

## PXW-X160

Three 1/3-inch type Exmor™ CMOS Full HD sensor XDCAM camcorder with 25x zoom lens and XAVC recordings



### Overview

Full HD XAVC Intra and XAVC Long GOP recordings and MPEG HD 422 50 Mbps offer budget savings and workflow flexibility for broadcast and professional applications

The PXW-X160 three 1/3-inch type Exmor™ CMOS sensors camcorder records Full HD XAVC Intra and XAVC Long GOP, as well as MPEG HD 422 50 Mbps MPEG HD 420 35 Mbps, AVCHD and DV, making it ideal for a wide range of applications from education/videography to broadcast. As the successor of HVR-Z7 and HXR-NX5, the PXW-X160 has a lot of attractive features, including dual SxS memory card slots, a G Series fixed 25x HD zoom lens with 26mm wide angle and variable ND filter, that provides four conventional mechanical 4 ND filter positions or a linear switch dial for more control in changing light conditions.

- **Three 1/3-inch type Exmor™ CMOS Full HD sensors**

High resolution, high sensitivity, low noise, and wide dynamic range for enhanced shooting under severe lighting conditions and more creative freedom.

- **G Series fixed 25x professional HD zoom lens**

26mm wide angle zoom with three independent rings with end-stop and large focal length.

- **High quality XAVC Intra and XAVC Long GOP recordings on SxS memory cards**

Supports XAVC Intra and Long GOP codecs, as well as MPEG HD 422 50 Mbps, the widely-accepted broadcast standard compliant with the latest EBU recommendations. The PXW-X160 also records in MPEG HD 420 35 Mbps, AVCHD and DV, offering flexibility and budget savings on recording media.

- **Dual ND filter control mechanism for more flexibility**

The PXW-X160 is equipped with a variable ND Filter function. Users can chose either four conventional

mechanical ND filter positions or the linear control dial, allowing you to quickly and smoothly adapt to different conditions of shooting.

## Features

- **Three 1/3-inch type Exmor™ CMOS Full HD sensors for a wide range of shooting conditions**

The PXW-X160 incorporates three 1/3-inch type Full-HD Exmor™ CMOS sensors to achieve high resolution, high sensitivity, low noise, and wide dynamic range. The sensor has 2 million effective pixels and achieves full HD 1920 x 1080 shooting without pixel interpolation, enhancing shooting under severe lighting conditions and providing more freedom of creative expression.

- **25x professional HD zoom lens with three independent rings with end-stop and large focal length**

The PXW-X160 is equipped with a G Series fixed 25x zoom lens with 26mm wide-angle. Due to a quick electric zoom function, the change of shooting from wide-angle to tele-angle can be made quickly. The lens has three independent control rings with end-stop, which means focus, zoom and iris can be manually controlled, making for better and faster adjustment.

- **High quality XAVC Intra and XAVC Log GOP recordings**

The PXW-X160 supports not only MPEG HD 422 50 Mbps in MXF (Material eXchange Format), which is widely accepted by major broadcasters worldwide, but also XAVC Intra and XAVC Long GOP codecs. XAVC technology is based on the H.264 standard, which provides an exceptional performance compression technology. XAVC Intra (frame) compression means that every frame is encoded independent of the other frames – providing a better quality picture, without compromises. With a Long GOP codec, only certain frames are encoded individually. This allows the codec to squeeze the video into a much smaller bitrate than Intra technology. The main benefit is faster ingest and editing. XAVC Long GOP files also require less storage space than XAVC Intra files, providing budget savings on recording media. The XAVC codec adopts 10 bit sampling for high definition recording with rich tonal expression. The bite rate of XAVC recording is 111 or 112 Mbps at 1080/59.94i or 50i and 89, or 112 Mbps at 1080/23.98P or 25p. The high bit rate gives a better quality picture.

- **Switchable recordings for greater flexibility**

As well as shooting at XAVC HD, MPEG HD 422 50 Mbps and MPEG HD 420 35 Mbps, the camcorder also supports DVCAM at 25 Mbps in MXF file format and AVCHD in MTS file format, which is compatible with NXCAM camcorders. MPEG HD 422 gives a high quality image with more detailed colour reproduction, as well as being ideal for chromakeying. It is also compatible with other XDCAM HD 422 and NXCAM camcorders, including the PMW-500, the PMW-200, HXR-NX3/VG1 and many others, which streamlines workflow and reduces time in the edit. High-quality MPEG HD422 50 Mbps is fully compliant with the latest EBU recommendations for long-form broadcast production and is widely accepted in broadcasting stations and production houses. This recording capability makes the PXW-X160 ideal for a wide range of different applications, including newsgathering and documentary production.

