SONY

PXW-X320

Solid-State Memory Camcorder

XAVC MPEG HD422 MPEG HD MPEG IMX DVCAM Exmor FULL HD 3CMOS SxS

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PXW-X320

The PXW-X320 is a high-performance SxS memory camcorder which inherits field-proven operability from the XDCAM™ family. The industry-proven XDCAM HD422 workflow and the camcorder's versatile full-shoulder style body meet the requirements of various broadcasters and professional content creators, such as run-and-gun style ENG shooting and content exchange.

The PXW-X320 has become a part of the XDCAM™ HD422 family, and comes equipped with cutting-edge imaging technology – three 1/2-inch-type Full-HD Exmor™ CMOS sensors with an extremely high S/N ratio – with a flash band reducer feature to provide outstanding picture quality.

The PXW-X320 supports new 10-bit XAVC™ Intra Frame and Long GOP formats offering higher quality content creation in the HD domain. In addition MPEG HD422, MPEG HD, MPEG IMX, and DVCAM are supported. Two HD/SD-SDI, HDMI, i.LINK™, and composite outputs provide a wide range of AV and IT interfaces. The PXW-X320 also supports wireless network operation using an optional adapter, the CBK-WA101. This enables easy and quick clip data transmission from field to broadcast station, minimizing the time to air and saving recorded media transportation costs.

With various functions inherited from Sony's world-acclaimed XDCAM camcorders, and yet highly cost effective with the lens included, the PXW-X320 is an ideal choice for many different camera professionals, from those engaged in news gathering, when speed is the key concern, to those who produce TV programs and documentaries, when quality is crucial.

High Picture Quality

The PXW-X320 incorporates three 1/2-inch-type Full-HD Exmor CMOS sensors (1920 x 1080) to achieve high resolution, high sensitivity (F11 at 59.94 Hz / F12 at 50 Hz), low noise (60 dB), and a wide dynamic range to give more freedom of expression for creative shooting.

In addition to existing noise reduction features, the PXW-X320 also includes a three-dimension noise reducer. This not only detects vertical and horizontal direction in a frame picture but also noise components in a time axis, utilizing correlation characteristics between video frames. Using this feature, the S/N ratio is improved to 60 dB which is the highest level of noise reduction in a 1/2-inch-type Full-HD shoulder camcorder.

Enhanced Flash Band Reducer

Incorporating a newly developed algorithm, the PXW-X320 detects and processes flash banding inside its hardware before recording begins. This provides greater flexibility in reducing flash banding across different shooting environments. This feature can be disabled from the menu if you want to use Content Browser for flash band reduction after shooting. You are free to choose to reduce flash band before or after shooting, depending on each shooting circumstance.

Flash Band Reducer ON

Flash Band Reducer OFF

Multiple Recording Formats and Bit Rates

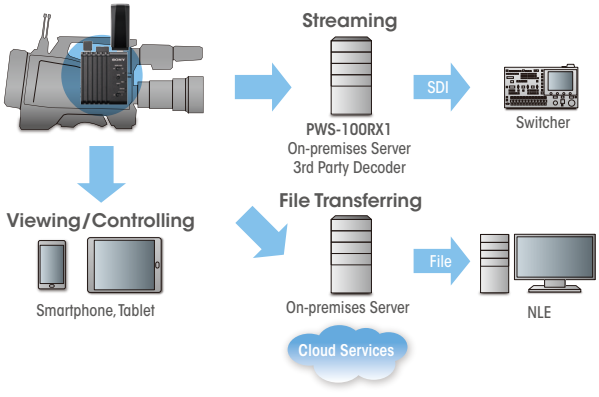
The PXW-X320 incorporates XAVC (Intra 4:2:2 and Long 4:2:2) in the HD domain at a 100-Mbps*1 data rate, enabling the creation of rich content with 10-bit quality. This camcorder can also record Full-HD video (1920 x 1080) at up to 50 Mbps using MPEG HD422 as well as MPEG HD at 35 Mbps / 25 Mbps, MPEG IMX at 50 Mbps, and DVCAM at 25 Mbps in MXF file, as standard supported formats.

