

# PMW-300

Solid-State Memory Camcorder

SONY

In response to rapidly growing demands for field video production and studio applications, Sony proudly introduces the PMW-300K1 (14-times zoom lens) / PMW-300K2 (16-times zoom lens) to the XDCAM HD422™ family. Inheriting qualities such as a lens exchange capability and ease of use from the PMW-EX3, this new camcorder has 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-300 also supports XAVC™\*1 in the HD domain which helps to boost user creativity in many different applications. Two SxS™ card slots can provide four hours of HD422 50 Mbps recording time using two 64 GB cards. The camcorder offers two HD/SD-SDI, HDMI, i.LINK™, 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 easy and quick clip data transmission using cloud services, saving the time and transportation cost of shot clip delivery.

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



## Features

### High Picture Quality

The PMW-300 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 advanced camera signal processing includes a powerful noise suppression feature. The signal processor detects the 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. Using this feature, noise is effectively suppressed, creating cleaner images.

### Selectable Format and Bit Rates

The PMW-300 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\*2 in the HD domain at a 100 Mbps data rate, enabling the creation of rich content with 10-bit quality.

\*2 Requires firmware upgrade, planned in 2014. 4K not supported.

### 3.5-inch Color LCD Viewfinder

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

### Various Conveniences via a Wireless Adapter

The PMW-300 is designed to support wireless operation using an optional wireless adapter, the CBK-WA100. With this adapter, the user can stream out pictures to a tablet device, enabling crews to check shooting images live in the field. After shooting, proxy files created on the CBK-WA100 can be immediately transmitted to a remote location. The adapter also provides remote control of the PMW-300 with mobile application software.

### Comfortable and Stable Shooting

A retractable chest pad is included as standard, which means the operator can always find a comfortable shooting position, even for long-duration shooting. Also, the operator can keep a well-balanced camera position even when the unit is docked with long lenses.



### 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-300 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. In addition, the USB connector is handy when connecting directly to a PC.



# Specifications

	PMW-300K1	PMW-300K2
<b>General</b>		
Mass	Approx. 2.2 kg (Approx. 4 lb 14 oz) (body)	Approx. 4.4 kg (Approx. 9 lb 11 oz) (with lens, lens hood, viewfinder, BP-U30 battery, a SxS memory card)
Dimensions (W x H x D)*1	275 x 239 x 384 mm (10 7/8 x 9 1/2 x 15 1/8 inches) (with lens, lens hood, viewfinder, without protrusions)	275 x 239 x 425 mm (10 7/8 x 9 1/2 x 16 3/4 inches) (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	0°C to 40°C (32°F to 104°F)	
Storage Temperature	-20°C to +60°C (-4°F to +140°F)	
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-L - 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	
<b>Lens</b>		
Lens Mount	Sony 1/2-inch type EX mount	Sony 1/2-inch type bayonet mount (with supplied lens mount adaptor)
Zoom Ratio	14x (optical), servo/manual	16x (optical), servo/manual
Focal Length	f = 5.8 - 81.2 mm (equivalent to 31.4-439 mm on 35 mm lens)	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 ∞ (MACRO OFF), 50 mm to ∞ (MACRO ON, Wide), 735 mm to ∞ (MACRO ON, Tele)	AF/MF/Full MF selectable. 800 mm to ∞ (MACRO OFF, Wide), 1500 mm to ∞ (MACRO OFF, Tele), 50 mm to ∞ (MACRO ON, Wide), 782 mm to ∞ (MACRO ON, Tele)
Image Stabilizer	ON/OFF selectable, shift lens	
Filter Diameter	M77 mm, pitch 0.75mm	M82 mm, pitch 0.75mm

	PMW-300K1	PMW-300K2
<b>Camera Section</b>		
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 (γ) (typical)	
Horizontal Resolution	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	
<b>Input/Output</b>		
Audio Input	XLR-type 3-pin (female), line/mic/mic +48 V selectable Line: +4 dBu Mic: -70 dBu -30 dBu	
Video Output	BNC (x1), HD-V/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)	
<b>Monitoring</b>		
Viewfinder	3.5-inch type color LCD: 960 (H) x 3 (RGB) x 540 (V), 16:9	
<b>Built-in Microphone</b>		
	Omni-directional stereo electret condenser microphone.	
<b>Media</b>		
Type	ExpressCard/34 slot (x2)	
<b>Supplied Accessories</b>		
	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 mount cap (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)	16 times standard zoom lens (1) Lens hood (1) Lens cap (1) Lens mount adaptor (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 mount cap (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



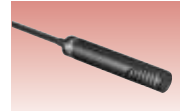
**BP-U90/U60/U30**  
Li-Ion Battery Pack



**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 Adaptor

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