



F55 CineAlta 4K the future, ahead of schedule

What happens when top engineers spend years consulting cinematographers and creating breakthroughs in sensors, image processors and recording media? The Sony F55. Here is a camera engineered to reward its owners now and far into the future. The Sony 4K image sensor incorporates a revolutionary electronic global shutter. You get superb dynamic range, the widest color gamut, and pristine image quality whether you shoot in HD, 2K or 4K. With the optional AXS-R5 recorder, you can even make the jump to incredibly precise 16-bit Linear RAW in both 2K and 4K.

CAMERA

Shoot spectacular HD, 2K or 4K

Does a 4K camera make sense in an HD world? Perfect sense. With 8.9 megapixels (effective), Sony's new 4K image sensor enables a single camera to provide gorgeous, super-sampled HD and 2K while preparing you for the 4K future.

- **Shoot, Record, Master and Distribute in stunning 4K.** You're ready for the more than 13,000 movie theaters with Sony Digital Cinema 4K projectors.
- **Shoot, Record and Master in 4K. Distribute in 2K/HD.** Derive your delivery format while preserving the original as a future-proof archive. Your master is ready for future 4K release.
- **Shoot in 4K. Record, Master and Distribute in 2K/HD.** Sony's 4K sensor gives you a gorgeous, super-sampled HD picture with visibly superior texture, color reproduction, detail and high-frequency contrast that ordinary HD cameras cannot touch.

4K/2K RAW recording option

The ultimate capture system would record every nuance of light and shadow from the image sensor, preserving every detail from every pixel for full exploitation in post-production. If you want the maximum flexibility that RAW delivers, Sony's optional AXS-R5 recorder is a remarkable new choice.

- **4K or derived 2K RAW.** Capture RAW at your choice of resolutions: the camera's native 4K or beautiful, derived 2K. RAW recording preserves the greatest latitude for color correction and other post processes.
- **Incredible 16-bit precision.** By design, Sony's 16-bit recording captures more tonal values than the human eye can differentiate. Sony RAW retains 16 times as many Red, Green and Blue gradations as 12-bit RAW and 64 times as many tones per channel as 10-bit recording. Sony 16-bit linear RAW is also the ideal point of entry into the 16-bit linear Academy Color Encoding System (ACES) workflow.
- **Comprehensive production platform.** More than an individual product, the AXS-R5 is the starting point for an efficient workflow. The AXS-R5 records onto sleek, optional AXSM™ memory cards, which are compatible with an affordable optional USB 3.0 reader, the AXS-CR1. Once on a PC, the RAW files can be screened using Sony's free RAW Viewer software.
- **Simultaneous RAW + Onboard SxS recording.** Instead of requiring you to patch together a science project, Sony provides a coordinated "off-line, on-line" workflow with simultaneous recording to internal SxS cards and the optional AXS-R5 RAW recorder. For seamless conforming in post, you get matching time code, start frame, stop frame, file names and other metadata. The camera supports the following RAW + Onboard combinations:
 - 4K/2K RAW + XAVC 2K*/HD
 - 4K/2K RAW + MPEG-2 HD422
 - 2K RAW + XAVC 2K*

* Expected as a future upgrade.

Sony's USB 3.0 card reader, the AXS-CR1.



The future is built in

The Sony F55 is uniquely designed to make economic sense today, with the features you'll need to continue generating value for years to come. Instead of locking you into a single recording system, the camera opens the door to unprecedented versatility. Consider the enormous flexibility of internal recording codecs and the choice of HD, 2K*, QFHD* and 4K resolutions. The camera's 16-bit Linear RAW 4K output enables Sony's optional AXS-R5 recorder to register every nuance of color, contrast and detail from the 4K image sensor—and even record a derived 2K RAW signal. Finally, Sony's planned firmware upgrades are scheduled to bring you even more frame rates, more operating features and more recording options in the months and years to come.

* Expected as a future upgrade

Revolutionary electronic global shutter

The traditional CMOS image sensor uses a “rolling” shutter that can result in images with unwanted distortions like motion skew and flash banding. That can be annoying, especially when shooting visual effects or 3D. Anything but typical, the F55 sensor incorporates electronic global shutter. Rolling shutter distortions aren't minimized, they're completely eliminated.



