SONY
make.believe

NEX-FS100E
NEX-FS100EK
NXCAM Super 35mm Sensor Camcorder

A New World of High Quality Video Production Convenience with
an NXCAM Super 35mm Motion Picture Camcorder

NXCAM AVCHD MPEG2 SD Exmor Super35 CMOS MEMORY STICK SDXC GPS

INTRODUCTION

NXCAM Super 35mm Motion Picture Camcorder Providing
a Simple Solution to High Quality Video Production

Sony's range of NXCAM models now includes the NEX-FS100E interchangeable lens camcorder featuring a Super 35mm sensor. Developed specifically for shooting motion pictures, this high sensitivity, large format sensor is capable of producing footage with shallow depth of field similar to that of a film camera for a new level of expression.

For even more creative flexibility, the NEX-FS100E also enables extended continuous recording and simultaneous recording of HD video footage for instant backup with an HXR-FMU128 Flash Memory Unit. These and other valuable features make this compact, high performance camera ideal for producing everything from low budget commercials, music videos and documentaries to wedding videos.
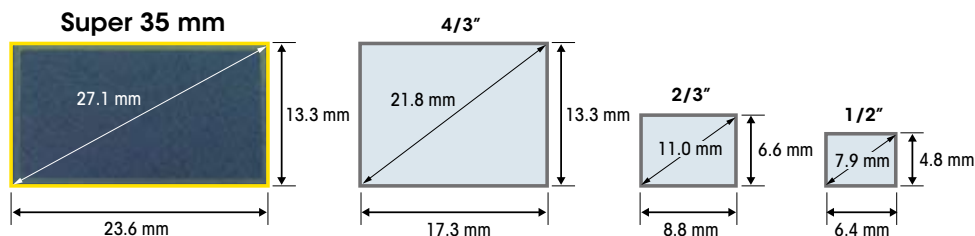
SENSOR

"Exmor" Super35 CMOS Sensor for Shooting Motion Pictures

Equipped with a large CMOS sensor equivalent in size to Super 35mm film, like that used in the PMW-F3, the NEX-FS100E enables shooting with the same creative depth of field as a film camera.

The sensor also features an optimum number of effective pixels for shooting HD moving images. At a high 50fps in all-pixel scan mode, this allows images to be captured with less color aliasing, jaggedness and rolling shutter than DSLR cameras, while providing the sensitivity to shoot at a minimum illumination of 0.28lux[1]. Another advantage of "Exmor" technology is minimal noise when shooting low-light scenes.

* 1 When using a fixed shutter speed of 1/25, auto gain and an iris setting of F1.4
   The SEL18200 lens supplied with the NEX-FS100EK enables shooting in illumination as low as 1.5lux when using a fixed shutter speed of 1/25, auto gain and auto iris

Super 35 mm

Super 35 mm	4/3"	2/3"	1/2"

27.1 mm | 13.3 mm | 23.6 mm
21.8 mm | 13.3 mm | 17.3 mm
11.0 mm | 6.6 mm | 8.8 mm
7.9 mm | 4.8 mm | 6.4 mm

"Exmor" Super35 CMOS Sensor

Gross pixels	Approx. 3,530,000 pixels
Effective pixels of moving pictures in 16:9	Approx. 3,370,000 pixels
Effective pixels of moving pictures in 4:3	Approx. 2,530,000 pixels

Exmor™ Super35 CMOS

Sensitivity

NEX-FS100E

DSLR camera

Depth of Field

NEX-FS100E

conventional camcorder

INTERCHANGEABLE LENSES

E-Mount Interchangeable Lens System

The NEX-FS100E features the E-mount Interchangeable lens system.

Sony's E-mount interchangeable lenses let you enjoy a level of creative freedom unimaginable with camcorders of the past. All feature precision-crafted optics with aspherical glass elements for compact high performance, and circular iris mechanisms for smooth background defocusing. The supplied SEL18200(E 18–200mm F3.5–6.3 OSS) with the NEX-FS100EK boasts 11x zoom power, a quiet AF motor for cleaner sound recording, and Optical SteadyShot™ image stabilization with an advanced Active mode that lets you take steady handheld shots while walking around — even without a bulky stabilization rig. An ultracompact SEL16F28 wide-angle lens and SEL1855 3x zoom lens are also available.

