

SONY
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NEX-FS100

Super 35mm NXCAM Camcorder

The right tool for the job

2nd
EDITION



NXCAM

AVCHD

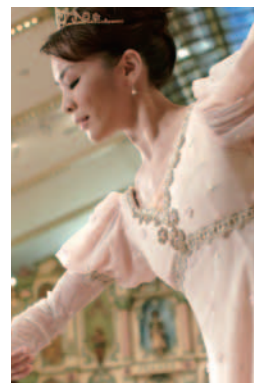
MPEG2 SD

Exmor™
Super35 CMOS

MEMORY STICK™

SDXC™

GPS



INTRODUCTION

NXCAM Super 35mm Motion Picture Camcorder Providing Creative Expression in High Quality Video Production!

Sony's range of NXCAM® camcorder models includes the NEX-FS100U 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-FS100U 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.



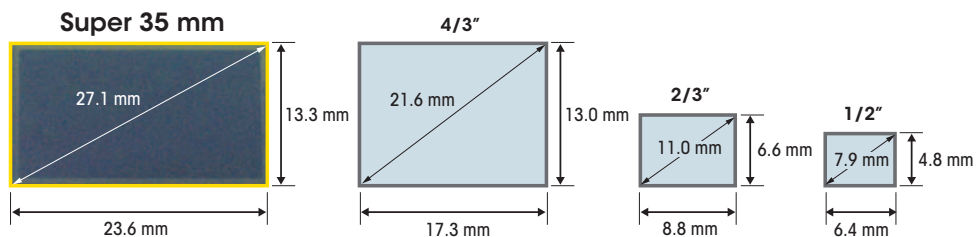
SENSOR

"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-FS100U enables shooting with similar creative depth of field as film cameras.

The sensor also features an optimum number of effective pixels for shooting HD moving images. At a high 60fps 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 1/30, auto gain and an iris setting of F1.4. The SEL18200 lens supplied with the NEX-FS100UK enables shooting in illumination as low as 1.5lux when using a fixed shutter speed of 1/30, auto gain and auto iris

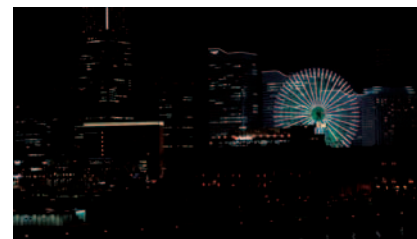


Exmor Super35 CMOS Sensor

Gross pixels	Approx. 3,530,000 pixels
Motion pictures (16:9)	Approx. 3,370,000 pixels, effective
Motion pictures (4:3)	Approx. 2,530,000 pixels, effective



Sensitivity

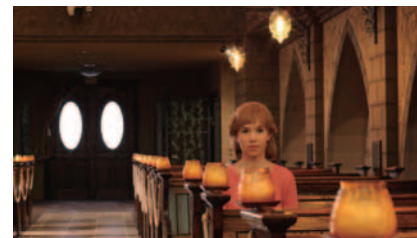


Full Frame DSLR



NEX-FS100U

Depth of Field



Four Thirds Camcorder



NEX-FS100U

LENSES

Open to the world

Central to the NEX-FS100 is Sony's E-mount interchangeable lens system. Thanks to an extremely shallow 18 mm flange back distance, the system is uncommonly open to a wide variety of SLR lenses and motion picture lenses via third-party adaptors.

E-mount lenses

Nine E-mount lenses are light and compact, with aspherical glass elements for high performance and circular iris mechanisms for beautiful out-of-focus highlights. The SEL18200 (E 18–200 mm F3.5–6.3 OSS) lens supplied with the NEX-FS100K boasts 11x zoom, quiet auto focus, and "Active mode" stabilization for steady handheld shots even as you walk.

A-mount lenses

Sony's lens adaptors open up a choice of more than 100 A-mount lenses for Sony Alpha DSLRs (sold separately).

