SONY

# PXW-X500

## XDCAM XAVC Memory Camcorder

Sony proudly introduces a new solid-state memory shoulder-mount camcorder, the PXW-X500, offering superior picture quality with its sophisticated three-chip 2/3-inch-type CCD image sensors. The PXW-X500 provides a -60 dB signal-to-noise ratio with F11 sensitivity for 1080/59.94i and F12 for 1080/50i.

The PXW-X500 camcorder supports XAVC at 1080/59.94p and 1080/50p, and a wide range of conventional formats including MPEG4 SStP. Optional Apple ProRes and DNxHD formats are also available. This state-of-the-art camcorder also provides exceptional reliability in shooting by dual recording onto two SxS cards simultaneously.

Sony's cutting-edge technology enables the PXW-X500 camcorder to capture full-resolution 1920 x 1080 high-definition images at an amazing frame rate at up to 1080/120p*1 so users can utilize excellent Slow & Quick Motion functions. With its innovative high performance and advanced operability, the PXW-X500 is an outstanding acquisition tool for a broad range of HD production applications such as scripted and reality TV drama, live production, ENG, and sporting event productions.

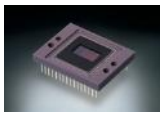
In addition, with a built-in wireless function module and optional camera adapter, the PXW-X500 can work in a wide variety of applications.

*1 An optional PXWK-503 Slow&Quick Option Key is required.

XDCAM XAVC MPEG HD422 MPEG HD MPEG IMX DVCAM PowerHAD FX ProRes AVID | Avid DNxHD


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

Newly developed three 2/3-inch-type PowerHAD™ FX CCDs produce exquisite high-quality pictures with a high sensitivity of F11 at 1080/59.94i (F12 at 1080/50i) which takes advantage of industry-standard B4-mount 2/3-inch HD video lenses.



### Slow & Quick Motion Functions

The PXW-X500 offers a powerful Slow & Quick Motion function.

The CCD image sensor captures full-resolution 1920 x 1080 high-definition images at an amazing frame rate.

The highest frame rate can reach 1080/120p which makes five times slow motion effect at 23.98p playback*1.

This enables users to create unique a 'look' or special effect with slow- and fast-motion images*2.

*1 An optional PXWK-503 Slow&Quick Option Key is required for XAVC format recording.

*2 For supported formats, please refer to the table below.

**Slow & Quick Motion Functions Supported 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 |

### Multiple-format Recording – XAVC, ProRes*3, and DNxHD*4

The PXW-X500 offers a wide array of recording formats for a variety of content creation applications (please refer to the following table). The PXW-X500 also supports the Apple ProRes format and Avid DNxHD in early 2015.

**Typical Recording Formats**

| | |
|---|---|
| SStP SR-Life 4:2:2 | 1080/59.94i, 29.97p, 23.98p, 50i, 25p |
| ProRes 422 HQ 10bit*3<br>ProRes 422 10bit*3 | 1080/59.94i, 29.97p, 23.98p, 50i, 25p<br>1080/59.94i, 29.97p, 23.98p, 50i, 25p |
| DNxHD 220x 4:2:2 10bit*4 | 1080/59.94i, 29.97p, 23.98p, 50i, 25p |
| DNx 145 family*4 | 1080/59.94i, 29.97p, 23.98p, 50i, 25p |
| XAVC Intra 4:2:2 | 1080/59.94i, 29.97p, 23.98p, 50i, 25p, 720/59.94p, 50p |
| XAVC Long 4:2:2 | 1080/59.94p, 50p, 59.94i, 29.97p, 23.98p, 50i, 25p, 1280 x 720/59.94p, 50p |
| MPEG HD422 | 1080/59.94i, 29.97p, 23.98p, 50i, 25p, 720/59.94p, 50p, 29.97p, 23.98p, 25p |
| MPEG HD (420) | 1080/59.94i, 29.97p, 23.98p, 50i, 25p, 720/59.94p, 50p, 1440 x 1080/59.94i, 50i, |
| MPEG IMX*5 | 720 x 480/59.94i, 720 x 576/50i |
| DVCAM | 720 x 480/59.94i, 720 x 570/50i |

*3 An optional PXWK-501 Codec Option (ProRes) Key is required (planned to be available in early 2015).

*4 An optional PXWK-502 Codec Option (DNxHD) Key is required (planned to be available in early 2015).

*5 Planned to be available in early 2015.

