NEX-FS700
Full-HD Super Slow Motion NXCAM Camcorder

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New Exmor™ Super35 CMOS Sensor Expands Sony's NXCAM Line-up to Create a Beautiful Super Slow Motion World !

Sony is pushing the creative boundaries once more with the new NEX-FS700 Full-HD Super Slow Motion NXCAM camcorder, the latest in Sony's line-up of NXCAM interchangeable E-mount camcorders. Its new 11.6M Exmor Super35 CMOS sensor delivers full-HD quality motion pictures at a maximum of 240 frames per second (fps). This camcorder also features a range of capabilities including built-in ND filters, 3G HD-SDI output, and shooting support functions. Additionally, the NEX-FS700 offers several creative options, shooting styles, and an enhanced ergonomic design to realize content-creation flexibility.

NXCAM   AVCHD Progressive   MPEG2 SD   Exmor Super35 CMOS   MEMORY STICK   SDXC

Full-HD 10x Super Slow Motion
240 fps in 1920 x 1080 High Speed Shooting

Thanks to the high-speed image data reading characteristics of the new Exmor Super35 CMOS sensor, the NEX-FS700 can capture full-HD images (1920 x 1080) at 120 or 240 fps of burst recording in 60Hz shooting mode. Using playback at 24 fps, the camcorder can simply and beautifully realize a maximum quality of full-HD 10x super slow motion pictures. For very high-speed shooting, you can choose 480- and 960-fps recording at a reduced resolution, widening your creative options.

As this table shows, the recording time depends on the frame rate.

Frame rate (60 Hz)	120 fps	240 fps	480 fps	960 fps
Recording time	16 sec	8 sec	9 sec	19 sec
Frame rate (50 Hz)	100 fps	200 fps	400 fps	800 fps
Recording time	19 sec	9 sec	12 sec	23 sec

The high sensitivity and the low-noise shooting capability of the NEX-FS700 make high-speed shooting more convenient – you won't need additional, large-scale equipment in various shooting environments.
The NEX-FS700 also enables Full HD (1920 × 1080) progressive slow and quick motion.
Frame rates are selectable from 60fps, 30fps, 15fps, 8fps, 4fps, 2fps and 1fps in 60 Hz shooting, 50fps, 25fps, 12fps, 6fps, 3fps, 2fps and 1fps in 50 Hz shooting.

Slow Motion Mechanism
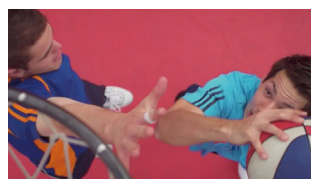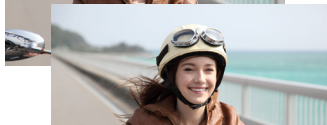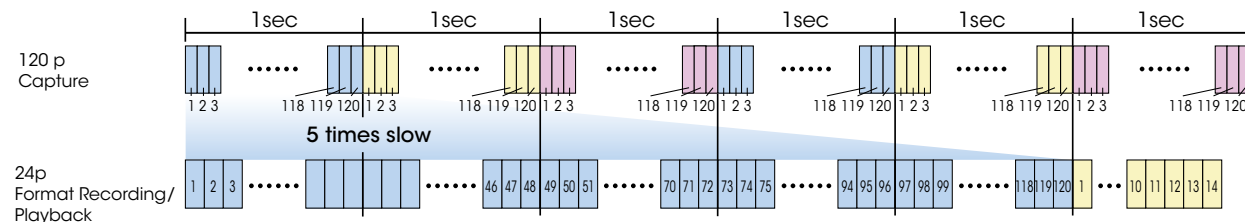
New 4K Exmor Super35 CMOS Sensor
High Speed Shooting, High Resolution and High Sensitivity

The NEX-FS700 is equipped with a newly developed 11.6M pixel Exmor Super35 CMOS sensor. This has a total of 4352 x 2662 pixels, and provides a future capability of 4K-size (4096 x 2160) motion picture shooting. Based on Exmor technology, this sensor has very high-speed image readout characteristics, such as a 240 fps reading in full-HD quality (1920 x 1080). Additionally, it has over 11M pixels in total, and the Exmor Super35 CMOS sensor realizes high sensitivity and a high signal-to-noise ratio (S/N). This means that the NEX-FS700 can shoot in minimum illumination (as low as 0.28[*1] lux).

