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PMW-350L

A Shoulder Mount Full-HD & SD* Camcorder with SxS PRO Solid State Recording, 2/3-inch sensors

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XDCAM EX - New Generation Solid State Recording System

The PMW-350 extends the multiple award-winning XDCAM EX Solid State Recording product family with a new shoulder mount design and cutting edge new three 2/3 inch-type Exmor full-HD CMOS sensors. The PMW-350 offers all the advanced creative recording features of the PMW-EX1R compact camcorder, plus enhancements such as a Scene File System and 4 channel audio. The PMW-350L version is supplied without a lens to provide customers with more choice, while the PMW-350K version is supplied with a Fujinon HD lens.

The 350's chassis is based on the proven XDCAM HD422 chassis, but weighs just 3.2kg and is one of the lightest shoulder camcorders in its class. Exceptionally low power consumption makes it environmentally friendly, using approximately 60% less than a comparable HD shoulder camcorder.**

The PMW-350 supports multiple frame rate recording such as 59.94i, 50i, and native 23.98P and 25P as well as being 1080i/720P switchable. There is also a choice of a 35Mb/s High Quality mode, 25Mb/s HDV 1080i compatible mode and optional 25Mb/s Standard Definition DVCAM recording*. Twin memory card slots support up to 280 minutes HD recording time using two 32GB SxS memory cards.

XDCAM EX is a focus of continual innovation from IT-friendly MP4 file recording and advanced creative features, through to SxS-1 low cost media and an adaptor enabling the use of high-speed Memory Sticks™.

All XDCAM EX Camcorders come supplied with a 2-year PrimeSupport contract which offers unique

extra services and benefits for added peace of mind.

*SD DVCAM Recording and Playback requires Optional Hardware Key, CBK-DV01

** Specific comparison is with HDW-700 Camcorder from Sony.

Features

Three 2/3-inch type Exmor™ CMOS Sensors
The PMW-350 is equipped with three newly developed 2/3-inch type Exmor™ CMOS Sensors, each with an effective pixel count of 1920 (H) x 1080 (V). These deliver superior picture performance with full-HD resolution. This 2/3-inch-type image sensor allows the camcorder to provide an excellent sensitivity of F12 in 60Hz mode (F13 in 50Hz), a remarkable signal-to-noise ratio of 59 dB, and a high horizontal resolution of 1000 TV lines*. In addition, the large 2/3-inch-type image sensors can capture images with a shallower depth of field, giving users more freedom of creative expression.

What's more, the Exmor CMOS sensor is a unique design that deploys an A/D converter to each column of pixels, resulting in a much lower clock speed than conventional CMOS sensors. This makes it possible to greatly reduce power consumption of the camcorder.

*In 1920 x 1080/59.94i mode

1920 x 1080 HD Recording Using the "MPEG-2 Long GOP" Codec
The PMW-350 camcorder records 1920 x 1080 HD images using the "MPEG-2 Long GOP" codec, which conforms to the MPEG-2 MP@HL compression standard. "MPEG-2 Long GOP" is a mature codec - also adopted by the XDCAM HD and HDV 1080i series of products - which enables users to record stunning-quality HD video and audio with highly efficient, reliable data compression.

Selectable Recording Modes including DVCAM Recording
The PMW-350 camcorder offers a choice of bit rates - either 35 Mb/s (HQ mode) or 25 Mb/s (SP mode) -

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depending on the desired picture quality and recording time. The HQ mode supports 1920 x 1080, 1440 x 1080 and 1280 x 720 resolutions. The 1440 x 1080 mode is new to the PMW-350 ensuring native integration of XDCAM EX footage into a XDCAM HD Professional Disc workflow. By supporting 1440 x 1080, 35Mb/s recording, material can be utilised with no transcode, just a re-wrap to MXF for NLE and archiving.

The SP mode supports 1440 x 1080 resolution at 25 Mb/s, which provides compatibility with HDV 1080i products. Footage recorded in this SP mode can be seamlessly integrated into HDV-compatible editing systems by transferring the stream from the camcorder via the i.LINK™ (HDV™) interface.

The PMW-350 also supports 25Mb/s DVCAM recording in either PAL or NTSC modes, again providing seamless integration into existing DVCAM workflows offering ultimate flexibility worldwide. (SD DVCAM Recording and Playback requires Optional Hardware Key, CBK-DV01.)

