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HXR-NX5E

1/3-inch Exmor™ CMOS Professional AVCHD Camcorder with GPS

Fast forward your creativity with NXCAM

Sony's first professional AVCHD camcorder redefines the performance and features expected of this product class. It records stunning quality 1920 x 1080 images at 24Mbps (50i or 25p), as well as supporting 720/50p and Standard Definition recording. Sony's "G Lens" and Exmor™ technology provide excellent resolution, colour and contrast, as well as exceptional low-light sensitivity.

Operational flexibility is maximised by AVCHD recording onto affordable and readily available consumer memory cards. Using two 32GB cards, the NX5 can record six hours of HD footage which can be further extended by simply swapping cards. Simultaneous HYBRID HD and/or SD recording is supported via a unique, optional 128GB Flash Memory Unit (HXR-FMU128) which offers 11 hours HD recording time at 24Mbps.

The NX5E is the first camcorder of its class to feature a built-in GPS locator, high quality Linear PCM audio recording and new Active SteadyShot stabilisation technology.

All NXCAM Camcorders come supplied with a 2-year PrimeSupport contract which offers unique extra services and benefits such as free helpdesk support for added peace of mind.

Features

Sony's exclusive High-performance G Lens

The "G Lens" provides great picture quality and versatility with a wide angle of 29.5 mm (equivalent to 35 mm film) and a 20x high quality zoom. Two ED (extra-low dispersion) glass elements reduce chromatic aberrations caused by differences in light refraction to minimize colour fringing. The advanced 10-group, 15-element lens structure also includes a compound aspheric lens for images that are crisp and clear, even when shooting videos at a high zooming ratio. A six-blade iris diaphragm is nearly circular, enabling the creation of extremely beautiful background blur. The "G Lens" advanced optical lens technology also makes the most of Sony's Exmor™ CMOS Sensor to realise sharper images with higher resolution and less noise even when shooting in very low light.

Natural-touch Lens Operation

The iris ring, located next to the zoom ring allows users to adjust exposure with great precision. The zoom function is variable and can be controlled by using the lens barrel ring, the lever at the lens grip or the lever on the camera handle. Additionally, once you select the high-speed zoom mode, you can zoom from wide to telephoto 1.5x faster than with the HVR-V1E.

Three Neutral Density Filters

The HXR-NX5E is equipped with three built-in ND (Neutral Density) filters – 1/4, 1/16, 1/64 – which help to vary the depth of field with iris control.

Three 1/3" Exmor™ CMOS Sensors with ClearVid array

Three state-of-the-art 1/3" Exmor™ CMOS sensors with a ClearVid array ensure high resolution, high sensitivity, a wide dynamic range, and excellent colour reproduction.

Exmor™ Technology Noise Reduction System

Multiple A/D (analogue-to-digital) converters on each pixel row convert analogue signals to digital as soon as they are generated, unlike traditional technology that only provides one A/D converter on each chip. Consequently, Exmor™ technology can eliminate the influence of external noise that enters the signal chain during transfer to the A/D converter, resulting in high-quality digital signals with extremely low noise. This significantly enhances shooting in low-light environments with a sensitivity of just 1.5 lux (1/30 shutter, auto iris, and auto gain).

ClearVid Array for Higher Sensitivity and Resolution

CMOS sensors equipped with a ClearVid array achieve a bigger sensor pixel size than ordinary image sensors, and this leads to higher sensitivity. Furthermore, an unique interpolation technique from Sony utilises the 45-degree rotated pixels on each chip, increasing resolution.

AVCHD - Ideal for Memory Recording

AVCHD is a highly efficient data compression format which greatly reduces memory requirements, maximizing the benefits of file-based recording with high image quality in a small file size. This is made possible by the exceptionally efficient MPEG4 AVC/H.264 codec.

Relay Record with Dual Memory Slots

The HXR-NX5E introduces a new feature which supports seamless, continuous recording between two memory card slots. For example, with two 32-GB memory cards, six hours of continuous HD footage can be recorded. Even longer continuous recording time can be achieved by simply waiting until recording has switched to the second card, at which time the first card can be safely ejected and a new blank memory card inserted. This procedure can be repeated for as long as necessary.

