

SONY®



(simulated image)

HXR-NX5U

Digital HD Video Camera Recorder

NXCAM

AVCHD



Exmor™
3 CMOS Sensors

MEMORY STICK™





NXCAM™ is the name for Sony's newest line of affordable HD camcorders based on the AVCHD technology produced exclusively for demanding professionals.

NXCAM

Picture yourself in the next stage.

Definition for Professionals

Mobility for Professionals

Confidence for Professionals

...visualize your creativity.

DSLR - NXCAM

Introduction

Debut of the First NXCAM Camcorder-HXR-NX5U – Heralding New Standards in Contents Creation

The new HXR-NX5U camcorder is the first product of the NXCAM generation from Sony, and a new category of tapeless memory camcorder, providing an ideal balance of power and performance in the digital age.

Utilizing the revolutionary AVCHD format, this camcorder offers long duration recording – with dual memory slots – on affordable consumer memory cards. As it facilitates a totally IT-based workflow, the HXR-NX5U has the potential to profoundly change the way content is created. Simultaneous hybrid recording is available in HD (high definition) and SD (standard definition) formats using an optional HXR-FMU128 flash memory unit.

In any format, breathtaking picture quality is assured with proven features from Sony such as a state-of-the-art "G Lens" and three Exmor™ CMOS sensors with a ClearVid™ array. Professionals around the world expect this standard of picture quality from Sony...and accept nothing less.



Main Features



G Lens

"G Lens", the lens featured in other successful Sony camcorders, already enjoys an excellent industry reputation. In the HXR-NX5U, this sophisticated lens is optimized to complement the camcorder's advanced image sensor and image-processing technology.



Three Exmor CMOS sensors with a ClearVid array comprise a state-of-the-art sensor system from Sony which realizes high resolution, high sensitivity, a wide dynamic range, and excellent color reproduction, regardless of the codec.



Memory Recording and HYBRID

Memory recording on affordable consumer memory cards offers workflow efficiency at both the shooting and editing stages. Combined with hybrid recording, using an optional HXR-FMU128, the user achieves a totally IT-based workflow, with the added bonus of instant data backup.





GPS

A built-in global positioning system (GPS) locator allows satellite navigation data to be recorded directly onto footage for reference or posting on popular internet mapping systems. GPS data can be invaluable when searching for footage or to provide evidence of where and when footage was recorded.



Active SteadyShot Feature

Active SteadyShot® feature is a new, enhanced image stabilization system that provides a powerful shake-reduction capability, vital for handheld usage. Additional stabilization is provided by the increased optical lens coverage area and by improved detection with state-of-the-art compensation

AVCHD Format

The revolutionary AVCHD™ recording format, which utilizes the MPEG-4, AVC/H.264 video codec, allows users to record HD video footage onto random access media. Its intelligent and sophisticated algorithm makes AVCHD a highly efficient compression format ideal for memory recording and IT-based editing.

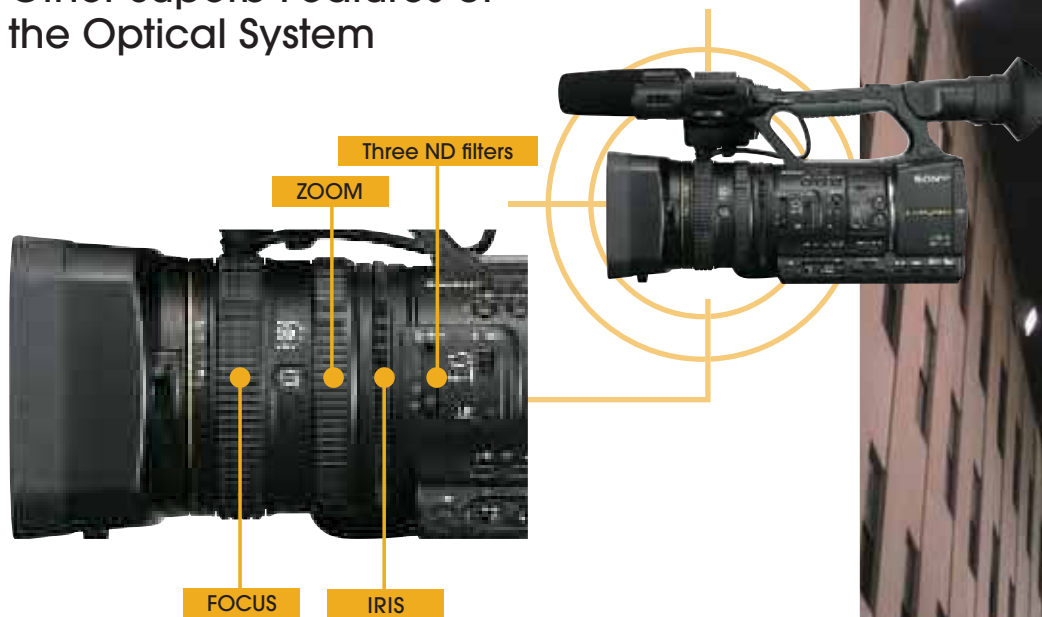
Advanced Camera Features

Sony-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 color 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.

