

# SONY



## PXW-X500

XDCAM® XAVC® Memory Camcorder

Whatever you expect in a shoulder mount camcorder, the PXW-X500 delivers more. More performance with the brilliance of 10-bit recording. More codec choices. More memory options. More wireless workflow capabilities. And more frame rates with under- and overcranking at up to 120p (with PXWK-503 software key, sold separately).

Recording formats include Sony's 10-bit XAVC-Intra, XAVC-Long and SR File codecs, all in addition to the well-established MPEG HD422. There's even Apple® ProRes 422 and Avid DNxHD® recording (with PXWK-501 and PXWK-502 software keys, sold separately, expected to be available in early 2015).

The PXW-X500 also stays true to the advantages that have made Sony camcorders preeminent. Capabilities include next-generation Sony CCD image sensors for 100% geometric integrity, Auto Lens Aberration Correction (ALAC), HyperGamma, pool feed and dual recording onto a pair of SxS® cards.

In news and field production, scripted and reality TV, documentaries, live production, corporate video and sports, the PXW-X500 is everything you expect from Sony. And more.

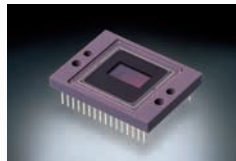
# PXW-X500

XDCAM XAVC Memory Camcorder



## Three 2/3-inch-type Power HAD™ FX CCDs

Sony's refined CCD technology results in -60 dB S/N ratio without sacrificing high sensitivity: F11 at 1080/59.94i (F12 at 1080/50i). The CCDs are also immune from the flash banding and motion skew of typical CMOS sensors.



## Slow & Quick Motion

Bend time and motion with amazing over- and undercranking. Sold separately, the PXWK-503 software key provides Slow & Quick Motion at frame rates up to 120p at full HD resolution. You get gorgeous 5x slow motion function when played back at 24p. The feature supports a range of recording formats, as shown in the table below.

### Slow & Quick Motion: Formats

Format	Reference System Frequency	Range of Slow&Quick
XAVC Intra	1080/29.97p, 25p, 23.98p	1fps to 120 fps
XAVC Long 50M, 35M	1080/59.94p, 50p, 29.97p, 25p, 23.98p	1fps to 120 fps
MPEG HD422	1080/29.97p, 25p, 23.98p	1fps to 30 fps

## 10-bit XAVC, SR File, Apple® ProRes-422 and Avid DNxHD® recording

Compared to 8-bit recording, 10-bit grayscale delivers greater dynamic impact and more nuanced rendering of fine color gradations, especially skin tones. The choice of recording formats includes the Apple® ProRes 4221 and Avid DNxHD®<sup>2</sup> codecs.

### Recording Formats

SR-File SR-Lite 4:2:2 10 bit	1080/59.94i, 29.97p, 23.98p, 50i, 25p
Apple® ProRes 422 HQ 10 bit <sup>1</sup>	1080/59.94i, 29.97p, 23.98p, 50i, 25p
Apple® ProRes 422 10 bit <sup>1</sup>	1080/59.94i, 29.97p, 23.98p, 50i, 25p
Avid DNxHD® 220x 4:2:2 10 bit <sup>2</sup>	1080/59.94i, 29.97p, 23.98p, 50i, 25p
Avid DNxHD® 145 4:2:2 8 bit <sup>2</sup>	1080/59.94i, 29.97p, 23.98p, 50i, 25p
XAVC Intra 4:2:2 10 bit	1080/59.94i, 29.97p, 23.98p, 50i, 25p 720/59.94p, 50p
XAVC Long 4:2:2 10 bit	1080/59.94p, 50p, 59.94i, 29.97p, 23.98p, 50i, 25p 1280x720/59.94p, 50p
MPEG HD422 8 bit	1080/59.94i, 29.97p, 23.98p, 50i, 25p 720/59.94p, 50p, 29.97p, 23.98p, 25p
MPEG HD (420) 8 bit	1080/59.94i, 29.97p, 23.98p, 50i, 25p 720/59.94p, 50p 1440x1080/59.94i, 50i
MPEG IMX <sup>3</sup> 8 bit	720x480/59.94i 720x576/50i
DVCAM 8 bit	720x480/59.94i 720x570/50i

<sup>1</sup> With PXWK-501 software key, sold separately, planned to be available in early 2015.