Thanks to the E-mount's short 18mm flange-back distance, using a mount adaptor allows shooting with a wide range of existing lenses. For example, with the optional LA-EA1 mount adaptor you can take advantage of the abundant A-mount lenses.
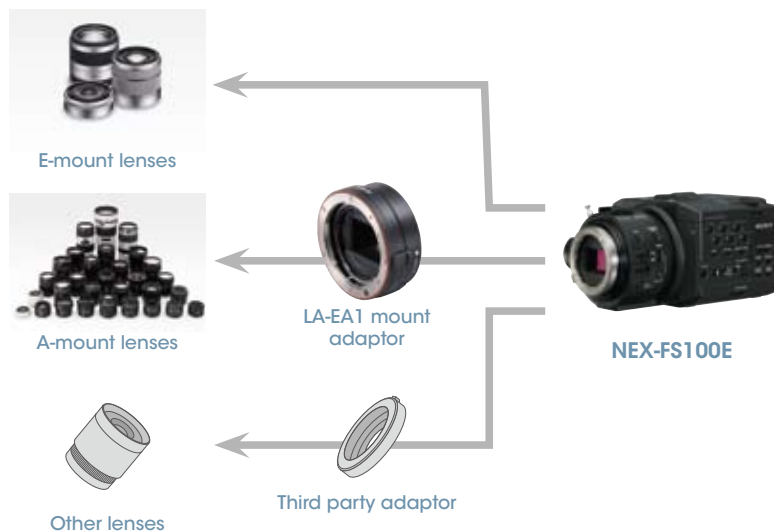
E-mount lenses

A-mount lenses

LA-EA1 mount adaptor

Other lenses

Third party adaptor

NEX-FS100E

E-mount lens on the NEX-FS100E

A-mount lens with the LA-EA1 adaptor

Another lens with a third party adaptor

MODULAR DESIGN

New Design Concept Providing the Flexibility for a Variety of Shooting Styles

Featuring a compact, lightweight body with detachable grip, top handle, and viewfinder, the NEX-FS100E is ideal for a wide range of shooting situations.

During hand-held shooting, the angle of the grip can be changed as desired, and recording started and start and stop recording with a button on the grip. Secondary record buttons are also available at two locations, at the top and in front of the camera body.

There are also 1/4-inch and 3/8-inch screw holes on both the handle and the bottom of the camera body for mounting various peripheral devices, plus a tape measure hook and an image sensor position index on the body.

Located on the optical axis, the 3.5-inch-type XtraFine™ LCD panel enables easier and more intuitive framing, especially during hand-held shooting. And the LCD panel can be rotated for stress-free operation when shooting low-angle scenes and digital signage footage. For easier and more precise focusing in daylight, the viewfinder comes with a detachable 1.2x magnifier.

CREATION

1920x1080P Slow and Quick Motion

Recording images at a different frame rate from that used for playback provides the extra versatility of slow and quick motion shooting. Furthermore, the NEX-FS100E enables Full HD (1920×1080) progressive slow and quick motion. Frame rates are selectable from 50fps, 25fps, 12fps, 6fps, 3fps, 2fps and 1fps. So, for example, when recording at 1080/25p, if the frame rate is set to 50fps, images are recorded in 2.0 times slow motion. This means you can create impressive slow motion scenes without the need for troublesome editing.

Note:Slow and quick motion shooting is only available in HD progressive mode. Simultaneous recording to a memory card and flash memory unit (optional HXR-FMU128) is not available.

