PXW-FX9/PXW-FX9K
Sony’s full-frame 6K sensor camera with Fast Hybrid AF, Dual Base ISO and S-Cinetone™ colour science.
OVERVIEW

Full-frame creativity
Realise beautiful 4K imagery with the creative freedom made possible by oversampling a huge high resolution full-frame sensor. Capture every detail from the scene with shallow depth of field and stunning bokeh with a truly cinematic look. 15+ stops of dynamic range and Dual Base ISO enable capture of every nuance, from subtle shadow detail to specular highlights and with an immaculate colour palette.

Capturing the impossible
Make sure your story's always clear with enhanced Fast Hybrid AF that tracks your subject with unprecedented speed, smoothness and precision. Its impact is transformative for premium documentary, commercials and event applications.

Shoot in comfort, expand your horizons
FX9 revolutionises full-frame cinematography with peerless ergonomics and advanced technology for on-the-go shooting. The world's first full-frame electronic variable ND filter* transforms possibilities for shooting in variable lighting conditions. Built-in Wi-Fi and 12G-SDI support advanced workflows while the optional XDCA-FX9 extension unit further expands the operational possibilities of the PXW-FX9.

*As of September 2019

FEATURES

6K Full-Frame “Exmor R” sensor for stunning picture quality
The camera's full-frame 6K sensor provides superb recording in DCI 4K*. Ultra HD and HD resolutions. Powerful image processing with debayering and oversampling ensures image quality beyond the limits of conventional Super 35mm sensors. The back-illuminated CMOS image sensor also uses Sony's Exmor R technology for improved sensitivity and noise reduction. Compared to a 4K Super 35mm sensor, the FX9's 6K sensor has over twice the surface area while providing a wider angle of view and shallower depth of field.

4096 x 2160 at 17:9 recording

Phenomenal 15+ stops dynamic range for limitless expression
FX9 offers an exceptional 15+ stops of dynamic range - beyond the normal range of human perception - allowing for unprecedented creative freedom in colour grading and post. Camera operators can concentrate on framing the scene they want while relying upon the FX9 to capture every nuance and detail using either 4K 4:2:2 10-bit internal recording or 16-bit RAW external recording. In grading, colourists can find colour and detail beyond the normal viewing abilities of the camera operator to create a final image that exactly portrays the mood of the scene.

Dual Base ISO for stunning images in any light
FX9 features a base sensitivity of ISO 800, providing the optimal dynamic range for typical documentary applications such as shooting outside or in brightly lit interiors. A secondary high base sensitivity of ISO 4000 excels in low light conditions such as early morning and evening shoots while maintaining superb image quality. ISO 4000 is also ideal whenever you're using slow lenses. Combining Dual Base ISO* with the camera’s electronic variable ND Filter provides superb creative control in almost any shooting environment, with truly next generation responsiveness to changing conditions.

*ISO 800 and ISO 4000 are used in S-Log3, Cine EI mode.
Cinematic colour science with S-Cinetone™

S-Cinetone is the default look of FX9 that’s tuned to meet the requirements of today’s content creators with rich mid-range colours, alluring facial tones and a softer tonal look – developed with the same expertise as Sony’s world-leading VENICE digital cinematography camera. S-Cinetone means that straight out of the camera your content looks fresh and vivid, with subjects that really stand out while retaining plenty of latitude in post production thanks to the high performance full-frame image sensor.

Selectable frame rates in both full-frame & Super 35

Choose your desired frame-rate from 1fps up to 180fps** for impressive quick and slow-motion footage. FX9 creates an immersive image with a wide angle look and shallower depth of field provided by its full-frame sensor in combination with quick and slow-motion. Engage your audience with this new creative look. FX9 also offers a Quality priority setting** that maximises full HD slow motion image quality with advanced oversampling technology.

* Up to 120fps with Ver1.0
** In Full-frame scanning mode: selectable at 1-30fps / In S35 scanning mode: selectable at 1-60fps

Catch the action with enhanced Fast Hybrid AF

Effortlessly track fast moving subjects with pin-sharp focus, even when using wide lens aperture settings to maintain a shallow depth of field with the camera’s full-frame sensor. Developed by Sony’s α camera engineers, enhanced Fast Hybrid AF combines phase detection AF for fast, accurate subject tracking with contrast AF for exceptional focus accuracy. In addition, Face Detection intelligently recognises and locks on to human faces.

The dedicated 561-point phase detection AF sensor covers approximately 94% of the whole image area width and 96% of height, allowing consistently accurate, responsive AF tracking, even with fast-moving subjects.

Customisable AF settings

FX9’s comprehensive autofocus settings provide the creative flexibility to integrate with any project. 7-level AF transition speeds from Fast - switching between subjects as quickly as possible – to Slow, where speed is reduced to fit a more measured shooting style, such as a historical TV drama.

