

PXW-Z750 4K 2/3-type 3-Chip 10-bit 4:2:2 CMOS Camcorder

ENG-style ergonomics with cinema-quality HDR performance

# A workhorse to meet the needs of today's productions – and beyond

The PXW-Z750 brings unrivaled image quality in an ergonomic package for content creators producing reality TV, documentary, news, wildlife, nature, and sports production. A newly developed 3-chip 2/3" global shutter 4K CMOS image sensor delivers rich artifact free images. The imager provides the foundation for superior HDR image making capability, offering 4K resolution, high contrast, and sensitivity, and low signal to noise. The 2/3" imager also allows the use of a wide range of versatile 2/3" lenses. The camcorder is the ideal choice for HDR productions, where highlight and shadow subtleties are crucial. In sports and entertainment, the camcorder will match our latest generation of System Cameras as the PXW-Z750 utilizes the same imager technologies.

The design of shoulder-mount ENG cameras has evolved over decades based on user feedback and technical innovation. The PXW-Z750 is the culmination of that experience. Operators will appreciate the instinctive familiarity and muscle memory of a camcorder that is lightweight, balances comfortably and confidently on the shoulder, recognizing the same external controls in all the right places. The PXW-Z750 is also compatible with a vast number of existing lenses, batteries, chargers, adaptors, microphones, and other accessories that readily mount to the camera that are already in the videographer's kit bag.



### Ready for anything

#### Sports

Timing, instinct, anticipation – these attributes are what sets sports shooters apart and make the Z750 the perfect companion. High Frame Rate, Picture Cache recording, superior ergonomics, lightweight and unquestioned reliability make the camcorder a natural choice and decrease fatigue over extended shooting periods. Excellent viewfinder options enable flawless focus tracking. Unique moments can be easily tagged for later edit using shot marks. Four channels of audio are available for your on-camera mics or integral wireless systems.



#### **News Production**

The Z750's form factor, built tough chassis and balanced ergonomics are designed to meet the rigors of daily news production. Simple and easily accessible menu's allow adjustments to be quickly dialed in. Built-in networking and wireless connectivity features enable high quality live-streaming and file transfer, allowing seamless delivery of content directly to air or for later editing. The Z750 also allows you the choice of several different codecs, so from MPEG 422 50 Mbps HD all the way to XAVC® 300 Mbps 4K. This camera will grow with you.



#### Documentary and Nature

The PXW-Z750 sets new standards for capturing lasting images to document historical events, wildlife and more. 4K resolution, HDR, and a vast color gamut, 4 channels of 24-bit audio ensure that the images will have a long and valuable shelf life. We also know what you go through to "get the shot". The camera is rugged, portable, utilizes low power consumption and has outputs for inexpensive drives and HDMI® based monitors. The wide array of 2/3" B4 mount lenses with seemingly endless choices of focal lengths ensure you can get as close... or as far as need be to bring the beauty and realism of the natural world into viewers' homes.



#### Reality and Other Episodic Production

High shooting ratios, tight production schedules and unpredictable action are among the daily challenges faced by production teams. The PXW-Z750 is tailored to meet these challenges head-on. Simultaneous 4K and HD recording delivery while the economical XAVC® L 422 format enables up to 1080 60p images at the same 50 Mbps data rate that's been the broadcast standard since 8-bit SD. These efficiencies save time and money via lightning-fast media and card readers while not compromising image quality – in fact, increasing it in most cases. Wireless networking, cloud storage, and cloud collaboration further increase workflow efficiencies while lowering costs.



#### Full Range of Viewfinders

Viewfinders with a full range of features, functions and specs are available to outfit the PXW-Z750 for any application. The camcorder's LCD panel can be flipped out or rotated to almost any angle for additional monitoring flexibility. ENG-style playback and audio control buttons offer convenient, quick access and functionality, along with external controls for headphones and shutter, and D-tap power for video light. Custom user menus are included, as well as WYSIWYG paint menus and scene files for situations in which a grading workflow is not desired.

0.7-type\* Full HD OLED viewfinder





0.7-type\* Full HD OLED viewfinder with LCD monitor for viewing at a distance



**HDVF-L10**3.5-type\* LCD color viewfinder

#### Flexible B4 Lens Options

The combination of a fast, powerful lens and silky-smooth servo control is essential to superior ENG camerawork. The ability to cover any type of action, at almost any distance – to go from super wide angle to extreme telephoto in a fraction of a second, with no lens change – is a requirement for ENG camera pros at the top of their game.