New Nonlinear Recording Media, "SxS PRO" - For Greater Efficiency, Operability, and Reliability
The XDCAM EX series adopts high-speed SxS PRO and SxS-1 memory cards for its recording media, developed specifically for professional content creation applications with a number of key features:

1. Compatible with ExpressCard/34 interface slot which is common on modern Windows PCs and Macs

2. Uses PCI Express interface and achieves an extremely high "read" speed of 800 Mb/s*

3. Large storage capacity: SBP-16 (16 GB) and SBP-32 (32 GB) memory cards are available. One SBP-16 (16 GB) memory card is supplied with the PMW-EX1R

4. Can record up to 140 minutes of HD video and audio (using one 32-GB memory card)

5. Compact size: approx. 75 × 34 × 5 mm (excluding the projecting parts) - half the size of the older PC Card standard

6. Low power consumption

7. Highly reliable: can resist shocks (up to 1500 G) and vibrations (up to 15 G)

8. Affordability: SxS-1 media (introduced in late 2009) provides users with a lower cost alternative to SxS PRO media that offers the same high performance, but with an estimated 5-year life span when recording at full capacity once per day. Users can check the card life on their PMW-EX1R and PMW-350 camcorders and even see an alarm when the data rewriting limit is reached.

*This data-transfer speed is a theoretical value.

Actual data-transfer speed depends on the file type and the performance of the PC.

Long Recording Time
Utilising a mature and highly efficient compression format together with high performance SxS memory cards, the PMW-350 can record superb quality HD images for an exceptional 140 minutes* on a single 16GB SxS card. As the PMW-350 features two memory card slots, this recording time is easily increased to 280 minutes (with two 32GB cards) and when recording across two cards, the transition is seamless without any frame loss. This feature makes the PMW-350 an ideal camcorder for a wide variety of content production applications, including documentary and event shooting, that require a long recording time.

*When recording in HQ (35 Mb/s) mode, recording time may be more than the above specified figure depending on the actual bit rate that is adopted during VBR encoding.

Multiple-format Recording - 1080/720, PAL/NTSC and Interlace/Progressive Switchable Operation
The PMW-350 camcorder offers a wide array of recording formats for multiple content creation applications. Scanning mode is switchable between 1920 x 1080, 1280 x 720, and 1440 x 1080 resolutions. Frame rate is also selectable from interlace and progressive - 59.94i, 50i, 29.97P, 25P, and native 23.98P*.

In addition, 59.94P and 50P progressive recording is available in 1280 x 720 mode. In SD mode, both 50/60i and 25P/30P modes are supported (SD mode requires optional CBK-DV01 accessory).

*In 1440 x 1080/23.98P (SP) mode, images are handled as 23.98P and recorded as 59.94i signals through means of 2-3 pull-down.

Four-channel Audio
The PMW-350 is the first XDCAM EX camcorder to record four channels of 16-bit, 48-kHz, linear PCM uncompressed audio. Each channel level can be controlled by an independent individual level controller. (When an SxS memory card with four-channel audio is replayed by the PMW-EX1, PMW-EX1R, PMW-EX3, or PMW-EX30, only CH-1/2 or CH-3/4 can be replayed.)

Wide Choice of Optional Microphones
Although the PMW-350 is equipped with a shotgun microphone, three optional microphones – the ECM-680S, ECM-678, and ECM-673 – are also available. As well as the supplied microphone, the ECM-680S can operate in either Stereo or Monaural (Uni-directional) mode. These modes can be selected from the switch on the microphone or from the PMW-350 itself.

The camcorder is also equipped with a slot to accommodate a DWR-S01D digital wireless microphone

receiver, which provides two-channel audio with stable and secure transmission. The WRR-855 Series microphone receiver can also be used in this slot.

IT Friendly

With the XDCAM EX series, recordings are made as data files in the "MP4" format, which is widely used in a number of recent electronic portable devices and has been standardized by ISO.

The file-based recording allows material to be handled with great flexibility in an IT-based environment - easily available for copying, transferring, sharing, and archiving. All these operations are accomplished without any "digitising" process required.

File-based data copying allows for degradation-free dubbing of AV content, which can be performed easily on a PC. The file-based recording system also allows for material to be viewed directly on a PC - simply by inserting the SxS memory card into the ExpressCard slot on a PC or Mac, or by linking a PC/Mac to the XDCAM EX unit via a USB2 connection. This works in just the same way as a PC reading files on an external drive. The file-based operation can dramatically improve the efficiency and quality of professional video applications.

