

## PMW-300K2

Three 1/2-inch Exmor™ CMOS sensors semi-shoulder XDCAM camcorder with interchangeable 16x zoom HD lens system recording XAVC HD 100 Mbps and MPEG HD422 at 50 Mbps



### Overview

#### **Semi-shoulder handheld camcorder integrates with multi-camera operations**

The PMW-300K1 XDCAM camcorder is equipped with three 1/2-inch Exmor™ full-HD CMOS sensors, capable of delivering high-quality images even in low-light environments. Ample support for interchangeable lens and a robust metal body further ensure that PMW-300K1 is suitable for a wide range of applications. Additionally, the PMW-300K1 offers a convenient remote-control and multi-camera operation capability, which allows use with high-end camera systems. There are two SxS memory card slots, taking SxS Pro or SxS-1 cards, as well as having SDXC card compatibility (exFAT recordings only)\*. The camcorder's user menu is also customisable and can be password locked to prevent unnecessary changes\*.

\* Requires Version 1.5 firmware.

#### **XAVC 10-bit HD 422 and MPEG HD 422 50 Mbps recordings ideal for a wide range of shooting conditions**

An evolution of Sony's industry leading PMW-EX3, the PMW-300K is able to record XAVC 10-bit HD422 recordings, including XAVC Intra frame 10-bit HD 422 100 Mbps and XAVC Long GOP 10-bit

HD 422 (low bit rate). It also records 50Mbps HD material in MPEG-2 HD422, meeting broadcast standards around the world, including the European Broadcasting Union's (EBU) requirements on HD broadcast acquisition for long form programme making. Standard Definition recording includes DVCAM format and MPEG IMX SD up to 50Mbps. MPEG IMX format offers exceptional visual quality for SD recording that is comparable to Digital Betacam broadcast standard. The high bit rate ensures excellent capture of fast moving objects, while its chroma subsampling feature is perfect for a wide range of video encoding areas such as VFX and green screen applications. The camcorder can also support Sony's revolutionary XAVC codec, extending the lifecycle of the product to ensure maximum return on investment.

## Features

### **XAVC HD Intra 100 Mbps and Long GoP recordings plus Full HD MPEG-2 HD 422 50 Mbps**

The PMW-300K2 supports XAVC 10-bit HD422 recordings, including XAVC Intra frame 10-bit HD 422 100 Mbps and XAVC Long GOP 10-bit HD 422 (low bit rate). It also records Full HD (1920 x 1080) MPEG HD 422 at 50 Mbps in industry-standard MXF files, along with 24-bit 48 kHz, 4-channel audio. It is also capable of recording MPEG-2 HD 420 in Full HD (1920 x 1080) at 35 Mbps. Standard Definition recording includes DVCAM format and MPEG IMX SD up to 50Mbps. MPEG IMX format offers exceptional visual quality for SD recording that is comparable to Digital Betacam broadcast standard. Standard Definition options include MPEG IMX and DVCAM.

### **Wireless workflows**

The PMW-300K1/K2 allows full High Res and Proxy wireless operations in combination with the CBK-WA100 wireless adapter. Clip metadata management, XAVC proxy recording on SD-HC card, streaming to tablet/smartphone and Wi-Fi remote for

camera and lens are provided. The CBK-WA101 allows secure file transfer of recorded content by FTP-push to cloud services or on-premises servers via Wi-Fi, 3G/4G /LTE. Content Browser Mobile free Android/iOS application gives you full control to wireless operations.

## **Three 1/2-inch type Exmor™ CMOS Full HD sensors and low-light 3DNR technology for a wide range of shooting conditions**

The three 1/2-inch Exmor™ Full-HD CMOS sensors offer high light sensitivity and low image noise. As a consequence, it delivers clear high-resolution images even when filming in low-light conditions. The camcorder also includes Sony's 3Dimensional Noise Reducer technology (3DNR), which reduce noise between frames and thus creates noticeably clearer images.

