SONY

PZW-4000

4K XAVC Recorder. Internal 2TB SSD with two SxS memory slots

Overview

Superb 4K picture quality and enhanced workflow efficiency

The PZW-4000 4K XAVC Recorder supports XAVC-L422 QFHD 200 (200Mbps for QFHD @60fps) recording/playback as well as XAVC-I QFHD 300 (Intra XAVC for QFHD @ 600 Mbps), which is widely adopted in today's 4K/UHD productions.

Long GOP compression technology at 200Mbps reduces video bit rates by 1/3 at 59.94p and 2/5 at 50p compared with the XAVC Intra codec while maintaining superb 4K image quality.

This combination of picture quality and lower data rate significantly improves workflow efficiency, especially with projects involving longer recording/playback time and faster transferring/copying of files.

The internal 2TB SSD allows approximately 20 hours of recording/playback in XAVC-L422 QFHD 200Mbps, with faster than real-time transfer through the GbE network interface.

On-the-fly playout from SxS memory

Dual slots for professional SxS memory cards enable on-the-fly playout without ingesting media into the recorder's internal SSD. It also enables simultaneous recording (*1) to internal SSD and SxS, allowing content to be used both for backup and 'to-go' for

editorial purposes. This allows production crews to carry out off-loading/backup operations as soon as shooting is completed.

Support for XAVC-L422 QFHD 200Mbps

The PZW-4000 supports the latest and most advanced XAVC family codec, XAVC-L422 QFHD 200, along with XAVC-I QFHD 300. It can compress QFHD/UHD images efficiently while maintaining high image quality. Excellent broadcast picture quality is ensured by 10-bit quantisation and 4:2:2 colour sampling, ideal for today's rapidly growing HDR productions.

The PZW-4000 uses the same highly efficient encoding process as introduced with the PWS-4500 server. This ensures the highest picture quality in both SDR and HDR at an easy-to-handle 200Mbps data rate.

Features

Supports latest removable media and codecs

The PZW-4000 supports direct access to industry-proven SxS professional memory. The recorder supports both XAVC-I and XAVC-L422 codecs and metadata, effectively providing complete format transparency. It also supports industry standard VTR/VDCP and ftp protocols.

Supports versatile USB SSD and/or HDD

For cost-effective portable media options, the PZW-4000 supports versatile USB SSD or HDD for check-in/out in handling large 4K UHD projects.
As the same manner with an SxS, simultaneous recording to internal SSD and USB drive is also supported.

Multi-tasking internal storage operations

The 2TB SSD internal storage is accessible when carrying out certain tasks. This multi-tasking capability increases interoperability and overall efficiency when working with network production systems.

Familiar VTR-style user interface

The control layout of the PZW-4000 follows industry-standard conventions that are familiar to most users with traditional linear editing operational skills. simplifying operation and integration into overall production workflows.

Enhanced network functionality

The PZW-4000 allows users to access growing volumes of files from servers and/or non-linear editors, with high-speed file transfer and multiple access via a network. It offers onboard Gigabit and optional 10Gb Ethernet.

HD monitor output

The PZW-4000 supports QFHD to HD down-converted outputs for monitoring purposes.

Specifications

General	
Power Requirements	AC 100 V to 127V/220V to 240 V, 50/60 Hz (47Hz to 63Hz)
Power Consumption	550 W
Operating Temperature	5°C to 40°C 42°F to 104°F
Storage Temperature	-20°C to + 60°C -4°F to + 140°F
Humidity	20% to 90% (relative humidity)
Mass	18.8 kg

	41 lb. 7.2 oz
Dimensions (W x H x D) (*2)	424 x 176 x 463 mm (excluding protrusions) 16 3/4 x 7 x 18 1/4 inches (excluding protrusions)
Recording / Playback Format (Video)	XAVC-I QFHD 300 (500 Mbps @50p, 600 Mbps @59.94p) XAVC-L422 QFHD 200 Mbps (both @50p & 59.94p) XAVC QFHD Long 150 Mbps (*3) (both @50p & 59.94p)
Recording / Playback Format (Audio)	8 ch / 24 bits / 48 kHz or 16 ch / 24 bits / 48 kHz
Recording / Playback Time (XAVC-I QFHD 300)	Approx. 7H on INT SSD
Recording / Playback Time (XAVC-L422 QFHD 200)	Approx. 20H on INT SSD
Search Speed Range (Shuttle Mode)	-20 times to +20 times normal speed
Search Speed Range (Variable Mode)	-2 times to +2 times normal speed
Search Speed Range	-1 time to +1 time normal speed