The PXW-Z750's native B4 lens mount opens an array of options to content creators seeking to capture images of spectacular drama and detail. Proven and durable, the B4 mount accepts existing HD lenses, next-generation 4K B4 lenses, and the full range of ENG and EFP lenses. Most 2/3" ENG zoom lenses are compatible without the need for adapters, thus avoiding reduced exposure levels and possible loss of image quality while adding adaptability that can save precious seconds when time is tight. Savings add up as existing lenses and other gear stay relevant and retain value.



## Instantly familiar layout and ergonomics







## Deliver 4K Image Quality with High Sensitivity and Vivid Color Reproduction

#### Three Native 4K CMOS sensors

Three independent 4K sensors, designed and built by Sony, deliver images with extraordinary dynamic range, wide color gamut and low-noise F12 sensitivity.

#### Global Shutter

The PXW-Z750's Global Shutter technology eliminates flash-banding artifacts and distortion of fast-moving objects associated with rolling shutter sensors, allowing you to shoot with confidence on the red carpet, or when LED lighting and other uncertain lighting conditions are present.





Photography and flashes can create a bright band across the frame. Global Shutter technology solves this issue. (Actual Images)

## **SDR**Standard Dynamic Range





#### High Dynamic Range (HDR)

(Simulated images)

High contrast situations, such as strong sunlight, have historically been a challenge for cinematographers and can lose important detail in the shadow or in the burned-out highlights. The PXW-Z750 offers two different HDR shooting modes: S-Log3 or Hybrid Log Gamma (HLG). Sony's S-Log3 was designed to capture the widest dynamic range as produced by the sensor. This allows the greatest flexibility for on-set lighting or post-production, while offering simple workflow integration with any of Sony's cinema cameras, including VENICE, FS7, F55 and the PXW-FX9. HLG has been designed for the live world where HDR content is coming from multiple cameras and there are no second chances. The PXW-Z750's becomes an ideal tool for matching the main cameras in the creation of pre-production and in-game elements, perfectly matching the main coverage cameras.

The PXW-Z750 supports Sony's S-Gamut3 and S-Gamut3. Cine color spaces, along with the industry standard ITU-R BT.2020 color space.

#### Video Payload ID (VPID)

The PXW-Z750 is the first\* camcorder that supports video payload ID (VPID) which delivers HDR Metadata over SD allowing our popular BVM-HX310 mastering and PVM-X Series production monitors to detect and set the correct EOTF and color space automatically. The VPID information is also recorded on the camera masters and can flow through some production systems.

#### Variable Frame Rates

The PXW-Z750 natively captures images up to 60 frames per second at 4K resolution and also has the ability to capture slow motion in HD resolution at up to 120 frames per second using the center scan mode. The resulting field of view is narrowed by half, the functional equivalent of shooting with a lens with twice the focal length – without HDR or HD image degradation or light-loss – a win-win. This feature that has many applications that are a bonus in wildlife and sports, among other subjects.

#### Picture Cache Recording

Up to 8 seconds in 4K and 15 seconds in HD\* of audio and video can be buffered in the PXW-Z750's memory, in 4K and Full HD, before the RECORD button is pressed, allowing for the capture of sudden or long waited action that would have otherwise been missed. The benefits are that the camera is in a power saving mode and not burning up precious media. Card storage Picture Cache Recording – is great for anytime the unpredictable unfolds.

\*Cache recording time shown while recording in 59.94 frequency.



High Frame Rates yield gorgeous slow motion playback, ideal for wildlife and sports cinematography (Simulated image).

#### XAVC: Quality Recording, Format Flexibility

Sony's XAVC codec captures and preserves the full richness of the sensor's image through to post production. **Depending on the image requirement** and production budget, producers can choose from a wide range of 4K and HD codecs. XAVC-I delivers superb image and audio quality, with the motion handling of Intra Frame recording, while XAVC-L minimizes storage requirements and transfer times, with bitrates as low as 100 Mbps in QFHD or just 50 Mbps in HD at full 1080 60p.

In addition to Sony's industry-standard XAVC-I QFHD Class 300 4K and MPEG HD422™ codecs, the PXW-Z750 also supports the latest generation XAVC-L422 QFHD 200 codec. This new format incorporates 10-bit 4:2:2 color sampling, which means it can deliver a stunning picture quality approaching the level of XAVC Intra Class 300 format, but with smaller file sizes. Lower data rates allow more recording time, provides faster file transfers, and reduce storage requirements in post and archive.