Hybrid Recording with Optional Flash Memory Unit

The 128-GB capacity of the optional HXR-FMU128 provides continuous recording for approximately 11 hours in the highest FX 24-Mbps mode (21-Mbps video data, 3Mbps audio and other data). Despite its huge capacity, the HXR-FMU128 integrates neatly with the HXR-NX5 - attaching directly to the back of the unit.

* HXR-FMU128 formatted by a 50i (60i) camcorder cannot be used by a 60i (50i) camcorder. Camcorder must be rebooted if unit is attached when power is ON.

Content Management Utility Software

The included Content Management Utility is an easy to use Microsoft Windows(R) application for clip management and file uploading. Key features include;

1. Merging files divided due to FAT32 file system - which automatically divides files larger than 2GB during recording.

2. Merging files split across multiple Memory Cards. (When recording, the HXR-NX5E will automatically carry on recording on the next card, if capacity is exceeded in the first.)

3. Maps GPS data embedded in video data. System Requirements: OS Microsoft Windows XP SP3*, Windows Vista SP2**, Windows 7

*64-bit editions and Starter (Edition) are not supported.

** Starter (Edition) is not supported. For more information, please refer to Specifications Table.

MPEG-2 for Standard Definition Recording

Standard Definition recording uses MPEG-2, which is the same compression codec as standard DVD-VIDEO Discs. This is easily edited in most NLEs and ideal for delivery using DVD-Video discs.

Loss-less Audio Recording Capability

The HXR-NX5E provides a choice of two audio recording formats; Dolby Digital stereo or Linear PCM stereo. The latter is capable of capturing uncompressed, CD quality audio data.

Active SteadyShot

In addition to conventional SteadyShot technology, the HXR-NX5E features Active SteadyShot technology which provides superior stabilisation - reducing hand-held camera shake. Improved stabilisation allows the user to concentrate more on composition and shot transition, rather than worrying about how to stabilise the camera. Depending on the shooting environment, users can select normal SteadyShot or Active SteadyShot for hand-held applications.

Built-in GPS

The HXR-NX5E is the world's first professional AVCHD camcorder with an internal Global Location Positioning (GPS) locator which can automatically embed satellite navigation data in AVCHD video data files. Mapping data can be created using bundled CMU software. Also GPS data can be extracted from video files, using CMU (Content Management Utility) software, in a commonly used latitude/longitude NMEA data format.

XtraFine™ LCD Touch Panel

The HXR-NX5E features a 3.2-inch-type XtraFine™ LCD Touch panel with approximately 921,000 pixels (1920 x 480) and this higher resolution allows for easier focus adjustment. The XtraFine™ LCD displays virtually 100% of the recorded picture area at a colour temperature of approximately 6500K.

Easy Operation with Touch Panel and Buttons

The XtraFine™ LCD Touch Panel has an interface specifically designed for the HXR-NX5. A Visual Index Button makes it easy to browse clips, while most settings are easily adjusted by touch screen operation. It's also possible to use buttons and switches, so users can choose which is best for any specific shooting situation.

XtraFine™ Electronic View Finder

The 0.45 inch type XtraFine™ EVF (Electronic View Finder) has approximately 1,227,000 pixels (852x3[RGB] x 480). This device has three independent LEDs for Red, Green, and Blue colours, which allows users to monitor objects with remarkable colour reproduction accuracy and high resolution*. The EVF has a selectable display mode between Colour or Black and White. The XtraFine™ EVF displays virtually 100% of the picture area at 6500K colour temperature.

* When the camcorder is panned quickly or when an object in the screen moves quickly, the primary colours of R/G/B may be seen on the object in the EVF momentarily.

Multiple Interfaces

The HXR-NX5E has a variety of flexible interfaces. An HD-SDI interface allows you to connect to a high-end video editing system with a single BNC cable. No conversion boxes are needed and the output is uncompressed, providing the highest picture quality. Timecode and audio signals are embedded in the HD-SDI signal.

A HDMI interface allows easy connection to consumer HD displays, while TC Link enables two camcorders to be connected with a standard mini-plug cable so time codes can be synchronised. A USB2.0 slot enables simple connection to a computer with no need for an external power supply. Also featured are RCA-pin-type composite and audio outputs terminals, component output with AV/R-out and Remote Terminal.