*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-FS700K enables shooting in illumination as low as 1.5 lux when using a fixed shutter speed of 1/30, auto gain, and auto iris.
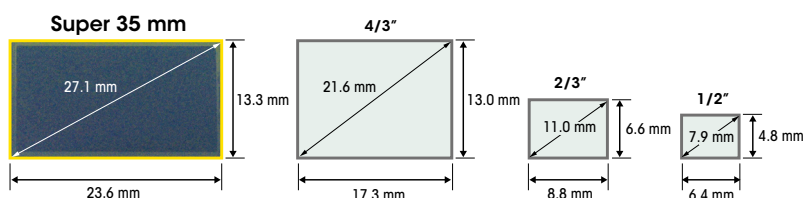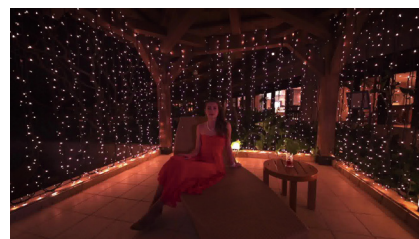

Sensitivity

"Exmor" Super35 CMOS Sensor

Total pixels	Approx. 11.6M
Effective pixels of in moving shooting (16:9)	Approx. 8.3M
Effective pixels of in still picture shooting (16:9)	Approx. 8.4M
Effective pixels of in still picture shooting (3:2)	Approx. 7.1M
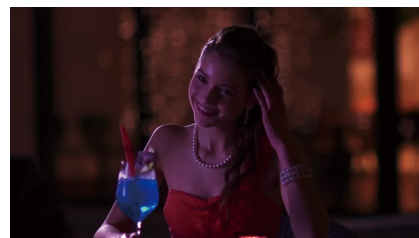
Depth of Field

Interchangeable Lenses
E-Mount Interchangeable Lens System

The NEX-FS700 features Sony's E-mount Interchangeable Lens System. This accommodates the Super35mm-size sensor and is ideal for motion picture shooting because the mechanism is compact and silent. With this lens system, the camcorder can realize auto exposure and SteadyShot image stabilization during motion picture shooting.

Sony's E-mount interchangeable lenses let you enjoy a level of creative freedom with legacy and current camcorders. All of these lenses feature precision-crafted optics with aspherical glass elements for compact high performance, and a circular iris mechanism for smooth background defocusing. The SEL18200 (E 18–200 mm F3.5–6.3 OSS) lens supplied with the NEX-FS700K boasts 11x zoom power, a quiet AF motor for silent recording, and Optical SteadyShot™ image stabilization with an advanced Active mode that lets you take steady handheld shots while walking around.

Thanks to the short 18 mm flange-back distance of E-mount interchangeable lenses, using a mount adaptor allows shooting with a wide range of existing lens resources. For example, with the optional A-mount adaptor, you can take advantage of the many available A-mount lenses. Sony's LA-EA2 A-mount lens adaptor allows you to use the wide range of high-quality alpha lenses and take advantage of the auto focus function for quicker and more convenient operation.
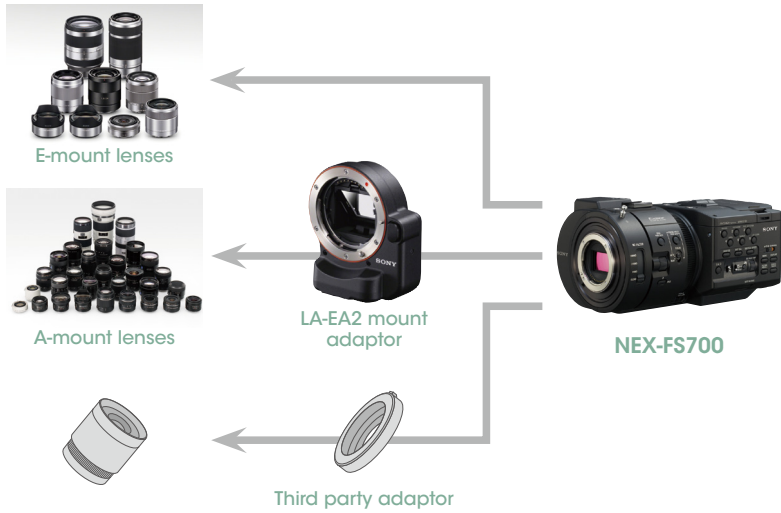
E-mount lens on
the NEX-FS700

A-mount lens with
the LA-EA2 adaptor

Another lens with
a third party adaptor

E-mount lenses

A-mount lenses

LA-EA2 mount adaptor

NEX-FS700

Third party adaptor

Mount Adaptor LA-EA2 Compatible

The NEX-FS700 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
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.

