SONY

PXW-Z450

4K HDR 2/3-type CMOS sensor shoulder camcorder with advanced network features, low power consumption and optimized weight balance



Overview

World’s first 4K HDR shoulder camcorder

Sony's ground-breaking PXW-Z450 combines 4K resolution (3,840 x 2,160) with superbly balanced shoulder-mount ergonomics and a versatile 2/3-inch B4 lens mount. It's a robust, high performance acquisition tool for 4K and HD news, documentaries, live events, and general field production.

The PXW-Z450 records 4K QFHD (3,840 x 2,160) at 50p/59.94p, with 4K Slow and Quick motion up to 59.94p*, as well as a variety of HD formats including XAVC Intra, XAVC Long GOP, MPEG HD 422, and MPEG HD 420. The Z450 can not only record and output SDR, but also HDR pictures as Hybrid Log Gamma (HLG) and S-Log3 with BT.2020 color space*.

Thanks to a specially developed 4K 2/3-type Exmor R CMOS sensor, the PXW-Z450 allows you to use a wide range of commercially available B4 mount lenses without having to use an adaptor. The PXW-Z450 offers the same advanced features as the PXW-X400 Full HD camcorder, with exceptional weight balance and low power consumption, alongside excellent networking features.

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The PXW-Z450 is available on its own (PXW-Z450) or with 4K lens, OLED Viewfinder and shotgun microphone (PXW-Z450KC).

4K HDR / HD SDR simultaneous recording

The Z450 can record both 4K HDR and HD SDR simultaneously to support high speed workflows.* No need to spend time converting 4K HDR clips to HD SDR to get on-air quickly.

Advanced picture monitoring*

To make HDR production easier, picture quality can be monitored with BT.709 imagery in the viewfinder while shooting S-Log3 or HLG, while a high quality Focus Magnifier picture can be made from the 4K resolution image.

Versatile B4 ENG lens options

Thanks to a versatile 2/3-type native sensor and B4 lens mount, this camcorder allows you to install a variety of B4 ENG lenses including either 4K or HD. This flexible lens options supports a variety of shooting applications while saving cost.

Low power and ergonomic design

Z450 power consumption is as low as 24W in normal operation (XAVC recording with color LCD on), extending recording times, while an ergonomically balanced weight distribution eases operator fatigue and enhances stable shooting.

Excellent connectivity and wireless functions [online]

The PXW-Z450 enables robust, high-speed ENG/EFP workflows with high resolution clip or proxy clip transfer via a Wired/Wireless LAN or a 4G/LTE connection. The camcorder can also stream HD video to a receiver even

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when shooting in 4K.

Easily connect to the cloud

C3 Portal* can upload high-res/proxy footage to the cloud from multiple camera operators in the field, so editing can start immediately. Uploaded content can be accessed securely from any location. Production teams can even start logging clips while shooting is still going on, saving even more valuable time when a story's breaking.

*C3 portal is only available in specific countries. C3 portal supported functions vary depending on the camcorder.

PXW-Z450KC – 18X Portable 4K Lens Kit Model

This cost-effective 4K shoulder camcorder kit includes the camcorder itself, plus HDVF-EL20 OLED color view finder, shotgun microphone, and a lightweight 3.79-lb 4K 18X Canon portable lens. The lens has a focal length of 7.6–137 mm, support for ALAC (Auto Lens Aberration Compensation) and its dimensions are (W x H x L) 6.3 x 4.1 x 8.1 in. (160.5 x 105 x 206.2 mm) Digital extender and focus-servo features are not supported.

* Version 3.0 firmware upgrade required.

Features

High quality recordings in 4K QFHD and HD

The PXW-Z450 supports a variety of 4K and HD formats, including 4K QFHD (3840x2160) at 50p/59.94p, using the XVAC Intra and XAVC Long GOP, MPEG HD 422 and MPEG HD 420 workflow standards.