(Jog Mode)	
Search Speed Range (Fast Forward / Reverse)	-50 times to +50 times normal speed

Media Drive

Media Type	SxS Memory Card Slots (x2) USB Type-C (x1)

Internal Storage

Storage Type	SSD, NVMe
Total Capacity (For Recording)	2 TB
Raid	Raid-1 (option)

Input / Output

Reference Input	BNC (x2) (including loop-through), HD Tri-level sync (0.6 Vp-p / 75Ω / negative) SD blackburst / composite sync (0.286 Vp-p/75 Ω/negative)
3G-SDI Input	BNC (x4) SMPTE 424 Level-A, B

	(w/embedded audio)
12G-SDI Input (*4)	BNC (1) SMPTE ST2082 Level-A
Analog Audio Input	XLR-type 3-pin (female) (x2) (channel selectable), +4 / 0 / -3 / -6 dBu (EBU Level) (selectable), Hi-z, balanced
Digital Audio Input (AES / EBU)	BNC (x4), 8 ch (2 ch each, 1/2 ch, 3/4 ch, 5/6 ch and 7/8 ch), AES-3id-1995
Timecode Input	BNC (x1), SMPTE timecode, unbalanced
System Timecode Input	BNC (x1), SMPTE timecode, unbalanced
3G-SDI Output	BNC (x4), SMPTE 424 Level-A, B (w/embedded audio)
12G-SDI Output (*4)	BNC (1) SMPTE ST2082 Level-A
3G-SDI MONITOR Output	BNC (x2), SMPTE 424 Level-A, B (w/embedded audio) character on/off
12G-SDI MONITOR Output (*4)	BNC (x2), SMPTE ST 2082 LEVEL-A (w/embedded audio) character

	on/off
HDMI Monitor	HDMI 1.4a, Type-A (x1), 19 pin (Outputs the front panel display picture)
Analog Audio Output	XLR-type 3-pin (female) (x2) (channel selectable), +4 / 0 / -3 / -6 dBu (EBU Level), (selectable), 600 Ω Load, Lo-z, balanced
Analog Audio Monitor	XLR-type 3-pin (male) (x2), +4 dBu, 600 Ω, Lo-Z, balanced
Digital Audio Output (AES / EBU)	BNC (x4), 8 ch (2 ch each, 1/2 ch, 3/4 ch, 5/6 ch and 7/8 ch), AES-3id-1995
Timecode Output	BNC (x2), SMPTE timecode, 1.0 Vp-p / 75 Ω / unbalanced
Ethernet	RJ-45 (x1) 1000BASE-T: IEEE 802.3ab 100BASE-TX: IEEE 802.3u 10GBASE-LR/SR: IEEE 802.3ae-2002 (Option)
USB (*6)	SuperSpeed USB 5 Gbps (USB 3.2) USB Type C (x1), Power delivery (3 A)
Remote (9-pin)	RJ-45 (*5), RS-422A

Remote (GPIO)	D-sub 25-pin (female) (x1) Input: CMOS 5V Output: open-collector
Maintenance	SuperSpeed USB 5 Gbps (USB 3.2), USB Type A (x2), Power delivery (0.9 A)

Video Performance

Sampling Frequency	Y: 148.5 / 1.001 MHz Pb/Pr: 74.25 / 1,001 MHz
Quantization	10 bits / sample
Error Correction	Reed Solomon Code

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)
	-20 / -18 / -16 / -12 / -9 dB (EBU

Headroom	Level) (selectable)

Other Equipment

Built-in Display	4.3-inch type color LCD monitor
Expansion Slot	PCIe Gen3x4 (x2)

Supplied Accessories

Supplied Accessories	Operating Instructions (1) RJ45-DSUB Adapter Cable (2)

Notes

Note	(*1) Simultaneous recording: recording on the internal SSD and chase copy to an SxS. (*2) The values for dimensions are approximate. (*3) Only playback of material recorded on SxS memory card by Sony Camcorders (XAVC-L QFHD 150 Video + 4CH Audio), or transcode copy to internal drive are supported. (*4) Using of 12G-SDI or 4 x 3G-SDI is selection in the maintenance

menu.
(*5) REMOTE 1/2 connector:
Controls the recording port and playback port.
(*6) USB Port B is reserved for future use.

Gallery