Motion skew at work. Right-to-left subject motion causes the train's verticals to tilt, even while the foreground fence is unaffected. With Sony's electronic global shutter this effect isn't merely minimized, it's completely eliminated.

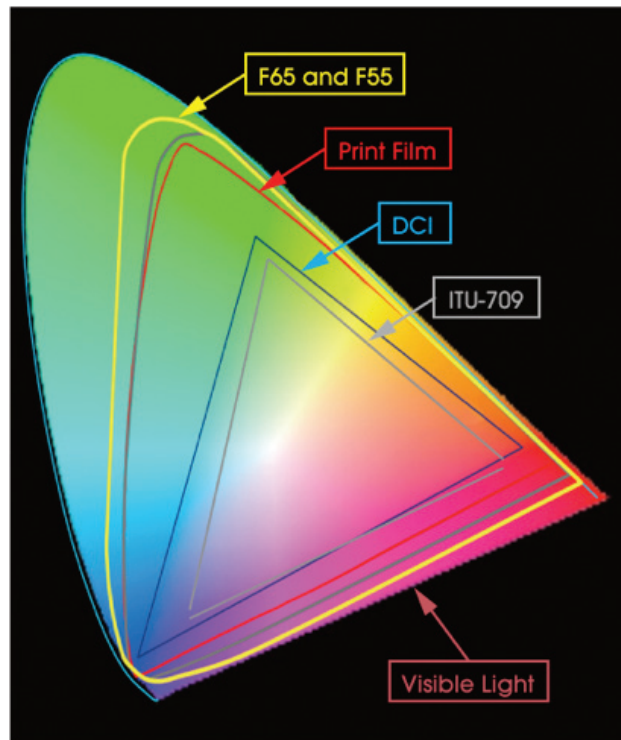
Vast exposure latitude

Cinematographers paint their images with light and shadow. So the ability to render tones from deepest shadows to brightest highlights is a crucial test of any digital camera. The F55 excels, with an impressive 14 stops of exposure latitude, extraordinary low-light sensitivity and extremely low noise in the blacks. The result? Graceful rendering of scene contrast, even in searing sunlight.

Ultra wide color gamut

Sony believes that your camera should not limit your color palette. That's why the F55 incorporates the same advanced color filter array technology as used in Sony's flagship F65, which is equipped with the industry's only 8K sensor.* You get a color gamut that's not only wider than other digital cameras. It's even wider than motion picture print film.

* As of September 2012.



Viewfinders as revolutionary as the camera

It's ironic that with focus so critical, most operators are stuck with viewfinders and on-camera monitors that offer middling contrast and resolution. Sony changes all that with the F55. A new digital interface has given rise to a brilliant new series of viewfinders.

- **Amazing OLED: optional DVF-EL100.** Don't let the small size fool you. This 0.7-inch* viewfinder has the incredible clarity of 1280 x 720 High Definition. And resolution is just the beginning. Thanks to OLED technology, you get superb brightness, contrast and response.
- **Higher resolution, higher contrast: optional DVF-L350.** Take a major step forward in operating with the incredible image of this 3.5-inch* LCD viewfinder. Compared to previous Sony finders, this one has higher resolution (960 x 540) plus ten times the contrast. And the eyepiece flips up for direct monitoring.
- **Full HD: optional DVF-L700.** This compact 7-inch* LCD viewfinder enables high resolution when shooting in 2K and 4K, not to mention pixel-for-pixel 1920 x 1080 representation of your HD images.

* Viewable area, measured diagonally.

Optional shoulder rig

Sony consulted closely with cinematographers on the ergonomics of handheld and shoulder-mounted shooting. One result was the optional Sony shoulder rig, which provides comfortable handheld operation hour after hour. The rig is sturdy, lightweight and features industry-standard rosettes on both sides for quick and easy attachment of third-party hand grips and other accessories.

Modularity and versatility

The F55 is exceptionally small, light and modular, letting you build up the right configuration for each job—or each shot. For example, you can add the optional AXS-R5 RAW recorder whenever you need it. Or go with internal 4K recording whenever size and weight are the highest priority. The time code/genlock connections and XLR audio inputs are built into two modules you can add or remove as needed. Small size is particularly welcome in stereoscopic 3D shooting. The chassis is only slightly wider than a typical PL mount prime lens, perfect for both mirror rigs and side-by-side configurations



The camera is highly modular, a major advantage whenever size and weight are primary concerns.

