PMW-300K1
Solid-State Memory Camcorder

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In response to the growing demand for on the go field video production and cost effective studio solutions, Sony is proud to announce the expansion of the XDCAM® HD422 family with the addition of the new PMW-300K1. The PMW-300K1 includes the 14X HD lens and inherits the interchangeable lens and ease of use features from the industry leading PMW-EX3. This new camcorder is equipped with three 1/2-inch-type Full-HD Exmor® CMOS sensors which provide high picture quality and an extremely high S/N ratio of 60 dB. As well as MPEG HD422, the PMW-300K1 also supports XAVC™*1 in the HD domain which helps to boost user creativity in many different applications. Two SxS® card slots can provide up to four hours of HD422 50 Mbps recording time using two 64 GB cards. The camcorder offers two HD/SD-SDI, HDMI, i.LINK®*2, USB, timecode, and genlock for a wide range of AV and IT interfaces, and supports wireless network operation using an optional adapter, the CBK-WA100. This enables quick and easy transmission of high resolution or proxy files to the network servers or the cloud services, saving time and operation cost.

*1 Requires firmware upgrade, planned in 2014. 4K not supported.

*2 i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connector. Not all products with an i.LINK connector will necessarily communicate with each other. For information on compatibility, operating conditions, and proper connection, please refer to the documentation supplied with any device with an i.LINK connector.

Shown with optional ECM-MS2 microphone, sold separately

Features

High Picture Quality
The PMW-300K1 incorporates three 1/2-inch type Full-HD Exmor CMOS sensors (1920 x 1080) to achieve high resolution, high sensitivity, low noise, and a wide dynamic range. This gives more freedom of expression for creative shooting.

Powerful Noise Suppression
The camcorder's powerful noise suppression feature allows the signal processor to detect noise not only in vertical and horizontal directions in a frame picture, but also detects noise components in a time axis, utilizing correlation characteristics between video frames. This feature effectively suppresses noise and creates cleaner images.

Selectable Format and Bit Rates
The PMW-300K1 provides a wide variety of codec operation points. Users can 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 files, as standard supported formats. The camcorder also incorporates XAVC*3 in the HD domain for recording 100 Mbps data rate, enabling the creation of rich content with 10-bit quality.

*3 Requires firmware upgrade, planned in 2014. 4K not supported.

3.5-inch*4 Color LCD Viewfinder
With a large, easy-to-read 3.5-inch QHD color LCD viewfinder as a standard accessory, the PMW-300K1 offers outstanding resolution of 960 x RGB x 540 pixels, strongly supporting critical focus control during HD shooting. The viewfinder cover can be flipped over to enhance visibility when the camcorder is set on a tripod.

*4 Viewable area measured diagonally

Various Conveniences via a Wireless Adapter
The PMW-300K1 is designed to support wireless field operation using an optional wireless adapter, the CBK-WA100. With this adapter, the user can stream video to a mobile device, enabling the crew to check content that's been shot right on site. Proxy files created on the CBK-WA100 can be immediately transmitted to the network server for editing.

Comfortable and Stable Shooting
A retractable chest pad is built-in as a standard feature, which is ergonomically designed to provide comfort and stability during a long shoot. In addition, the chest pad provides balance even when the camera is docked with a long lens.

Variety of Interfaces
There are two lines of SDI output connection enabling, for example, one connection to an external recording device and one to the optional CBK-WA100. Also, for monitoring purposes the PMW-300K1 can be connected via HDMI to professional displays as well as consumer 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. In addition, the USB connector is handy when connecting directly to a PC.