Slow Motion Mechanism
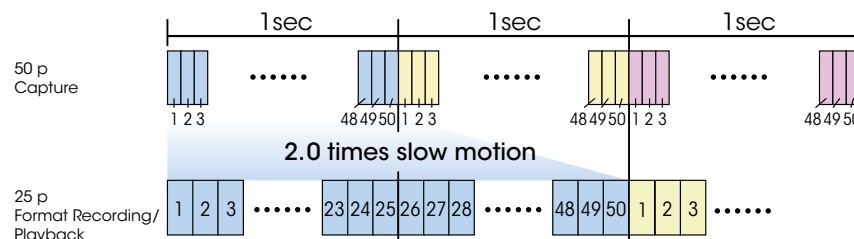
SAFETY & LONG RECORDING

Hybrid Recording

Recording to the directly mountable HXR-FMU128 Flash Memory unit allows continuous recording for over 10 hours without changing the recording medium. Simultaneous recording using memory cards and other media is also possible for secure backup when shooting footage that can't be reshot.

Note: HD and SD footage cannot be recorded separately on different recording media.

Compatible Memory Cards Type

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

Recording Time

HD MOVIE

		AVC HD 28M (PS)	AVC HD 24M (FX)	AVC HD 17M (FH)	AVC HD 9M (HQ)	AVC HD 5M (LP)
Linear PCM 2ch	1GB Memory Card	4 min	4 min	6 min	10 min	15 min
	2GB Memory Card	8 min	10 min	10 min	20 min	35 min
	4GB Memory Card	15 min	20 min	25 min	45 min	70 min
	8GB Memory Card	35 min	40 min	55 min	90 min	145 min
	16GB Memory Card	70 min	80 min	110 min	185 min	295 min
	32GB Memory Card	145 min	170 min	225 min	375 min	590 min
	HXR-FMU128 (128GB) [Optional]	600 min	700 min	940 min	1560 min	2460 min
Dolby Digital 2ch	1GB Memory Card	4 min	5 min	7 min	10 min	20 min
	2GB Memory Card	9 min	10 min	10 min	25 min	45 min
	4GB Memory Card	15 min	20 min	30 min	50 min	90 min
	8GB Memory Card	35 min	40 min	60 min	105 min	190 min
	16GB Memory Card	75 min	90 min	120 min	215 min	380 min
	32GB Memory Card	150 min	180 min	245 min	440 min	770 min
	HXR-FMU128 (128GB) [Optional]	640 min	750 min	1030 min	1830 min	3200 min

SD MOVIE

		SD 9M (HQ)
Dolby Digital 2ch	1GB Memory Card	10 min
	2GB Memory Card	25 min
	4GB Memory Card	55 min
	8GB Memory Card	110 min
	16GB Memory Card	225 min
	32GB Memory Card	460 min
	HXR-FMU128 (128GB) [Optional]	1910 min

Note: Recording time may vary depending on recording conditions.

WORK FLOW

NXCAM Recording Format

Like other NXCAM series cameras, the new NEX-FS100E uses the AVCHD recording format to enable stable operation using the same NXCAM workflow. Better still, it's ready to shoot with a maximum frame rate of 1920x1080/50p (28Mbps) for even higher quality recording. For more flexibility, the MPEG-2 for SD recording format is also possible.
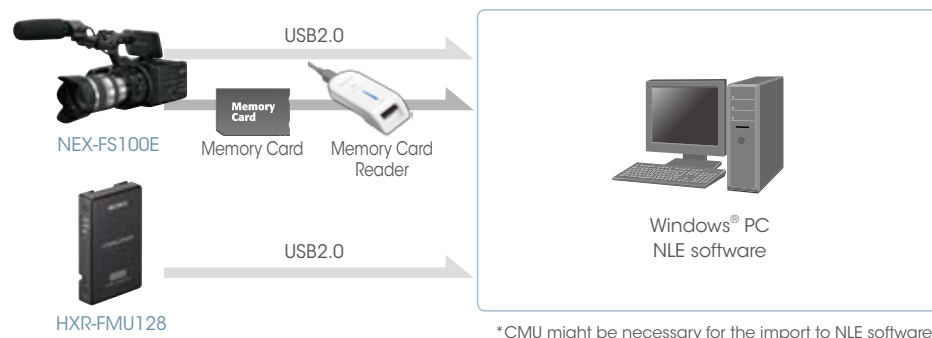
HDMI Output with Embedded Time code for 4:2:2 Uncompressed Signal Output