## Simultaneous Recording on Two SxS Cards

The PXW-X500 offers a simultaneous recording function for peace-of-mind productions. Recording is available on both SxS cards simultaneously as a backup measure within the same codec*6 and same operating point*6 in the following recording formats; XAVC-Intra, XAVC-Long, MPEG HD422, or MPEG HD(420).

*6 Simultaneous recording with proxy file is supported in all the combination with above formats an SD card.

## Built-in Wireless Function Module*7

With a built-in wireless module, the supplied IFU-WLM3 USB wireless LAN module, users can operate the PXW-X500 from Wi-Fi-compatible devices such as tablets.
In addition, lightweight proxy video files can be generated separately from the mainline recording, and can be recorded to an SD card. The wireless module can output streaming of proxy content over LTE (Long Term Evolution).

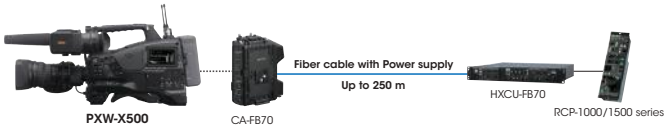
*7 Planned to be available in early 2015. This function is not supported in some countries. Please ask your Sony sales person.


## Flexible Camera System Operation

The CA-FB70 Optical Fiber Camera Adaptor or the CA-TX70 Digital Triax Camera Adaptor can be attached to the PXW-X500 for live camera operation. The CA-FB70 enables the PXW-X500 to transmit signals via an optical fiber cable up to 250 m between the CA-FB70 and HXCU-FB70 Optical Fiber Camera Control Unit (CCU) with power and signal transmission. The CA-TX70 transmits signals via triax cable up to 600 m*8 between the CA-TX70 and HXCU-TX70 Digital Triax Camera Control Unit.

*8 When ø 8.5 mm cable is utilized.

**PXW-X500 integration with optical fiber cables**




## GPS Functionality*9

A built-in GPS receiver module is incorporated to record GPS data in an MXF file and a log file*10 automatically when this function is active. The GPS function is beneficial in post-production when used to track shooting locations.

*9 This function is available for recording in XAVC formats.
Future support is planned for other HD formats and log file recording.

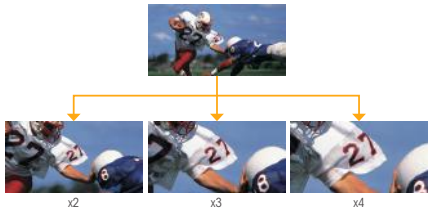
*10 Planned to be available in early 2015.

## Pool-feed Operation

The PXW-X500 offers pool-feed operation enabling the recording of HD-SDI and SD-SDI*10 inputs including 3G-SDI*10. Return HD-SDI input*10 can be also displayed on the viewfinder.

## Other Features

- The newly developed ALAC (Automatic Lens Aberration Compensation) feature drastically decreases specific patterns of chromatic aberration caused by the lens.
- Four types of HyperGamma are available in addition to the standard gamma curves for powerful contrast handling by making maximum use of the capacity and wide dynamic range of the Power HAD™ CCD sensor. User Gamma allows for the creation of customized gamma curves. Gamma curves can be edited by using optional CVP File Editor gamma creation software running on a PC.
- A Focus Assist function is incorporated for easier focusing on the viewfinder by a graphic bar indication. In addition, the viewfinder can indicate Waveform, Vector Scope, or Histogram.
- The Digital Extender function enables images to be digitally expanded two to four times in size without any loss of F-drop image sensitivity*11.




Simulated Images

*11 Use of the Digital Extender function reduces image resolution (planned to be available in early 2015).