- **Dual SxS media slots, “Simul” or “Relay” recording, and independent record control**

The PXW-X160 is equipped with two SxS memory card slots. The camcorder is compatible with SxS PRO+ and SxS-1 memory cards, XQD, SDXC and SDHC cards can be also used with an appropriate card adaptor. Two media slots can record in either “Simul” or “Relay” mode. “Simul” mode permits simultaneous recording to two memory cards, while “Relay” mode automatically switches recording from the first to the second memory card when the first is full. The user can set up the two Start/Stop buttons on the PXW-X160, one on the grip and one on the camcorder body, to independently start and stop recording on different memory cards while recording in Simul mode.

- **Variable dual ND filter control mechanism**

The PXW-X160 is equipped with a variable ND Filter function, allowing you to choose either four conventional mechanical ND filter positions or the linear control dial. The optical filter changes the density electrically, allowing the light amount to be reduced more conveniently. The density can be changed gradually and fluidly. Different from conventional optical ND filters, the ND filter on the PXW-X160 can be controlled from

1/4ND to 1/128ND linearly. By choosing the density value properly, the iris control has more flexibility.

- **Multi Interface Shoe (MI Shoe) for flexible connection without XLR cable**

The PXW-X160 is equipped with a Multi Interface Shoe (MI Shoe) that has an electric interface in its mechanical attachment allowing the camcorder to communicate with an attached accessory. Accessories attached to the MI Shoe can be controlled by the camcorder. Using an MI Shoe connection, the audio signal from a UWP-D11 or UWP-D12 wireless microphone package can be input from the wireless microphone receiver to the PXW-X160 without an XLR cable. The power can be supplied from the PXW-X160 to the receiver and a battery is not required for the receiver operation. So, for example, if the HVL-LBPC video light is attached to the MI Shoe, video light power can be switched on and off from the camcorder.

- **Viewfinder includes amazing OLED technology**

This 0.5-inch OLED viewfinder has the incredible clarity of 1024 x 768 High Definition, plus superb OLED brightness, contrast and response. The high resolution of the viewfinder allows better precision of manual focus operations and eliminates any colour-breaking phenomenon.

- **Wide choice of connections**

The camcorder offers numerous connections to suit the broadcast workflow, including 3G HD-SDI, HDMI®, USB, composite output, timecode input/output and genlock input. The 3G-SDI connector is able to output the 1080/59.94P or 50P signal. Down-conversion output from HD to SD is also possible. Simultaneous output from both SDI and HDMI is possible. The Rec Trigger signal can be sent through SDI and HDMI to link an external recording device.

- **Lens Remote (LANC)**

The PXW-X160 has a LANC interface. Using a LANC remote controller such as the RM-1BP and the VCT-PG11RMB, the focus, zoom, rec start/stop and rec review can be controlled remotely.

## Technical Specifications

Specifications	
● Mass	Approx. 2.7 kg (body) Approx. 5lb 15.2 oz (body) Approx. 3.2 kg (with lens hood (1), eyecup (1), battery pack BP-U30 (1), SxS memory card(1)) Approx. 7lb 0.9 oz (with lens hood (1), eyecup (1), battery pack BP-U30 (1), SxS memory card (1))
● Dimensions (W x H x D)*1	191.5 x 201.5 x 412 mm (Approx. 7 5/8 x 8 x 16 1/4 in.) (without protrusions)
● Power Requirements	DC19.5 V (AC Adaptor), DC14.4 V (battery pack)
● Power Consumption	Approx. 19.9 W (while recording with LCD Off, EVF On when the external device connector is not used.) Approx. 20.8 W (while recording with LCD On, EVF On when the external device connector is used.)
● Operating Temperature	0°C to 40°C (32°F to 104°F)
● Storage Temperature	-20°C to +60°C (-4°F to 104°F)
● Battery Operating Time	With battery pack BP-U90: approx. 4 hours, 00 minutes (While recording with LCD Off, EVF On when the external device connector is not used.) With battery pack BP-U60: approx. 2 hours, 35 minutes (While recording with LCD Off, EVF On when the external device connector is not used.) With battery pack BP-U30: approx. 1 hours, 15 minutes (While recording with LCD Off, EVF On when the external device connector is not used.)
● Recording Format (Audio)	LPCM, AC-3 (AVCHD): 2ch→ LPCM (XAVC/MPEG2/AVCHD/DVCAM), Dolby Digital (AVCHD): 2ch

