PXW-Z450
4K XDCAM® shoulder-mount 2/3-inch camcorder

Enter the new world of 4K without leaving your ENG operating style behind. Sony's groundbreaking PXW-Z450 combines 4K resolution (3840 x 2160) with familiar shoulder-mount ergonomics and even takes 2/3-inch B4 lenses. Here's the ideal 4K acquisition tool for news, documentaries, live events and general field production.

Now with firmware V3.00, the camera offers High Dynamic Range (HDR) recording and output, 4K and HD simultaneous recording to a single card and – using the CBKZ-Z450QL license, sold separately – 4K 59.94p/50p output.

The heart of the PXW-Z450 is Sony's innovative 2/3-inch Exmor R™ CMOS sensor, which delivers stunning images in 4K and HD. The B4 lens mount enables you to use existing HD lenses or attach the new generation of 4K lenses to achieve images of incredible texture and detail.

The PXW-Z450 is everything you expect in a Sony shoulder-mount camcorder. Enjoy the same fine-tuned weight balance as the PXW-X400. Experience low power consumption and convenient networking. Select from a range of Sony's XAVC™ 4K and HD recording formats. Achieve critical focus with a choice of HDVF Series OLED viewfinders, sold separately.

For even greater production flexibility, the camera is expected to provide 4K 59.94p/50p output (via software upgrade in 2017) and simultaneous 4K/HD recording (in 2017).

So enter the new world without leaving your past behind, with Sony's PXW-Z450.

Stunning picture quality

The heart of this innovative camera is an original imager: Sony's 2/3-inch Exmor R CMOS sensor with 3840 x 2160 pixels. The Exmor R design enables the PXW-Z450 to combine native 4K resolution with high sensitivity.

Familiar B4 lens mount

Thanks to the camcorder's B4 lens mount, you can use a full range of ENG lenses, including the HD lenses you may already have. Or mount next-generation 4K lenses for images of spectacular drama and detail.
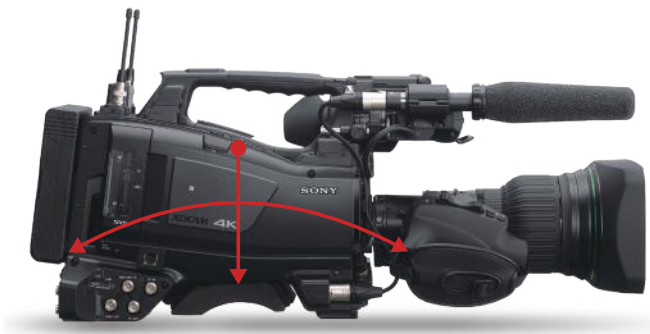

| PXW-Z450 with 4K lens | PXW-Z450 with HD lens |

Ideal front/rear weight balance

Shooters love the perfectly honed front/rear balance of our PXW-X400. So it's no surprise that we retained this balance for the PXW-Z450. When you use typical ENG lenses, your right hand won't need to support weight. Your shooting will be more stable – and more comfortable – hour after hour.

XAVC Intra and XAVC Long recording at 50p/59.94p

With the PXW-Z450, you can shoot in HD now and switch over to 4K whenever you're ready. Capture 4K (3840 x 2160) 50p and 59.94p with the well accepted XAVC Intra and XAVC Long codecs. Or choose from four HD codecs: XAVC Intra, XAVC Long or the de facto standard MPEG HD422 and MPEG HD recording.

XAVC Intra	3840 x 2160/59.94p, 50p, 29.97p, 25p, 23.98p 1920 x 1080/59.94p, 50p, 59.94i, 50i, 29.97p, 23.98p, 25p 1280 x 720/59.94p, 50p
XAVC Long	3840 x 2160/59.94p, 50p, 29.97p, 25p, 23.98p 1920 x 1080/59.94p, 50p, 59.94i, 50i, 29.97p, 23.98p, 25p 1280 x 720/59.94p, 50p
MPEG HD422	1920 x 1080/59.94i, 50i, 29.97p, 23.98p, 25p 1280 x 720/59.94p, 50p, 29.97p, 23.98p, 25p
MPEG HD (420)	1920 x 1080/59.94i, 50i, 29.97p, 23.98p, 25p 1440 x 1080/59.94i, 50i 1280 x 720/59.94p, 50p
MPEG IMX	720 x 480/59.94i, 720 x 576/50i
DVCAM	720 x 480/59.94i, 720 x 570/50i

Simultaneous 4K/HD recording

To support parallel 4K and HD production, the Z450 enables you to simultaneously capture 4K (3840 x 2160) and HD to a single card.