4K Slow and Quick motion

The camcorder provides 4K Slow and Quick motion up to

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59.94p*.

* Version 3.0 firmware upgrade required.

High sensitivity image making

The camcorder’s specially-developed 4K 2/3-type Exmor R CMOS sensor provides superb image quality and high sensitivity. The sensor matches B4 mount lens systems, allowing you to use commercially-available B4 4K/HD lens systems without needing an adapter.

4K HDR / HD SDR simultaneous recording to one card

The PXW-Z450 supports simultaneous 4K HDR and HD SDR recordings to a single card* and Hybrid Log Gamma (HLG) and S-Log3 recordings with BT.2020 color space.*

* Version 3.0 firmware upgrade required.

Quad Link 3G-SDI option for 4K 50p/59.94p output**

Use the PXW-Z450's four 3G-SDI connectors to support 4K 50p/59.94p output as a Quad Link 3G-SDI signal. Connect any 4K Quad Link product you want to the PXW-Z450.

** Version 2.0 firmware required plus CBKZ-Z450QL upgrade license.

4K cache recordings*

The PXW-Z450 provides cache recording support for 4K pictures at XAVC-Long GOP quality.

* Version 3.0 firmware upgrade required.

Discover optimized weight balance

Thanks to its fine-tuned ergonomic design, the PXW-Z450 camcorder achieves an optimized weight balance to lessen the weight on the lens grip and support stable

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image shooting.

Supports Full HD OLED viewfinders

The PXW-Z450 supports a variety of Sony's viewfinders, including the Full HD OLED HDVF-EL30 and HDVF-EL20. The OLED viewfinders take an advantage of focusing the 4K shooting.

Advanced picture monitoring*

Picture quality can be monitored with BT.709 pictures in the viewfinder while shooting S-Log3 or HLG, while a high quality Focus Magnifier picture can be made from the 4K resolution image.

* Version 3.0 firmware upgrade required.

Embedded RJ-45 connector

An embedded RJ-45 Ethernet 100B-T connector on the right side of the camcorder provides a robust and fast network connection that can be used for file transfer, live streaming and camera control from a web browser.

One-touch wireless LAN connection

A Near Field Communication (NFC) function allows easy, one-touch wireless LAN connection to a smartphone or tablet device without manual setting of the network parameters.

Built-in wireless module with Content Browser Mobile™

The camcorder's built-in wireless module gives you more mobility with no cable needed, enabling proxy recording and file transfer or live streaming. In file transfer mode, high-resolution files and XAVC Proxy files can be transferred over wireless connection to cloud or FTP server thanks to Content Browser Mobile*** (CBM) application. In Push mode, the CBM application enables users to monitor the currently shot video and to

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wirelessly control camcorder settings such as focus, zoom, iris, white balance, REC START/STOP, and more. With Content Browser Mobile V2.0 proxy trim, proxy partial clip upload, and logging are available. High quality live streaming is provided by the advanced Sony QoS technology embedded in the camcorder and in the PWS-100RX1 network RX station. Non QoS live streaming is also possible with a third-party receiver or VLC player.

*** The CBM application can be downloaded from the Google Play Store or App Store.

Support for DWX wireless microphone systems*

The PXW-Z450 supports Sony's DWX series wireless microphone systems. Power Save Mode synchronizes with Camera Power OFF and can be controlled by assignable buttons. With power save enabled, the status is displayed in the viewfinder.

* Version 3.0 firmware upgrade required.

Easy network connection

A dedicated button gives simple on-off control of Network Client Mode, Auto Upload (Proxy) and Live Streaming. Proxy recording mode can be enabled or disabled by assignable buttons*. Wi-Fi Access Point for Station Mode can be set by the camera menu*. Multiple CCM addresses can be saved on-board*.
* Version 3.0 firmware upgrade required.