S-level AF subject shift sensitivity ranges from Locked-on – ignoring other moving subjects in the frame – to Responsive that switches focus from one subject to another – ideal for snapping between race cars as they speed by.

Autofocus with all E-mount lenses

Experience smooth, responsive autofocus with every E-mount lens, including Sony’s new Cinema Lens Series with premium optical performance and operability for demanding cinematography applications. Advanced E-mount lever lock operation allows quick, easy lens exchange in the field, plus added stability and security with large lenses.
World’s first electronic variable ND filter for full-frame sensor

Realise even greater creative control with Sony’s unique built-in electronic variable neutral density (ND) filter – a world first* for professional full-frame camcorders. Set to Auto, or adjust filter density manually in smooth increments from 1/4 to 1/128 as you shoot, for perfectly exposed images without affecting depth of field as lighting conditions change. Use higher density settings with a slower shutter speed for breathtaking artistic effects.

*As of September 2019

Proven ergonomics & accessory compatibility

FX9 chassis is the latest refinement of the revolutionary FS7 design, so you can be sure it will feel great to shoot with from almost any position, while also offering compatibility with a large proportion of the countless FS7 accessories* including U-series batteries, chargers, E-mount lenses, plus arms and lens adapters.*

The control arm is easily adjusted without tools, so FX9 adapts effortlessly to your physique and preferred shooting style – handheld, at waist level or shoulder mounted.

The smart grip features an updated design, more compact than before while still holding all the key shooting controls, allowing you to concentrate on the scene without distractions. FX9 also introduces a micro USB interface for improved responsiveness and support for a wrist strap.

* BP-U30 and XDCA-FS7 are not compatible with the FX9.

16-bit RAW capability†

16-bit RAW offers a phenomenal increase in post-production creative freedom to fully exploit FX9’s exceptional 15+ stops of dynamic range. FX9 supports export of 16-bit RAW at either 4K or 2K resolution using the optional XDCA-FX9 extension unit with a single BNC cable connection to compatible external RAW recorders.

* Limited to 10-bit recording during 120fps high frame rate shooting within Super35 image circle.
**Compatible recorders to be announced

Stable, shake-free handheld footage

Advanced image stabilisation information means even handheld footage can be transformed with Sony Catalyst Browse/Catalyst Prepare software* in post-production to look as smooth as if it were shot with a gimbal. Unlike in-camera or lens stabilisation, meta data generated by FX9’s built-in gyro allows you to creatively choose the balance between the level of shake-compensation and the resolution of trimmed 4K imagery. This feature is also compatible with any E-mount lens and allows for far faster processing than conventional NLE stabilisation workflows**.

* Catalyst Browse/Catalyst Prepare Ver.2019.2 is required.
** Resolution and angle of view reduced compared to native footage.

Shoot

PXW-FX9 with any E-mount lens

with Image stabilization information

Edit

CATALYST PREPARE
CATALYST BROWSE

†16-bit RAW capability
Optimised for professional cinematography applications, the light, compact, SELP28135G powered zoom lens is an ideal complement for the full frame imaging possibilities of the FX9.

- Circular aperture with full-frame image circle format
- Motorised servo zoom for smooth, precise zoom moves
- Independent three rings for focus, zoom and iris with smooth, silent drive

You have the choice of purchasing the FX9 on its own (PXW-FX9) or with SELP28135G lens (PXW-FX9K).

Further extend the capabilities of the FX9 with the optional XDCA-FX9 extension unit that optimises camera weight distribution and ergonomics for comfortable shoulder-style shooting – ideal for ENG (Electronic News Gathering) and documentary applications. The extension unit also adds advanced networking for streaming/file transfers and Timecode for multi-camera shoots.

FX9 offers superb audio capabilities with independent control dials for each channel. In applications such as interview, 4-channel audio recording enables simultaneous use of an external microphone for recording ambient sounds, the built-in microphone for voice memos by the operator, and two optional UWP Series wireless microphones for voice of interviewer and interviewee. In addition, using the optional XLR-K3M, XLR-K2M or XLR-K1M XLR adapter – with two extra XLR inputs – allows even more devices to be connected.

Sony’s flexible Multi-Interface (MI) Shoe provides power, signal connections and coordinated on/off switching with compatible Sony accessories. For example, you can connect and control Sony UWP-D wireless microphone systems (optional).

The FX9 features internal 5GHz* and 2.4GHz Wi-Fi capability as standard. Just switch on and log onto your preferred network to enable a host of advanced wireless production features:

- Content Browser Mobile™ application can be downloaded from Google Play Store or App Store. Wi-Fi operation cannot be guaranteed with all smartphones and tablet computers.