Low power consumption

Meticulous circuit design enables power consumption as low as 24 W (normal XAVC recording, color LCD on). So you can record continuously with superb battery life.

High Dynamic Range (HDR)

High Dynamic Range is sweeping the television market – and gaining the attention of more and more producers. The PXW-Z450 delivers stunning HDR recording and HDR output in 4K and HD alike. Hybrid Log-Gamma (HLG) with BT.2020 color space means that your results will look amazing on both HDR and conventional televisions without additional color correction. If you're going to post in 4K HDR, you've got a choice of shooting in either HLG or S-Log3 with BT.2020 color.

Wireless streaming and remote control

Stream audio/video in real time. Transfer proxy video via FTP. Operate the camera via Wi-Fi® from a tablet or smartphone. The PXW-Z450 provides wireless capability and a convenient ONLINE button. The camera comes equipped with the IFU-WLM3 Wi-Fi module and an RJ-45 Ethernet port.

CBK-WA02 wireless LAN adaptor
attached to the PXW-Z450
(Adaptor sold separately.)

ONLINE button

Embedded RJ-45 Connector

NFC (Near Field Communication)

Skip cumbersome setup procedures on your smartphone or tablet. NFC enables easy connection for launching the CBM (Content Browser Mobile) application.

Robust inputs and outputs

The PXW-Z450 goes beyond the usual connections with the following additions:
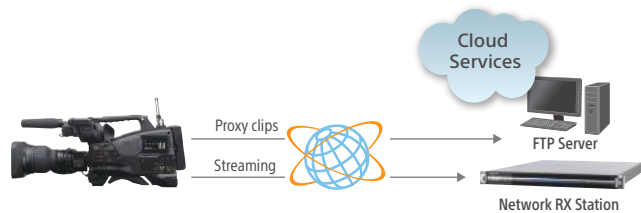
- 4K output via Quad Link 3G-SDI for 3840 x 2160 59.94p/50p signals (with CBKZ-Z450QL license, sold separately)
- Multi-purpose analog/digital audio input
- Pool-feed SDI input to record HD from another camera

All inputs and outputs are separate. Because there's no need to switch between input and output, you can use all the terminals at the same time.

Sony's Quality of Service (QoS) streaming

You can enjoy high-quality HD streaming without the complexity and cost of bonded cellular or satellite newsgathering thanks to Sony's Quality of Service (QoS) technology and our PWS-110RX1 receiver. Using a 3G/4G/LTE carrier dongle and service, sold separately, you can stream content from the field back to the studio. Sony's receiver can output HD-SDI signals for on-air broadcasting and send files to networked storage.

To optimize your workflow from image acquisition to editing, the receiver has a graphical user interface. You can monitor the streaming image, display a thumbnail list of proxy clips and send the proxy clips to a networked FTP server.

Accepts Full HD OLED viewfinders

For critical focus, the PXW-Z450 accepts Sony's brilliant Full HD OLED viewfinders, the HDVF-EL30 and EL20. In addition to the main eyepiece, the EL30 has an LCD monitor for viewing over a longer distance.
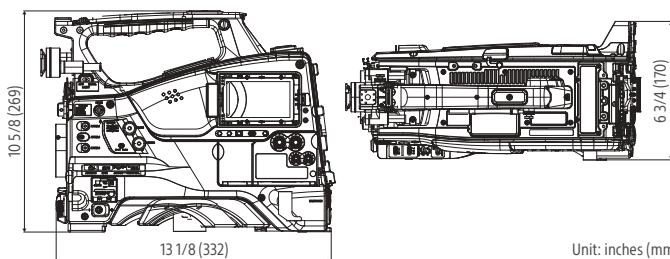