*1 Available by Intra 4:2:2

XAVC XDCAM HD MPEG HD422 MPEG HD MPEG IMX DVCAM

Easy and Convenient Wireless Operation

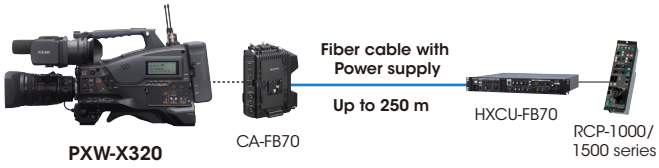
The PXW-X320 is designed to support wireless operation using an optional wireless adapter, the CBK-WA101, which can be attached directly. Using this adapter, you can stream out pictures for live shooting via an IP network. After shooting, you can select a recorded proxy or high-resolution file from the list and upload it to the PWS-100RX1 or to an on-premises server or to a cloud service via a mobile Wireless LAN router or 3G/4G/LTE device. The adapter also provides live monitoring and remote control of the PXW-X320 by mobile tablet or smartphone with mobile application software.



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-X320 for live camera operation. The CA-FB70 enables the PXW-X320 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*2 between the CA-TX70 and HXCU-TX70 Digital Triax Camera Control Unit.

*2 When ø 8.5 mm cable is utilized.



3.5-inch Type Color LCD Viewfinder

With a large, easy-to-read 3.5-inch type QHD color LCD viewfinder as a standard accessory, the PXW-X320 offers outstanding resolution of 960 × 540 pixels, strongly supporting critical focus control during HD shooting. The viewfinder cover can be flipped up to enhance visibility when the camera is set on a tripod.

User Customizable Menu

The PXW-X320 has a User Customizable Menu feature that is typically associated only with high-end camcorders. This feature allows you to pick and organize frequently used menu items much in the same way as the bookmark feature of a web browser. By using this feature, you can save a lot of time – you won't have to repeatedly search for specific menu items – and experience more efficient operation.

Variety of Interfaces

Two lines of SDI output connection are provided by the PXW-X320. This enables, for example, the director and camera operator to concurrently check shot content via two separate monitors. Also, for monitoring purposes this camcorder can be connected via HDMI to professional displays as well as domestic-use TVs with an HDMI connector.

The i.LINK connector can be used for HDV when SP 1440 (FAT) mode is selected and for DV when DVCAM (FAT) mode is selected, for both input and output signal flows.

Specifications

	PXW-X320
General	
Mass	Approx. 3.4 kg (body only without lens, VF, Mic)
	Approx. 7.9 lb (body only without lens, VF, Mic)
Dimensions (W x H x D)*1	124 x 269 x 332 mm (5 x 10 5/8 x 13 1/8 inches) (excluding protrusions, body only)
Power Requirements	DC 12 V
Power Consumption	Approx. 25W (with viewfinder, lens and microphone while recording)
Operating Temperature	0° C to 40° C (32° F to 104° F)
Storage Temperature	-20° C to +60° C (-4° F to +140° F)
Continuous Operating Time	Approx. 194 min with BP-L80S
Recording Format (Video)	XAVC
	- XAVC-I mode: CBG, 112Mbps max, MPEG-4 AVC/H.264
	-XAVC-L50 mode: VBR, 50Mbps, MPEG-4 AVC/H.264 -XAVC-L35 mode: VBR, 35Mbps, MPEG-4 AVC/H.264 -XAVC-L25 mode: VBR, 25Mbps, MPEG-4 AVC/H.26
	MPEG-2 Long GOP:
	- HD 422 mode: CBR, 50 Mbps max., MPEG-2 422P@HL
	- HQ mode: VBR, 35 Mbps max., MPEG-2 MP@HL
	- SP mode: CBR, 25 Mbps, MPEG-2 MP@H-14
	- SD mode : MPEG IMX, DVCAM
Recording Format (Audio)	<exFAT>
	- XAVC-I mode: LPCM 24 bits, 48 kHz, 4 channels
	XAVC-L mode:LPCM 24 bits, 48 kHz, 4 channels
	HD 422 50 mode: LPCM 24 bits, 48 kHz, 4 channels
	HD 420 HQ mode: LPCM 16 bits, 48 kHz, 4 channels
	SD MPEG IMX mode: LPCM 16/ 24 bits, 48 kHz, 4 channels
	SD DVCAM mode: LPCM 16 bits, 48 kHz, 4 channels
	<UDF>
	- HD 422 50 mode: LPCM 24 bits, 48 kHz, 4 channels
	- HD 420 HQ mode: LPCM 16 bits, 48 kHz, 4 channels
	- SD MPEG IMX mode: LPCM 16/ 24 bits, 48 kHz, 4 channels
	- SD DVCAM mode: LPCM 16 bits, 48 kHz, 4 channels
	<FAT>
	- HD mode: LPCM 16 bits, 48 kHz, 4 channels
	- SD DVCAM mode: LPCM 16 bits, 48 kHz, 2 channels
Lens	
Lens Mount	Sony 1/2-inch type bayonet mount
Zoom Ratio	16x (optical), servo/manual (AF lens for PXW-X320)
Focal Length	f = 5.8 mm to 93 mm (equivalent to 31.4 mm to 503 mm on 35 mm lens)
Iris	F1.9 to F16 and Close, Auto/Manual selectable
Focus	AF/MF/Full MF selectable
	800 mm to ∞ (MACRO OFF)
	50 mm to ∞ (MACRO ON, Wide)
	782 mm to ∞ (MACRO ON, Tele)
Filter Diameter	M82 mm, pitch 0.75 mm (on lens)
Input/Output	
Genlock Input	BNC (x1)
Timecode Input	BNC (x1)
Audio Input	XLR-type 3-pin (female) (x2), Line/Mic/Mic +48 V selectable
Mic Input	XLR-type 5-pin
SDI Output	BNC (x2), HD-SDI/SD-SDI selectable
Video Output	BNC (x1) HD-Y or Analog composite
Audio Output	XLR-type 5-pin