Third-party lenses

The NEX-FS100 accepts motion picture lenses, plus 35mm SLR and DSLR lenses from Canon, Leica, Nikon, Olympus and others via simple third-party adaptors (sold separately).

For amazing creative freedom, you can reach beyond the standard primes and zooms to tilt shift and bellows lenses. Thanks to this flexibility, even if you're committed to one SLR system, you can cherry pick the best lenses from other systems to use on the FS100!

Sony's incredible LA-EA2 adaptor for A-mount lenses

The LA-EA2 adaptor enables full-time phase detection auto focus as you shoot video. It's an amazing advantage in fast-moving, run-and-gun documentary shooting. (Requires FS100 Firmware version 2.0, a free upgrade.)



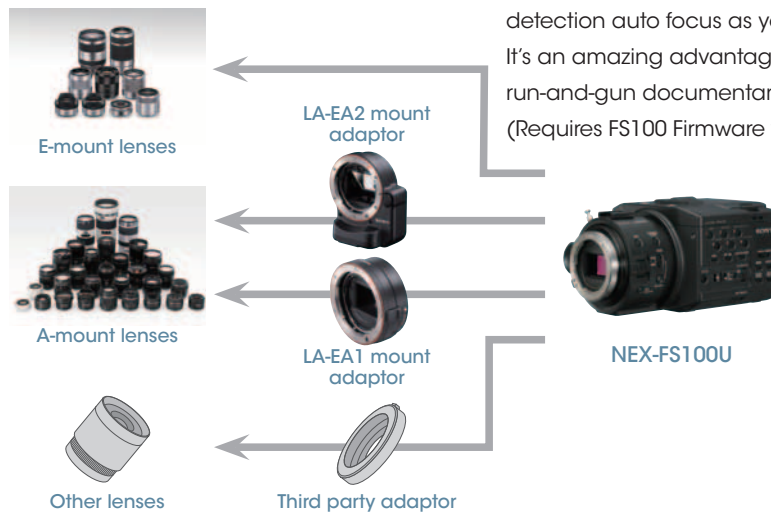
E-mount lens on the NEX-FS100U



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-FS100U is ideal for a wide range of shooting situations.



During hand-held shooting, the angle of the grip can be changed as desired, 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 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 three 1/4-inch holes on the top of the camera body. In addition, there is a tape measure hook and a focal plane marker for indicating the image sensor position.



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.

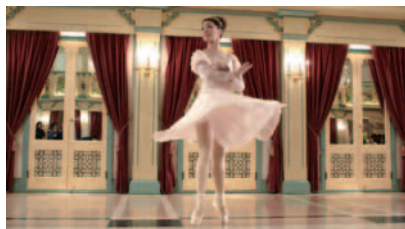
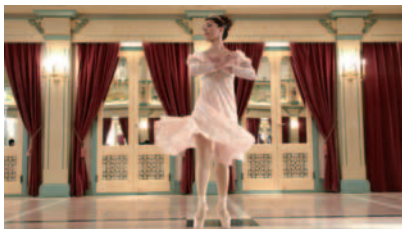
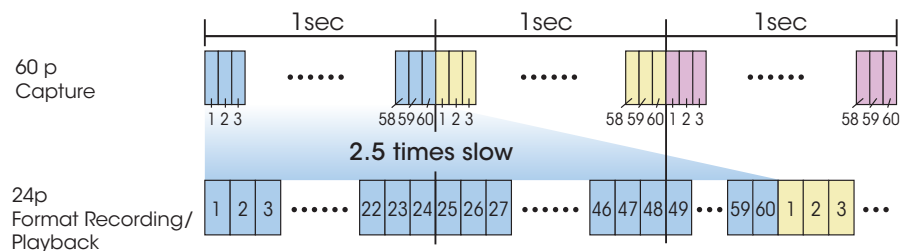
CREATION

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-FS100U enables Full HD (1920x1080) progressive slow and quick motion. Frame rates are selectable from 60fps, 30fps, 15fps, 8fps, 4fps, 2fps and 1fps. So, for example, when recording at 1080/24p, if the frame rate is set to 60fps, images are recorded in 2.5 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 slow and quick motion recording to a memory card and flash memory unit (optional HXR-FMU128) is not available.