Other Superb Features of the Optical System



Natural-touch Lens Operation

The focus, zoom and iris ring are positioned on the lens barrel, and this design offers the same operability as general interchangeable lenses. Focus, zoom and iris control can all be managed easily.

Six-blade Iris

► The six-blade iris diaphragm is nearly circular, enabling the creation of an extremely beautiful background blur.

Built-in ND filters

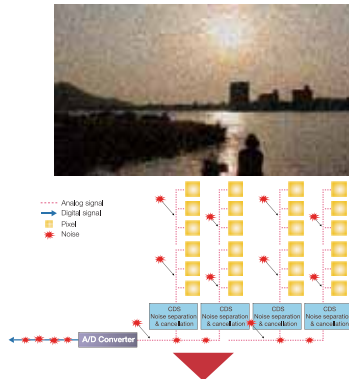
► The HXR-NX5U is equipped with three built-in ND (Neutral Density) filters – 1/4, 1/16, 1/64 – which help to vary the depth of field with iris control.



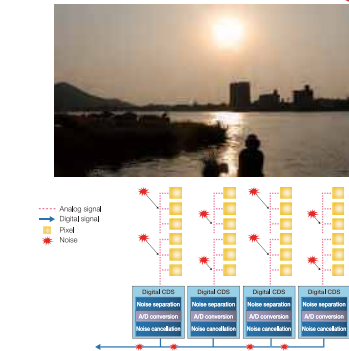
Innovative Technologies

Exmor Technology

+ Ordinary CMOS Sensor

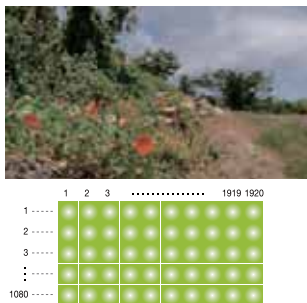


+ Sensor with Exmor Technology

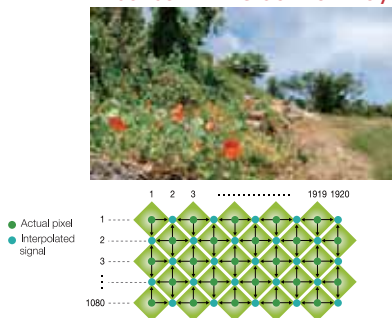


ClearVid Array Technology

+ Small size sensor



+ Sensor with ClearVid Array



(simulated image)

Three 1/3" Exmor CMOS Sensors – Before the Codec

Exmor™
3 CMOS Sensors

The 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 color reproduction. The quality of this imaging system has earned an excellent reputation in the industry, and is of course fully realized in the new HXR-NX5U.

► Exmor Technology Noise Reduction System

Multiple A/D (analog-to-digital) converters on each pixel row convert analog signals to digital as soon as they are generated, unlike traditional technology that only provides one A/D converter on each chip. 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.*

* At 1/30 shutter, auto iris, and auto gain.

► High Sensitivity and Resolution with Sophisticated Techniques

CMOS sensors equipped with a ClearVid array achieve a bigger sensor pixel size than ordinary image sensors, and this leads to high sensitivity. Furthermore, a unique interpolation technique from Sony utilizes the 45-degree rotated pixels on each chip, increasing resolution. The powerful combination of these two sophisticated techniques explains why Sony picture quality has such an excellent industry reputation.



Cutting-edge Technologies

Location Simplification with Cutting-edge GPS Technology

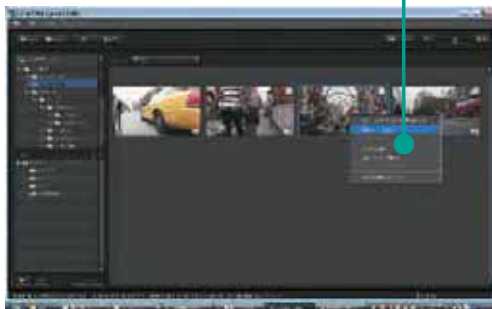


The HXR-NX5U is the world's first AVCHD professional camcorder with an internal GPS. This important new feature enables users to find the same shooting location when, for example, they need to revisit a location for extra shots that must match existing footage. GPS data is embedded in AVCHD video data files. Mapping data can be created using bundled Content Management Utility software. Also GPS data can be extracted from video files, using Content Management Utility software, in a commonly used latitude/longitude NMEA data format. This GPS information can be used in several applications.



Display GPS data on the map

Google



Content Management Utility Software

" Google and Google Earth are trademarks of Google inc."

" Maps and satellite images powered by Google Maps™ mapping service. "



Shoot and Walk with the New Active SteadyShot Feature



A new feature of the HXR-NX5U is Active SteadyShot. This useful feature effectively reduces hand-held camera shake. The improvement is particularly noticeable when using wide-angle framing. It is an essential feature when holding the camcorder by hand, and especially for projects that are recorded mainly in the field. It is also ideal when the subject is moving and must be followed, for example in news gathering or at weddings. Shooting from inside a moving vehicle is another useful application for the Active SteadyShot feature. It significantly reduces the need for external stabilization systems. Improved stabilization allows the user to concentrate more on composition and shot transition, rather than worry about how to stabilize the camera. Depending on the shooting environment, users can select normal SteadyShot feature or Active SteadyShot feature for hand-held applications. When not in use, the stabilization feature can be easily switched off.