	PXW-X320
Timecode Output	BNC (x1)
Earphone Output	Stereo mini jack (x1)
Speaker Output	Monaural
DC Input	XLR-type 4-pin
DC Output	4-pin
Lens	12-pin
Remote	8-pin
Light	2-pin
i.LINK	IEEE 1394, 6-pin (x1), HDV (HDV 1080i)/DVCAM stream input/output*2, S400
USB	USB device B Type (x1), host A Type (x1)
HDMI	A type (x1)
Camera Section	
Imager	3-chip 1/2-type "Exmor" Full HD CMOS
Effective Picture Elements	1920 (H) x 1080 (V)
Optical System	F1.6 prism system
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, 32, 64-frame accumulation
Slow & Quick Motion Function	720p: Frame rate selectable from 1 fps to 60 fps
	1080p: Frame rate selectable from 1 fps to 30 fps
Sensitivity (2000 lx, 89.9% reflectance)	F11 (typical) (1920 x 1080/59.94i mode)
	F12 (typical) (1920 x 1080/50i mode)
Minimum Illumination	0.04 lx (typical) (1920 x 1080/59.94i mode, F1.6, +24 dB gain, with 64-frame accumulation)
White Balance	Preset (3200K), Memory A, Memory B/ATW
Gain Selection	-3, 0, 3, 6, 9, 12, 18, 24 dB
S/N Ratio	60 dB (Y) (typical)
Horizontal Resolution	1,000 TV lines or more (1920 x 1080i mode)
Viewfinder	
	3.5-inch*3 type color LCD monitor:
	960 (H) x 540 (V), Quarter HD Size
Other Equipment	
Built-in LCD Monitor	Black & White LCD (Audio level, TC, battery and media remaining capacity)
Built-in Speaker	1
Supplied Accessories	
	Viewfinder (1)
	Shoulder strap (1)
	Stereo microphone (1)
	Wind-screen (1)
	Cold shoe kit (1)
	Lens mount cap (1)
	Flange back adjustment chart (1)
	Auto focus lens (1)
	Before Using this Unit (1)
	CD-ROM:
	Operating Instructions (English)
	Operating Instructions (Japanese)

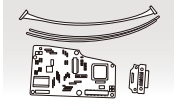
*1 The values for dimensions are approximate.
*2 HDV/ DV stream input/output are available only in FAT mode. Depending on the connected products, it may not be recorded correctly.
*3 Viewable area measured diagonally.

Optional Accessories

SBP-128C/SBS-128G1B
SxS Memory Card Series

MEAD-SD02/QDA-EX1
Media Adapters for MS/SD Card and XQD

CBK-WA101
Wireless Adapter



CBK-CE01
50-pin Interface Unit and Digital Extender Option

CA-FB70/TX70
System Camera Configuration Units

DWR-S02D
Digital Wireless Receiver

BKW-401
Viewfinder Rotation Bracket

CBK-SP01
Optional Soft Shoulder Pad

HDVF-L750
LCD Viewfinder

RM-B170
RCP-1000/1500
Remote Control Unit

BP-L80S
Rechargeable Lithium-ion Battery Pack

BC-L500/L160/L70
Li-ion Battery Charger

ECM-680S/678/673
Shotgun-type Electret Condenser Microphone

SBAC-US30
SxS Card Reader/Writer

SBAC-UT100
Multi SxS Card Reader/Writer

VCT-14/VCT-U14
Tripod Attachment

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