When shooting, the NEX-FS100E provides HDMI 4:2:2 uncompressed output with an embedded SMPTE Time code in order to record onto an external device which is capable of higher bit-rate recording.
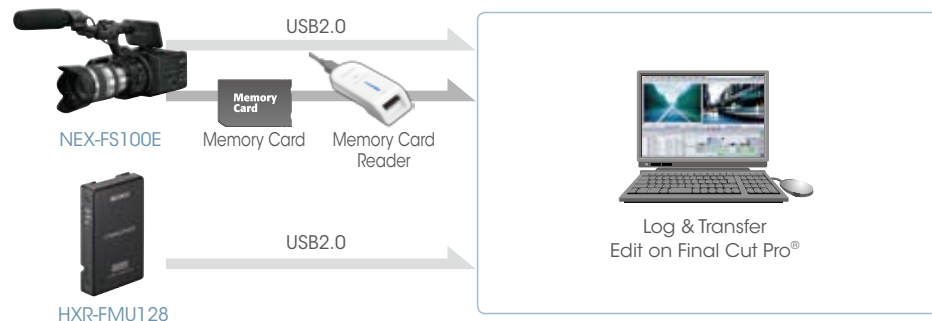
For Windows® users
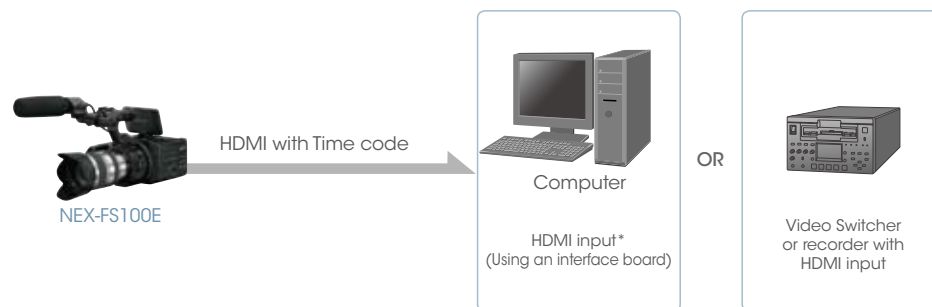### Use Content Management Utility Software to ingest

NEX-FS100E — USB2.0 → Windows® PC NLE software

Memory Card — Memory Card Reader

HXR-FMU128 — USB2.0 →

*CMU might be necessary for the import to NLE software.

For Final Cut Pro® Users
Use "Log & Transfer" and convert to ProRes422 to edit

NEX-FS100E — USB2.0 → Log & Transfer Edit on Final Cut Pro®

Memory Card — Memory Card Reader

HXR-FMU128 — USB2.0 →

Utilizing HDMI output

NEX-FS100E — HDMI with Time code → Computer

HDMI input*
(Using an interface board)

OR

Video Switcher or recorder with HDMI input

*Please contact the manufacturer for further detailed information

FUNCTION

Other Convenient Features

Location Simplification with GPS Technology

A built-in GPS function automatically records location information at the time of a shoot to AVCHD files. The supplied Content Management Utility (CMU) Version 2.0 software can also be used together with map software. This enables easy confirmation of exactly where footage was shot, which is particularly useful when shooting overseas.

Picture Profile™

Six picture profile settings for different shooting conditions are provided as default settings. Selecting a picture profile for a particular scene offers an easy way to change image quality.

Last Scene Review

Enables fast, one-touch confirmation of the last recorded scene without operating multiple buttons.

Expanded Focus

Press a button and this enlarges the center of the displayed image by 2x, a particularly useful feature when making critical focusing adjustments.