## **Interchangeable lens system with 16x Fujinon HD lens package option (PMW-300K2)**

The PMW-300K2 features the same EX-mount interchangeable lens system as the PMW-EX3, making it compatible with a wide range of 1/2-inch and 2/3-inch lenses (with optional ACM-21 adaptor). The camcorder also comes with two auto-focusing zoom lens packages, one for a 14x (PMW-300K1) and the other a 16x zoom lens (PMW-300K2). Both lenses include a focus ring for quick switching between auto and manual focus.

## **Precision focusing with 3.5-inch colour LCD viewfinder**

An enhanced HD-resolution 3.5-inch colour LCD viewfinder (960x540 pixels) enables precision focusing for HD camcorder work, while the 8-pin remote-control and multi-camera operation capability allows the PMW-300K2 to be used in 3D configurations and high-end camera systems.

## **Multi-camera operation with 8-pin remote control**

The camcorder has a Genlock In and Timecode In/Out interface,

so that it can link together with other cameras for multi-camera operation capability and 3D configurations. The 8-pin 700-Protocol remote control interface allows for remote adjustment from the RM-B170\* or RM-B150\*\* remote control, sold separately.

\* The RM-B750 and the RCP remote control cannot be connected due to the power supply capacity of the PMW-300.

\*\* RM-B150 is discontinued.

## **HD/SD-SDI and HDMI interfaces for integration with broadcast infrastructures**

The PMW-300K2 has an SDI interface so that it can connect with broadcast infrastructures and professional equipment. It's also possible to down-convert from HD to SD. There is also an HDMI interface making it possible to link to consumer products, including a standard consumer TV. SDI and HDMI interfaces are available in the same time.

## **Wide range of frame rates**

The camcorder has standard recording modes of 1920 x 1080/25P or 50i and can additionally record at 59.94i, 23.98P and 29.97P in MPEG-2 HD 422 mode. At 1280 x 720, the camcorder can record 25P as well as 23.98P, 29.97P, 50P and 59.94P. Further recording modes are also possible at MPEG-2 HD 420 and DVCAM.

## **Slow and quick motion from 1 fps to 60 fps**

Slow motion shooting is possible with up to 60 frames per second (fps) recording in 720P or 30 fps recording in 1080P, when used with the SxS Pro or SxS-1 memory card. Quick motion can be obtained by slowing the frame rate down to 1 fps.

## **Semi-shoulder robust design with metal body**

The PMW-300K2 features an innovative semi-shoulder design with an extendable chest pad mechanism and rotary hand grip,

allowing comfortable recording over long periods of time. Its magnesium metal body ensures the camcorder is robust and, like its predecessor, the PMW-EX3, can withstand even the harshest production environments.

## **Wi-Fi remote control with optional Wi-Fi adaptor**

In addition to the 8-pin remote control interface, Apple iPads or Android mobile devices can be used as simple remote controllers. By attaching the optional CBK-WA01 or IFU-WLM3 Wi-Fi adaptor, the remote can control zoom, focus, iris and white balance as well as the recording functions such as recording trigger.

## **Cache recording**

Utilising a 15 second cache recording function, the PMW-300K2 can help prevent the loss of important scenes or events that occur up to 15 seconds before the camcorder's REC start button is pressed.

## **Two SxS memory card slots plus SDXC compatibility\***

The PMW-300 has two SxS memory card slots and, using two 64GB SxS memory cards, this allows for around four hours of continuous recording, with two hours of HD 422 50 Mbps recorded on each card. Content can also be copied between the two slots. The camcorder can use either SxS Pro or SxS-1 cards. In addition, SDXC cards can be used to record exFAT files only. The camcorder will also accept consumer recording media, including Memory Stick, SD card and XDQ card with an appropriate adaptor for emergency use.

\* Requires Version 1.5 firmware.

## **Customisable menu with lock function\***

Typically associated only with high-end camcorders, this feature allows you to pick and organize frequently used menu items –

similar to the bookmark feature of a web browser. By using this feature, you can save a lot of time with no need to repeatedly search for specific menu items. In addition, the user menu can be locked with a 4-digit passcode to ensure there are no unnecessary changes.

\* Requires Version 1.5 firmware.