Translucent
Mirror Technology™

Full-time Continuous AF
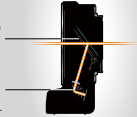
Modular Design

A New Design Concept Provides Flexibility to Build Up New Shooting Styles.

The NEX-FS700 has a refined ergonomic design with a robust detachable handle and an adjustable-angle grip. There are also 1/4-inch and 3/8-inch screw holes on both the top and the bottom of the camera body for mounting various peripheral devices and building various kinds of shooting styles to meet your particular needs. Additionally, the camcorder body is equipped with a tape-measure hook and an image sensor position index.

Though every switch can be accessed directly, the NEX-FS700 is equipped with a hold switch on the lower side of its body to protect inadvertent setting changes during shooting.

Still Picture Recording

The NEX-FS700 can capture high-quality 8.3M still images with beautiful shallow depth-of-field, thanks to the Exmor Super35 CMOS sensor. The aspect ratio of the still image is selectable from 16:9 to 3:2. This camcorder also includes a face detection function and auto focus, to help ensure subjects are always kept in focus.

Built-in ND Filters

With its built-in, ultra-thin ND filters, the NEX-FS700 offers exceptional shallow depth-of-field on highlights. This means you can expand your shooting styles in every different shooting situation, without requiring external ND filter equipment. The newly designed ND filter wheel that rotates across the sensor like a turret. The wheel includes positions for Clear, 1/4 (2 Stop), 1/16 (4 Stop), and 1/64 (6 Stop).

3G HD-SDI and HDMI Output

The camcorder's 3G HD-SDI output enables easy integration with the highest-quality recording formats. The output signal is the same format as the recording mode selected on the NEX-FS700. You can choose HDMI output for embedded timecode for 4:2:2 uncompressed signals. Both 3G HD-SDI and HDMI are useful for recording with an external backup recorder, and both output the signal simultaneously.

Shooting Mode Select Button

Built-in ND Filters   Hold

3G HD-SDI   HDMI

Photo   IRIS Push Auto

Zoom Lever

Expanded Focus

Rosset Shape Engagement

Safe, Long-duration Recording in a One-piece Body
Hybrid Recording

Recording to the directly mountable HXR-FMU128 Flash Memory unit allows continuous recording for over 10 hours without changing the recording media. Simultaneous recording using a memory card and the HXR-FMU128 is also possible for secure backup when shooting footage that cannot be re-taken.

Note: HD footage 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.

Memory Stick PRO Duo™

SD/SDHC/SDXC Memory Card

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.
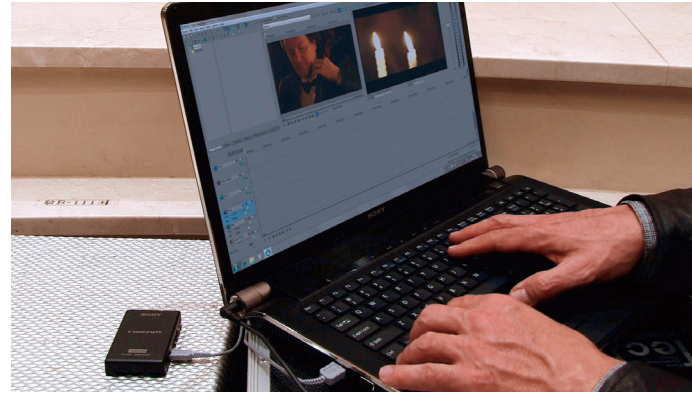
HXR-FMU128 slot