<sup>2</sup> With PXWK-502 software key, sold separately, planned to be available in early 2015.

<sup>3</sup> Planned to be available in early 2015.

## Simultaneous Recording on Two SxS Cards

For additional peace of mind, the PXW-X500 offers simultaneous recording to both SxS cards. Think of it as automatic backup using the same codec and same operating point. The feature works in the following formats: XAVC-Intra, XAVC-Long, MPEG HD422 and MPEG HD (420). You can also perform simultaneous proxy file recording onto an SD card.

## Built-in Wireless Function Module

Control the camera from a tablet or smartphone, stream proxy content over Long Term Evolution (LTE) wireless networks and record proxy to an SD card and with the supplied IFU-WLM3 USB wireless LAN module.

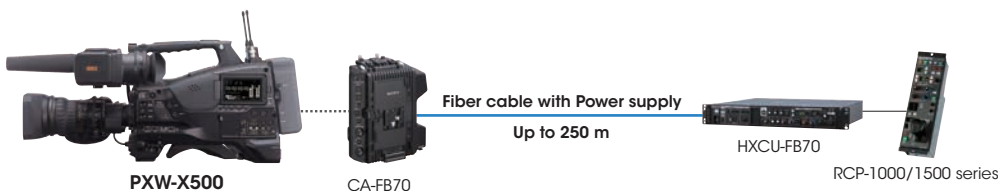
(Function planned to be available in early 2015. LTE streaming not available in all countries. Consult your Sony representative.)



## Multi-Camera System Operation

Deploy the PXW-X500 in multi-camera productions with Sony system camera adaptors, sold separately. The CA-FB70 optical fiber camera adaptor passes signals and DC power up to 800 feet (250 meters) from the HXCU-FB70 optical fiber camera control unit (CCU). The CA-TX70 digital triax camera adaptor transmits signals up to 2,000 feet (600 meters) to the HXCU-TX70 digital triax CCU, using 8.5 mm diameter cable.

PXW-X500 integration with optical fiber cable



## GPS Logging

To track your shooting locations, the built-in GPS receiver module can automatically record location data to XAVC MXF files and log files. (Log file recording is expected to be available in early 2015. Future GPS support is planned for additional recording formats.)

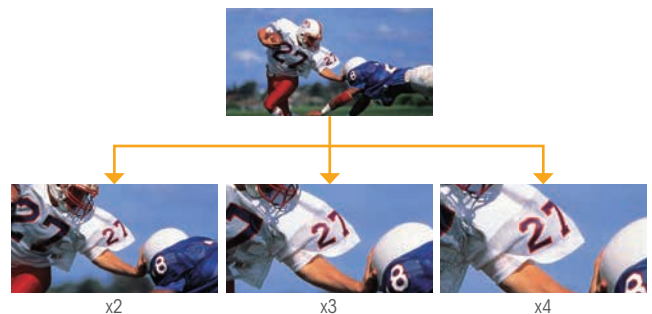
## Pool-feed Operation

The PXW-X500 offers pool-feed operation to record an HD-SDI input. In addition, support for SD-SDI, 3G-SDI and viewfinder display of return HD-SDI is expected to be available in early 2015.

## Advanced Features

- Automatic Lens Aberration Compensation (ALAC) drastically reduces chromatic aberration when used with compatible lenses.
- Four HyperGamma curves provide powerful contrast handling, exploiting the full dynamic range of the CCDs and the new 10 bit codecs. Or create customized User Gamma curves, editing them with the optional CVP File Editor PC software.
- Focus Assist provides a bar graph in the viewfinder as a focusing aid. The viewfinder can also display Waveform, Vector Scope or Histogram.
- Digital Extender expands images two to four times in size without any loss of F-stop

(Digital Extender reduces image resolution. Planned to be available in early 2015.)



