pin (female) x 2, +6 dBu, Hi-Z, balanced
Digital audio AES/EBU	BNC x 2, 4 ch (2 ch each, 1/2 ch and 3/4 ch), AES-3id-1997
Time code	BNC x 1, SMPTE time code, 0.5 to 18 Vp-p/3.3 kohms/unbalanced
SDI (HD/SD*1 switchable)	BNC x 1 -HD-SDI: SMPTE 292M (w/ embedded audio) -SD-SDI: SMPTE 259M (w/ embedded audio)

Signal Outputs

HD-SDI	BNC x 1, SMPTE 292M (w/ embedded audio)
HD-SDI (character On/Off)	BNC x 1, SMPTE 292M (w/ embedded audio)
SD-SDI	BNC x 1, SMPTE 259M (w/ embedded audio)
SD-SDI (character On/Off)	BNC x 1, SMPTE 259M (w/ embedded audio)
SD composite	BNC x 1, 10 Vp-p/75 ohms/negative, SMPTE 172M
SD composite (character On/Off)	BNC x 1, 10 Vp-p/75 ohms/negative, SMPTE 172M
Analogue audio line	XLR 3-pin (male) x 2, +4 dBu, 600ohms, Lo-Z, balanced
Analogue audio monitor	XLR 3-pin (male) x 2, +4 dBu, 600ohms, Lo-Z, balanced
Digital audio AES/EBU	BNC x 2, 4 ch (2 ch each, 1/2 ch and 3/4 ch), AES-3id-1997
Time code	BNC x 1, SMPTE time code, 1 Vp-p/75 ohms/unbalanced

Other Inputs/outputs

Phones	Stereophone-jack x 1
i.LINK	x 1, 6 pin, IEEE1394
Ethernet	RJ-45 x 1, 1000Base-T: IEEE802.3ab, 100Base-Tx: IEEE802.3u, 10Base-T: IEEE802.5
Remote	D-sub 9-pin (female) x 1, RS-422A
Video control	D-sub 9-pin (female) x 1, RS-422A
AC input	x 1, 100 to 240 V
DC input	XLR 4-pin (male) x 1
DC output	4-pin (female) x 1, DC 12 V, 7.5 W
USB	x 2 (for maintenance)

Video performance

Sampling frequency	Y: 74.25 MHz, Pb/Pr: 37.125MHz
Quantization	8 bit/sample
Compression	MPEG-2 4:2:2P@HL
Composite output	Frequency response: 0.5 to 5.75 MHz +0.5 dB/-2.0 dB S/N(Y): 53 dB or more Y/C delay: ± 20 ns or less K-factor (K2T): 1% or less

Processor adjustment range

Video level	-infinity to +3 dB
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Chroma level	-infinity to +3 dB
Set up/black level	± 30 IRE/ ± 210 mV
Chroma phase	$\pm 30^\circ$
System sync phase	± 15 us
System sync phase (fine)	0 to 400 ns

Audio performance

Sampling frequency	48 kHz
Quantization	24 bit
Frequency response	20 Hz to 20 kHz +0.5 dB/ -1.0 dB
Dynamic range	90 dB or more
Distortion	0.05% or less
Headroom	-12/-16/-18/-20 dB (selectable)
Notes	(*1)Requires a software up- grade planned to be avail- able in autumn 2008. (*2)Requires optional PDBZ- S1500 software planned to be available in autumn 2008.

Supplied Accessories

	Operation manual
	Installation manual
	XDCAM Application Software CD-ROM

Accessories**Batteries and Power Supplies****BP-GL95**

Rechargeable Lithium-ion Battery Pack

**BP-L80S**

Rechargeable Lithium-ion Battery Pack

Remote Controls and Panels**RM-280**

Editing Controller