

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.

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

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| | 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) |
| Recording/Playback Time (MPEG HD) | 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 (PFD23A) 25 Mbps, 4-ch audio: Approx. 190 min (PFD50DLA), Approx. 85 min (PFD23A) 25 Mbps, 2-ch audio (playback |

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

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| Search Speed Range (Jog Mode) | -1 time to +1 time normal speed |
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| Search Speed Range (Fast Forward/Reverse) | -20/+20 times normal speed |
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Media Drive

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

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| 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) |
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| Analog Composite Input | BNC (x1), 1.0 Vp-p/75 Ω/negative, SMPTE 170M |
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| | BNC (x1) (HD/SD switchable) HD-SDI: SMPTE 292M |
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| HD-SDI Input | (w/embedded audio) SD-SDI: SMPTE 259M (w/embedded audio) |
| Analog Audio Input | XLR-type 3-pin (female) (x4) (channel selectable), +4/0/-3/-6 dBu (selectable), 10 k Ω , balanced CH1 and CH2: switchable phantom powered mic input |
| Timecode Input | BNC (x1), SMPTE timecode, 0.5 V _{p-p} to 18 V _{p-p} /3.3 k Ω /unbalanced |
| Analog Composite Output | BNC (x1), 1.0 V _{p-p} /75 Ω /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 |
| | XLR-type 3-pin (male) (x4) (channel selectable), +4/0/-3/-6 |

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| Analog Audio Output | dBu (selectable), 600 Ω , Lo-z, balanced CH3 and CH4: switchable analog audio monitor |
| Headphone Output | JM-60 Stereo phone jack (x1), -13 dBu, 8 Ω , unbalanced |
| Timecode Output | BNC (x1), SMPTE timecode, 1.0 Vp-p/75 Ω /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

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 $+30^\circ$

System Sync Phase $-15 \mu\text{s}$ to $+15 \mu\text{s}$

System SC Phase 0 ns to 400 ns

Audio Performance

Sampling Frequency 48 kHz

Quantization 24 bits

20 Hz to 20 kHz +0.5/-1.0 dB (0 dB)

Frequency Response 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)

Notes

[*1] The values for dimensions are approximate.

[*2] Playback only.

Lamp in this product contains mercury. Disposal of these

Environmental notice
for customers in the
USA

materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or see www.sony.com/mercury for additional information.

Gallery