*5GHz support dependent on country/regional regulation. ** Content Browser Mobile™ application can be downloaded from Google Play Store or App Store. Wi-Fi operation cannot be guaranteed with all smartphones and tablet computers.
Related Accessories

**XDCA-FX9**
Extension Unit for FX9 camera

- **Enhanced operability with advanced networking, wireless audio† and RAW output†**

  Connecting directly to the PXW-FX9 camera with no cables needed, the XDCA-FX9 extension unit provides convenient additional features to enhance shooting convenience and flexibility. The XDCA-FX9 allows easy fitting of BP-GL and BP-FL series batteries, extending camera operating times during the most demanding shoots. Attaching quickly and easily to the rear of the PXW-FX9 via a multi pin connector, the XDCA-FX9 provides advanced networking capabilities for streaming or file transfer via Ethernet or dual link cellular connection. It also allows the easy addition of high quality wireless audio† via a wireless receiver slot. Additional output connectors including timecode, and D-tap are also provided. 16-bit RAW signals can be recorded via XDCA-FX9 RAW output† via XDA-FX9 RAW output by using a third-party external recorder.

**FE C 16-35mm T3.1 G SELC1635G**

FE C 16-35mm T3.1 G Cinema Lens Series full-frame wide angle zoom with advanced optical performance, operability and intelligent shooting functions

**OVERVIEW**

- **Cinematic images with beautiful bokeh**

  Experience beautiful cinematic images, with excellent corner-to-corner resolution and consistent T3.1 (F2.8) large aperture from wide to telephoto for stunning background bokeh effects.

- **Responsive manual control for content creators**

  Adjust focus, zoom and iris with smooth, consistent precision. Enjoy fine control over realising your artistic vision with large-format sensor camera of the FX9.

- **Shoot with extra intelligence**

  Enjoy smart functions unique to Sony’s E-mount lens system, including AF (autofocus) support, servo zoom and zoom/iris/focus control from your camera, remote or smartphone, allowing cinematographers to concentrate on composition and focus without touching lens rings.*

  * Requires compatible cameras, remote controllers, smartphones and mobile apps.
UNLIMITED EXPRESSION FOR CONTENT CREATORS

Explore new artistic possibilities and precise creative control with Cinema Lens Series – the refined expression of Sony’s technological expertise for uncompromising content creators. This wide angle zoom lens is optimised for digital cinematography, documentary production and other premium content produced with full-frame camera of the FX9.

ADVANCED OPTICAL DESIGN

Two XA (Extreme Aspherical) lens elements and three aspheric elements minimise distortion, curvature and astigmatism. Two ED (Extra-low Dispersion) glass elements suppress colour distortion, while an advanced nano AR (Anti Reflection) coating on optical surfaces drastically reduces flare and ghosting. The floating focus mechanism is optimised for motion picture applications, ensuring outstanding resolution and very low distortion at any shooting distance.

SMOOTH, NATURAL BOKEH

An ideal partner for the full-frame sensor of Sony’s acclaimed FX9 camera, the consistent T3.1 (F2.8) large aperture and circular 11-blade aperture of the SELC1635G lets professional cinematographers enjoy shallow depth of field and the creation of beautifully smooth bokeh (background defocus) effects.

PRECISE, RESPONSIVE MANUAL FOCUS

Linear Response MF enables smooth, lag-free manual focus, allowing DoPs and camera operators to adjust focus accurately and intuitively. The focus ring offers a 120deg large angle of rotation for finer control, with distance scale markers for consistent focus reset during multiple takes. For complete creative control to suit any user including photographers who are used to shooting stills, SELC1635G also offers reversible zoom ring rotation, modes switchable between AF/MF and Full manual, and the option to engage ‘click stops’, providing tactile feedback for precise adjustments of the aperture ring. When the click stops are disengaged, the aperture ring moves smoothly and quietly.

MORE OPTIONS FOR CONTENT CREATORS

The SELC1635G has a 0.8mm pitch gear and 114mm lens diameter, which is regarded as the industry standard in cinematography, providing compatibility with a wide range of accessories include matte boxes and follow focus systems.

DETACHABLE SERVO ZOOM

The included servo unit provides comfortable fingertip control for smooth, gradual zooms suitable for a slow moving drama or promotional video. Servo and Manual control are switchable by the button on the lens unit, and while set to servo, you can control zoom via camera’s handle or grip zoom. Also, the servo can be detached if preferred, making the lens lighter and more portable.