Immediate Recording Start and No Overwriting Footage

By virtue of recording on flash memory card, the XDCAM EX can start recording virtually the instant the camcorder is turned on. Moreover, the XDCAM EX system automatically records on an empty area of the card - there's no danger of overwriting existing content.

This is extremely convenient, as camera operators do not have to worry about accidentally recording over good takes, and they don't have to search through footage for the correct position to start the next recording. In short, it means the camera is always ready for the next shot!

Instant-access Thumbnail Search with "Expand" Function

Each time a recording is started and stopped on the XDCAM EX camcorder, the video and audio signals are recorded as one clip. During playback, users can cue-up to the next or previous clip simply by pressing the 'Next' or 'Previous' button, as you would do on a CD or DVD player.

Furthermore, thumbnails are automatically generated for each clip as a visual reference, allowing operators to cue-up to a desired scene simply by guiding the cursor to a thumbnail and pressing the 'Play' button.

For further convenience, the 'Expand' function allows one selected clip in the Thumbnail display to be divided into 12 even-time intervals, each with their own thumbnail identifier. This is useful if you want to quickly search for a particular scene within a lengthy clip. * In HD-SDI, HQ 1080 mode.

Lens Package Choice

There are two different models of the PMW-350. One is the PMW-350K, which comes equipped with a Fujinon HD lens with 16x zoom. The other is the PMW-350L, which comes without a lens. Both models have a standard 2/3-inch bayonet lens interface, and the user can choose from wide variety of optional lenses in the existing 2/3-inch HD lens line-up.

Selectable Peaking

The Peaking function can help operators to adjust the camera's focus more accurately by altering the way pictures are displayed on tviewfinder. It can enhance the outline of the image, which the camera focuses on most, and change its colour to make it more visible. Enhance levels can be selected from a choice of "HIGH", "MIDDLE", and "LOW", and the outline colour from "RED", "WHITE", "YELLOW", and "BLUE".

ALAC (Automatic Lens Aberration Compensation)

This feature decreases any chromatic aberration caused by the lens, which is active only with the PMW-350K's supplied lens and with certain third-party lenses that incorporate compensation data. Please check with your lens supplier for ALAC support.

Optical ND Filters and Electrical CC Filters

The PMW-350 camcorder comes equipped with optical ND (Neutral Density) filters and electrical CC (Colour Correction) filters. The optical ND filters are controlled via a built-in ND filter wheel -- Clear, 1/4ND, 1/16ND, and 1/64ND. And with the electrical CC filters, users can easily obtain the desired colour temperature by setting the mode – 3200K/4300K/5600K/6300K – on a camcorder-assignable switch. Users can select the four values cyclically, or choose one preset value. This is also available via an assignable switch. This is useful when a sudden change occurs during shooting, and a quick and direct setting is required.

23.98P Native Recording

All XDCAM EX Camcorders are part of the legendary Sony CineAlta™ familyand offer native 23.98P* recording which, in combination with advanced creative features such as selectable gamma curves, makes these camcorders ideal for cinema production.

*In 1440 x 1080/23.98P (SP) mode, images are handled as 23.98P and recorded as 59.94i signals via a 2-3 pull-down.

Slow & Quick Motion Function

The PMW-350 offers a powerful Slow & Quick Motion function - commonly known as over-cranking and under-cranking in film shooting - that enables users to create unique 'looks' or special effects with slow- and fast-motion images.

The PMW-350 can capture images at frame rates selectable from 1 fps (frame per second) to 60 fps in 720P mode and from 1 fps to 30 fps in 1080P mode, in increments of 1 fps. For example, when viewed at 23.98P, images captured at 60 fps will appear 2.5 times slower than normal. Conversely, images

captured at four fps will appear six times faster than normal.

With the Slow & Quick Motion function of this camcorder, images are recorded natively without interpolating the frames. This means the quality of the slow- and fast-motion images is extremely high and incomparable to those created in the editing process. In addition, these slow- and quick-motion images can be played back immediately after shooting, without using any converters or processing on nonlinear editing systems.

Image Inversion Function

When a cinema-style lens or stills camera lens is attached to the camera with a DOF (Depth of Field) adaptor, the image is rotated 180 degrees. Image Inversion is the function that normalises the image by reverse scanning.