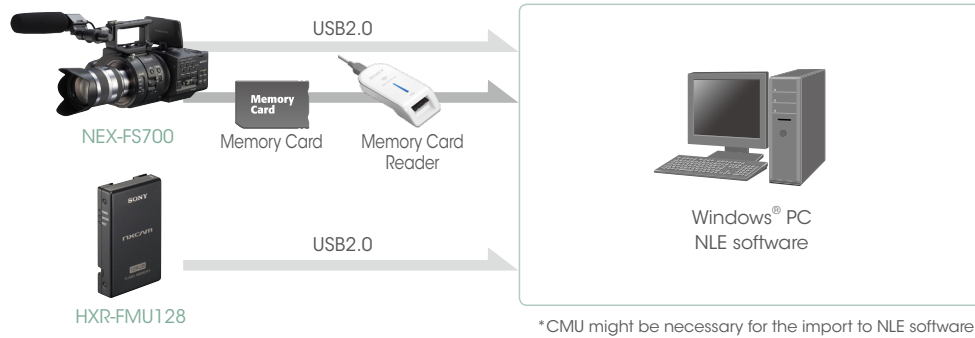Memory Card slot

Editing Workflow
NXCAM Recording Format

Like other NXCAM Series camcorders, the NEX-FS700 uses the AVCHD format to enable stable operation using the same NXCAM workflow. AVCHD version 2.0 includes the shooting footage with a maximum frame rate of 1920 x 1080/60p (28 Mbps) for even higher-quality recording. For more flexibility, the MPEG-2 for SD recording format is also available.
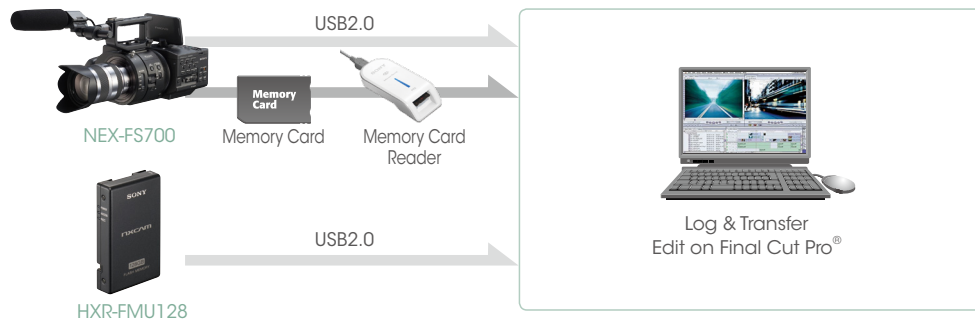
For Windows® users
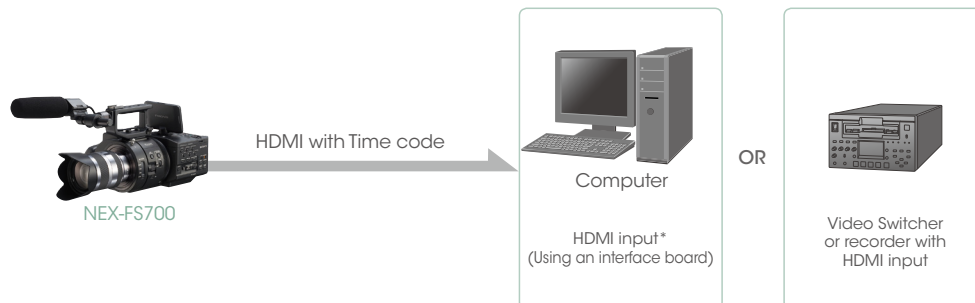**Use Content Management Utility Software to ingest**

NEX-FS700 — USB2.0 → Windows® PC NLE software

Memory Card / Memory Card Reader — USB2.0

HXR-FMU128 — USB2.0 → Windows® PC NLE software

*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-FS700 — USB2.0 → Log & Transfer Edit on Final Cut Pro®

Memory Card / Memory Card Reader — USB2.0

HXR-FMU128 — USB2.0 → Log & Transfer Edit on Final Cut Pro®

Utilizing HDMI output

NEX-FS700 — 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

Shooting Support Functions
## Convenient Features for Contents Creation

Selectable Magnification and Positioning of Expanded Focus

The camcorder has expanded focus improvement which allows for 4x and 8x magnification and provides a moveable area of expansion for easy focusing with shallow depth-of-field.