Without Active SteadyShot Feature



With Active SteadyShot Feature

(simulated images)

Memory Recording for Professionals

Efficiency and Operability on Readily Available Memory Cards

The HXR-NX5U is also the first Sony professional camcorder designed to record directly onto consumer memory cards. These cards are affordable and easy to find. This general versatility is especially handy when a user suddenly needs extra memory – something that happens quite often when shooting a documentary or news report on the move. Also, memory cards are very compact and easy to handle. Many devices can accept these memory cards allowing easy playback. Files can be copied



from a memory card to any available computer, instantly backing up valuable data. Another benefit is that memory cards can be easily and cost-effectively reused.

Available Memory Cards Type



* For detailed information please refer to the specification sheet on the back of this brochure.

Relay Record with Dual Memory Slots

Another new feature is continuous recording between two memory card slots. The new HXR-NX5U camcorder automatically cycles between the dual memory slots. When using two, 32-GB memory cards, six hours of continuous HD footage can be recorded. If a longer continuous recording time is required, the user simply waits until the first card is full and recording has relayed to the second card, before ejecting the first card and inserting a new blank memory card. This procedure can be repeated as required, extending continuous recording for a sufficiently long time.



Three Major Advantages of Memory Recording

1. Easy Viewing of Recorded Footage

The major benefit of this memory recording system is its instant search capability for recorded clips using thumbnail images. This speeds up logging and editing work, which is ideal in fast-paced environments. Having the ability to access clips randomly will make production staff much happier and far more efficient.

2. Fast Ingestion to a Computer

Users can simply pop out a memory card and plug it into any computer's memory card reader slot (or use a USB2.0-type memory card reader) to upload files. This is likely to take less time than the actual length of recorded footage, so more time can be spent shooting. Users are secure in the knowledge that editing deadlines will be met, thanks to this efficient new approach to digital video production.

*The uploading time will depend on the computer's specification.

3. Easy Playback

Affordable consumer memory media are already used in many consumer electronic devices, and more are to come. Recorded footage can be instantly played back using these devices.

Recording Time on a single memory media

HD MOVIE						SD MOVIE		
		AVCHD 24Mbps (max) FX mode	AVCHD 17Mbps (avg) FH mode	AVCHD 9Mbps (avg) HQ mode	AVCHD 5Mbps (avg) LP mode			SD 9Mbps (avg) HQ mode
Linear PCM 2ch	1GB	4 min	6 min	10 min	15 min	Dolby Digital 2ch	1GB	10 min
	2GB	10 min	10 min	20 min	35 min		2GB	25 min
	4GB	20 min	25 min	45 min	70 min		4GB	55 min
	8GB	40 min	55 min	95 min	150 min		8GB	115 min
	16GB	85 min	110 min	190 min	300 min		16GB	235 min
	32GB	170 min (2h 50m)	225 min (3h 45m)	385 min (6h 25m)	605 min (10h 5m)		32GB	475 min (7h 55m)
Dolby Digital 2ch	1GB	5 min	6 min	10 min	20 min			
	2GB	10 min	10 min	25 min	40 min			
	4GB	20 min	25 min	50 min	90 min			
	8GB	45 min	55 min	105 min	185 min			
	16GB	90 min	115 min	215 min	375 min			
	32GB	180 min (3h 0m)	235 min (3h 55m)	435 min (7h 15m)	750 min (12h 30m)			

Hybrid Video Footage Recording Capability

Optional 128-GB Flash Memory Unit, HXR-FMU128

Sony proudly introduces the HXR-FMU128, an optional 128-GB flash memory unit exclusively designed for the HXR-NX5U camcorder. This enables hybrid recording of video footage – another world first for an AVCHD professional camcorder. Other capabilities include simultaneous recording of HD and HD video footage, and even the combination of HD and SD, realizing an instant backup in the desired format. The 128-GB storage capacity provides continuous recording for almost half a day at the highest bit-rate – incredible in a unit of such compact size. This is an ideal option for recording music festivals, seminars, and weddings, and for making documentaries, all of which require extended recording times.

Simple Direct Attachment

The HXR-FMU128 is designed exclusively for this camcorder, so it attaches directly to the back of the HXR-NX5U.

Long, High-quality Recording

The memory unit enables approximately 11 hours of continuous recording in the highest FX 24-Mbps* mode.

* FX 24-Mbps mode comprises 21-Mbps of video data and 3-Mbps of audio and other data.

