SONY

PXW-Z100

1/2.33-inch type Exmor R CMOS sensor 4K compact XDCAM camcorder recording on XAVC format



Overview

Professional handheld camcorder records 4K using the XAVC format on to XQD solid state memory cards

The PXW-Z100 uses Exmor R™ CMOS sensors capable of 4K resolution (4096 x 2160) at 60 fps or 50fps, while weighing under 3 kg even with a 4K-compatible high-performance G lens™ mounted. The recording format is XAVC, which was first used in the PMW-F55 digital cinema camera. As with the F55, 4K 60p 4:2:2 10-bit recording is possible at a high bit rate of 500Mbps or 600 Mbps. QFHD (3840 x 2160) and HD (1920 x 1080) resolutions, which have high compatibility with 4K TV, can also be selected.

For extended recording, XAVC LongGOP (QFHD 4:2:0 8-bit / Full HD 4:2:2 10-bit) and AVCHD are supported via firmware upgrades. As the PXW-Z100 can be used in the same way as conventional professional handy-type cameras, 4K content can be recorded by a minimal number of staff. In addition, during editing for a HD project, 4K source material provides significant additional creative options.

Sony's PXW-Z100 is a professional camcorder designed to expand the range of 4K recording possibilities even in low-budget environments.

Features

4K (4096 x 2160) 50fps or 60fps shooting
The camcorder provides good sensitivity due to the back-illuminated Exmor™ R CMOS sensor. With 8 million effective pixels, the 1/2.33" sensor captures 4K images at 50fps or 60fps. The inbuilt high-performance G Lens offers maximum shooting flexibility, including a wide angle of 29.5mm (equivalent to 35mm) and 20x powerful optical zoom.

XAVC format for recording 4K /HD 60p with 4:2:2 10-bit at 600Mbps
The PXW-Z100 uses the XAVC recording format, featuring efficient MPEG-4 AVC/H.264 compression, for HD (1920x1080), QFHD (3840x2016) and 4K (4096x2160) video. Image sampling is 4:2:2 10-bit, with an intra-frame system that compresses each frame individually at a maximum bit rate of 500Mbps or 600Mbps during 4K 50fps or 60fps recording respectively and 223Mbps during HD 50fps or 60fps recording.The XAVC format is ideal for those looking to implement a high-quality, secure and worry-free workflow.

Support for XAVC LongGOP Mode and AVCHD Format
For extended recording, XAVC LongGOP (QFHD 4:2:0 8-bit / Full HD 4:2:2 10-bit) is supported from a firmware upgrade (V3.0). In addition, as a consumer friendly format, AVCHD (Full HD) is supported from a V4.0 firmware upgrade.

XQD Memory Card recording
The XQD Memory Card* is a new standard of solid state memory, which was recently defined by several industry leading companies. XQD uses the ultra-fast PCI Express interface and Sony's unique camera processor to enable stable video recording at 500Mbps or 600Mbps. The PXW-Z100 features two XQD Memory Card slots. Multiple

cards can be used in various ways, such as for relay recording. When the first card becomes full, recording continues on the second card without a break.

* XQD cards have a write speed of up to 800Mbps. The use of S Series cards with 180MB/s writing speed is recommended.

HDMI interface for 4K output and 3G HD-SDI interface for HD output
The HDMI interface on the PXW-Z100 can output 4K as a 50fps/60fps signal. When the PXW-Z100 is connected to a Sony 4K-compatible BRAVIA TV, the recorded 4K content can be displayed in 4K 50fps/60fps quality. Latest firmware provides compatibility with the new HDMI 2.0 standard and enable 4K 50fps/60fps output to a wider range of devices. Other features include a 3G HD-SDI interface that supports output to an SDI of up to HD 60fps. It also supports HD output during 4K recording.

Note: Cannot output 4K (HDMI) and HD (3G HD-SDI) simultaneously.

Paint function for more creative freedom
The PXW-Z100's paint function enables multiple image parameters to be adjusted including gamma curve, black level, skin detail and colour. The range of settings is similar to those in the PMW-F55. Together with other setting options, parameter settings can be recorded as a camera profile onto a memory card. The recorded camera profile can then be used to set the same parameters in another PXW-Z100 to enable the matching of quality and image tones when using a multi-camera setup.

Remote control with WiFi
Focus, zoom, aperture settings and 'record start/stop' can be remote controlled using the browser function of a smartphone or tablet.

High-quality Audio
The PXW-Z100 is equipped with two XLR connectors, which are for professional microphones such as the ECM-680S/MS2/678/674/673/VG1 and wireless microphone systems such as the UWP-V1/V2.

Timecode IN/OUT
The PXW-Z100 comes equipped with Timecode Input/Output connectors.These allow users to synchronize the timecode with other cameras, enabling easier multi - camera productions.