Slow Motion Mechanism



FLEXIBILITY

Hybrid Recording



Recording to the optional HXR-FMU128 Flash Memory unit allows continuous recording for over 10 hours without changing the recording medium. Simultaneous recording using memory card and HXR-FMU128 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.

WORKFLOW

AVCHD Codec

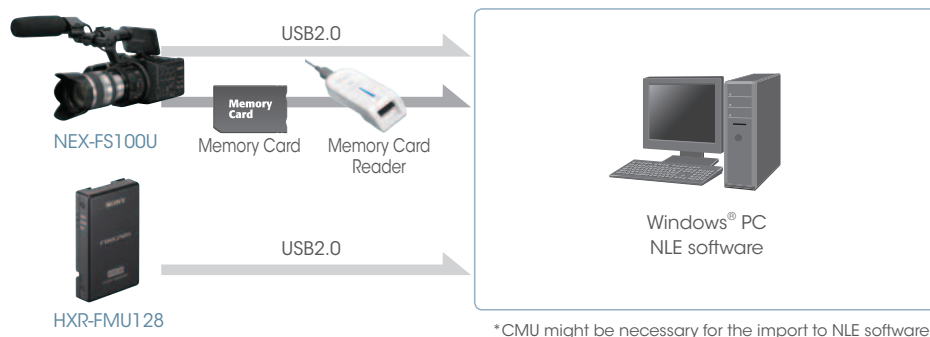
Like other NXCAM® series cameras, the NEX-FS100 uses the highly efficient AVCHD™ codec to achieve excellent image fidelity. Better still, it's ready to shoot with a high maximum frame rate of 1920x1080/60p (28Mbps). There's also Standard Definition with the same MPEG-2 PS encoding as DVDs.

Uncompressed 8-bit HDMI output

The NEX-FS100 connects to outboard recorders via uncompressed HDMI™ 4:2:2 or RGB output. This output features embedded SMPTE time code and embedded 2-3 pull-down markers, which enable 24p material output as 60i to be recognized once more as 24p.