Simulated Images

# Specifications

PXW-X500	
<b>General</b>	
Mass	Approx. 8 lb 6 oz (3.8 kg) (body only without lens, VF, Mic)
Dimensions (W x H x D)	6 x 10 5/8 x 13 1/8 inches (150 x 269 x 332 mm) (excluding protrusions, body only)
Power Requirements	DC 12V (11V to 17V)
Power Consumption	Approx. 35 W (while XAVC recording, color LCD on) Approx. 37 W (while XAVC recording, CBK-VF02 viewfinder and color LCD on)
Operating temperature	23°F to 104°F (-5°C to +40°C)
Storage temperature	-4°F to +140°F (-20°C to +60°C)
<b>Recording Format (Video)</b>	
SSiP SR-Lite 4:2:2	1920x1080/59.94i, 50i, 29.97p, 23.98p, 25p
ProRes 422 HQ 10bit*1	1080/59.94i, 29.97p, 23.98p, 50i, 25p
ProRes 422 10bit*1	1080/59.94i, 29.97p, 23.98p, 50i, 25p
DNxHD 220x 4:2:2 10bit*2	1080/59.94i, 29.97p, 23.98p, 50i, 25p
DNx 145 family*2	1080/59.94i, 29.97p, 23.98p, 50i, 25p
XAVC Intra	1920x1080/59.94i, 50i, 29.97p, 25p, 23.98p, 1280x720/59.94p, 50p
XAVC Long	1920x1080/59.94i, 50i, 59.94p, 50p, 29.97p, 25p, 23.98p, 1280x720/59.94p, 50p
MPEG HD422	1920x1080/59.94i, 50i, 29.97p, 25p, 23.98p, 1280x720/59.94p, 50p, 29.97p, 25p, 23.98p
MPEG HD420	1920x1080/59.94i, 50i, 29.97p, 25p, 23.98p, 1440x1080/59.94i, 50i, 1280x720/59.94p, 50p
MPEG IMX*3	720x480/59.94i (50M), 720x576/50i (50M)
DVCAM	720x480/59.94i (25M), 720x576/50i (25M)
<b>Recording Format (Audio)</b>	
SSiP SR-Lite 4:2:2	LPCM 24 bits, 48 kHz, 4 channels
ProRes 422 HQ 10bit*1	LPCM 24 bits, 48 kHz, 4 channels
ProRes 422 10bit*1	LPCM 24 bits, 48 kHz, 4 channels
DNxHD 220x 4:2:2 10bit*2	LPCM 24 bits, 48 kHz, 4 channels
DNx 145 family*2	LPCM 24 bits, 48 kHz, 4 channels
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 (420)	LPCM 16 bits, 48 kHz, 4 channels
MPEG IMX*3	LPCM 16/24 bits, 48 kHz, 4 channels
DVCAM	LPCM 16 bits, 48 kHz, 4 channels
<b>Recording Format (Proxy Video)</b>	
XAVC Proxy	AVC/H.264 Main Profile 4:2:0 Long GOP, VBR, 9/3/1/0.5 Mbps
<b>Recording Format (Proxy Audio)</b>	
XAVC proxy	AAC-LC, 128 kbps, 2 channels
<b>Lens</b>	
Lens mount	Sony 2/3-inch type bayonet mount
<b>Camera Section</b>	
Imaging device (Type)	3-chip 2/3-inch type Full HD CCD, PowerHAD FX
Effective picture elements (H x V)	1920 x 1080
Optical System	F1.4 prism system
Built-in Filters	ND Filter (Optical filter) 1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND CC Filter (Electrical filter) A: 3200K, B: 4300K, C: 5600K, D: 6300K