Histogram

Onscreen display of a histogram enables easier exposure adjustment. The histogram also shows the point where the zebra pattern appears (the zebra point). This enables confirmation of overall brightness distribution and the brightness level set with the zebra function. As well as preventing overexposure, this is useful as a guide when aiming for optimum exposure of certain parts of an image, such as faces.

Peaking

A peaking function draws a defined line around the subject displayed in the LCD monitor and viewfinder. Peaking sensitivity and color (red, white, yellow) can be selected to enable more precise focusing.

Markers

Center, aspect, safety zone, guide frame and other markers can be displayed on the LCD.

Firmware Update

Sony has implemented a firmware update scheme for future functions.

Sony Opens Up New Era of
Super 35mm Digital Production

Available Accessories

2NP-F970/B
Rechargeable Battery Pack

AC-VQL1BP
AC Adaptor / Charger

VCT-SP1BP
Camcorder Support

VCT-SP2BP
Camcorder Support

HXR-FMU128
Flash Memory Unit

VCT-PG11RMB
Tripod with RM-1BP Remote
Controller

HVL-LBPB
Battery Video Light

LPM-770BP
Portable Monitor

LCS-G1BP
Soft Carrying Case

LCS-BP1BP
Soft Carrying Case

RM-1BP
Remote Commander

MS-HX32A (32 GB, 16 GB, 8 GB)
Memory Stick PRO-HG Duo™
MS-MT32G (32 GB, 16 GB, 8 GB, 4 GB, 2 GB)
Memory Stick PRO Duo™

SF-32N4 (32 GB, 16 GB, 8 GB, 4 GB, 2 GB)
SF-32NX (32 GB, 16 GB, 8 GB)
SD / SDHC Memory Card

Specifications

General

Mass	Body only	Approx. 1.04 kg (2 lb 4oz)	
	w/optional lens w/VF, w/ Battery (NP-F970), w/large eyecup, w/handle, w/MIC (ECM-XM1), w/grip, w/o gripbelt	Approx. 2.76 kg (6 lb 1oz)	
Dimension (W x H x D)	Body only	Approx. 126.5 x 101.5 x 193.5 mm (5 x 4 x 7 5/8 inch)	
	w/optional lens, w/VF, w/large eyecup, w/handle, w/MIC (ECM-XM1), w/grip, w/o gripbelt	Approx. 178 x 192 x 519.5mm (7 1/8 x 7 5/8 x 20 1/2 inch)	
Power requirements	Power Requirements (AC adaptor / Battery)	8.4V / 7.2V	
Power consumption	w/ ECM-XM1 and LCD with normal brightness	5.6W (w/ supplied lens) *When Flash Memory Unit HXR-FMU128 is used, the average power consumption increases about 1.1W	
Operating temperature		0 to +40 deg C (+32 to +104 deg F)	
Storage temperature		-20 to +60 deg C (-4 to +140 deg F)	
Continuous Recording Time	Continuous Recording Time	Approx. 510 min (NP-F970:fully charged batt.)	
Recording format	Video Format	HD	MPEG-4 AVC/H.264 AVCHD format compatible (1080/50p original format)
		STD	MPEG-2 PS
	Audio Format	HD	Linear PCM 2ch, 16bit, 48kHz / Dolby Digital 2ch, 16bit, 48kHz
		STD	Dolby Digital 2ch, 16bit, 48kHz
Recording frame rate*			HD PS (28Mbps) 1920x1080/50p, HD FX (24Mbps) 1920x1080/50i, HD FH (17Mbps) 1920x1080/50i, HD HQ (9Mbps) 1440x1080/50i, HD LP (5Mbps) 1440x1080/50i, HD FX (24Mbps) 1920x1080/25p, HD FH (17Mbps) 1920x1080/25p, HD FX (24Mbps) 1280x720/50p, HD FH (17Mbps) 1280x720/50p, SD/STD HQ (9Mbps) 720x576/50i
Recording/Playback time			170 min (2h 50m) with 32GB Memory Stick PRO-HG Duo HX at FX(24Mbps) Linear PCM 2ch recording