# Specifications

| | PXW-X500 |
|---|---|
| **General** | |
| Mass | Approx. 3.8 kg (8 lb 6 oz) (body only without lens, VF, Mic) |
| Dimensions (W x H x D) | 150 x 269 x 332 mm (6 x 10 5/8 x 13 1/8 inches) (excluding protrusions, body only) |
| Power Requirements | DC 12 V (11 V to 17 V) |
| Power Consumption | Approx. 35 W (while XAVC recording, color LCD on)<br>Approx. 37 W (while XAVC recording, CBK-VF02 viewfinder and color LCD on) |
| Operating temperature | -5°C to +40°C (23°F to 104°F) |
| Storage temperature | -20°C to +60°C (-4°F to +140°F) |
| **Recording Format (Video)** | |
| SSIP SR-Lite 4:2:2 | 1920x1080/59.94i, 29.97p, 23.98p, 50i, 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, 29.97p, 50i, 25p, 23.98p, 1280x720/59.94p, 50p |
| XAVC Long | 1920x1080/59.94i, 59.94p, 50p, 29.97p, 50i, 25p, 23.98p, 1280x720/59.94p, 50p |
| MPEG HD422 | 1920x1080/59.94i, 29.97p, 50i, 25p, 23.98p, 1280x720/59.94p, 50p, 29.97p, 25p, 23.98p |
| MPEG HD420 | 1920x1080/59.94i, 29.97p, 50i, 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) |
| **Recording Format (Audio)** | |
| 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 |
| **Recording Format (Proxy Video)** | |
| XAVC Proxy | AVC/H.264 Main Profile 4:2:0 Long GOP, VBR, 9/3/1/0.5 Mbps |
| **Recording Format (Proxy Audio)** | |
| XAVC proxy | AAC-LC, 128 kbps, 2 channels |
| **Lens** | |
| Lens mount | Sony 2/3-inch type bayonet mount |
| **Camera Section** | |
| 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<br>CC Filter (Electrical filter) A: 3200K, B: 4300K, C: 5600K, D: 6300K |

| | PXW-X500 |
|---|---|
| Sensitivity (2000 lx, 89.9% reflectance) | F12 (typical) (1920 x 1080/50i mode)<br>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 rezolution | 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 |
| **Input/Output** | |
| 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) |
| **Monitoring** | |
| 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 |
| **Media** | |
| High resolution Video/Audio | SxS card<br>XQD card (with XQD ExpressCard Adapter, QDA-EX1)<br>SDXC card (with SD card adapter, MEAD-SD02) |
| Proxy Video/Audio and Utility | SDXC/SDHC |
| **Other Functions** | |
| Wi-Fi | Yes |
| GPS | Yes |
| **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) | |

*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

**HDVF-20A**
2-inch*5 HD Electronic Viewfinder

**HDVF-200**
2-inch*5 CRT B/W Viewfinder

**HDVF-C30WR**
2.7-inch*5 LCD Color Viewfinder

**CBK-VF02**
3.5-inch*5 LCD Color Viewfinder

**HDVF-L750**
7-inch*5 LCD Color Viewfinder

**CA-FB70**
Optical Fiber Camera Adaptor

**CA-TX70**
Digital Triax Camera Adaptor

**PXWK-501*3**
ProRes Codec Option Key

**PXWK-502*3**
DNxHD Codec Option Key

**PXWK-503**
Slow&Quick Option Key

**BP-GL95A/GL65A, BP-L80S/L60S, BP-FL75**
Lithium-ion Battery Pack

**BC-L500/L160/L70/L90**
Battery Charger

**BKW-401**
Viewfinder Rotation Bracket
**SBP-64B/128B**
SxS Memory Card SxS PRO+
**SBS-64G1A/32G1A**
SxS Memory Card SxS-1

**QD-S64E/QD-S32E**
XQD Memory Card S Series
**SF-64UX2**
(64 GB)
SDXC Memory Card
**QDA-EX1**
XQD ExpressCard Adapter

**MEAD-SD02*6**
SD Card Adapter for XDCAM Series
**ECM-680S/678/674/673**
Shotgun-type Electret Condenser Microphone
**EC-05X3F5M**
3pin-5pin cable for ECM-680S

**DWR-S02D**
Digital Wireless Receiver
**WRR-855S**
Wireless Microphone Receiver
**DWA-01D**
External Case

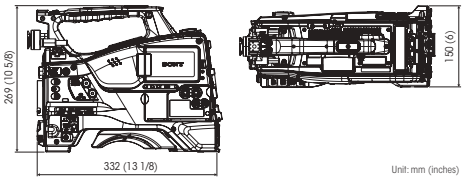
**HXCU-FB70**
Optical Fiber Camera Control Unit
**HXCU-TX70**
Digital Triax Camera Control Unit
**AC-DN10/DN2B**
AC Adapter

**RM-B170**
Remote Control Unit
**RCP-1000/1001/1500/1501/1530**
Remote Control Panel
**CAC-12**
Mic Holder

**VCT-14**
Tripod Adapter
**CBK-SP01**
Soft Shoulder Pad Option
**LC-H300**
Hard Carrying Case

*6 Operation with all SDXC memory cards is not assured.

# Dimensions




Unit: mm (inches)



MK11152V1KURA14AUG