Recording Format (Video)	
● XAVC-Intra 1920x1080	59.94i: 111Mbps max, 50i: 112Mbps max, 29.97P: 111Mbps max, 25P: 112Mbps max, 23.98P: 89Mbps max
● XAVC-Intra 1280x720	59.94P: 111Mbps max, 50P: 112Mbps max
● XAVC-Long 1920x1080	59.94i, 50i: 50/35/25Mbps max, 59.94P, 50P, 29.97P, 25P, 23.98P: 50/35Mbps max
● XAVC-Long 1280x720	59.94P, 50P: 50Mbps max
● MPEG HD422 1920x1080	59.94i, 50i, 29.97P, 25P, 23.98P: 50Mbps max
● MPEG HD422 1280x720	59.94P, 50P, 29.97P, 25P, 23.98P: 50Mbps max
● MPEG HD420 1920x1080	59.94i, 50i, 29.97P, 25P, 23.98P: 35Mbps max
● MPEG HD420 1440x1080	59.94i, 50i: 35Mbps max
● MPEG HD420 1280x720	59.94P, 50P: 35Mbps max
● AVCHD 1920x1080	59.94P, 50P: 28Mbps max, 59.94i, 50i, 29.97P, 25P, 23.98P: 24Mbps max
● AVCHD 1280x720	59.94P, 50P: 24Mbps max
● DVCAM 720x480	59.94i: 25Mbps
● DVCAM 720x576	50i: 25Mbps

Lens	
● Lens Mount	Fixed
● Zoom Ratio	25x (optical), servo/manual
● Focal Length	f=3.7-92.5 mm equivalent to 26-650 mm on 35 mm lens
● Iris	F1.6 - F11 and C (close)
● Focus	AF/MF selectable, 10 mm ~ ∞ (Wide), 800 mm ~ ∞ (Tele)
● Image Stabilizer	ON/OFF/ACTIVE selectable, shift lens

● Filter Diameter	M82 mm
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Camera Section	
● Imaging Device (Type)	3-chips 1/3-type "Exmor" CMOS Sensor
● Effective Picture Elements	1920 (H) x 1080 (V)
● Built-in Optical Filters	Clear, 1/4~1/128 Variable
● Sensitivity	F9 (typical) (1920 x 1080/59.94i mode) F10 (typical) (1920 x 1080/50i mode)
● S/N Ratio	60 dB (Y) (typical)
● Shutter Speed	1/32 sec to 1/2000 sec
● Slow & Quick Motion Function	1920x1080p: Frame rate selectable 1~60p (depends on Recording Format) 1280x720: 1~120P (depends on Recording Format) Angle of view becomes smaller over 60fps.
● White Balance	Preset (3200K), A,B
●	No
● Wireless functions	No
● NFC	No

Input/Output	
● Audio Input	XLR-type 3-pin (female) (x2)
● HDMI Output	Type A (x1)
● 3G-SDI Output	BNC Connector (x1)
● Composite Output/GENLOCK-IN	BNC Connector (x1)
● Audio Output	Stereo mini jack ø3.5 mm (x1)
● USB	mini-B/USB2.0 Hi-speed/mass-storage (x1) Type A/for Wireless LAN module (x1) Type A/USB3.0 (x1) (future Update)
● TC in/out	BNC Connector (x1)
● Remote	Stereo mini mini jack ø2.5 mm (x1)
● DC Input	DC jack (x1)
● Shoe	Multi Interface Shoe (x1)
● Headphone Output	Stereo mini jack ø3.5 mm (x1)

Monitoring	
● Viewfinder	0.5-type color OLED, 2.36M dots
● LCD	3.5-type color LCD monitor Aspect ratio 16:9, 1.56Mdots