Focus Transition

When using E-mount lens, a focus transition function is available. You can memorize the two focusing positions by assigning setting buttons to each. After the two focusing position have been set, push the executing button and a smooth focus transition is realized automatically. You can also set the start time and transition duration time.
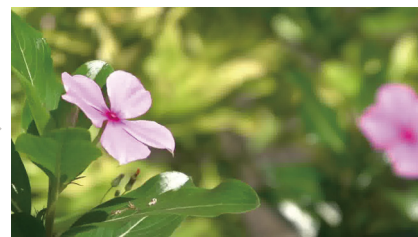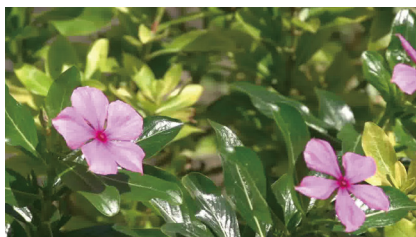
Face Detection in Auto Focus

In auto focus mode, the face detection function is useful for getting sharp focus continuously. When there are several faces in the same frame, you can set which face is the priority to keep in sharp focus.

Camera Profile Settings Storage on Memory Card

Up to 99 camera-profile settings can be stored, allowing rapid adaptation to multiple shooting environments without time wasted on adjusting parameters. Settings are also easily shared in multi-camera productions.

Marker Indication

Several types of marker help with shooting. Center, aspect ratio, safety zone, guide frame, and other markers can be displayed on the LCD.
For aspect ratio indication, seven types of ratio marker are available.
Moreover, you can select the units of measure: meter or feet, dB or ISO, and – for shutter speed – degree or second.

Switchable 50-Hz and 60-Hz Shooting

The NEX-FS700 is switchable between 50 Hz and 60 Hz to allow 24 p shooting in PAL areas, and to ensure no PAL/NTSC limitations.
Below table shows available recording frame rate.

Recording Frame rate

HD	PS (28Mbps) 1920 x 1080/60p, 50p
	FX (24Mbps) 1920 x 1080/60i, 50i, 30p, 25p, 24p 1280 x 720 /60p, 50p
	FH (17Mbps) 1920 x 1080/60i, 50i, 30p, 25p, 24p 1280 x 720 /60p, 50p
	HQ (9Mbps) 1440 x 1080/60i, 50i
	LP (5Mbps) 1440 x 1080/60i, 50i
SD	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.

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)
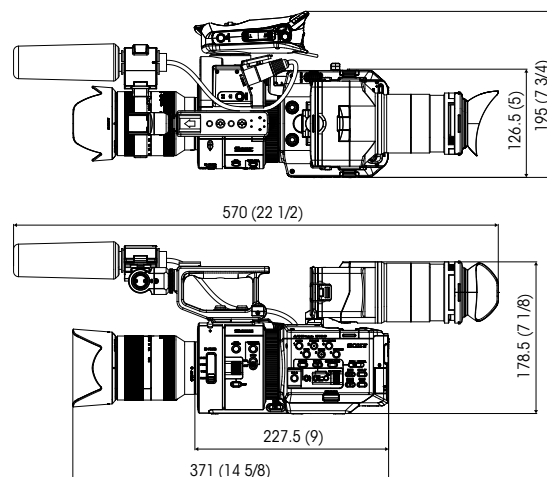SD/SDHC Memory Card