Recording Time on HXR-FMU128

HD recording time (HD MOVIE)
When connected to the HXR-NX5U

	AVCHD 24Mbps (max) FX mode	AVCHD 17Mbps (avg) FH mode	AVCHD 9Mbps (avg) HQ mode	AVCHD 5Mbps (avg) LP mode
Linear PCM 2ch	700 min (11h 40m)	930 min (15h 30m)	1570 min (26h 10m)	2490 min (41h 30m)
Dolby Digital 2ch	740 min (12h 20m)	980 min (16h 20m)	1790 min (29h 50m)	3080 min (51h 20m)

SD recording time (SD MOVIE)
When connected to the
HXR-NX5U

	SD 9Mbps (avg) HQ mode
Dolby Digital 2ch	1960 min (32h 40m)



Hybrid Recording with the HXR-NX5U and HXR-FMU128



1. HYBRID Format

HD+HD/HD+SD

SD for today, HD for tomorrow, both acquired by one shot

5. HYBRID Media

Memory Card + Flash Memory Unit

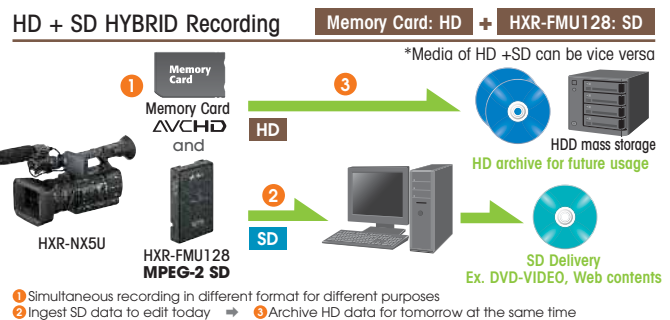
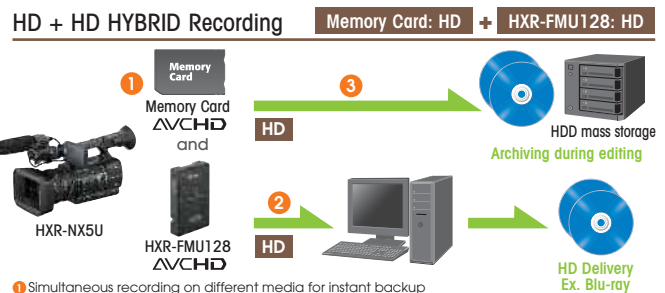
Identical clips on different media provides instant backup

9. HYBRID Workflow

Media for Editing + Media for Archiving

Simultaneous ingesting to two computers will allow editing and archiving at the same time

HYBRID Recording



Simple Data Transfer and Input

Simple connection to a computer via a USB slot means there's no need for an external power supply. Once the HXR-NX5U is linked to a PC via a USB2.0 cable, files can be uploaded directly. This allows fast file transfer to popular NLE systems, and saves valuable time.



*Notes on HXR-FMU128

- HXR-FMU128 formatted by a 60i (50i) camcorder cannot be used by a 50i (60i) camcorder.
- Rebooting of the camcorder is needed when HXR-FMU128 is attached while the camcorder power is ON.

Recording Format and Editing Workflow

The Revolutionary AVCHD Format

AVCHD

AVCHD is an efficient data compression method which greatly reduces memory requirements. The new format allows tapeless recording with high image quality in a small file size. This is made possible by the revolutionary MPEG4 AVC/H.264 codec. In addition, the AVCHD file format is spreading rapidly into the market. Many consumer electronic devices already support AVCHD playback, and there are more to come. Major NLE software manufacturers already support AVCHD ingestion and editing. The market is starting to recognize AVCHD as a standard file format for video.

Loss-less Audio Recording Capability

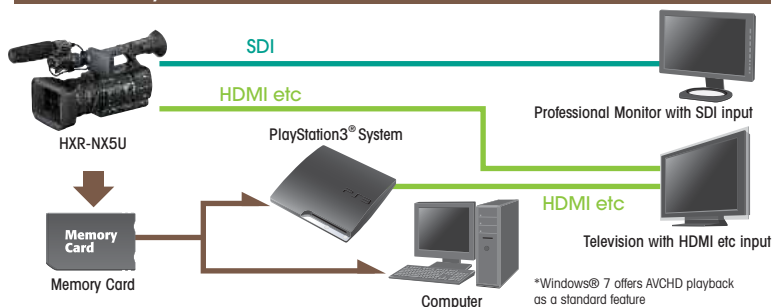
The audio recording format on HXR-NX5U can be selected from either Dolby Digital stereo or Linear PCM stereo. LPCM audio recording provides uncompressed audio quality. Customers who needs high quality audio, such as in music videos will be able to acquire CD quality audio data.

MPEG-2 for SD (standard definition) Recording Format

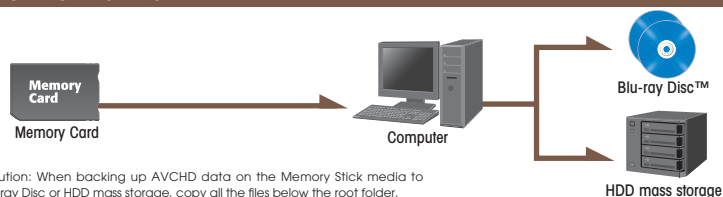
SD format recording is available in addition to HD format recording. The SD recording format uses MPEG-2 which is the same compression codec as standard DVD-VIDEO Discs. Customers who make delivery in DVD-VIDEOS will be able to obtain video data in sufficient SD quality using this format.