Slow Shutter Function

The PMW-350 camcorder offers a Slow Shutter function for capturing clear images in low-light environments. This allows the shutter speed to be extended to a maximum of 64 frames. The Slow Shutter function not only increases camera sensitivity but also produces a special blurring effect when shooting a moving object, for enhanced shooting creativity. The shutter speed is selectable from 2-, 3-, 4-, 5-, 6-, 7-, 8-, 16-, 32-, and 64-frame periods.

Selectable Gamma Curves

The PMW-350 camcorder offers a wide variety of gamma curves to flexibly handle contrast and give a specific 'look' to an image. In addition to six types of standard gamma curves, there are four types of Hyper Gamma which are identical to those on high-end CineAlta camcorders. Operators can select the best-suited preset gamma curve, depending on scenes.

Cache Recording Function

Once enabled, Cache Recording continuously streams audio and video through the camcorder's internal memory. Once the Record button is pushed, the content buffered in the camcorder's memory is recorded onto the memory media at the start of the recording clip. The caching period can be adjusted by menu setting up to 15 seconds, so in a situation such as monitoring a developing situation, Cache Record enables capturing an event up to 15 seconds before the record button is pressed.

Interval Recording Function

The PMW-350 camcorder offers an Interval Recording function that records signals at pre-determined intervals. This is convenient for shooting over long periods of time, and also when creating pictures with special effects of extremely quick motion.

Frame Recording Function

Frame Recording is a special feature of all XDCAM EX camcorders that is especially useful for stop-motion/clay animation shooting. Using this function, images

for pre-determined frames are recorded every time the Record button is pressed.

Shutter Angle Settings

In addition to the electronic shutter speed controls, the PMW-350 also has a "shutter angle" control - which is familiar to film users. By setting the shutter speed to "angle", the PMW-350 automatically operates with the proper exposure time, determined by the selected frame rate and the shutter angle.

Total Level Control System (TLCS)

By activating TLCS, the correct exposure is automatically set_for normal, dark, and very bright shooting environments by controlling the lens iris, electronic shutter, and Auto Gain Control.

Scene File System

The Scene File feature of the PMW-350 allows camera operators to easily call up customised picture-tonal settings – such as the parameters of matrix, colour correction, detail, gamma, and knee – to suit particular shooting conditions, rather than having to readjust the camera each time. This gives users greater operational efficiency. SxS memory cards can be used for storing and loading scene files.

Turbo Gain

The Turbo Gain function can boost the camera gain up to +42 dB, which helps reproduce images in very low-light environments.

Camera Metadata (HD Format Only)

The camera setting data such as iris, focus, zoom, macro, capture fps, shutter, gain, white balance, and gamma are recorded as acquisition metadata for future utilities.

Viewfinder with 3.5-inch* Colour LCD

The PMW-350 is equipped with a large, easy-to-view, colour LCD with a high resolution of 1920 x 480 pixels, which simplifies focusing. The viewfinder can also be used to instantly review recorded footage, as well as access the camera's set-up menus, view thumbnails, and display status indications.

When the elbow block is opened up, the screen can be monitored directly, while menu setting and thumbnails are easily accessed using switches on the inside panel. The PMW-350 also has an interface for the DXF-20W and DXF-51 Viewfinders

*Viewable area measured diagonally.

** The supplied viewfinder and DXF viewfinder cannot be used concurrently.

Depth-of-field Indicator

A Depth-of-field Indicator can be displayed on the LCD monitor and viewfinder to help camera operators easily recognize the depth-of-field of a scene, and thereby produce their desired images.

Brightness-level Display

The average brightness level of the centre of a frame can be displayed on the LCD monitor and viewfinder as a percentage. This is useful when a waveform monitor is not available for shooting.

Histogram Indicator

The Histogram Indicator can be displayed on the LCD monitor and viewfinder, allowing operators to easily evaluate the distribution of brightness on currently captured images. This enables proper exposure control of iris, gain and gamma.

Six Assignable Buttons for Quick Access to Desired Functions

Frequently used functions can be programmed to six assignable buttons on the PMW-350, allowing operators to make rapid changes when working in the field. The colour temperature button and lens RET button also can be utilised as additional assignable buttons.

Adjustable Shoulder Pad

The position of the shoulder pad can be adjusted – either forwards or backwards – to provide users with optimum weight balance. This is particularly useful when the camera is docked with a different lens or camera adaptor. In addition, no tools are required for this adjustment. For those who prefer a soft shoulder pad, there is the optional CBK-SP01.