Recording Modes	
XAVC Intra (XAVC-I QFHD 300)	3840 x 2160: 59.94p, 50p, 29.97p, 25p, 23.98p
XAVC Intra (XAVC-I HD 100)	1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
XAVC Long (XAVC-L422 QFHD 200)	3840 x 2160: 59.94p, 50p
XAVC Long (XAVC-L420 QFHD 150)	3840 x 2160: 59.94p, 50p
XAVC Long (XAVC-L420 QFHD 100)	3840 x 2160: 29.97p, 25p, 23.98p
XAVC Long (XAVC-L422 HD 50)	1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
MPEG HD422 mode	1920 × 1080: 59.94i, 50i, 29.97p, 25p, 23.98p 1280 × 720: 59.94p, 50p, 29.97p, 25p, 23.98p

#### Simultaneous 4K + HD recording (including HDR options)

The PXW-Z750 supports simultaneous 4K and HD recording on a single SxS® media card, a tremendous conversion time-saver when shooting content for multiple platforms, or for HD delivery now and 4K for archive.



### Audio Completes the Picture

#### Superb digital audio and wireless mic integration

The PXW-Z750 can record up to four channels of 24-bit/48 kHz digital audio. Two XLR inputs are accessible at the rear (configurable for analog or AES/EBU digital), and a 5-pin XLR jack at the front of the camera is available for a stereo or mono shotgun microphone, such as Sony's superb ECM-680S. The Z750 also accommodates a two-channel wireless microphone receiver (DWR-S03D with the DWA-SLAS1 15 pin interface) to enable seamless digital audio capture without extra cables, brackets, or external power for the receiver. True digital audio transmission, from the transmitters to the receiver and into the camera's video file, allow for the quality of a directly connected microphone, all the way through post/distribution to the viewer. A one-step, full-frequency spectrum scan simplifies channel selection by choosing the 'quietest' open frequencies and then assigns them to the paired transmitters. The slot-in receiver becomes an integral part of the camera by enabling users to monitor the transmitter's RF and VU level in the camera's viewfinder, and many parameters of the transmitter can be remote-controlled directly by the camera's menu. The transmitter's Power Save Mode can be synchronized with the camera's on/off state, conserving battery life.





The DWR-S03D receiver integrates seamlessly with all of Sony's shoulder camcorders

#### Output and Input

The PXW-Z750 is equipped with all the standard in/out connectors you'd expect to find on a professional ENG camcorder, and more:

- 12-G 4K 59.94p output over a single BNC cable
- or 3G 1080 59.94p output
- or 1.5G 1080 59.94i output
- 4K HDMI
- (3) USB ports
- Ethernet
- (2) XLR jacks at rear
- (1) 5-pin XLR jack at front
- (1) 5-pin XLR audio output
- Headphone jack with external volume control
- Timecode In and Out jacks (can be used simultaneously)
- Remote connector (8-pin)
- Genlock in
- Sync Out
- Hirose for 12v accessory power
- D-tap connector for LED light
- SDI input connector for 1080p Pool Feed recording
- (6) Assignable buttons for user-specific customization and quick access to menu functions



#### Networked for Remote Production

#### Wireless streaming and file transfer

The PXW-Z750 is equipped with powerful networking capabilities including advanced live streaming and FTP transfer of full-res files and proxies. The supplied Wi-Fi module and Ethernet Connection enables remote control of the Z750 over Wi-Fi using the Content Browser Mobile app, which is compatible with iOS® and Android® smartphones and tablets.

The optional PWS-110RX1A Network Station (sold separately) enhances remote production capabilities by enabling remote camcorder control, preview/playback of recorded files, and hi-res/low-res files pull via FTP. The PWS-110RX1A can also receive live streams from up to 30 connected camcorders simultaneously. Sony's Quality of Service (QoS) technology helps maintain video and audio integrity during live stream transmission.