Playback and Archiving

How to Playback



How to Archive



Caution: When backing up AVCHD data on the Memory Stick media to Blu-ray Disc or HDD mass storage, copy all the files below the root folder.





Content Management Utility Software for HXR-NX5U

Content Management Utility is an easy to use Microsoft Windows® software application for clip management and file uploading.

1. It allows users to connect divided files due to FAT32 restrictions, which automatically divide files into 2-GB data files during recording.
2. The new Sony dual memory card relay recording system record clips onto separate cards, if the clip exceeds the capacity of a single memory card. Content Management Utility software also connects clips divided onto several cards made by relay recording.
3. Content Management Utility software maps any GPS data embedded in video data.

Content Management Utility



PC Software		Content Management Utility 1.0.00
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 hardware requirements other than those 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 running on currently 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.

Recording Format and Editing Workflow

Editing Workflow

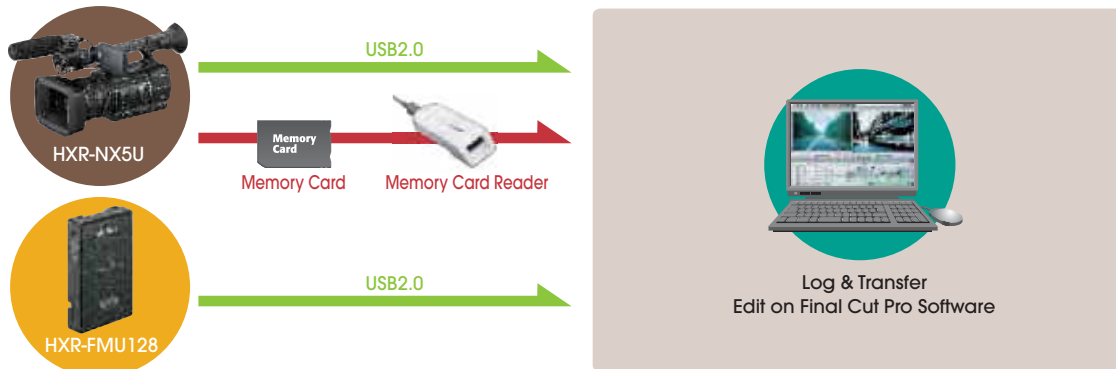
For Windows users

Use Content Management Utility Software to ingest

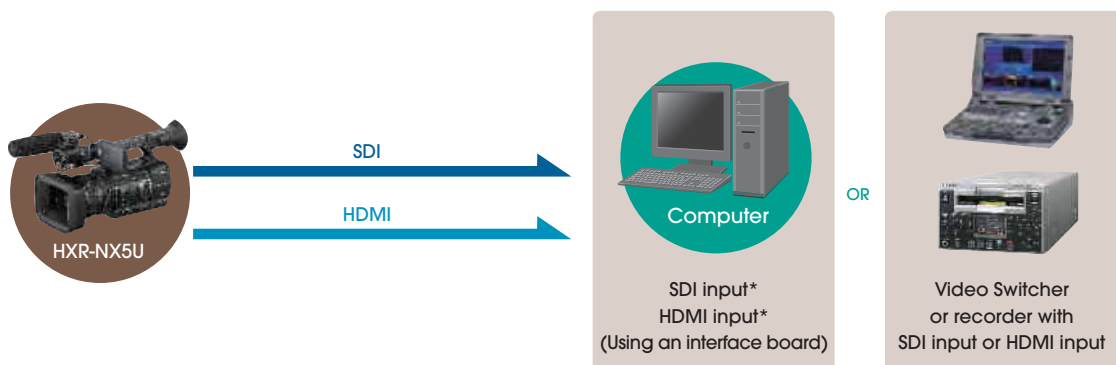


For Final Cut Pro® Users

Use “Log & Transfer” and convert to ProRes422 to edit



Utilize the SDI or HDMI etc outputs



*Please contact the manufacturer for further detailed information

Operation Functionality

Easy Operation with Newly Designed Menu Interface

The completely new menu interface allows users to adjust camcorder functions via a touch panel or buttons and switches. This interface is newly designed specifically for this model. Easier and more straightforward operations are achieved by the combination of a high-resolution XtraFine™ LCD panel, XtraFine electronic viewfinder (EVF), and well-defined layout.

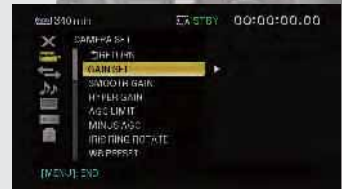
VISUAL INDEX Button

The VISUAL INDEX button is a one touch button to view the recorded footage. It will instantly change the camera mode from shooting to previewing. Just touch a thumbnail picture of the recorded clip on the LCD panel to select a clip to preview.



MENU Button

The MENU button will instantly lead you to the camera setting menu. Changing the output settings, display settings, timecode settings can be done through this menu.



MODE Button

Functions to manage the media and recorded data can be reached from this MODE button. Formatting the media and dubbing and copying the data can be done through this menu. Smooth Slow Rec can be triggered from this MODE button.



