

# PDW-HR1

XDCAM HD422 Professional Disc field station



## Overview

Sony's top-of-the-line XDCAM HD422 Series is being embraced around the world for its file-based recording capability utilizing high-capacity and highly reliable Professional Disc media. Thanks to its newly developed MPEG HD422 codec, the XDCAM HD422 Series provides high-quality video and audio recording capabilities, with an image resolution of 1920 x 1080 and eight-channel 24-bit uncompressed audio.

The newly developed PDW-HR1 XDCAM HD422 Field Station further enhances the operational capability of this series. The PDW-HR1 packs a large number of functions into its compact yet robust body. With a large 9-inch\* WVGA LCD, material can be checked on the spot and a wide variety of GUIs offers superb operational efficiency.

It provides multi-format recording capability as standard, including a frame rate of 23.98P in 1080 mode and SD recording. A wide range of signal interfaces, including baseband video (composite, HD/SD-SDI), Gigabit Ethernet, MPEG TS\*\*, DVB-ASI\*\*, and HDMI are also provided. What's more, an FTP client capability\*\*\* allows the PDW-HR1 to transfer files via its Ethernet connection without the need for a PC.

With its great operational versatility, the PDW-HR1 further expands the operational applications of the XDCAM HD422 Series.

\* Viewable area measured diagonally.

\*\* Requires optional PDBK-202 board.

\*\*\* Requires a software upgrade

**Highly portable, compact, light weight. Easy to carry and transport meaning lower freight and storage costs**

**Multi-format recording including 24P (23.98P) progressive and SD as standard so the PDW-HR1 now caters for productions intended for cinema release in the USA**

**Wide range of signal interfaces. Can operate in either baseband video or File Access Mode (FAM) offering a wide range of connectivity options. Cross conversions, up-res and down-res can be done within the PDW-F1600 negating the need for additional external equipment**

**Large 9-inch WVGA LCD screen. A wide variety of GUIs offers superb operational efficiency which allows material recorded to be checked on the spot**

## Features

**The PDW-HR1 XDCAM HD422 Field Station further enhances the operational capability of the XDCAM family and packs a large number of**

**functions into its compact yet robust body.**

- With a large 9-inch WVGA LCD, material can be checked on the spot and a wide variety of GUIs offers superb operational efficiency.

- Multi-format recording capability as standard, including a frame rate of 23.98P in 1080 mode and SD recording.

Full Product Specifications

General	
Power Requirements	AC 100 V to 240 V, 50/60 Hz, DC +12 V, Battery
Power Consumption	AC: 65 W, DC: 55 W
Operating Temperature	-5°C to +45°C 23°F to 113°F
Storage Temperature	-20°C to +60°C -4°F to +140°F
Humidity	20% to 90% (relative humidity)
Mass	7.4 kg 16 lb 5 oz
Dimensions (W x H x D) *1	300 x 129 x 400 mm (excluding protrusions) 11 7/8 x 5 1/8 x 15 3/4 inches (excluding protrusions)
Recording/Playback Format (Video)	MPEG HD422 (CBR, 50 Mbps) MPEG HD: - HQ mode (VBR, maximum bit rate: 35 Mbps) - SP mode (CBR, 25 Mbps) - LP mode (VBR, maximum bit rate: 18 Mbps) *2 MPEG IMX (CBR, 50/40/30 Mbps) DVCAM (CBR, 25 Mbps)
Recording/Playback Format (Audio)	MPEG HD422: 8 ch/24 bits/48 kHz MPEG HD: 4 ch/16 bits/48 kHz MPEG IMX: 4 ch/24 bits/48 kHz or 8 ch/16 bits/48 kHz DVCAM: 4 ch/16 bits/48 kHz
Recording/Playback Format (Proxy Video)	MPEG-4
Recording/Playback Format (Proxy Audio)	A-law (8 ch/8 bits/8 kHz)
Recording/Playback Time (MPEG HD422)	50 Mbps: Approx. 95 min (PFD50DLA), Approx. 43 min (PFD23A)  35 Mbps, 4-ch audio: More than 145 min (PFD50DLA), More than 65 min (PFD23A) 35 Mbps, 2-ch audio (playback only): More than 150 min (PFD50DLA), More than 68 min