Accessories Compatibility

The HXR-NX5E is compatible with many of Sony's standard professional accessories, for example batteries, chargers, LCD hoods and more. Please take a look at our professional accessory line-up and choose the best combination for your requirements.

Benefits

Exceptional Picture Performance

Set yourself apart from the competition with superb quality images and superior low-light capabilities providing the ability to work in the most demanding natural light conditions.

Work Faster

Memory Recording transforms the speed at which you work, making deadlines easier to hit and reducing time lost on unnecessary processes. With the HXR-NX5E, there's no need to rewind tape - thumbnail images provide immediate, one-touch access to recorded clips, speeding up logging and editing work, as well making it easier to review footage while on a shoot.

Flexible Workflow

Work the way you want to with a wide-ranging choice of bit rates, interlace or progressive recording and even Standard Definition using MPEG-2 codec at 9Mbps. High Definition recording is possible at up to 24Mbps 1920 x 1080 50i or 25p. 720/50P recording is also possible. Audio is recorded in AVCHD modes in full 2-channel linear PCM audio.

Hybrid Media Choice

The HXR-NX5E provides a choice of recording media to suit different applications. Dual memory card slots mean you can make use of affordable, easily available consumer media products for most shoots.

Technical Specifications

Camera Section	
Imaging device	3-chip 1/3-inch type Exmor CMOS with ClearVid pixel array
Effective picture elements	Approx. 1,037,000 pixels with ClearVid array
Built-in optical filters	Clear, 1/4, 1/16, 1/64
Minimum illumination	1.5 lx (auto gain, auto iris, 1/25 shutter)
Shutter speed	Auto, Manual 50i/50p/25p: 1/3 - 1/10000 sec.
Slow Shutter (SLS)	1/4, 1/8, 1/15, 1/30 sec.
Slow & Quick Motion function	200 fields per second improved Smooth Slow Record (The picture resolution is reduced).
White balance	Auto, one-push auto (A/B positions), indoor (3200 K), outdoor (selectable level -7 to +7, approx. 500K/step), manual WB Temp (selectable 2300K to 15000K, 100K/step)
Gain	-6, -3, 0, 3, 6, 9, 12, 15, 18, 21 dB, AGC

Lens	
Zoom ratio	Sony G Lens, 20x (optical), 1.5x Digital Extender
Focal length	f = 4.1 to 82.0 mm (equivalent to f = 29.5 to 590 mm at 16:9 mode, f = 36.1 to 722 mm at 4:3 mode on 35 mm lens)
Focus	AF/MF selectable, 800 mm to ?‡ (MACRO OFF), 10 mm to ?‡ (MACRO ON, Wide), 800 mm to ?‡ (MACRO ON, Tele)
Image stabiliser	ON/OFF selectable, shift lens
Filter diameter	72 mm

VTR Section	
Recording Format HD Video	MPEG-4 AVC/H.264 (AVCHD)
Recording Format SD Video	MPEG-2 PS
Recording Format HD Audio	Linear PCM 2ch, 16bit, 48kHz / Dolby Digital 2ch, 16bit, 48kHz
Recording Format SD Audio	Dolby Digital 2ch, 16bit, 48kHz
Recording frame rate	AVCHD FX (24Mbps) 1920x1080/50i, AVCHD FH (17Mbps) 1920x1080/50i, AVCHD HQ (9Mbps) 1440x1080/50i, AVCHD LP (5Mbps) 1440x1080/50i, AVCHD FX (24Mbps) 1920x1080/25p, AVCHD FH (17Mbps) 1920x1080/25p, AVCHD FX (24Mbps) 1280x720/50p, AVCHD FH (17Mbps) 1280x720/50p, MPEG SD HQ (9Mbps) 720x576/50i, MPEG SD HQ (9Mbps) 720x576/50i (25p Scan)
Recording/Playback time	170 min (2h 50m) with 32GB Memory Stick PRO-HX Duo FX (24Mbps) Linear PCM 2ch recording

Monitoring	
Viewfinder	0.45 inch-type approx. 1,226,880 dots (852 x 3[RGB] x 480), 16:9 aspect ratio
Built-in LCD monitor	3.2 inch-type, XtraFine LCD, approx. 921,600 dots, hybrid type, 16:9 aspect ratio