ATW & Hold

The ATW (Auto Tracing White Balance) function of the PMW-350 automatically adjusts the camera's colour temperature according to changes in the lighting conditions. This function is useful when recording outside for long periods, and the lighting changes gradually over time. The PMW-EX1R also has an ATW Hold function, which allows the operator to hold auto tracing at a desired colour balance via an assignable switch.

Wide Array of Interfaces

The PMW-350 camcorder comes equipped with a wide range of interfaces optimised for a variety of operational needs. These include an HD-SDI output, down-converted SD-SDI output, i.LINK (HDV 1080i and DVCAM stream) input/output, USB2 and analogue composite output. Timecode In/Out and Genlock in are also supported. A HDMI output (Type A) allows the user to show the picture on a consumer display or professional monitor equipped with an HDMI input. Non-compressed video and two channels of audio can be output. When HDMI output is selected, other outputs are not available.

Digital Extender function

For future expandability, the PMW-350 has a 50-pin interface option (available Autumn 2010), which offers a Digital Extender function digitally doubling images in size. Unlike lens extenders, the Digital Extender function performs this doubling without any loss of image sensitivity, often referred to as the F-drop phenomenon.

Affordable MPEG TS Option for Field and Satellite Transmission

The HDCA-702 MPEG TS adaptor, which can be directly docked onto the PMW-350, transmits an MPEG Transport Stream (TS) of MPEG via a DVB-ASI output. This can be done simultaneously as the PMW-350 records onto SxS memory card. This function is also available using the 50-pin interface option (which will be available in Autumn 2010).

Camera Remote Control

A Sony 8-pin remote interface is supplied with the PMW-350. Various camera settings can be remotely controlled using an optional RM-B150 RM-B750, RCP-750, RCP-751, RCP-920, or RCP-921 Remote Control Unit via its 8-pin remote connector (please note not all controls on the remote control units are supported by the PMW-350). Composite output is always available for monitoring purposes, regardless of HD/SD output selection.

Other Features

1 High-speed picture search: x4, x15

2 Freeze Mix function

3 Skin-tone Detail control

4 Low-key saturation

Additional Information

Only SxS PRO and SxS-1 are guaranteed for use with XDCAM EX Camcorders. Sony HX Series Memory Stick are supported with MEAD-MS01 Adaptor for certain functions (please see accessory page for details). USB based memory cards might work with the XDCAM EX range in some cases, but Sony does not guarantee that all the functions will operate. The performance of USB based memory cards can vary

Benefits

The PMW-350 is truly an innovation in compact shoulder camcorder development. It offers a supremely ergonomic lightweight, low profile chassis coupled with newly designed state-of-the-art 2/3-inch Exmor full HD CMOS sensors for superior picture performance and the proven XDCAM EX solid state workflow for maximum flexibility in whatever style of production is chosen.

Enhanced Workflow

Innovative solid state recording with SxS PRO ExpressCard memory cards offers the following benefits:

1 Compatible with industry-standard ExpressCard interface available on most modern laptops

2 No time lost to tape loading

3 Robust storage media, impervious to shocks and vibrations

4 Small, high capacity recording media offering over 4 hours of continuous HD content across 2 x 32GB cards.

5 Common interoperability with DVCAM, HDV and XDCAM - so ready to use immediately with most existing NLEs.

6 No need to worry about accidentally overwriting precious content

7 Write and Re-Writable media with no degradation in picture quality

8 Thumbnail images representing key scenes can be browsed and instantly accessed using on-camera colour screen

9 ' Essence Mark' key scenes at the touch of a button

10 No frantic fast-forward/rewinding to find the clips you want to review

11 Non-proprietary media manufacture

12 Supplied with Clip Browser Software for viewing and copying clips to HDD, DVD or Blu-ray Disc.

Superior Picture Performance

Newly developed 2/3 inch Exmor™ CMOS processors offer true 1080 x 1920 resolution meeting the industry standard for broadcast cameras:

1 Large 2/3 inch sensors for excellent sensitivity and depth of field characteristics

2 Full 1080 x 1920 effective pixels

3 Low power consumption compared to CCD technology

4 1080 / 720, PAL/NTSC switchable for international programme production

Professional 2/3inch HD Lens

The adoption of three 2/3-inch imagers and a standard 2/3-inch bayonet lens interface means the PMW-350L is compatible with a wide variety of broadcast standard optional lenses, providing users with the choice of exactly which lens they wish to use for their specific production needs

Exciting and Creative Recording Modes

All XDCAM EX camcorders carry the legendary CineAlta brand, which represents optimisation for feature film production and specifically support for 23.98P recording capability - the standard frame rate for feature film production. Alongside this, there are a myriad of creative recording modes available including:

1 Scene File System allows camera operators to easily call-up customised picture tonal settings to suit particular shooting conditions. SxS memory cards can used for sharing settings between camcorders.