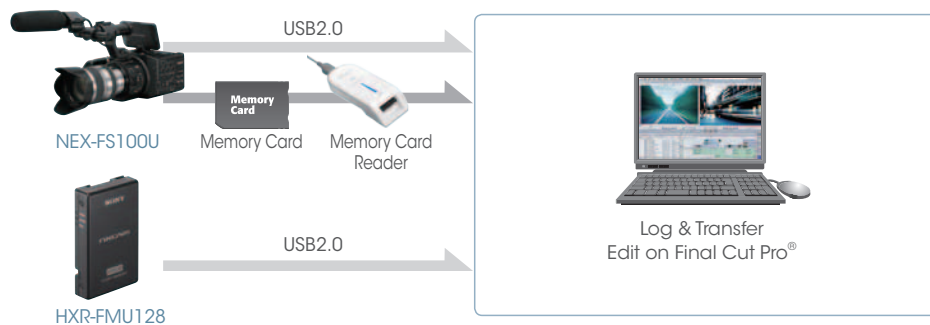
For Windows® users

Use Content Management Utility Software to ingest

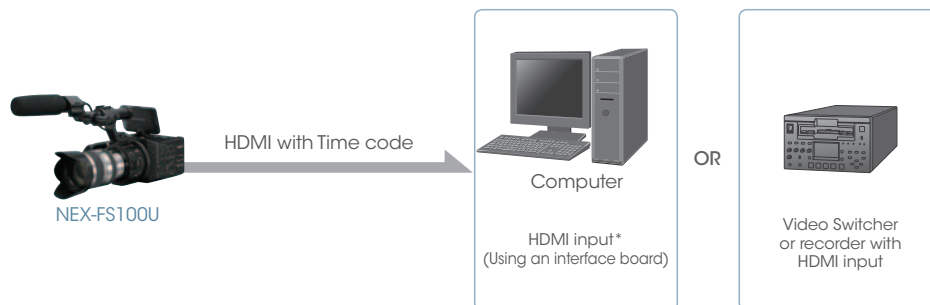


For Final Cut Pro® Users

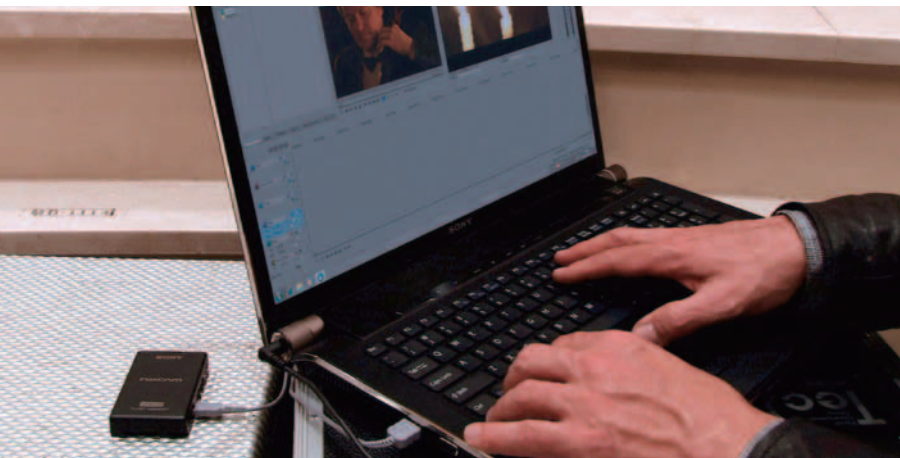
Use "Log & Transfer" and convert to ProRes422 to edit



Utilizing HDMI output



*Please contact the manufacturer for further detailed information



CONTROL

The professional features you deserve

Geo-tagging with built-in GPS receiver

If you shoot on-location and overseas, you'll appreciate the built-in GPS receiver. It enables you to geo-tag each shot for later identification. The camera captures location metadata in the AVCHD™ files. After the shoot, use the supplied Content Management Utility (CMU) Version 2.0 software with Google Maps* to pinpoint each location.

* Requires PC with Internet access. Service provided by Google and subject to change without notice

99 Picture Profile settings

Sony's Picture Profile™ function stores your choices for Gamma, Knee, Detail and much more. You can store up to 99 Picture Profile settings on a memory card. (Requires Firmware 2.0, a free upgrade.)

Histogram

The onscreen histogram helps you set accurate exposure. The histogram even shows the zebra threshold, helping to adjust zebras and prevent blown-out highlights.

Last Scene Review

Enjoy one-touch confirmation of the last recorded scene without reaching for multiple buttons.



Expanded Focus

Because focus is critical in HD shooting, the NEX-FS100 provides 4-times and 8-times Expanded Focus magnification plus the ability to move the expanded focus window around the image. (Requires Firmware 2.0, a free upgrade.)

Peaking

To assist focus, peaking draws a defined line around in-focus subjects in the LCD monitor. You can adjust peaking sensitivity and color for precise focusing.

LCD markers

For convenient framing, the camera offers a variety of LCD markers including center, aspect ratio (4:3, 13:9, 14:9, 15:9, 1.66:1, 1.85:1 and 2.35:1), safety zone, guide frame, and others. You even have a choice of displaying shutter in degrees or seconds, gain in dB or ISO, and focus distance in meters or feet. (Requires Firmware 2.0, a free upgrade.)

50/60 Hz World-cam switching

Now you can accept assignments for delivery anywhere in the world or shoot 24p in 50 Hz countries. (Requires Firmware 2.0, a free upgrade.)