Records a second camera's feed via SDI

An SD or HD-SDI (up to 1.5G) signal can be recorded by the camcorder, a useful function to record an external feed from another camera.

Lower power consumption

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Due to advanced component design, the PXW-Z450’s power consumption is as low as 24 W in normal recording mode**. This reduces battery consumption and extends recording times.
** XAVC recording with color LCD on.

Specifications

General	
Mass	Approx. 3.6 kg (body only without lens, VF, Mic) Approx. 7 lb 15 oz (body only without lens, VF, Mic)
Dimensions (W x H x D) *1	170x 269 x 332 mm (excluding protrusions, body only) 6 3/4 x 10 5/8 x 13 1/8 inches (excluding protrusions, body only)
Power Requirements	DC 12 V (11 V to 17.0 V)
Power Consumption	Approx. 24 W (while XAVC recording, color LCD on) Approx. 26 W (while XAVC recording, color LCD on)
Operating Temperature	0° C to 40° C 32° F to 104° F

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Storage Temperature	-20°C to +60°C -4°F to +140°F
Continuous Operating Time	Approx. 160 min with BP-FLX75
Recording Format (Video)	XAVC Intra: - XAVC-I QFHD 300 mode: MPEG-4 AVC/H.264, VBR, Max. 600 Mbps - XAVC-I HD 100 mode: MPEG-4 AVC/H.264, CBG, Max. 223 Mbps XAVC Long: - XAVC-L QFHD 150 Mode: MPEG-4 AVC/H.264, VBR, Max. 150 Mbps XAVC Long: XAVC-L QFHD 100 Mode: MPEG-4 AVC/H.264, VBR, Max. 100 Mbps - XAVC-L422 HD 50 Mode: MPEG-4 AVC/H.264, VBR, Max. 50 Mbps - XAVC-L422 HD 35 Mode: MPEG-4 AVC/H.264, VBR, Max. 35 Mbps - XAVC-L422 HD 25 Mode: MPEG-4 AVC/H.264, VBR, Max. 25 Mbps

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Recording Format (Video)	MPEG HD422: - HD422 mode: MPEG-2 422P@HL, CBR, Max.50 Mbps MPEG HD: - HQ mode: MPEG-2 MP@HL, VBR, Max.35 Mbps MPEG IMX: - MPEG-2 422@ML, CBR, 50 Mbps DVCAM: - CBR, 25 Mbps
Recording Format (Audio)	XAVC Intra: LPCM 24 bits, 48 kHz, 4 channels XAVC Long: LPCM 24 bits, 48 kHz, 4 channels MPEG HD422: LPCM 24 bits, 48 kHz, 4 channels MPEG HD: LPCM 16 bits, 48 kHz, 4 channels MPEG IMX: LPCM 16/24 bits, 48 kHz, 4 channels DVCAM: LPCM 16 bits, 48 kHz, 4 channels
Recording Format	XAVC Proxy: AVC/H.264 Main Profile 4:2:0 Long GOP, VBR 1280 × 720, 9 Mbps (Target Rate) 1280 × 720, 6 Mbps (Target

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(Proxy Video)	Rate) 640 × 360, 3 Mbps (Target Rate) 480 × 270, 1 Mbps, 500 kbps (Target Rate)
Recording Format (Proxy Audio)	XAVC Proxy: AAC-LC, 128 kbps, 2 channels
Recording Time (Continuity) (XAVC Intra, XAVC Long) *2	XAVC-I QFHD 300 mode: Approx. 20 min. with 128 GB SxS card at 59.94p XAVC-I HD 100 mode: Approx. 120 min. with 128 GB SxS card at 59.94i XAVC-L QFHD 150 mode: Approx. 80 min. with 128 GB SxS card at 59.94P XAVC-L QFHD 100 mode: Approx. xx min. with 128 GB SxS card at 59.94P XAVC-L422 HD 50 mode: Approx. 240 min. with 128 GB SxS card at 59.94i XAVC-L422 HD 35 mode: Approx. 340 min. with 128 GB SxS card at 59.94i XAVC-L422 HD 25 mode: Approx. 440 min. with 128 GB SxS card at 59.94i