2 Slow and Quick motion offers a range of frame rates produced within the camera and available for instant review in the field

3 New shutter setting emulates filmic operation

4 Cine Gamma curves offer further filmic options for production

5 Frame and Interval recording offers further creative scope for animation and extremely quick motion effects

6 Slow Shutter for clear images in low-light environments

7 Standard Definition DVCAM recording mode extends operational flexibility (with Optional Hardware Key, CBK-DV01).

ECO Information

The PMW-350 is designed to be environmentally friendly thanks to its low power consumption of just 15W.* There's no need for a fan motor to ventilate the inside of the body and this, alongside the energy efficient Exmor sensors, means 60% less power is used than in comparable conventional HD camcorders from Sony such as the HDW-700 full-HD shoulder camcorder with a 2/3-inch image sensor. In addition, the PMW-350 is produced at Sony EMCS Corporation KosaiTec, which has received ISO14001 Environmental Management system certification.

* Body only in recording time.

Superb Ergonomics

Designed to be very compact and ergonomically well balanced, the PMW-350 provides a high level of mobility and comfort in various shooting situations.

1. The main body weighs only 3.2 kg (7lb 1 oz) and is one of the lightest shoulder camcorders with three 2/3-inch full-HD imagers available.

2. The position of the shoulder pad can be adjusted forwards or backwards to provide optimal weight balance. No tools are required for this adjustment, which is particularly useful when the camera is being used with different lenses or other accessories.

3. Training requirements are minimised as the basic chassis is the same as used by the XDCAM HD422 family, an acclaimed extension of familiar Sony shoulder camcorder design.

4. Low-profile design provides a wide space between the main frame of the camera and the handle, providing an unobstructed view to the right-hand side of the camera operator.

5. Solid State Recording eliminates the need for a cooling fan, reducing weight and power consumption.

Peace of Mind

All XDCAM EX Camcorders come supplied with a 2-year PrimeSupport contract which offers unique extra services and benefits;

2 years' cover

Free telephone helpdesk support in English, German, French, Italian and Spanish.

Collection and replacement product delivery anywhere in EU, Norway and Switzerland.

Technical Specifications

General

Mass	3.2 kg (7 lb 1 oz) (body) 6.3 kg (13 lb 14 oz) (with LCD VF, AF lens, Mic, BP-GL95)
Dimension (W x H x D)	124 x 269 x 332 mm (5 x 10 5/8 x 13 1/8 inches) without projection
Power requirements	DC 12 V
Power consumption	Approx. 18 W (with LCD VF, AF lens, mic, while recording) Approx. 15 W (body 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)
Battery operating time	Approx. 310 min with BP-GL95 battery
Recording format	Video: MPEG-2 Long GOP HQ mode: VBR, maximum bit rate: 35 Mb/s, MPEG-2 MP@HL SP mode: CBR, 25 Mb/s, MPEG-2 MP@H-14 SD mode: DVCAM (Option) Audio: HD mode: Linear PCM (4ch, 16-bit, 48-kHz) SD mode: Linear PCM (2ch, 16-bit, 48-kHz)
Recording frame rate	NTSC area: HD HQ mode: 1920 x 1080/59.94i, 29.97p, 23.98p, 1440 x 1080/59.94i, 29.97p, 23.98p, 1280 x 720/59.94p, 29.97p, 23.98p HD SP mode: 1440 x 1080/59.94i, 23.98p SD mode: 720 x 480/59.94i, 29.97p (Option) PAL area: HD HQ mode: 1920 x 1080/50i, 25p, 1440 x 1080/50i, 25p, 1280 x 720/50p, 25p HD SP mode: 1440 x 1080/50i SD mode: 720 x 576/50i, 25p (Option)
Recording/Playback time	HQ Mode: Approx. 100 min with SBP-32 (32 GB) memory card* Approx. 50 min with SBP-16 (16 GB) memory card Approx. 25 min with SBP-8 (8 GB) memory card SP/SD Mode: (SD:Option) Approx. 140 min with
	SBP-32 (32 GB) memory card* Approx. 70 min with SBP-16 (16 GB) memory card Approx. 35 min with SBP-8 (8 GB) memory card