Choice of recording formats

When it comes to production, one recording mode emphatically does not fit all. That's why the F55 gives you not one, but four useful recording formats. All four are recorded internally, onto Sony's established, affordable SxS media.

System	Color	Bit Depth	Bit Rate at 30 fps	Benefits
MPEG-2 HD	4:2:2	8 bits	50 Mbps	The de facto standard for television production. The 50 Mbps 4:2:2 codec is robust with superb pictures and compact files. The workflow is well established with computationally efficient multi-stream processing and widespread third-party support.
XAVC HD (2K*)	4:2:2	10 bits	100 Mbps	The next generation of H.264/AVC Intra-frame coding, the XAVC format establishes a cost-efficient system for High Frame Rate HD and 4K/60p production. The algorithm supports the high data rates you'll need beyond HD with superb efficiency and beautiful 10-bit pictures. The XAVC format also delivers the superior efficiency of multi-pass encoding, more refined bit allocation based on human visual characteristics and superior multi-generation performance.**
SR Codec*	4:2:2, 4:4:4	10 bits	220, 440 Mbps	As established by the HDCAM-SR system, the SR Codec (MPEG4 SSiP) is already a de facto standard for Hollywood production, post production and program exchange. The F55 will soon* incorporate the same codec that resides on SR tape. Recorded natively as a file, the SR Codec is currently supported by a robust workflow.
XAVC 4K (QFHD*)	4:2:2	10 bits	300 Mbps	4K can be a data challenge, leading to large files and high storage costs. Sony tames the gusher through this brilliant implementation of H.264/AVC Intra-frame encoding. You get a unique combination of exquisite 4K image quality together with reasonably compact files.

* Expected as a future upgrade

** Compared to previous professional AVC Intra-frame only encoding.

High speed shooting at up to 240 fps in 2K

From stunts and explosions to the fall of a single raindrop, high-speed shooting is a powerful storytelling tool.

- **60 fps** out of the box (XAVC HD at launch; XAVC 4K, QFHD and 2K with a planned upgrade)
- **180 fps** with a planned upgrade (XAVC 2K/HD). Unique to this process, there is no line skipping or sensor windowing. So there's no crop factor, no loss in angle of view.
- **240 fps 2K RAW**, with the optional AXS-R5 outboard recorder and a planned upgrade, achieves the highest frame rates most productions will need, while retaining exceptional, 16-bit image quality. This not only exceeds 12-bit RAW with 16 times as many Red, Green and Blue gradations. By design, it exceeds the capabilities of human vision!

High-speed SxS PRO+ media cards

The F55 is a next-generation camera, featuring high-data-rate on-board recording of XAVC 4K today and 180 fps XAVC 2K/HD with a free planned upgrade. This requires next-generation SxS recording media—Sony's 64 and 128 GB* SxS PRO+ memory cards—and a next-generation USB card reader, the SBAC-US20.

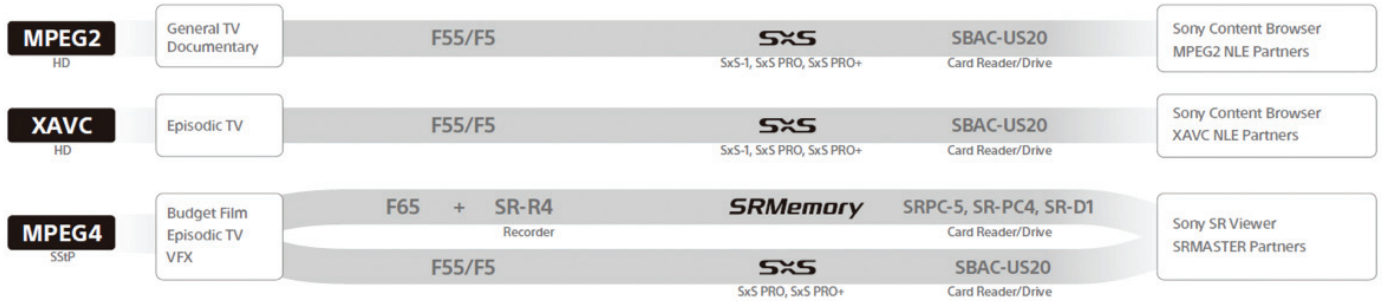
* 1 GB equals one billion bytes, a portion of which is used for data management functions.