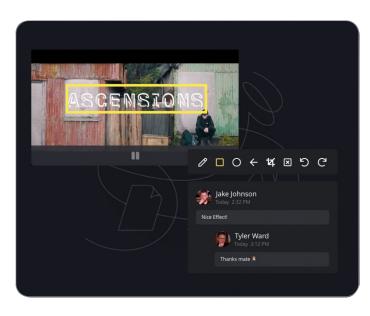






## Collaboration in the Cloud with Sony's Ci Media Cloud

Built for media professionals, Sony's Ci Media service provides a comprehensive toolkit of powerful features and apps that enable **you** to build an end-to-end media workflow solution. Remote collaboration, unrestricted file size uploads, customizable metadata and easy searching tools promotes fluid communication and efficiency. Ci brings users and workgroups to their content seamlessly, in real-time, from anywhere in the world via the cloud. Ci delivers the potential for unlimited cloud storage, easy-to-manage archival tools and guaranteed delivery protected by **professional-grade** security.



## News Production in the Cloud with XDCAM air Professional Service

XDCAM air orchestrates the smooth exchange of live video, media files and project metadata in the cloud, so **shooters** can focus on the breaking story while saving valuable time and cutting costs.

Live-stream breaking news over a single or dual link connection to multiple distribution points including direct to social media. Metadata tagging identifies content at the point of acquisition for fast retrieval and story turnaround. Field management is facilitated by the camcorder's remote control and geolocation. And in the unlikely event that a camcorder goes down, settings can be quickly restored by pulling a copy of the camcorder's profile, stored in the cloud.



Participants virtually anywhere in the world can log into a Ci VideoReview session, marking up frames, exchanging comments and reaching much faster decisions.

#### Accessories



HDVF-EL30 0.7-type\* Full HD OLED viewfinder with LCD monitor for viewing at



HDVF-EL20 0.7-type\* Full HD OLED viewfinder



HDVF-L10 3.5-type\* LCD color viewfinder



DWR-R03D 2-channel rackmount wireless receiver



ECM-90BC/ECM-90LM

Ultra-compact lavalier microphone, perfect for Sony's wireless bodypack transmitters



SBP-240F

SxS PRO X high-speed memory card, 240GB (one GB is 1 billion bytes. A portion of the memory is used for system files and may vary)



SBP-120F

SxS PRO X high-speed memory card, 120GB (one GB is 1 billion bytes. A portion of the memory is used for system files and may vary)



Thunderbolt® 3 high-speed SxS memory card reader/writer



SBAC-US30

USB 3.0 high-speed SxS PRO+ and SxS-1 memory card reader/writer



a distance

DWT-B30 Digital wireless bodypack transmitter



DWR-S03D 2-channel digital slot-in wireless receiver compatible with all DWX Series transmitters and microphones



DWT-B03R Digital wireless microphone bodypack transmitter



URX-S03D 2-channel digital slot-in wireless receiver compatible with Sony's UWP/UWP-D Series and 800 Series transmitters

and microphones



ECM-680S

MS stereo shotgun-type electret condenser microphone



CBK-WA02 2.4GHz - 5GHZ Wireless LAN adaptor



PWS-110RX1A Network RX station



BVM-HX310 31-inch\* TRIMASTER HX™ 4K HDR critical evaluation monitor



BVM-E171

TRIMASTER EL™ HD monitor HDR capable with optional BVML-HE171 HDR monitoring license



ECM-678 Shotgun-type electret condenser microphone



Shotgun-type electret

condenser microphone

ECM-673 Short shotgun-type electret condenser microphone



ECM-VG1 Shotgun-type electret condenser microphone



ECM-MS2 Compact electret condenser microphone



PVM-X2400 24-inch\* 4K HDR TRIMASTER production monitor



PVM-X1800 18-inch\* 4K HDR TRIMASTER production monitor



LMD-A Series Affordable HD monitors with v3.0 firmware for HDR viewing



CBK-SP01 Soft shoulder pad

\*(Viewable area measured diagonally)