## **Planning metadata automatically recorded**

By loading a pre-recorded Planning Metadata file (XML file) to the PMW-300K2, either from an SxS memory card or a USB memory, the metadata is automatically generated and recorded as described in the XML file while recording. Also the filename of a clip is automatically set as described in the XML file.

## **i.LINK Input/Output for DV/HDV recordings**

i.LINK (HDV) Out can be activated while SP 1440 (FAT) or DVCAM (FAT) is selected and the i.LINK (HDV) In signal can be recorded while the video format is set appropriately.

## **4 channels 24-bit 48 kHz audio recordings**

The PMW-300K2 is equipped with two XLR connectors, which connect to Sony's range of professional microphone products. 24-bit 48kHz audio can be recorded in HD 422 50 Mbps, with up to four channels of audio recorded.

## **Multiple language system**

The PMW-300K2 has multiple language system. The language for the menu and warning messages can be selected among English, Chinese, Spanish, Brazilian Portuguese, Russian and Indonesian.

## **4 Neutral Density filters**

The PMW-300K2 is equipped with four built-in ND (Neutral Density) filters – Clear, 1/4, 1/16, 1/64 – that help to vary the depth of field with iris control.

**Power on Quick Rec to help get up and running quicker**

If the camcorder power is turned on while pushing a REC button, the ‘Quick Rec’ mode is activated. By accelerating the power on process, the camcorder can start up and start recording more quickly than normal.

**Direct access to the thumbnails**

With the PMW-300K2, there is no need to switch between Camera and Media mode to access to the recording video. The access to the thumbnails is direct and without any reboot internal process.

Specifications

General	
Mass	Approx 2.2 kg (without lens, VF) Approx. 4 lb 14 oz (without lens) Approx. 4.4 kg (with lens hood, viewfinder, BP-U30 battery, a SxS memory card) Approx. 9 lb 11 oz (with lens hood, eye piece, BP-U30 battery, a SxS memory card)
Dimensions (W x H x D) *	263 x 239 x 445 mm (103/8x91/2x175/8inches) (with lens & viewfinder, without protrusions)
* The values for dimensions are approximate.	

Power Requirements	DC 12 V
Operating Temperature	0°C to 40°C 32°F to 104°F
Storage Temperature	-20°C to +60°C -4°F to +140°F
	<div>XAVC</div> <div>XAVC-I mode: CBG, 112 Mbps max., MPEG-4 AVC/H.264</div> <div>UDF</div> <div> <ul style="list-style-type: none"> <li>● HD422 mode: CBR, maximum bit rate: 50 Mbps, MPEG-2 422P@HL</li> <li>● HD420 mode: VBR, 35 Mbps, MPEG-2 MP@HL</li> <li>● SD mode: MPEG IMX 50Mbps</li> <li>● SD mode : DVCAM 25Mbps</li> </ul> </div>
Recording Format (Video)**	<div>FAT</div> <div> <ul style="list-style-type: none"> <li>● HQ 1920 mode: VBR, 35 Mbps, MPEG-2 MP@HL</li> <li>● HQ 1440 mode: VBR, 35 Mbps, MPEG-2 MP@HL</li> </ul> </div>



- HQ 1280 mode: VBR, 35 Mbps, MPEG-2 MP@HL
- SP 1440 mode: CBR, 25 Mbps, MPEG-2 MP@H-14
- DVCAM mode: DVCAM
- DVCAM mode: DVCAM 25Mbps (AVI)

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\*\* Design and specifications are preliminary and subject to change without notice

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exFAT  
XAVC-I mode: LPCM 24-bit, 48 kHz, 4 channels  
UDF

Recording Format  
(Audio)

- HD422 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 mode: LPCM 16 bits, 48 kHz, 2 channels

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exFAT

XAVC-I mode: CBG, 112 Mbps max.