Structure of MODE

CAMERA Button
→ SMOOTH SLOW REC
PLAY Button
→ VISUAL INDEX
→ PLAYLIST

EDIT Button
→ PROTECT
→ PLAYLIST EDIT
→ PHOTO CAPTURE
→ DIVIDE
→ DELETE

DUB/COPY
→ MOVIE DUB
→ PHOTO DUB

MANAGE MEDIA
→ MEDIA FORMAT
→ REPAIR IMAGE DB FILE
→ USB CONNECT

Supporting Features

XtraFine LCD Panel

The HXR-NX5U features a 3.2-inch*-type XtraFine LCD panel. It has approximately 921,000 pixels (1920 x 480), and this higher resolution allows easier focus. The XtraFine LCD displays virtually 100% of the recorded picture area at a color temperature of approximately 6500K. The LCD Panel on non-Sony camcorders often have poor contrast and non-standard color temperature.

*(viewable area, measured diagonally)

Hybrid Operation with Touch Panel and Buttons

The HXR-NX5U is equipped with a touch panel LCD with a complete new interface specifically designed for this new camcorder. Most of settings can be adjusted by touch screen operation, which is easy, straightforward, and instinctive for operators. However, standard operation using buttons and switches is also available, to provide users with choices to suit any shooting situation.

One-touch Viewing with the Visual Index Button

Thanks to file-based operation, recorded clips can be quickly reviewed by scanning through thumbnail images. This makes it easier and less stressful to search for important clips.



(simulated image)

Well-designed Layout

The ergonomic layout of buttons and switches provides convenient access. Professional user feedback has guided the design processing, making the new HXR-NX5U easy to use.



One-touch Clip-type Microphone Holder

A one-touch clip-type microphone holder makes it easy to attach and remove the microphone for quick storage.



Two Screw Holes for Secure Connection

To provide a more secure connection between the camcorder and a tripod plate and other accessories, there are two screw holes in the camcorder's base plate.

XtraFine EVF

The 0.45-inch-type XtraFine electronic viewfinder (EVF) has approximately 1,227,000 pixels (852 x 3 (RGB) x 480). This is approximately 6x higher resolution than viewfinders on similar camcorders from other manufacturers. This device has three independent LEDs for Red, Green, and Blue colors. The EVF has a selectable display mode (Color or Black and White mode). It also displays virtually 100% of the recorded picture area at a color temperature of approximately 6500K, and has an improved interface for easier viewing of the on-screen menu.

Hardware Switch for Headphone Monitor

A high-quality headphone monitor jack allows the user to instantly check the quality of recorded audio. The HXR-NX5U is equipped with a hardware switch so the user can change the output to Channel 1 or Channel 2, or mix both channels together. There is no need to go into the menu to change the headphone output.

Versatile Terminal Interfaces

1. HD-SDI

The HXR-NX5U is equipped with an HD-SDI* terminal, making it easier and more convenient to install the camcorder into high-end video editing systems. If the system has an HD-SDI input, the camcorder can be connected to the system with a BNC cable. No conversion boxes are needed. The camera's E to E output from the HDSDI terminal will be a 10 bit uncompressed 4:2:2 signal.

*Timecode and audio signals are embedded in the HD-SDI signal.
*SD-SDI is also available.

2. HDMI terminals

The HDMI interface allows easy connection to consumer electronic devices.

3. RCA-pin-type composite and audio outputs terminals

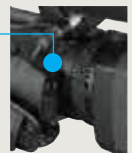
4. Component output with AV/R-out

5. USB

6. Remote Terminal

7. TC Link

By connecting two camcorders with a standard mini-plug cable, using the TC Link function, timecodes of the two camcorders can be synchronized.



Accessories

To expand the variety and possibilities of shooting, using accessories is a simple, efficient choice. How about shooting in darkness or longtime shooting? Shooting under these kinds of situations can be realized much easier with the help of accessories.

Sony makes a variety of compatible accessories available starting from basic necessities, such as batteries, to advanced necessities, such as camcorder supports, which are ergonomically designed to ease the workflow and enhance the creativeness of the users.

The new HXR-NX5U, also is compatible with many of our professional accessories lineup.

For instance, batteries, chargers and LCD hoods will be essential to ensure comfortable shooting. Moreover, shooting supports will ease the stress made by longtime shooting. Take a look at our professional accessories lineup and choose the best combination to meet your shooting style needs.



RM-1000BP
Remote Commander® Unit

- Multifunction Remote Commander unit
- Controls main camcorder functions
- Better User Interface for professional applications



HXR-FMU128
Flash Memory Unit

An external Flash Memory Recording Unit with a 128GB capacity, capable of recording AVCHD and MPEG2 SD formats, designed exclusively for the NXCAM camcorder. Simple direct attachment to the camcorder and a simple data transfer to the computer via USB 2.0 is available.