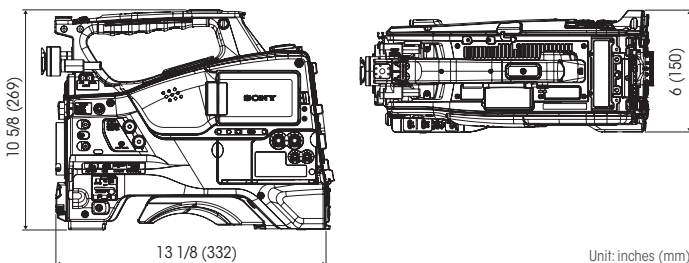
PXW-X500	
Sensitivity	F12 (typical) (1920 x 1080/50i mode) F11 (typical) (1920 x 1080/59.94i mode)
Minimum illumination	0.016 lx (typical) (1920 x 1080/59.94i mode, F1.4, +42 dB gain, with 16-frame accumulation)
S/N ratio	60 dB(NS:ON)
Horizontal resolution	1,000 TV lines or more (1920 x 1080i mode)
Shutter speed	1/60 sec to 1/2,000 sec + ECS
Slow shutter (SLS)*4	2, 3, 4, 5, 6, 7, 8, and 16-frame accumulation
White balance	Preset (3200K), Memory A, Memory B/ATW
Gain	-6, -3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42 dB
<b>Input/Output</b>	
Audio input	XLR-type 3-pin (female) (x2), Line/AES EBU/Mic/Mic +48 V
Video output	BNC (x1) HD-Y or Analog composite
Audio output	XLR-type 5-pin (x1)
SDI input	BNC (x1)
SDI output	BNC (x2), HD-SDI/SD-SDI selectable
Timecode input	BNC (x1)
Timecode output	BNC (x1)
Genlock input	BNC (x1)
USB	USB device B Type (x1), host A Type (x2)
Headphone output	Stereo mini jack (x1)
DC input	XLR-type 4-pin (x1)
DC output	4-pin (x1)
Remote	8-pin (x1)
HDMI output	HDMI connector (Type A) (x1)
Lens	12-pin (x1)
Light	2-pin (x1)
<b>Monitoring</b>	
Viewfinder	Supplied interfaces (20-pin IF for HDVF-20A and HDVF-200, 26-pin IF for CBK-VF02)
Built-in LCD monitor	3.5-inch*5 type, 960(H) x 540(V) pixels, 16:9
<b>Media</b>	
High resolution Video/Audio	SxS card XQD card (with XQD ExpressCard Adapter, QDA-EX1) SDXC card (with SD card adapter, MEAD-SD02)
Proxy Video/Audio and Utility	SDXC/SDHC
<b>Other Functions</b>	
Wi-Fi	Yes
GPS	Yes
<b>Supplied Accessories</b>	
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)	

\*1 An optional PXWK-501 Codec Option (ProRes) Key is required (planned to be available in early 2015).  
\*2 An optional PXWK-502 Codec Option (DNxHD) Key is required (planned to be available in early 2015).  
\*3 Planned to be available in early 2015.  
\*4 Slow Shutter setting frames vary according to the system frequency.  
\*5 Viewable area measured diagonally.

# Optional Accessories

 <b>HDVF-20A</b> 2-inch*5 HD Electronic Viewfinder	 <b>HDVF-200</b> 2-inch*5 CRT B/W Viewfinder	 <b>HDVF-C30WR</b> 2.7-inch*5 LCD Color Viewfinder	 <b>CBK-VF02</b> 3.5-inch*5 LCD Color Viewfinder	 <b>HDVF-L750</b> 7-inch*5 LCD Color Viewfinder	 <b>CA-FB70</b> Optical Fiber Camera Adapter	 <b>CA-TX70</b> Digital Triax Camera Adapter
 <b>PXWK-501*3</b> ProRes Codec Option Key	 <b>PXWK-502*3</b> DNxHD Codec Option Key	 <b>PXWK-503</b> Slow&Quick Option Key	 <b>BP-GL95A/GL65A, BP-L80S/L60S, BP-FL75</b> Lithium-ion Battery Pack	 <b>BC-L500/L160/L70/L90</b> Battery Charger	 <b>BKW-401</b> Viewfinder Rotation Bracket	 <b>QD-S64E/QD-S32E</b> XQD Memory Card S Series
 <b>MEAD-SD02*6</b> SD Card Adapter for XDCAM Series	 <b>DWR-S02D</b> Digital Wireless Receiver	 <b>HXCU-FB70</b> Optical Fiber Camera Control Unit	 <b>RM-B170</b> Remote Control Unit	 <b>VCT-14</b> Tripod Adapter	 <b>SBP-64B/128B</b> SxS Memory Card SxS PRO+	 <b>SF-64UX2</b> (64 GB) SDXC Memory Card
 <b>ECM-680S/678/674/673</b> Shotgun-type Electret Condenser Microphone	 <b>WRR-855S</b> Wireless Microphone Receiver	 <b>HXCU-TX70</b> Digital Triax Camera Control Unit	 <b>RCP-1000/1001/1500/1501/1530</b> Remote Control Panel	 <b>CBK-SP01</b> Soft Shoulder Pad Option	 <b>LC-H300</b> Hard Carrying Case	*6 Operation with all SDXC memory cards is not assured.
 <b>EC-05X3F5M</b> 3pin-5pin cable for ECM-680S	 <b>DWA-01D</b> External Case	 <b>AC-DN10/DN2B</b> AC Adapter	 <b>CAC-12</b> Mic Holder			

# Dimensions



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