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Recording Time (Continuity) (MPEG-2 HD422/HD420) *2	MPEG HD422 mode: Approx. 240 min. with 128 GB SxS card at 59.94i MPEG HD420 HQ mode: Approx. 360 min. with 128 GB SxS card at 59.94i
Recording Time (Continuity) (MPEG IMX 50M) *2	Approx. 240 min. with 128 GB SxS card at 59.94i
Recording Time (Continuity) (MPEG HD) *2	HD HQ Mode: Approx. 400 min. with 128 GB SxS card at 59.94i HD SP Mode: Approx. 560 min. with 128 GB SxS card at 59.94i
Recording Time (Continuity) (DVCAM) *2	Approx. 440 min. with 128 GB SxS card at 59.94i
Recording Frame Rate	XAVC Intra (XAVC-I QFHD 300 mode): - 3840 × 2160: 59.94p, 50p, 29.97p, 25p, 23.98p XAVC Intra (XAVC-I HD 100 mode): - 1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p - 1280 × 720: 59.94p, 50p XAVC Long (XAVC-L QFHD 150 mode):

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	- 3840 × 2160: 59.94p, 50p XAVC Long (XAVC-L QFHD 100 mode): - 3840 × 2160: 29.97p,25p, 23.98p XAVC Long (XAVC-L422 HD 50 mode): - 1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p - 1280 × 720: 59.94p, 50p
Recording Frame Rate	XAVC Long (XAVC-L422 HD 35 mode): - 1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p XAVC Long (XAVC-L422 HD 25 mode): - 1920 × 1080: 59.94i, 50i MPEG HD422: - 1920 × 1080: 59.94i, 50i, 29.97p, 25p, 23.98p - 1280 × 720: 59.94p, 50p, 29.97p, 25p, 23.98p MPEG HD420: - 1920 × 1080: 59.94i, 50i, 29.97p, 25p, 23.98p - 1440 × 1080: 59.94i, 50i - 1280 × 720: 59.94p, 50p MPEG IMX: - 720 × 486: 59.94i

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	- 720 × 576: 50i DVCAM: - 720 × 480: 59.94i - 720 × 576: 50i

Lens

Lens Mount	Sony 2/3-inch type bayonet mount

Input/Output

Genlock Input	BNC (x1), 1.0 Vp-p, 75 Ω, unbalanced
Timecode Input	BNC (x1), 0.5 V to 18 Vp-p, 10 kΩ
SDI Input	SMPTE ST292/ST259 standard compliant, 4-channel audio 1.5G Poolfeed Recording (upto 1080 59.94i)
Audio Input	CH1/CH2: XLR-type 3-pin (female) (x2), Line/Mic/Mic/+48V selectable LINE: +4, 0, -3 dBu AES/EBU: AES3 compliant MIC: -70 dBu to -30 dBu
Mic Input	XLR-type 5-pin, female: -70 dBu to -3 0 dBu
WRR (Wireless	D-sub 15-pin

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Microphone Receiver)	Analog CH1: -40 dBu Digital CH1/CH2: -40 dBFS
SDI Output	Output 1/2/3/4: BNC (x4), 0.8 Vp-p,
Video Output	BNC, SD analog composite/HD-Y selectable
Audio Output	XLR-type 5-pin, male, +4/0/-3 dBu (balanced)
Timecode Output	BNC, 1.0 Vp-p, 75 Ω
Earphone Output	Stereo mini jack (x1) -11 dBu reference level output, maximum monitor volume, 16 Ω load
Speaker Output	Monaural, 300 mW output
DC Input	XLR-type 4-pin, male, 11 V to 17 V DC
DC Output	Round type 4-pin, 11 V to 17 V DC, 1.8 A maximum rated current
Lens	12-pin, lens power source (11 V to 17V DC, 1.0 A maximum rated current)
Remote	8-pin
Light	2-pin
Camera Adaptor	D-sub, 50-pin (x1)
Ethernet	RJ-45 (x1), 100BASE-TX: IEEE 802.3u, 10BASE-T: IEEE 802.3