Audio	
Built-in microphone	Stereo microphone

Media	
Types	Memory Stick PRO Duo(Mark2), Memory Stick PRO-HG Duo, Memory Stick PRO-HG Duo HX, SDHC Card

Inputs/Outputs	
Audio input	XLR 3-pin (female) (x 2), line/mic/mic +48 V selectable
Composite output	RCA Type (x 1)
S-Video output	N/A (optional VMC-15FS is required.)
Audio output	RCA type(CH-1,CH-2)
Component output	RCA Type (x 3) via A/V multi connector
SDI output	BNC (x 1), HD-SDI/SD-SDI selectable
USB	USB device, Mini-B (x 1)
Headphone output	Stereo mini jack (x 1)
Speaker output	Monaural
DC input	Power cord
Remote	Remote
HDMI output	HDMI connector (x 1)

General	
Mass	(w/ Lens hood with Lens cover) 2.2 kg (4 lb 15 oz)

Dimension (W x H x D)	(Lens hood with Lens cover) 173 x 187x 342 mm (6 7/8 x 7 3/8 x 13 1/2 inch)
Power Requirements (AC adaptor / Battery)	8.4V / 7.2V
Operating temperature	0 to +40 deg C (+32 to +104 deg F)
Storage temperature	-20 to +60 deg C (-4 to +140 deg F)
Battery operating time	385 min

Content Management Utility 1.0 System Requirements

OS	Microsoft Windows XP SP3*, Windows Vista SP2**, Windows 7 *64-bit editions and Starter (Edition) are not supported. ** Starter (Edition) is not supported. Standard installation is required. Operation is not assured if the above OS has been upgraded or in a multi-boot environment.
CPU	Use an Intel Core 2 Duo 2.20 GHz CPU or faster to play back videos with high definition image quality (HD) if recorded using the highest quality mode. Videos with high definition image quality (HD) recorded in other quality modes may be played back with a slower CPU. Depending on the performance of your video card, videos with high definition image quality (HD) recorded using the highest quality mode may be played back with a slower CPU than that recommended above. For the following operations, an Intel Pentium III 1GHz or faster is necessary. - Importing videos to a computer
	- Processing videos with standard definition image quality (SD) only
Memory	Windows XP 512 MB or more (1 GB or more is recommended.) For processing content with standard definition image quality (SD) only, 256 MB of memory or more is necessary. Windows Vista 1 GB or more Windows 7 1 GB or more
Hard Disk	Disk volume required for installation: Approximately 100 MB Only the NTFS or exFAT filesystem can be used for importing videos or registering them for viewing.
Display	Minimum 1,024 X 768 dots
Others	USB port (this must be provided as standard, Hi-Speed USB (USB 2.0 compatible))
Notes	Your computer must meet or exceed hardware requirements described above for each OS. Even in a computer environment where the operations are guaranteed, frames may be dropped from movies, resulting in uneven playback. However, imported images will not be affected. Operations are not guaranteed on all the recommended environments. For example, other open or background applications may limit product performance. Content Management Utility does not support 5.1ch surround sound reproduction. The sound is reproduced in 2ch sound. If you use a Notebook PC, connect it to the AC Adaptor as the power source. Otherwise, the software will not work properly due to the power saving function of the PC.

Accessories

Remote Controls

RM-1000BP

Remote Commander

RM-1BP

Remote Commander

Lapel (ECM-series)

ECM-680S

Shotgun electret condenser microphone

ECM-678

Electret Condenser Shotgun Microphone

ECM-673

Short Shotgun Electret Condenser Microphone.

Tripods

VCT-SP1BP

Multi-purpose Camcorder Support System

VCT-SP2BP

Multi-function Camcorder Shoulder Support

Camera Adaptors

VCL-HG0872K

Wide Conversion Lens

HVL-LBPA

LED Battery Video Light

Viewfinders

SH-L32WBP

LCD Hood

Batteries and Power Supplies

2NP-F970/B

Rechargeable Battery Pack (2 Batteries)

NP-F970

InfoLITHIUM Rechargeable Battery Pack

NP-F770

InfoLITHIUM Rechargeable Battery Pack

NP-F570

InfoLITHIUM Rechargeable Battery Pack

AC-VQL1BP

Intelligent Quad Battery Charger and Dual AC adaptor

LMD Production Monitors

LMD-940W

9-inch Wide Screen LCD Monitor