Specifications

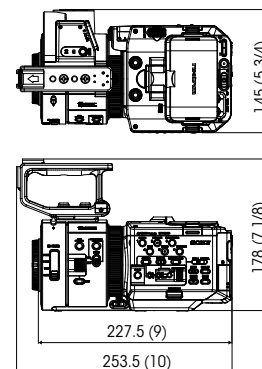|	NEX-FS700
Camera	
Imager	Exmor Super35 CMOS sensor
Number of pixels	Total pixels approx. 11.6M
	Effective pixels in movie shooting (16:9) approx. 8.3M
	Effective pixels in still picture shooting (16:9) approx. 8.4M
	(3:2) approx. 7.1M
Built-in ND filters	Clear, 1/4, 1/16, 1/64
Color temperature	AUTO, ONE PUSH AB, INDOOR (3200K),
	OUTDOOR (5800K±7 positions),
	MANU WB TEMP (2300K~15000K, 100K step)
Zoom lens (supplied with NEX-FS700K)	
SEL18200	Approx. 11x zoom (Optical)
E mount Lens	f=18~200 mm, 35 mm equivalent 30.6~340 mm (16:9),
	34.2~380 mm (3:2) F3.5~6.3
	Filter diameter 67 mm Optical Steady Shot installed
Camera system	
Recording format	
Video recording format	HD MPEG-4 AVC/H.264 AVCHD Ver.2.0
	SD MPEG-2 PS
Audio recording format	Linear PCM 2ch (48kHz 16-bits) (in HD)
	Dolby Digital 2ch (48 kHz 16-bits)
Recording mode (Recording bit rate is the total of video and audio)*	
HD	PS max 28 Mbps, 1920 × 1080/60p, 50p, 16:9
	FX max 24 Mbps, 1920 × 1080/60i, 50i, 30p, 25p, 24p, 16:9
	1280 × 720/60p, 50p, 16:9
	FH approx. 17 Mbps (ave), 1920 × 1080/60i, 50i, 30p, 25p, 24p, 16:9
	1280 × 720/60p, 50p, 16:9
	HQ approx. 9 Mbps (ave), 1440 × 1080/60i, 50i, 16:9
	LP approx. 5 Mbps (ave), 1440 × 1080/60i, 50i, 16:9
SD	HQ approx. 9 Mbps (ave), 720 × 480/60i, 720 × 576/50i, 16:9, 4:3
Recording media	Flash Memory Unit (HXR-FMU128)
	MS PRO Duo (Mark2 only)
	MS PRO-HG Duo
	SD/SDHC/SDXC Class4 and higher
Input/output	
Memory card slot	MS PRO Duo, SD/SDHC/SDXC compatible ×1
3G HD-SDI OUT	BNC connecter ×1
HDMI OUT	HDMI connecter (type A) ×1
COMPONENTOUT	mini D terminal ×1
VIDEO OUT	RCA Pin ×1
AUDIO OUT	RCA Pin ×2
Headphone jack	Stereo mini jack (ø3.5 mm) ×1
USB jack	Mini-AB ×1
AUDIO INPUT 1/INPUT 2	XLR 3-pin (Female) ×2, LINE/MIC/MIC +48V selectable
Remote	Stereo mini-mini jack (ø2.5 mm) ×1
LCD screen	
Screen size	8.8 cm (3.5type, 16:9)
Total dots (H × W)	Approx. 921000 dots (1,920 × 480)
General	
Power supply	DC7.2 V (Battery Pack)
	DC7.6 V (AC-DC adaptor)
Power consumption	9.6 W (60i), 8.8 W (50i)
Operating temperature	0 ~ 40°C
Storage temperature	−20 ~ +60°C
Dimensions (W × H × D)	145.0 mm x 178.5 mm x 235.5 mm (including protrusions)
Body mass	1,680 g (3 lb 11 oz)
Total mass in recording	3,060 g (6 lb 13 oz)
	(Mass including SEL18200 [optional], Battery [NP-F770],
	VF w/ large eyecup, handle, ECM-XM1, grip)
Supplied accessories	
	AC Adaptor (AC-PW10), Charger (AC-VL1), Rechargeable Battery Pack (NP-F770), Microphone (ECM-XM1), Remote Commander (RMT-845), Component video cable, A/V connecting cable, USB cable, USB Adaptor Cable (VMC-UAM1), Large eyecup, Lens hood with lens cover (Lens cap & Lens hood), Lithium Battery (CR2025), Clock Lithium (Installed), Application Software (CD-ROM) (CMU2.1)

* Due to variable bit rate, 28Mbps is the maximum bit rate for HD PS mode, and 24Mbps for HD FX mode.
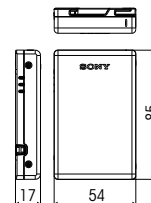 The average bit rate is stated for FH, HQ and LP modes.

Dimensions

NEX-FS700

570 (22 1/2)
126.5 (5)
195 (7 3/4)
178.5 (7 1/8)
227.5 (9)
371 (14 5/8)

Body only

145 (5 3/4)
178 (7 1/8)
227.5 (9)
253.5 (10)

HXR-FMU128

SONY
85
17
54

Unit: mm (inches)