Specifications

General	
Mass	Approx 2.46 kg, 5 lb 6.75 oz Approx. 2.91 kg, 6 lb 6.7 oz (with lens hood, eyecup, NP-F970 battery, ECM-XM1 Mic.,)
Dimensions (W x H x D)	Approx. 189 x 193 x 362 mm, 7 7/16 x 7 19/32 x 14 1/4 inches (without protrusions)
Power Requirements	7.2 V (battery pack); 12.0 V (AC Adaptor)
Power Consumption	Approx. 14.9 W (while recording, EVF On) Approx. 15.2 W (while recording, LCD monitor On)
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to +60°C (-4°F to +140°F)
Battery Operating Time	Approx. 165 mins with NP-F970 battery (while recording, EVF ON, LCD monitor Off)

General	
Recording Format (Video)	XAVC (AVC/H.264 High 4:2:2 Intra Profile) 4K: VBR, 600 Mbps max. HD: SMPTE RP2027 Class100 compliant XAVC-L (AVC/H.264 High Profile) QFHD 4:2:0 8bit VBR, 150Mbps max. XAVC-L (AVC/H.264 High 4:2:2 Profile) HD : 4:2:2 10bit VBR, 50Mbps max. AVCHD format ver.2.0 compatible: MPEG4-AVC/H.264
Recording Format (Audio)	LPCM 8CH (2CH recording/playback), 24-bit, 48-kHz Dolby Digital 2ch Stereo, Dolby Digital Stereo Creator (AVCHD)
Recording Frame Rate	XAVC-I 4K (4096 x 2160): 23.98p/25p/29.97p/50p/59.94p XAVC-I QFHD (3840 x 2160): 23.98p/25p/29.97p/50p/59.94p XAVC-I HD (1920 x 1080): 23.98p/25p/29.97p/50p/59.94p XAVC-L QFHD (3840 x 2160): 23.98p/25p/29.97p/50p/59.94p XAVC-L HD (1920 x 1080): 23.98p/25p/29.97p/50p/50i/59.94p/59.94i AVCHD (1920x1080): 50p/59.94p (PS), 23.98p/25p/29.97p/50i/59.94i (FX)
Recording/Playback Time	XAVC QFHD Intra 29.97P Approx. 20 min with QD-S64 (64 GB) memory card Approx. 10 min with QD-S32 (32 GB) memory card XAVC FHD Intra 59.94P Approx. 30 min with QD-S64 (64 GB) memory card Approx. 15 min with QD-S32 (32 GB) memory card XAVC-L QFHD 29.97P (100Mbps) Approx. 60 min with QD-S64 (64 GB) memory card Approx. 30 min with QD-S32 (32 GB) memory card XAVC-L HD 59.94P (50Mbps) Approx. 120 min with QD-S64 (64 GB) memory card Approx. 60 min with QD-S32 (32 GB) memory card

Lens	
Lens Mount	Fixed
Zoom Ratio	20x (optical), servo/manual

Lens

Focal Length	f=4.1 - 82.0 mm equivalent to f=30.0 - 600 mm on 35 mm lens (17:9 4096 x 2160) equivalent to f=31.5 - 630 mm on 35 mm lens (16:9 3840 x 2160, 1920 x 1080)
Iris	F1.6 - F11 auto/manual selectable
Focus	AF/MF selectable, 10 mm to ∞ (Wide), 800 mm to ∞ (Tele)
Image Stabilizer	ON/OFF selectable, shift lens
Filter Diameter	M72 mm

Camera Section

Imaging Device (Type)	1-chip 1/2.3 type back-illuminated “Exmor R” CMOS Sensor
Imaging Device (Pixel Count)	18.9M (total), 8.8M (effective)
Built-in Optical Filters	OFF: Clear, 1: 1/4ND, 2: 1/16ND, 3: 1/64ND
Minimum Illumination	60P: 4 lux (1/30 Shutter Speed) 50P: 3 lux (1/25 Shutter Speed)
Shutter Speed	1/3 sec to 1/9,000 sec
Slow & Quick Motion Function	1080p: Frame rate selectable 1,2,4,8,15,30,60 fps in NTSC mode from 1,2,3,6,12,25,50 fps in PAL mode
White Balance	Preset (Outdoor: 5600K), A, B
Gain	0, 3, 6, 9, 12, 15, 18, 21, 24, 27 dB, AGC
Gamma Curve	Selectable

Input/Output

Audio Input	XLR-type 3-pin (female) (x2), line/mic/mic +48 V selectable
Composite Output	Composite Video Out (RCA pin)
Audio Output	RCA pin
SDI Output	BNC (x1), HD/SD selectable
Timecode Input / Output	RCA pin (x1) IN/OUT selectale
USB	mini-B/USB2.0 Hi-speed/mass-storage (x1), TypeA/USB2.0 Hi-speed /Host*1
Headphone Output	Stereo mini jack ø3.5 mm (x1)

Input/Output

Speaker Output	Monaural
DC Input	DC jack
Remote	Stereo mini mini jack ø2.5 mm (x1)
HDMI Output	Type A (x1)

Monitoring

Viewfinder	0.45-inch type color LCD: 852 [H] × 3 [RGB] × 480 [V], 16:9
Built-in LCD Monitor	3.5-inch type Xtra Fine LCD™: 852 [H] × 480 [V] × 3 [RGB],16:9

Built-in Microphone

	Omni-directional stereo electret condenser microphone.

Media

Type	XQD x2 (for XAVC) Memory Stick Duo™ and SD/SDHC/SDXC compatible x1 (for AVCHD) *AVCHD is planned to be updated in the future SD/SDHC/SDXC x1 (for Utility SD slot)

Supplied Accessories

	Lens hood (1), Pre-installed to the Camcorder EVF eyecup (1) USB cable (1) AV connecting cable (1) AC-NB12A AC adaptor (1) HDMI Cable (1) Wi-Fi dongle (1) ECM-XM1Microphone (1) Operating instructions (1) AC Cable (2) Battery Charger (1) NP-F970 Battery (1) Warranty (1) CD-ROM: Operating instructions in PDF (1)













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