FAST, ACCURATE AF AND AE

The SELC1635G fully supports the enhanced Hybrid phase/contrast detection autofocus (AF) and Auto Exposure (AE) capabilities of the FX9 full-frame camera. This breakthrough technology allows you to concentrate on framing while the camera and lens work seamlessly together to maintain focus on subjects with shallow depth of field.
### SPECIFICATIONS

#### General

**Dimensions (W x H x D) [P. W100101]**

- 36 x 22 x 29 mm (body without projections)
- 60 x 35 x 41 mm (body with protrusions)

**Power Requirements**

- 12 V DC

**Power Consumption**

- Approx. 3.4 W (while recording XAVC-I/L HDmode)
- Approx. 2.0 W (while recording XAVC-I L QFHD mode)

**Operating Temperature**

- 0°C to 40°C

**Storage Temperature**

- -4°F to +140°F

**Battery Operating Time**

- Approx. 90 minutes

**Dimensions (W x H x D)**

- 146 x 142.5 x 229 mm (body without protrusions)

**Camera Section**

**Recording Format (Video)**

- XAVC-I QFHD 23.98p mode: VBR, MAX bit rate 240 Mbps, MPEG-4 AVC/H.264
- XAVC-L HD 59.94i/50i mode: VBR, MAX bit rate 25 Mbps, MPEG-4 H.264/AVC
- XAVC-I HD 50i/25p mode: CBG, MAX bit rate 112 Mbps, MPEG-4 AVC/H.264
- XAVC-I HD 59.94p mode: CBG, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-I QFHD 25p mode: VBR, MAX bit rate 250 Mbps, MPEG-4 AVC/H.264
- XAVC-I HD 23.98p mode: CBG, MAX bit rate 89 Mbps, MPEG-4 AVC/H.264
- XAVC-I HD 50p mode: CBG, MAX bit rate 223 Mbps, MPEG-4 AVC/H.264
- XAVC-L QFHD 29.97p/25p/23.98p mode: VBR, MAX bit rate 100 Mbps, MPEG-2 HD422 mode:1920 x 1080/59.94i, 50i, 29.97P, 23.98P
- XAVC-I QFHD 50p mode: CBG, MAX bit rate 223 Mbps, MPEG-4 AVC/H.264
- XAVC-L HD 50p mode: CBR, MAX bit rate 150 Mbps, MPEG-2 HD422 mode: CBR, MAX bit rate 50 Mbps, MPEG-4 H.264/AVC
- XAVC-I HD 59.94p mode: CBG, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-I QFHD 59.94p mode: CBG, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264

**Recording Format (Audio)**

- XAVC-I HD 25p mode: 1920 x 1080/59.94i, 50
- XAVC-L QFHD 30p/25p/23.98p/59.94p/50p mode: VBR, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-I QFHD 59.94p mode: CBG, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-L QFHD 30p/25p/23.98p/59.94p/50p mode: VBR, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-L QFHD 30p/25p/23.98p/59.94p/50p mode: VBR, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-L QFHD 30p/25p/23.98p/59.94p/50p mode: VBR, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-L QFHD 30p/25p/23.98p/59.94p/50p mode: VBR, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264
- XAVC-L QFHD 30p/25p/23.98p/59.94p/50p mode: VBR, MAX bit rate 222 Mbps, MPEG-4 AVC/H.264

**Built-in Optical Filters**

- S-Log3, S-GAMMA, STD1, STD2, STD3, STD4

**ISO Sensitivity**

- ISO 800/4000 (Cine EI mode, D55 Light source)

**White Balance**

- 3200K, 5600K, 7500K

**Shutter Speed**

- 1/2 to 1/8000 sec

**Gamma Curve**

- [XAVC Long]

**Input/Output**

- **SDI Output**
  - BNC, 3G-SDI, HD-SDI
  - BNC, SDI-3G, SDI-5G
  - BNC, HD-SDI

- **USB**
  - USB device, micro-B (x1)

- **NFC**
  - NFC Forum Type 3 Tag compliant

- **Audio Input**
  - XLR-type 3-pin (F/M) [XAVC Long]

**Lens**

- **Lens Mount**
  - E-mount

**Built-in Microphone**

- Built-in Microphone

**Built-in Microphone**

- Built-in Microphone

**Wi-Fi/NFC**

- **Frequency Band**
  - 2.4GHz band

- **Security**
  - WEP/WPA-PSK/WPA2-PSK

**Supported Format**

- [XAVC Long]

**Supplied Accessories**

- **Battery Pack**
  - BC-U35 battery pack (1)

- **USB Cable**
  - USB cable (1)

**MONITORING**

- **Screen**
  - 8.8 cm (3.5 type)

**Dimensions**

- Approx. 4.4 kg (body only)

根据地区/国家的不同，规格可能会有所变化。

**Dimensions**

- 5.6 kg (body only)

* Depending on country/region regulation

** For India only. Not supplied in other countries

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