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.

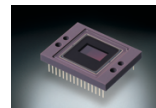*1 An optional PXWK-503 Slow&Quick Option Key is required.

XDCAM XAVC MPEG HD422 MPEG HD MPEG IMX DVCAM Power HAD.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-Lite 4:2:2	1080/59.94i, 29.97p, 23.98p, 50i, 25p
ProRes 422 HQ 10bit*³ ProRes 422 10bit*³	1080/59.94i, 29.97p, 23.98p, 50i, 25p 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.
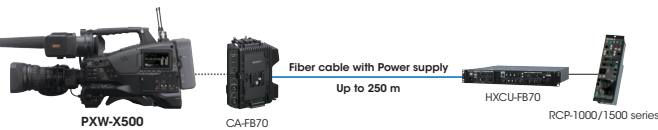
Flexible Camera System Operation

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

PXW-X500 — CA-FB70 — Fiber cable with Power supply Up to 250 m — HXCU-FB70 — RCP-1000/1500 series

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.
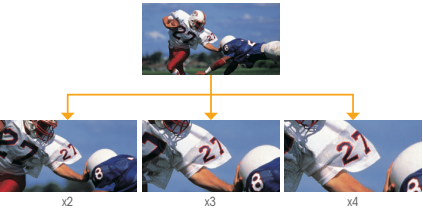Future support is planned for other HD formats and log file recording.
*10 Planned to be available in early 2015.

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.

x2   x3   x4

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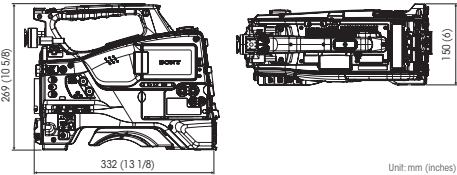
Simulated Images

Specifications

General	PXW-X500
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) / 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)	
SStP 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, 23.98p, 50i, 25p
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)	
SStP 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 / 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) / 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 / XQD card (with XQD ExpressCard Adapter, QDA-EX1) / 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*6 HD Electronic Viewfinder
HDVF-200 2-inch*6 CRT B/W Viewfinder
HDVF-C30WR 2.7-inch*6 LCD Color Viewfinder
CBK-VF02 3.5-inch*6 LCD Color Viewfinder
HDVF-L750 7-inch*6 LCD Color Viewfinder
CA-FB70 Optical Fiber Camera Adapter
CA-TX70 Digital Triax Camera Adapter

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

269 (10 5/8)
332 (13 1/8)
150 (6)

Unit: mm (inches)

MK11152V1KURA14AUG