UWP-V1
UHF Wireless Microphone Package

- Consists of Bodypack Transmitter and Portable Receiver
- Portable Receiver can be attached to shoe connector by supplied shoe mount adaptor



ECM-680S
Shotgun-type Electret Condenser Microphone

- Stereo and Monaural
- Switchable Stereo: Uni-Directional
- Monaural: Super-cardioid

ECM-678/9X
Shotgun-type Electret Condenser Microphone

- Monaural type
- Super-cardioid

ECM-673/9X
Shotgun-type Electret Condenser Microphone

- Monaural type
- Super-cardioid



VCT-PG11RMB
Tripod with RM-1BP Remote Controller



VCT-SP1BP
Camcorder Support

- Weight support for stable/comfortable shooting
- Support for several shooting styles (e.g., high-angle shooting)
- Quick-release function from harness for excellent mobility

- Perfect design for camcorder Monopod
- Carbon shaft for light weight and rigid design
- RM-1BP Remote Controller supplied as standard



VCL-HG0872K Wide Conversion Lens

- Equivalent to 0.8 magnification
- High-resolution wide conversion lens for the HXR-NX5U
- Bayonet mount for quick and easy attachment
- Supports large French Flag and 4x5.65 inch filter holder
- Quick and convenient integrated lens shutter



HVL-LBPA LED Battery Video Light

- LED reliability and low power consumption of 16W
- Battery power from NP-F770/F970
- Wide compatibility for flexible installation (Cold shoe/Screw bolt/Screw hole)
- Ideal for Wide-angle shooting and interviews Spot (600lx@1m) or flood-lighting (300lx@1m) with attached condensing lens ON or Off
- Light diffuser attached to soften shadows and reduce contrast
- Long Operating time: approximately 3 hours with the NP-F970 (at maximum brightness)
- Supplied indoor/outdoor filter kit (5,500K to 3,200K)



VCT-SP2BP Camcorder Support

- Three point support (shoulder, chest, operator's hands)
- Simple but efficient stabilization capable of a variety of shooting styles
- Quick release from tripod including tripods which require VCT-U14
- Fast and easy transformation from tripod mode to support mode



SH-L32WBP LCD Hood

- LCD Hood for 3.2" LCD monitor
- Adjustable shade (360° shade)
- Folding structure realize transfer with camcorder

* (viewable area measured diagonally)

2NP-F970/B InfoLITHIUM Rechargeable Battery Pack (2 pack)

NP-F970/F770/F570 InfoLITHIUM Rechargeable Battery Pack

RM-1BP Remote controller



MS-MT32G (16GB, 8GB, 4GB, 2GB, 1GB)

- Memory Stick PRO Duo™ Media



AC-VQL1BP AC Adapter / Charger

- 4 slots battery charger (A pair of parallel charge)
- 2 charge mode selectable (Normal/Full)
- Charging information Remaining time to charge complete Current

- available time for shooting
- Battery Log information Total charge time Total charge cycle last operation date



MS-HX32G (16GB, 8GB, 4GB)

- Memory Stick PRO-HG Duo HX media
- High speed data transfer
- *Use the USB adaptor for high speed transfer (20Mbps)



LMD-940W Professional LCD Monitor

- 800x480 (WVGA) Panel Resolution
- 4:3 / 16:9 Aspect Ratio Selection
- 3 mode power system - AC100V, DC12V, Battery Adaptor

- 3G SDI input / output standard

Specifications

HXR-NX5U

General			
Weight	(w/ Lens hood with Lens cover)		Approx. 4 lb 15 oz (2.2 kg)
	(w/ Battery, Lens hood with Lens cover, large eyecup, ECM-XM1, Memory card)	NP-F770 NP-F970	Approx. 5 lb 11oz (2.6 kg) Approx. 5 lb 14oz (2.7 kg)
Dimension (W x H x D)	(Lens hood with Lens cover)		Approx. 6 7/8 x 7 3/8 x 13 1/2 inch (173 x 187 x 342 mm)
	(Lens hood with Lens cover, large eyecup, ECM-XM1, NP-F970)		Approx. 6 7/8 x 7 5/8 x 17 3/4 inch (173 x 193 x 449 mm)
Power requirements	(AC adaptor / Battery)		8.4V / 7.2V
Power consumption	(w/ ECM-XM1 and LCD with normal brightness)		Approx. 7.9 W *When Flash Memory Unit HXR-FMU128 is used, the average power consumption increases about 1.1 W.
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	Continuous recording time		Approx. 365 min (NP-F970:fully charged batt.)
Recording format	Video Format	HD	MPEG-4 AVC/H.264 (AVCHD)
		SD	MPEG-2 PS
	Audio Format	HD	Linear PCM 2ch, 16bit, 48kHz / Dolby Digital 2ch, 16bit, 48kHz
		SD	Dolby Digital 2ch, 16bit, 48kHz
Recording frame rate* ¹			AVCHD FX (24Mbps) 1920 x 1080/60i AVCHD FH (17Mbps) 1920 x 1080/60i AVCHD HQ (9Mbps) 1440 x 1080/60i AVCHD LP (5Mbps) 1440 x 1080/60i AVCHD FX (24Mbps) 1920 x 1080/24p AVCHD FH (17Mbps) 1920 x 1080/24p AVCHD FX (24Mbps) 1920 x 1080/30p AVCHD FH (17Mbps) 1920 x 1080/30p AVCHD FX (24Mbps) 1280 x 720/60p AVCHD FH (17Mbps) 1280 x 720/60p MPEG2 SD HQ (9Mbps) 720 x 480/60i MPEG2 SD HQ (9Mbps) 720 x 480/60i (24p Scan) MPEG2 SD HQ (9Mbps) 720 x 480/60i (30p Scan)
Recording/Playback time			170 min (2h 50m) with 32GB Memory Stick PRO-HX Duo FX (24Mbps) Linear PCM 2ch recording
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)* ²
Iris			Auto/Manual (F1.6-F11, close)
Focus			AF/MF selectable, 800 mm to ∞ (MACRO OFF), 10 mm to ∞ (MACRO ON, Wide), 800 mm to ∞ (MACRO ON, Tele)
Image stabilizer			ON/OFF selectable
Filter diameter			72 mm
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, 1/30 shutter)
Shutter speed	Auto	60/60p: 1/60-1/2000, 30p: 1/30-1/2000, 24p: 1/48-1/2400	
	Manual	60/30p/60p: 1/4 - 1/10000, 24p: 1/3 - 1/10000	
Slow & Quick Motion function			120 fps (fixed) as improved Smooth Slow Rec *The picture quality is degraded.
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			Auto/Manual (-6dB - 21dB, 3dB step)
Inputs/Outputs			
Audio input			XLR 3-pin (female) (x 2), LINE/MIC/MIC +48 V selectable
Composite output			RCA Type (x 1)
Audio output			RCA type(CH-1, CH-2)
Component output			RCA Type (x 3) via Mini-D jack
SDI output			BNC (x 1), HD-SDI/SD-SDI selectable
USB			USB device, Mini-B/HI-Speed (x 1)
Headphone output			Stereo mini jack (x 1) ø3.5mm
Speaker output			Monaural
DC input			Power code
Remote			Remote: Stereo mini-mini jack (x 1) ø2.5mm
HDMI output			HDMI connector (x 1)
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(1920 x 480), hybrid type, 16:9 aspect ratio
Built-in Microphone			
			stereo microphone