Lens

Lens mount	2/3-type SONY bayonet
Zoom ratio	16x (optical), servo/manual (AF lens for PMW-350K)
Focal length	f = 8 mm to 128 mm (equivalent to 31.5 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 infinity (MACRO OFF) 50 mm to infinity (MACRO ON)
Image stabilizer	N/A
Filter diameter	M82 mm, pitch 0.75 mm (on lens)

Camera Section

Imaging device	3-chip 2/3-inch type Exmor Full HD CMOS
Effective picture elements	1920 (H) x 1080 (V)
Optical system	F1.4 prism system
Built-in optical filters	1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND
Sensitivity (2000 lx, 89.9% reflectance)	F12 (typical) (1920 x 1080/59.94i mode), F13 (typical) (1920 x 1080/50i mode)
Minimum illumination	0.006 lx (typical) (1920 x 1080/59.94i mode, F1.9, +42 dB gain, with 64-frame accumulation)
S/N ratio	59 dB (Y) (typical) (Noise Suppression mode ON)
Horizontal rezolution	1,000 TV lines or more (1920 x 1080i mode)
Shutter speed	1/60 sec to 1/2,000 sec + ECS
Slow Shutter (SLS)	2, 3, 4, 5, 6, 7, 8, 16, 32, and 64-frame accumulation
Slow & Quick Motion function	720p: Selectable from 1 fps to 60 fps as recording frame rate 1080p: Selectable from 1 fps to 30 fps as recording frame rate
White balance	Preset (3,200 K), Memory A, Memory B/ATW
Gain	-3, 0, 3 ,6, 9, 12, 18, 24, 30, 36, 42 dB

Inputs/Outputs

Audio input	XLR-type 3-pin (female) (x2), line/mic/mic +48 V selectable
Composite output	BNC (x1), NTSC or PAL, COMPONENT Y
S-Video output	N/A
Audio output	XLR-type 5-pin
Component output	N/A
SDI output	BNC (x1), HD-SDI/SD-SDI selectable
i.LINK	IEEE 1394, 6-pin (x1), HDV (HDV 1080i)/DVCAM stream input/output, S400
Timecode input	BNC (x1)
Timecode output	BNC (x1)
Genlock input	BNC (x1)
USB	Device Type B (x1)
Headphone output	Stereo mini-jack (x1)
Speaker output	Monaural
DC input	XLR-type 4-pin
DC output	4-pin

Remote	8-pin
Lens remote	12-pin
Mic	XLR-type 5-pin
HDMI output	19-pin
VF	26-pin (LCD VF), 20-pin (DXF)
Wireless receiver IN	D-Sub 15-pin

Monitoring

Viewfinder	3.5-inch* type colour LCD monitor: approx. 921,000 effective pixels, 640 (H) x 3 (RGB) x 480 (V), 16:9, hybrid type *Viewable area measured diagonally
Built-in LCD monitor	Black & white LCD (Audio level, TC, battery and media remaining capacity)

Media

Type	ExpressCard/34 slot (x2)

Accessories

XDCAM

SBAC-US10

SxS Memory Card USB Reader/Writer

HDV

HVR-DR60

Portable Hard Disk Recording Unit

HVR-MRC1K

Compact Flash Memory Recording Unit

UWP Wireless Series

DWR-S01D

Dual Digital Wireless Microphone Receiver

Lapel (ECM-series)

ECM-674

Electret Condenser Microphone

ECM-678

Electret Condenser Shotgun Microphone

Tripods

VCT-14

TRIPOD ADAPTOR FOR PORT. CAMERAS/
CAMC.

Cases

LC-777

Hard shell carrying case for Digital Betacam camcorders

LC-DS300SFT

Soft Carr.case For Dsr-300p/500wsp

Batteries and Power Supplies

AC-DN10

AC Adaptor/Charger

BP-GL65

Battery Pack

BC-M150

Battery Charger

BC-L500

Li-ion Battery Charger

BC-L70

Li-ion Battery Charger

BP-L80S

Rechargeable Lithium-ion Battery Pack

BP-GL95

Rechargeable Lithium-ion Battery Pack

Option Boards and Modules

MEAD-MS01

Adaptor for using Memory Stick™ with
XDCAM EX products