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USB	USB 3.0/2.0 4-pin (type A), USB2.0 4-pin (type B), USB2.0 4-pin (type-A)
HDMI	A type, 19-pin (x1)
Viewfinder	20-pin IF for HDVF Series Viewfinder, and 26-pin IF for CBK-VF02

Audio Performance

Frequency Response	20 Hz to 20 kHz (±3 dB or less)
Dynamic Range	90 dB (typical)
Distortion	0.08% or lower (-40 dBu input level)
Headroom	20 dB (factory default) (20, 18, 16, 12dB), EBUL

Camera Section

Imager	2/3-type "Exmor R" 4K CMOS
Effective Resolution	3840 (H) x 2160 (V)
Built-in Optical Filters	1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND
Shutter Speed (Time)	59.94i/p, 50i/p: 1/60 sec. to 1/2000 sec. + ECS 29.97p: 1/40 sec. to 1/2000 sec. + ECS 25p: 1/33 sec. to 1/2000 sec.

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	+ ECS 23.94p: 1/32 sec. to 1/2000 sec. + ECS
Shutter Speed (Slow Shutter(SLS))	2, 3, 4, 5, 6, 7, 8, 16-frame accumulation
Slow & Quick Motion Function	1080p: Frame rate selectable from 1fps to 60 fps
Sensitivity (2000 lx, 89.9% reflectance)	F10 (typical) (1920 x 1080/59.94i mode or 3840 x 2160/59.94p mode) F11 (typical) (1920 x 1080/50i mode or 3840 x 2160/50p mode)
Minimum Illumination	0.019 lx (F1.4, +42 dB, 16-frame accumulation)
White Balance	Preset (3200K), Memory A, Memory B/ATW
Gain Selection	-9, -6, -3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB(TBD)
S/N Ratio	61 dB typical (typical, 1920x1080/59.94i mode, Noise Suppression On)

Viewfinder

Viewfinder	Option

Other Equipment

	Color LCD, Screen size: 8.8

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Built-in LCD Monitor	cm (3.5 inch) diagonal *3 , Aspect ratio: 16:9, Number of pixels: 960 (H) × 540 (V) for Video display, Audio level, TC, battery and media remaining capacity
Built-in Speaker	(x1)
Media SxS Card Slots	Number of slots: 2
Media SD Card Slots	Proxy (1), Utility (1)
GPS	Yes
Built-in Network Module	Yes
NFC	Yes

Supported Media

High Resolution Video/Audio	SxS card XQD card (with XQD ExpressCard Adapter, QDA-EX1*) SDXC card (with XQD ExpressCard Adapter, MEAD-SD02) * This product is discontinued with no successor.
Proxy Video/Audio and Utility	SDXC/SDHC

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Supplied Accessories

Supplied Accessories	Shoulder Belt (1) Cold Shoe Kit (1) Lens Mount Cap (1) USB wireless LAN module (IFU-WLM3) (1) Protective Cap (2) Operation Guide (1) Operation Manual (CD-ROM) (1)

Notes

*1	The values for dimensions are approximate.
*2	Recording time may vary by the encoding format or the type of memory.
*3	Viewable area measured diagonally.

Related products



LMD-B170

17-inch cost-effective, lightweight basic grade Full HD LCD monitor for versatile use



LMD-B240

24-inch cost-effective, lightweight basic grade Full HD LCD monitor for versatile use



SxS PRO X Memory Card

120 GB, 240 GB SxS PRO X Series Memory Card

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Gallery











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