## Specifications

General	
Weight	Approx. 8 lbs., 6 oz. (3.8 kg, body only without lens, VF, Mic)
Dimensions (W H D)	Approx. 5-7/8 x 10-5/8 x 13 inches (150 x 269 x 332 mm, body only excluding protrusions)
Power Requirements	DC 12 V (11 V to 17.0 V)
Power Consumption	Approx. 41 W (while XAVC recording, color LCD on)
Operating Temperature	32 ~ 104° F (0 ~ 40° C)
Storage Temperature	-4 ~ +140° F (-20 ~ +60° C)
Continuous Operating Time	Approx. 110 min with BP-GL95B
Lens Mount	Sony 2/3 type bayonet mount
Camera Section	
Imager	2/3-type 3-chip 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. + 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	2160p: Frame rate selectable from 1 fps to 60 fps 1080p: Frame rate selectable from 1 fps to 60 fps / 72/75/80/90/96/100/110/120 fps
Sensitivity (2000 lx, 89.9% reflectance)	F12(1080/59.94i), F13(1080/50i) *High Sensitivity Mode On (Typical) F12(2160/59.94p), F13(2160/50p) *High Sensitivity Mode On (Typical)
Minimum Illumination	0.019 lx (F1.4, +42 dB, 16-frame accumulation)
White Balance	Preset (3200K), Memory A, Memory B/ATW
Gain Selection	-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB
S/N Ratio	62dB (Noise Suppression On, 1920×1080 59.94i) (Typical)
Horizontal Resolution	2,000 TV lines or higher (3840 x 2160p mode) 1,000 TV lines or higher (1920 x 1080i mode)

3840 x 2160: 59.94p, 50p, 29.97p, 25p, 23.98p
1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
3840 x 2160: 59.94p, 50p
3840 x 2160: 59.94p, 50p
3840 x 2160: 29.97p, 25p, 23.98p
1920 × 1080: 59.94p, 50p, 59.94i, 50i, 29.97p, 25p, 23.98p
1920 × 1080: 59.94i, 50i, 29.97p, 25p, 23.98p 1280 × 720: 59.94p, 50p, 29.97p, 25p, 23.98p
1920 × 1080: 59.94i, 50i, 29.97p, 25p, 23.98p 1440 × 1080: 59.94i, 50i 1280 × 720: 59.94p, 50p
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
LPCM 24 bits, 48 kHz, 4 channels
AVC/H.264 Main Profile 4:2:0 Long GOP, VBR 1920 x 1080, 9 Mbps, 6 Mbps 1280 x 720, 9 Mbps, 6 Mbps 640 x 360, 3 Mbps 480 x 270, 1 Mbps, 500 kbps
AAC-LC, 128 kbps, 2 channels

Inputs and Outputs	
Genlock Input	BNC (x1), 1.0 Vp-p, 75 $\Omega$ , 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 Pool Feed recording (up to 1080 59.94i)
Audio Input	CH1/CH2: XLR-type 3-pin (female) (x2), Line/AES/EBU/ Mic+48V selectable LINE: +4, 0, -3 dBu AES/EBU: AES3 compliant MIC: -70 dBu to -30 dBu
Mic In	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	BNC ×2 (Both SDI are selectable from 12G, 3G and 1.5G) 12G (QFHD/60p) / 3G (HD/60p) / 1.5G (HD/i) 4ch Embedded Audio
Sync Output	BNC, SD analog composite/HD-Y selectable
Audio Output	XLR-type 5-pin, female: +4/0/-3dBu
Timecode Output	BNC, 1.0 Vp-p, 50 Ω
Earphone Output	Stereo mini jack (x1) -12 dBu (reference level output, maximum monitor volume, 16 $\Omega$ load)
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
Ethernet	RJ-45 (x1), 100BASE-TX: IEEE 802.3u, 10BASE-T: IEEE 802.3
USB	4 pin (A-type) x2, 4 pin (B type)
HDMI®	A type, 19-pin (×1) output up to 3840×2160
Viewfinder	20-pin IF for HDVF Series Viewfinder

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
Monitoring	
Viewfinder	Sold separately
Built-in LCD Monitor	Color LCD Screen size: 3.5 type (8.8 cm) viewable area, measured diagonally Aspect ratio: 16:9 Pixels: 960 (H) ×540 (V) for Video display, Audio level, TC, battery and media remaining capacity
Other Functions	
Built-in Speaker	(x1)
SxS Media Card Slots	Number of slots: 2
SD Media Card Slots	Proxy (1), Utility (1)
HDR	OETF: HLG/S-Log3 Color Space: BT.2020/S-Gamut3/S-Gamut3.cine
GPS	Yes
Built-in Network Module	Yes
NFC	Yes
Supported Media	
High Resolution Video/Audio	SxS card SDXC card (via MEAD-SD02 SD card adapter, sold separately)
Proxy Video/Audio and Utility	SDXC/SDHC
Supplied Accessories	
Shoulder Belt Cold Shoe Kit Lens Mount Cap USB wireless LAN module (IFU-WLM3) Protective Cap Operating Instructions (CD-ROM)	

Before using this unit