Media	
Type	Memory Stick PRO Duo(Mark2) TM , Memory Stick PRO-HG Duo TM , Memory Stick PRO-HG Duo HX TM *3 SD/SDHC Memory Card*4 Flash Memory Unit
Supplied Accessories	
AC Adaptor/Charger	AC-VL1
Rechargeable Battery Pack	NP-F770
Connecting cord	DK-415
Microphone	ECM-XM1
Remote Commander	RMT-845
Component video cable	
A/V connecting cable	
USB cable	
Large eyecup	
Lens hood with lens cover	
Accessory shoe kit	
Lithium Battery	CR2025
Application Software (CD-ROM)	

*1 Due to variable bitrate, 24Mbps is the maximum bitrate for AVCHD FX mode and the average bitrate is being stated for FH, HQ and LP modes.

*2 The focal length is when SteadyShot mode is in SteadyShot or Off.

*3 Compatible "Memory Stick" type : For AVCHD recording / Capacity: more than 1GB. For standard definition recording / Capacity: more than 512MB

*4 Recommended Speed Class For AVCHD recording / Class 4 or higher. For standard definition recording / Class 2 or higher

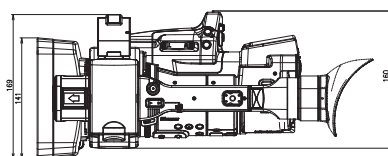
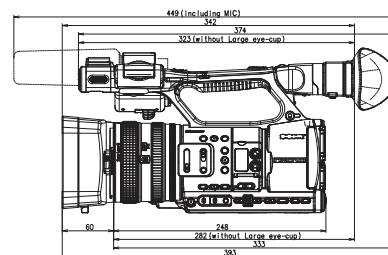
HXR-FMU128

Flash Memory	Recording Capacity	128GB*
	File System	FAT32
Interface	Camcorder Connection	Connection Jack
	PC Connection	USB mini-B jack Hi-Speed USB (USB 2.0)
OS Compatibility	OS	Windows® XP SP3 (64bit editions and Starter (Edition) are not supported) Windows Vista® SP2 (Starter (Edition) is not supported) Windows® 7 Mac OS X(v10.4 or later)
General	Weight	2oz (80g)
	Dimension (WxHxD)	Approx. 2 1/4 x 3 3/8 x 21/32 inch (54 x 85 x 17mm) (including the projecting parts)
	Power Requirements	5V (Power supplied from connecting device)
	Power Consumption	Approx. 0.9W (Power supplied from connecting device)
	Operating Temperature	+32 to +104 deg F (0 to +40 deg C)
	Storage Temperature	-4 to +140 deg F (-20 to +60 deg C)
	Supplied Accessories	USB cable (Mini-jack - A-jack) Case Label

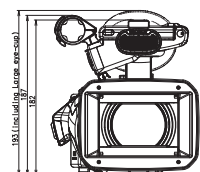
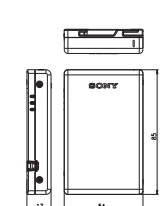
*In this specification, 1GB indicates 1 billion bytes. A portion of the recording capacity is used for data management.

Dimensions

HXR-NX5U



HXR-FMU128



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