Recording Frame rate

HD	PS (28Mbps) 1920x1080/60p, 50p
	FX (24Mbps) 1920x1080/60i, 50i, 30p, 25p, 24p1280x720 /60p, 50p
	FH (17Mbps) 1920x1080/60i, 50i, 30p, 25p, 24p1280x720 /60p, 50p
	HQ (9Mbps) 1440x1080/60i, 50i
	LP (5Mbps) 1440x1080/60i, 50i
STD	HQ (9Mbps) 720 x 480/60i, 720 x 576/50i

*Recording media formatted or recorded at 60i (50i) cannot be recorded or played back at 50i (60i), and vice versa.

Mount Adaptor LA-EA2 Compatible

The NEX-FS100U can attach A-mount lens via A-mount to E-mount adaptor LA-EA2. Thanks to Translucent Mirror Technology on LA-EA2, auto focus and one push auto iris functions are available during motion picture shooting with most of A-mount lenses.



Mount Adaptor LA-EA2



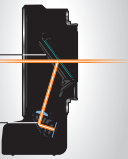
Translucent Mirror Technology
Full-time Continuous AF

Translucent Mirror Technology

Translucent Mirror Technology delivers responsive autofocus with A-mount lenses

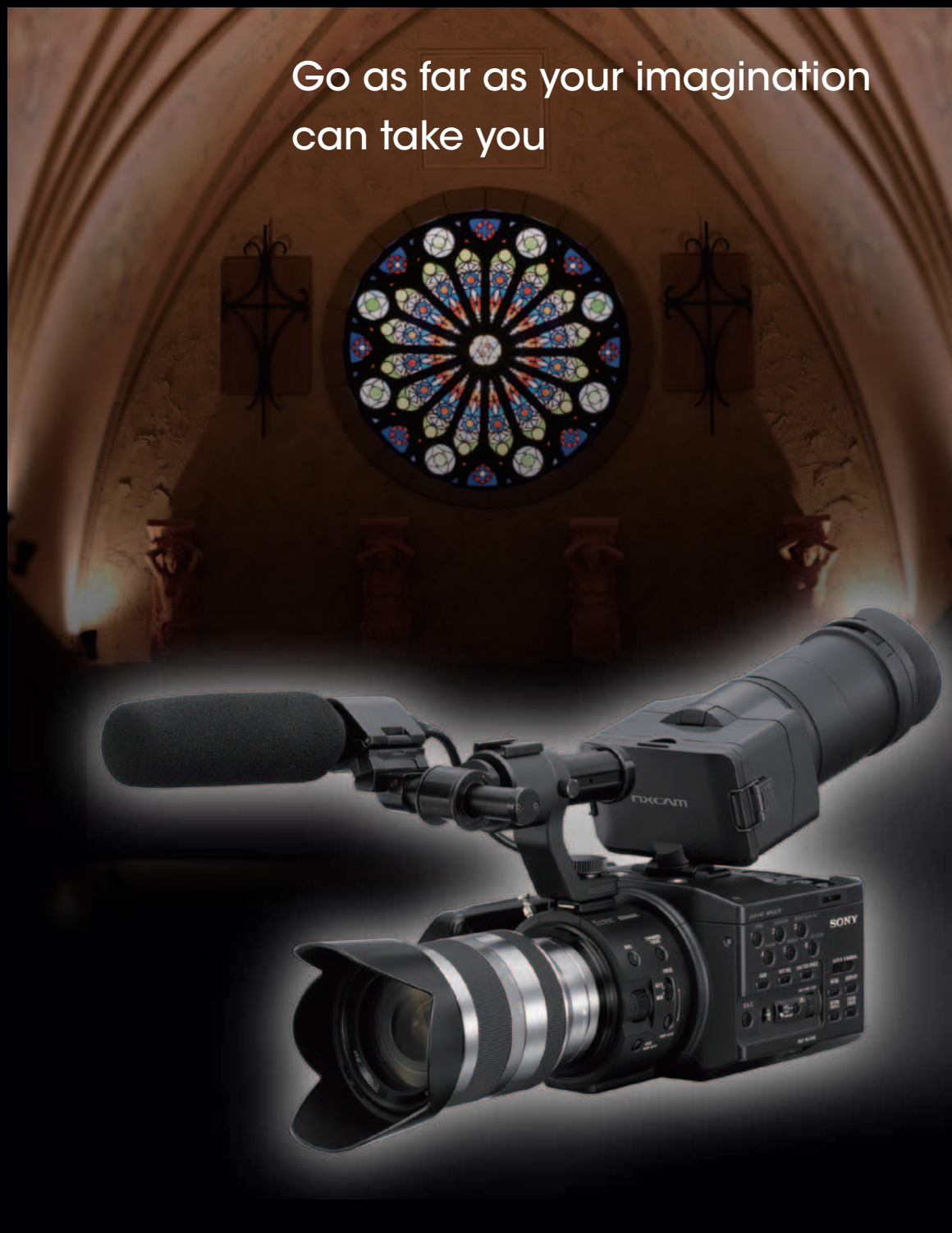
Translucent mirror
An innovative translucent mirror simultaneously and continuously transmits light from the lens to both the CMOS image sensor and AF sensor.