Recording/Playback Time (MPEG HD)	(PFD23A) 25 Mbps, 4-ch audio: Approx. 190 min (PFD50DLA), Approx. 85 min (PFD23A) 25 Mbps, 2-ch audio (playback only): Approx. 200 min (PFD50DLA), Approx. 90 min (PFD23A) 18 Mbps, 4-ch audio (playback only): More than 248 min (PFD50DLA), More than 112 min (PFD23A) 18 Mbps, 2-ch audio (playback only): More than 265 min (PFD50DLA), More than 122 min (PFD23A)
Recording/Playback Time (MPEG IMX)	50 Mbps: Approx. 100 min (PFD50DLA), Approx. 45 min (PFD23A) 40 Mbps: Approx. 120 min (PFD50DLA), Approx. 55 min (PFD23A) 30 Mbps: Approx. 150 min (PFD50DLA), Approx. 68 min (PFD23A)
Recording/Playback Time (DVCAM)	25 Mbps: Approx. 185 min (PFD50DLA), Approx. 85 min (PFD23A)
Search Speed Range (Shuttle Mode)	-20 times to +20 times normal speed
Search Speed Range (Variable Mode)	-1 time to +1 time normal speed
Search Speed Range (Jog Mode)	-1 time to +1 time normal speed
Search Speed Range (Fast Forward/Reverse)	-20/+20 times normal speed

### Media Drive

Media Type	Professional Disc Drive (x1) SxS Memory Card Drive, ExpressCard/34 (x2) (Optional PDBK-MK1 is required.)
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### Input/Output

Reference Input	BNC (x2) (including loop-through), HD Tri-level sync (0.6 Vp-p/75 Ω/negative) or SD blackburst/composite sync (0.286 Vp-p/75 Ω/negative)
Analog Composite Input	BNC (x1), 1.0 Vp-p/75 Ω/negative, SMPTE 170M
HD-SDI Input	BNC (x1) (HD/SD switchable) HD-SDI: SMPTE 292M (w/embedded audio) SD-SDI: SMPTE 259M (w/embedded audio)

XLR-type 3-pin (female) (x4) (channel selectable), +4/0/-3/-6 dBu (selectable), 10

Analog Audio Input	k $\Omega$ , balanced CH1 and CH2: switchable phantom powered mic input
Timecode Input	BNC (x1), SMPTE timecode, 0.5 Vp-p to 18 Vp-p/3.3 k $\Omega$ /unbalanced
Analog Composite Output	BNC (x1), 1.0 Vp-p/75 $\Omega$ /negative, SMPTE 170M, character On/Off
HD-SDI Output	BNC (x2), 1: SMPTE 292M (w/embedded audio) 2: SMPTE 292M (w/embedded audio), character on/off
SD-SDI Output	BNC (x1), SMPTE 259M (w/embedded audio), character on/off
HDMI Output	Type-A (x1), 19 pin
Analog Audio Output	XLR-type 3-pin (male) (x4) ( channel selectable), +4/0/-3/-6 dBu (selectable), 600 $\Omega$ , Lo-z, balanced CH3 and CH4: switchable analog audio monitor
Headphone Output	JM-60 Stereo phone jack (x1), -13 dBu, 8 $\Omega$ , unbalanced
Timecode Output	BNC (x1), SMPTE timecode, 1.0 Vp-p/75 $\Omega$ /unbalanced
i.LINK	IEEE 1394 6-pin (x2)* File Access Mode or HDV TS*(1080i/720p) (selectable) *Optional PDBK-202 is required for HDV IN/OUT.
Ethernet	RJ-45 (x1) 1000BASE-T: IEEE 802.3ab 100BASE-TX: IEEE 802.3u 10BASE-T: IEEE 802.3
Remote Input/Output (9-pin)	D-sub 9-pin (female) (x1), RS-422A
DC Input (12 V)	XLR-type 4-pin (male) (x1)
DC Output (12 V)	4-pin (female) (x1), DC 12 V, 7.5 W
Maintenance	USB (x2)
AC Input	AC Input (x1), 100 V to 240 V, 50/60Hz

## Video Performance

Sampling Frequency	Y: 74.25 MHz, Pb/Pr: 37.125MHz
Quantization	8 bits/sample

Error Correction	Reed Solomon Code
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### Processor Adjustment Range

Video Level	$-\infty$ to +3 dB
Chroma Level	$-\infty$ to +3 dB
Set Up/Black Level	-30 IRE to +30 IRE/-210 mV to +210 mV
Chroma Phase	-30° to +30°
System Sync Phase	-15 $\mu$ s to +15 $\mu$ s
System SC Phase	0 ns to 400 ns

### Audio Performance

Sampling Frequency	48 kHz
Quantization	24 bits
Frequency Response	20 Hz to 20 kHz +0.5/-1.0 dB (0 dB at 1 kHz)
Dynamic Range	More than 90 dB
Distortion	Less than 0.05% (at 1 kHz)
Headroom	20/18/16/12 dB (selectable)

### Other Equipment

Built-in Display	9-inch type color LCD monitor
Built-in Speaker	Stereo (x1)

### Supplied Accessories

Supplied Accessories	Operation manual (1) Installation manual (1) XDCAM Application Software CD-ROM (1)
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### Notes

[*1]	The values for dimensions are approximate.
[*2]	Playback only.
Environmental notice for customers in the USA	Lamp in this product contains mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or see <a href="http://www.sony.com/mercury">www.sony.com/mercury</a> for additional information.

## Gallery