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

Specifications

General

	PMW-300K1
Weight	Approx 4 Lb 14 oz (Approx. 2.2 kg) (body)
	Approx. 8 lb 9.6 oz (Approx. 3.9 kg) (with lens, lens hood, viewfinder, BP-U30 battery, a SxS memory card)
Dimensions (W x H x D)*1	10 7/8 x 9 1/2 x 15 1/8 inches (275 x 239 x 384 mm) (with lens, lens hood, viewfinder. without protrusions)
Power Requirements	DC In: 12 V, Battery: 11-17 V
Power Consumption	Approx. 20 W (while recording, with viewfinder, IO Select Off)
	Approx. 23.5 W (while recording, with viewfinder, RM-B170, IO Select HD SDI & HD HDMI)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-4°F to +140°F (-20°C to +60°C)
Recording Format (Video)	<UDF> - HD422 50 1080 mode: CBR, maximum bit rate: 50 Mbps, MPEG-2 422P@HL - HD422 50 720 mode: CBR, maximum bit rate: 50 Mbps, MPEG-2 422P@HL - HQ 1920 x 1080 mode: VBR, 35 Mbps, MPEG-2 MP@HL - HQ 1440 x 1080 mode: VBR, 35 Mbps, MPEG-2 MP@HL - HQ 1280 x 720 mode: VBR, 35 Mbps, MPEG-2 MP@HL - SD mode: MPEG IMX - SD mode: DVCAM <FAT> - HQ 1920 x 1080 mode: VBR, 35 Mbps, MPEG-2 MP@HL - HQ 1440 x 1080 mode: VBR, 35 Mbps, MPEG-2 MP@HL - HQ 1280 x 720 mode: VBR, 35 Mbps, MPEG-2 MP@HL - SP 1440 x 1080 mode: CBR, 25 Mbps, MPEG-2 MP@H-14 - SD mode: DVCAM
Recording Format (Audio)	<UDF> - HD422 mode: LPCM 24 bits, 48 kHz, 4 channels - 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> - HQ mode: LPCM 16 bits, 48 kHz, 4 channels - SD mode: LPCM 16 bits, 48 kHz, 2 channels
Recording/Playback Time	<UDF> HD 422 mode Approx. 240 min with 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 HQ 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 SD Mode: IMX50 Approx. 240 min with 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 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 <FAT> HQ 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) memory card SP 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 SD Mode: DVCAM 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

Lens

Lens Mount	Sony 1/2-inch type EX mount
Zoom Ratio	14x (optical), servo/manual
Focal Length	f = 5.8 - 81.2 mm (equivalent to 31.4-439 mm on 35 mm lens)
Iris	F1.9 - F16 and Close auto/manual selectable
Focus	AF/MF/Full MF selectable, 800 mm to ∞ (MACRO OFF), 50 mm to ∞ (MACRO ON, Wide), 735 mm to ∞ (MACRO ON, Tele)
Image Stabilizer	ON/OFF selectable, shift lens
Filter Diameter	M77 mm, pitch 0.75mm

Camera Section

	PMW-300K1
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 Rezolution	1,000 TV lines or more (1920 x 1080i mode)
Shutter Speed	1/32 sec to 1/2,000 sec
Slow & Quick Motion Function	720p: Frame rate selectable from 1 fps to 60 fps (from 1 fps to 50 fps in PAL area setting in UDF mode) 1080p: Frame rate selectable from 1 fps to 30 fps (from 1 fps to 25 fps in PAL area setting in UDF mode)
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: +4 dBu Mic: -70 dBu - -30 dBu
Video Output	BNC (x1), HD-Y/Composite 1.0 Vp-p, 75 Ω
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 0.5 V-1.8 Vp-p, 10 kΩ
Timecode Output	BNC (x1) (switchable to TC in) SMPTE 12M-2-2008 standard 1.0 Vp-p, 10 kΩ
Genlock Input	BNC (x1) 1.0 Vp-p, 75 Ω
USB	USB device, mini-B (x1) USB Host, Type A (x1)
Headphone Output	Stereo mini jack (x1) -18 dBu 16 Ω
Speaker Output	Monaural, 150 mW
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

Built-in Microphone

	Omni-directional stereo electret condenser microphone.

Media

Type	ExpressCard/34 slot (x2)

Supplied Accessoies

	14 times standard zoom lens (1) Lens hood with lens cap (1) Viewfinder (1) Infrared Remote Commander (1) USB cable (1) Cold shoe kit (1) BP-U30 battery pack (1) BC-U1 battery charger (1) Shoulder strap (1) Lens cap for the supplied lens (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)

*1 The values for dimensions are approximate.

Optional Accessories

SBP-128B/64B
SxS PRO+ Memory Card

SBS-64G1A/32G1A
SxS-1 Memory Card

SBP-64A
SxS PRO™ Memory Card

MEAD-MS01/SD02 QDA-EX1
Memory Adapters for MS/SD Card and XQD

SBAC-US20
SxS Memory USB Reader/Writer

BP-U90/U60/U30
Li-Ion Battery Pack

BP-U60T
Li-Ion Battery Pack for CBK-WA100

BC-U1/U2
Battery Charger (1-slot / 2-slot)

ECM-MS2
Stereo Microphone

CBK-WA100
Wireless Adapter
(Planned availability December 2013.)