AF sensor
Light from the mirror is continuously transmitted to the precision TTL phase detection AF sensor for instant focus lock-on, even with fast-moving subjects.





Sample image using LA-EA2



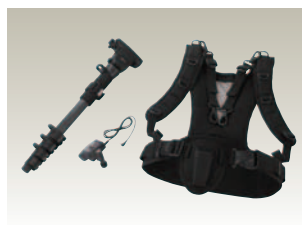
Available Accessories



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-HX32B (32 GB, 16 GB, 8 GB)
Memory Stick PRO-HG Duo™



SF-32UX (32 GB, 16 GB, 8 GB)
SD / SDHC Memory Card

Specifications

General		
Weight	Body only	Approx. 2 lb 4oz (1.04 kg)
	w/optional lens w/VF, w/ Battery (NP-F970), w/large eyecup, w/handle, w/MIC (ECM-XM1), w/grip, w/o gripbelt	Approx. 6 lb 1oz (2.76 kg)
Dimension (W x H x D)	Body only	Approx. 5 x 4 x 7 5/8 inch (126.5 x 101.5 x 193.5 mm)
	w/optional lens, w/VF, w/large eyecup, w/handle, w/MIC (ECM-XM1), w/grip, w/o gripbelt	Approx. 7 1/8 x 7 5/8 x 20 1/2 inch (178 x 192 x 519.5 mm)
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		+32 to +104 deg F (0 to 40 deg C)
Storage temperature		-4 to +140 deg F (-20 to +60 deg C)
Continuous Recording Time	Video Format	Approx. 510 min (NP-F970: fully charged batt.)
	Audio Format	MPEG-4 AVC/H.264 AVCHD ver.2.0 format compatible
Recording Format	HD	MPEG-2 PS
	STD	Linear PCM 2ch, 16bit, 48kHz / Dolby Digital 2ch, 16bit, 48kHz
Recording Frame rate	HD	Dolby Digital 2ch, 16bit, 48kHz
	STD	PS (28Mbps) 1920x1080/60p, 50p FX (24Mbps) 1920x1080/60i, 50i, 30p, 25p, 24p 1280x720 /60p, 50p FH (17Mbps) 1920x1080/60i, 50i, 30p, 25p, 24p 1280x720 /60p, 50p HQ (9Mbps) 1440x1080/60i, 50i LP (5Mbps) 1440x1080/60i, 50i HQ (9Mbps) 720 x 480/60i, 720 x 576/50i
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-FS100UK)		
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 (1/30 shutter, IRIS F1.4, Auto GAIN) **
Shutter speed	Auto	60i/60p: 1/60-1/2000, 30p: 1/30-1/2000, 24p: 1/48-1/2400 50i/50p: 1/50-1/1750, 25p: 1/25-1/1750
	Manual	60i/60p/30p: 1/4-1/10000, 24p: 1/3-1/10000 50i/50p/25p: 1/3-1/10000
Slow & Quick Motion function	Rec Format	1080/60p, 1080/30p, 1080/24p, 1080/50p, 1080/25p
	Frame Rate	60p/30p/24p: 60fps, 30fps, 15fps, 8fps, 4fps, 2fps, 1fps 50p/25p: 50fps, 25fps, 12fps, 6fps, 3fps, 2fps, 1fps 1/scan frame rate - 1/10000(Manual)
White balance	Shutter Speed	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
Composited 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-mini jack (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-VL1 AC Adaptor/Charger, Power cord (mains lead), NP-F770 InLiTHIUM Rechargeable Battery Pack, RMT-845 Wireless Remote Commander, CR2025 Lithium Battery (Installed), Component video cable, A/V connecting cable, USB cable, VMC-UAM1 USB Adaptor Cable, Large LCD viewfinder, Large eyecup, ECM-XM1 Microphone, Wind Screen, Handle, Grip, Flash memory unit jack cover, Body cap (attached to the camcorder), Accessory shoe plate, DK-415 Connecting cord, CMU2.0 Application Software (CD-ROM), Manuals for Interchangeable Lens Digital HD Video Camera Recorder (CD-ROM), Operating Guide, SEL18200 Zoom lens (supplied with NEX-FS100UK), Lens hood (supplied with NEX-FS100UK), Front lens cap/rear lens cap (attached to the lens)(supplied with NEX-FS100UK)		