MPEG-4 AVC/H.264

1920 × 1080/59.94i, 50i, 29.97p, 25p, 23.98p

1280 × 720/59.94p, 50p

UDF

HD422 Mode: MPEG-2 422P@HL, 50Mbps/ CBR

- - 1920x1080/ 59.94i, 50i, 29.97p, 25p, 23.98p
- - 1280x720/ 59.94p, 50p, 29.97p, 25p, 23.98p

HD420 Mode: MPEG-2 MP@HL, 35Mbps/ VBR

Recording Frame Rate

- 1920x1080/ 59.94i, 50i,

29.97p, 25p, 23.98p

- 1440x1080/ 59.94i, 50i, 29.97p, 25p, 23.98p
- 1280x720/ 59.94p, 50p, 23.98p

SD Mode: IMX50

- 720x486/ 59.94i, 29.97PsF
- 720x576/ 50i, 25PsF

SD Mode: DVCAM

- 720x486/ 59.94i, 29.97PsF
- 720x576/ 50i, 25PsF

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FAT

HQ 1920 Mode: MPEG-2 MP@HL, 35Mbps/ VBR

- 1920x1080/ 59.94i, 50i, 29.97p, 25p, 23.98p

HQ 1440 Mode: MPEG-2 MP@HL, 35Mbps/ VBR

- 1440x1080/ 59.94i, 50i, 29.97p, 25p, 23.98p
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HQ 1280 Mode: MPEG-2 MP@HL,  
35Mbps/ VBR

- 1280x720/ 59.94p, 50p,  
29.97p, 25p, 23.98p

SP 1440 Mode: MPEG-2 MP@H-14,  
25Mbps/ CBR

- 1440x1080/ 59.94i, 50i,  
23.98p (2-3 pull down)

DVCAM Mode

- 720x480/ 59.94i,  
29.97PsF
- 720x576/ 50i, 25PsF

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exFAT

XAVC-I mode

When using SBP-128B (128 GB):

Approx. 120 minutes

When using SBP-64B / SBS-64G1A

(64GB): Approx. 60 minutes

When using SBS-32G1A (32GB):

Approx. 30 minutes

UDF

HD 422 mode

- Approx. 240 min with
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## Recording/Playback Time\*\*

SBP-128B (128 GB)  
memory card

- Approx. 120 min with SBP-64B/ SBS-64G1A (64 GB) memory card
- Approx. 60 min with SBS-32G1A (32 GB) memory card

## HD 420 mode:

- Approx. 360 min with SBP-128B (128 GB) memory card
- Approx. 180 min with SBP-64B/ SBS-64G1A (64 GB) memory card
- Approx. 90 min with SBS-32G1A (32 GB) memory card

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## SD Mode: IMX50

- Approx. min with SBP-128B/ (128 GB) memory card
  - Approx. min with SBP-64B/ SBS-64G1A (64
-

GB) memory card

- Approx. min with SBS-32G1A (32 GB) memory card

SD Mode: DVCAM

- Approx. 440 min with SBP-128B/ (128 GB) memory card
- Approx. 220 min with SBP-64B/ SBS-64G1A (64 GB) memory card
- Approx. 110 min with SBS-32G1A (32 GB) memory card

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FAT

HQ 1920/HQ 1440 mode/HQ 1280 mode:

- Approx. 400 min with SBP-128B (128 GB) memory card
  - Approx. 200 min with SBP-64B/ SBS-64G1A (64 GB) memory card
  - Approx. 100 min with SBS-32G1A (32 GB)
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## memory card

### SP 1440 Mode:

- Approx. 560 min with SBP-128B (128 GB) memory card
- Approx. 280 min with SBP-64B/ SBS-64G1A (64 GB) memory card
- Approx. 140 min with SBS-32G1A (32 GB) memory card

### DVCAM mode

- Approx. 520 min with SBP-128B (128 GB) memory card
- Approx. 260 min with SBP-64B/ SBS-64G1A (64 GB) memory card
- Approx. 130 min with SBS-32G1A (32 GB) memory card