HDVF-EL30

HDVF-EL20

Specifications

	PXW-Z450
General	
Weight	Approx. 7 lb 15 oz (body only without lens, VF, Mic)
	Approx. 3.6 kg (body only without lens, VF, Mic)
Dimensions (W x H x D)	6 3/4 x 10 5/8 x 13 1/8 inches (excluding protrusions, body only)
	170 x 269 x 332 mm (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 (CBK-VF02 viewfinder, lens, microphone, while XAVC recording, color LCD on)
Operating Temperature	32° F to 104° F (0° C to 40° C)
Storage Temperature	-4°F to +140°F (-20°C to +60°C)
Camera Section	
Imager	2/3-type "Exmor R" 4K CMOS
Effective Picture Elements	3840 (H) x 2160 (V)
Built-in Optical Filters	1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND
Shutter Speed (Time)	1/60 sec to 1/2,000 sec + ECS (Extended Clear Scan)
Shutter Speed (Slow Shutter (SLS))	2, 3, 4, 5, 6, 7, 8, 16-frame accumulation
Slow & Quick Motion	1080p: Frame rate selectable from 1 fps 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 (typical) (F1.4, +42 dB gain, 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
S/N Ratio	61 dB (Y) (typical, 1920 x 1080/59.94i mode, Noise Suppression On)
Horizontal Resolution	1,000 TV lines or higher (1920 x 1080i mode)
Recording format (Video)	
XAVC Intra (XAVC-I QFHD 300):	- 3840 x 2160: 59.94p, 50p, 29.97p, 25p, 23.98p
XAVC Intra (XAVC-I HD 100):	- 1920 x 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
	- 1280 x 720: 59.94p, 50p
XAVC Long (XAVC-L QFHD 150):	- 3840 x 2160: 59.94p, 50p
XAVC Long (XAVC-L QFHD 100):	- 3840 x 2160: 29.97p, 25p, 23.98p
XAVC Long (XAVC-L422 HD 50):	- 1920 x 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
	- 1280 x 720: 59.94p, 50p
XAVC Long (XAVC-L422 HD 35):	- 1920 x 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
XAVC Long (XAVC-L422 HD 25):	- 1920 x 1080: 59.94i, 50i
MPEG HD422™:	- 1920 x 1080: 59.94i, 50i, 29.97p, 25p, 23.98p
	- 1280 x 720: 59.94p, 50p, 29.97p, 25p, 23.98p
MPEG HD420:	- 1920 x 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
	- 720 × 576: 50i
DVCAM®:	- 720 × 480: 59.94i
	- 720 × 576: 50i
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 *[1]
DVCAM:	LPCM 16 bits, 48 kHz, 4 channels
Recording Format (Proxy Video)	
XAVC Proxy:	AVC/H.264 Main Profile 4:2:0 Long GOP, VBR
	1280 × 720, 9 Mbps (Target Rate)
	1280 × 720, 6 Mbps (Target 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
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 -30 dBu
WRR (Wireless Microphone Receiver)	D-sub 15-pin
	Analog CH1: -40 dBu
	Digital CH1/CH2: -40 dBFS
SDI Output	Output 1/2/3/4: BNC (x4), 0.8 Vp-p
	unbalanced, 3G/HD/SD selectable
	SMPTE ST424/ST425, ST292/ST259 standard compliant
	4-channel audio
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

	PXW-Z450
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 17 V 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
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, HDVF-L750
Monitoring	
Viewfinder	Option
Built-in LCD Monitor	Color LCD, Screen size: 3.5 inch* (8.8 cm) diagonal, Aspect ratio: 16:9, Number of pixels: 960 (H) × 540 (V) for Video display, Audio level, TC, battery and media remaining capacity
Other Functions	
Built-in Speaker	(x1)
Media SxS Card Slots	Form factor: Express Card/34, Number of slots: 2, Connector: PCMCIA Express Card compliant, Write rate: 50 Mbps or higher, Read rate: 50 Mbps or higher
Media SD Card Slots	Proxy (1), Utility (1)
GPS	Yes
Built-in Network Module	Yes
NFC	Yes
Media	
High resolution Video/Audio	SxS card
	XQD card (with XQD ExpressCard Adapter, QDA-EX1)
	SDXC card (with XQD ExpressCard Adapter, MEAD-SD02)
Proxy Video/Audio and Utility	SDXC/SDHC
Supplied Accessories	
	Shoulder belt (1)
	Cold shoe kit (1)
	Lens mount cap (1)
	Protective cap (2)
	Operation Guide (1)
	Operation Manual (CD-ROM) (1)
	USB wireless LAN module (IFU-WLM3) (1)

Optional Accessories

SBP-256D
SxS Pro+ memory

HDVF-EL20
0.7-inch* OLED Viewfinder

HDVF-EL30
0.7-inch* OLED Viewfinder

CBK-VF02
3.5-inch* LCD color Viewfinder

ECM-680S/678/674
Shotgun-type electret condenser microphone

DWR-S02D
Digital wireless receiver

URX-S03D
Wireless receiver

BP-FLX75
Lithium-ion Battery pack

RM-B170
Remote control unit

RCP-1000/ 1500/1530
Remote control panel

PWS-110RX1
Network RX station

CBK-SP01
Soft shoulder pad

CBKZ-Z450QL
License for 4K output
via Quad Link 3G-SDI

*Viewable area, measured diagonally.

Dimensions

10 5/8 (269)

6 3/4 (170)

13 1/8 (332)

Unit: inches (mm)