Lens (supplied with NEX-FS100EK)

Lens Mount		E-mount	
Model Name		SEL18200	
Product Name		E 18-200mm F3.5-6.3 OSS	
Equivalent 35mm-format focal length	16:9	28.8 - 320mm	
	4:3	36- 400mm	
Zoom ratio		11.1x	
Filter Diameter		67mm	

Camera Section

Imaging device		"Exmor" Super35 CMOS Sensor	
	Gross pixels	Approx. 3,530,000 pixels	
	Effective pixels of moving pictures in 16:9	Approx. 3,370,000 pixels	
	Effective pixels of moving pictures in 4:3	Approx. 2,530,000 pixels	
Minimum illumination		0.28 lx (1/25 shutter, IRIS F1.4, Auto GAIN) **	
Shutter speed	Auto	50i/50p: 1/50-1/1750, 25p: 1/25-1/1750	
	Manual	1/3 - 1/10000 1/50 - 1/1750 (50i, 50p), 1/25 - 1/1750 (25p)	
Slow & Quick Motion function	Rec Format	1080/50p, 1080/25p	
	Frame Rate	50fps, 25fps, 12fps, 6fps, 3fps, 2fps, 1fps	
	Shutter Speed	1/scan frame rate - 1/10000(Manual)	
White balance		Auto, Outdoor(5800K), indoor(3200K), One-push (Touch panel)	

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 Video Output	RCA Type (x 3) via Mini-D jack
USB	USB device, mini-AB/Hi-Speed (x 1)
Headphone output	Stereo mini jack (x 1) ø3.5mm
Remote	Stereo mini-minijack (ø2.5mm)
HDMI output	HDMI connector (x 1)
Built-in LCD monitor	3.5 inch-type, XtraFine LCD, approx. 921,600 dots(1920 x 480), 16:9 aspect ratio

Recording Media

Type	Memory Stick PRO Duo(Mark2), Memory Stick PRO-HG Duo,Memory Stick PRO-HG Duo HX
	SD/SDHC/SDXC Memory Card***

Supplied Accessories

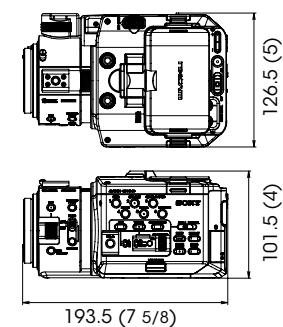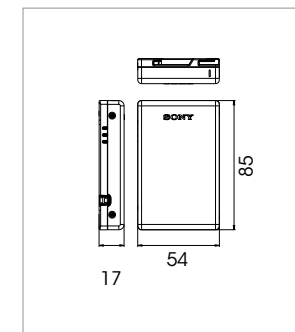|	
	AC Adaptor/Charger (AC-VL1), Rechargeable Battery Pack (NP-F770), Connecting cord (DK-415), Microphone (ECM-XM1), Remote Commander (RMT-845), Component video cable, A/V connecting cable, USB cable, USB Adaptor Cable (VMC-UAM1), Large eyecup, Lens (SEL18200), Lens hood with lens cover, Accessory shoe kit, Lithium Battery (CR2025), Clock Lithium (Installed), Application Software (CD-ROM) (CMU2.0)

* Due to variable bitrate, 28Mbps is the maximum bitrate for HD PS mode, and 24Mbps for HD FX mode. The average bitrate is stated for FH, HQ and LP modes.
** 1.5 lx (w/ supplied lens: auto gain, auto iris, 1/25 shutter speed)
*** Class 4 or higher

Dimensions

Unit: mm (inches)

NEX-FS100E

519.5 (20 1/2)
178 (7 1/8)
126.5 (5)
164.5 (6 1/2)
192 (7 5/8)
292 (11 1/2)

Body only

126.5 (5)
101.5 (4)
193.5 (7 5/8)

HXR-FMU128

85
54
17

SONY

make.believe

MK10847V1OHB11MAR