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## Lens

Lens Mount	Sony 1/2-inch type Bayonet mount
Zoom Ratio	16x (optical), servo/manual
Focal Length	f = 5.8 - 93 mm (equivalent to 31.4-503 mm on 35 mm lens)
Iris	F1.9 - F16 and Close auto/manual selectable
Focus	AF/MF/Full MF selectable, 800 mm to $\infty$ (MACRO OFF, Wide), 1500mm to $\infty$ (MACRO OFF, Tele), 50 mm to $\infty$ (MACRO ON, Wide), 782 mm to $\infty$ (MACRO ON, Tele)
Image Stabilizer	No
Filter Diameter	M82 mm, pitch 0.75mm

## Camera Section

Imaging Device (Type)	3-chip 1/2-inch type "Exmor" Full HD CMOS
Effective Picture Elements	1920 (H) x 1080 (V)



Optical System	F1.6 prism system
Built-in Optical Filters	OFF: Clear, 1: 1/4ND, 2: 1/16ND, 3: 1/64ND
Sensitivity (2000 lx, 89.9% reflectance)	F11 (typical) (1920 x 1080/59.94i mode)
Minimum Illumination	0.12 lx (typical) (1920 x 1080/59.94i mode, F1.9, +18 dB gain, with 64-frame accumulation, Gamma off, 100% video level) 0.02 lx (typical) (1920 x 1080/59.94i mode, F1.9, +18 dB gain, with 64-frame accumulation, Gamma on, 50% video level)
S/N Ratio	60 dB (Y) (typical)
Horizontal Resolution	1,000 TV lines or more (1920 x 1080i mode)
Shutter Speed	1/32 sec to 1/2,000 sec
Slow Shutter (SLS)	2, 3, 4, 5, 6, 7, 8, 16, 32, and 64-frame accumulation
Slow & Quick Motion	720p: Frame rate selectable from 1 fps to 60 fps (from 1 fps to 50 fps in PAL area setting in UDF mode)

Function	1080p: Frame rate selectable from 1 fps to 30 fps (from 1 fps to 25 fps in PAL area setting in UDF mode)
White Balance	Preset (3200K), Memory A, Memory B/ATW
Gain	-3, 0, 3, 6, 9, 12, 18 dB, AGC
Gamma Curve	Selectable

## Input/Output

Audio Input	XLR-type 3-pin (female) (x2), line/mic/mic +48 V selectable Line: +4dBu Mic: -70dBu--30dBu
Video Output	BNC (x1), HD-Y/Composite 1.0Vp-p, 75Ω (switchable to Genlock in)
Audio Output	Phono jack (CH-1,CH-2)
SDI Output	BNC (x2), HD/SD selectable SMPTE 292M/259M standards
i.LINK	IEEE 1394, 4-pin (x1), HDV (HDV 1080i) input/output, DV input/output, S400

Timecode Input	BNC (x1) (switchable to TC out) SMPTE 12M-2-2008 standard 0.5V-1.8Vp-p, 10k $\Omega$
Timecode Output	BNC (x1) (switchable to TC in) SMPTE 12M-2-2008 standard 1.0Vp-p, 10k $\Omega$
Genlock Input	BNC (x1) (switchable to Video out) 1.0 Vp-p, 75 $\Omega$
USB	USB device, mini-B (x1) USB Host, Type A (x1)
Headphone Output	Stereo mini jack (x1) -18dBu 16 $\Omega$
Speaker Output	Monaural, 150mW
DC Input	DC jack
Remote	8-pin
Lens Remote	8-pin, round
HDMI Output	Type A (x1)

## Monitoring

Viewfinder	3.5-inch type color LCD: 960 (H) x 3 (RGB) x 540 (V), 16:9
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Built-in Microphone

Built-in Microphone	Omni-directional stereo electret condenser microphone.
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Media

Type	ExpressCard/34 slot (x2)
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Supplied Accessories

Supplied Accessories**	Lens hood (1), Pre-installed to the Camcorder Infrared Remote Commander (1) USB cable (1) BP-U30 battery pack (1) BC-U1 battery charger (1) Shoulder strap (1) Lithium battery (CR2032 for data backup) (1), Pre-installed to the Camcorder Lithium battery (CR2025 for the IR Remote Commander) (1), Pre-installed to the IR Remote Commander "Before Using this Unit" (1) CD-ROM: Operating instructions in PDF (1)
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## Gallery