Built-in Microphone	
● Built-in Microphone	Omni-directional stereo electret condenser microphone

Media	
● Type	ExpressCard/34 slot (2) (for XAVC/MPEG2/AVCHD/DV) SD/SDHC (1) (for Utility)

## Supplied Accessories

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Lens hood (1), pre-installed to the Camcorder  
EVF large eyecup (1)  
USB cable (1)  
Audio connecting cable (1)  
Infrared Remote Commander (1)  
Lithium battery (CR2025 for the IR Remote Commander) (1)  
CD-ROM: Operating instructions in PDF (1)  
AC adaptor (1)  
BC-U1 battery charger (1)  
BP-U30 battery pack (1)  
AC Cable (2)  
COLD SHOE KIT (1)  
Shoulder strap (1)  
Warranty booklet (1)  
Accessory shoe kit (accessory shoe (1), accessory shoe plate (1), screws (4))  
SD card adaptor (1)

## Notes

- Notes

\*1 The values for dimensions are approximate.

## Accessories

### Accessories



**SMAD-P3**  
Multi Interface Shoe (MI Shoe) adaptor for cable-free connection

### Batteries and Power Supplies



**BC-U1**  
Battery charger/AC adaptor for BP-U90/U60/U30 Lithium-ion battery



**BC-U2**  
Two-channel simultaneous battery charger/AC adaptor for BP-U90/U60/U30 Lithium-ion battery



**BP-U30**  
Lithium-ion Battery



**BP-U60**  
Lithium-ion Battery



**BP-U90**  
Lithium-ion battery (85 Wh)



**PSZ-HA50**  
500GB Hard Disc Drive



**PSZ-SA25**  
256GB Solid State Drive

### Remote Controls



**RM-1BP**  
LANC Remote Commander

### Shotgun



**ECM-673**  
Short Shotgun Electret Condenser Microphone.



**ECM-674**  
Affordable shotgun Electret condenser microphone



**ECM-678**  
Shotgun Electret condenser microphone



## Cases



**LCS-BP1BP**  
Soft Backpack Style Carrying Case



**LCS-G1BP**

## Creative Software



**Catalyst Browse**  
A powerful clip management tool for the latest portfolio of Sony cameras and decks.

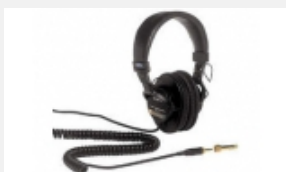


**Catalyst Prepare**  
The fast, simple, reliable path from camera to post.



**Vegas Pro 12**  
Professional Video, Audio, and Blu-ray Disc™ Creation

## Headphones



**MDR-7506**  
Stereo professional headphones



**ECM-680S**  
MS stereo shotgun Electret condenser microphone



**ECM-CG50BP**  
Super-cardioid shotgun Electret condenser microphone



**ECM-MS2**



**ECM-VG1**  
Shotgun Electret condenser microphone

## Tripods and Supports



**VCT-PG11RMB**  
Tripod



**VCT-SP2BP**  
Multi-function Camcorder Shoulder Support

## UWP-D Series Microphone Packages



**MDR-7510**

Studio professional headphones



**MDR-7520**

High quality studio professional headphones

## Lights



**HVL-LBPC**

LED battery video light

## Mixers and AV Amps



**DMX-P01**

Portable digital audio mixer

## Option Boards, Modules and Plug-ins



**MEAD-SD02**

Adaptor for using SD Card™ with XDCAM EX products

## Portable Storage



**UWP-D11**

Belt-pack UWP-D wireless microphone package



**UWP-D12**

UWP-D wireless microphone package with handheld transmitter



**UWP-D16**

Belt-pack UWP-D wireless microphone package with XLR plug-on transmitter

## XDCAM (Disc/Memory)



**SBAC-US20**

SxS PRO solid state memory USB 3.0 & 2.0 reader/writer



**SBAC-US30**

SxS PRO+ and SxS-1 solid state memory USB 3.0 reader/writer



**SBAC-UT100**

Dual slots SxS PRO+ and SxS-1 solid state memory Thunderbolt 2 and USB 3.0 reader/writer



**PSZ-HA1T**  
1TB Hard Disc Drive