* 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.

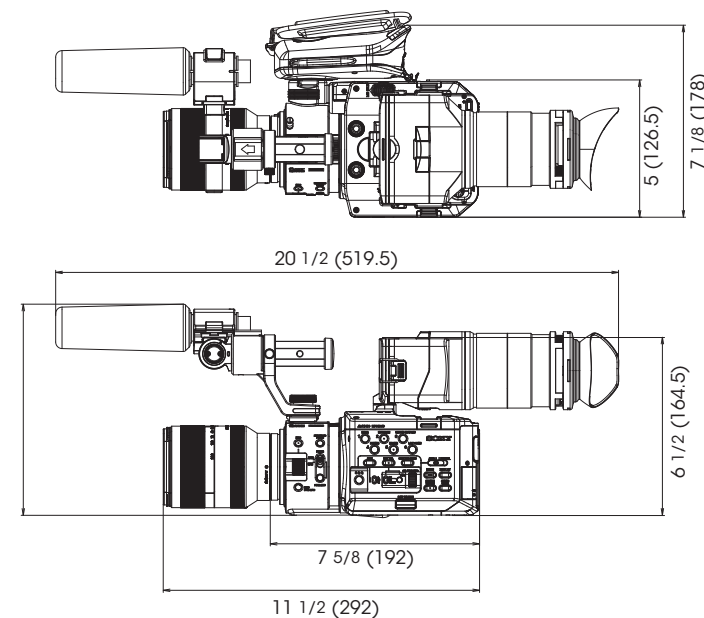
** 1.5 lx (w/ supplied lens: auto gain, auto iris, 1/30 shutter speed)

*** Class 4 or higher

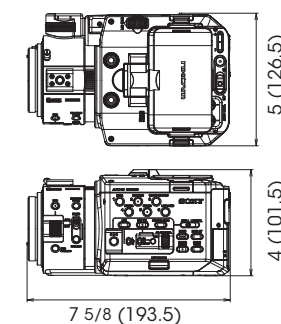
Dimensions

Unit: inches (mm)

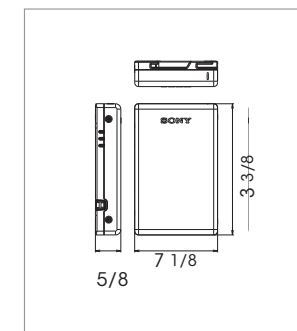
NEX-FS100U



Body only



HXR-FMU128



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