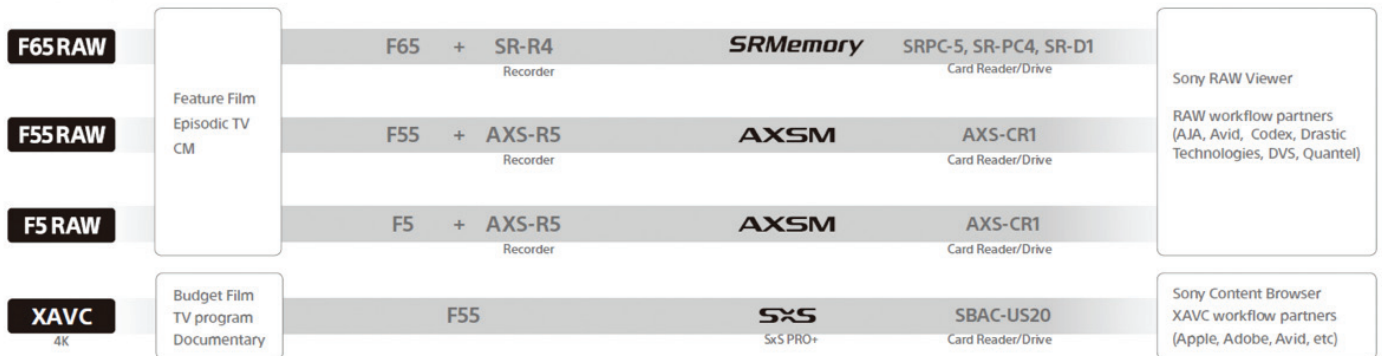
Real world workflows

Sony understands a fundamental truth: working cameras require practical workflows. That's why the F55 is part of a larger production platform that includes affordable media cards, affordable card readers, free RAW Viewer software and compatibility with popular NLEs and finishing tools.

HD Workflow



4K Workflow



Incredible flexibility: PL-mount, FZ-mount and still lenses

Some Super 35 digital motion picture cameras are dedicated to PL-mount cine lenses. Other cameras tap the growing trend of shooting with affordable still lenses. The F55 was designed from the ground up to accommodate both.

- **PL-Mount Lenses.** Take advantage of acclaimed cine optics from Angénieux®, Canon®, Carl Zeiss®, Cooke®, FUJIFILM®, Leica® and more.
- **Still Lenses.** Slip off the supplied PL-mount adaptor to reveal the native FZ mount with 18 mm flange focal distance. It's perfect for accepting commercially available adaptors for still lenses, including Canon® EF, Canon FD, Nikon® DX, Nikon G, Leica® M and even 2/3-inch broadcast B4 lenses.
- **FZ-Mount Lenses.** There's also Sony's game-changing FZ-mount auto focus servo zoom: the SCL-Z18X140.



Enjoy the convenience of auto focus, auto iris, image stabilization and servo zoom in Super 35 cinematography with Sony's SCL-Z18X140 14x zoom.

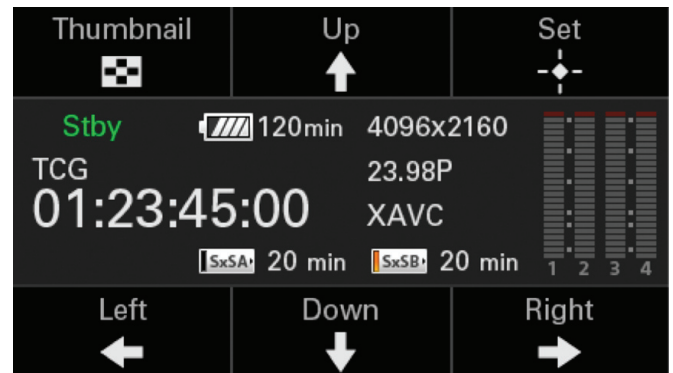
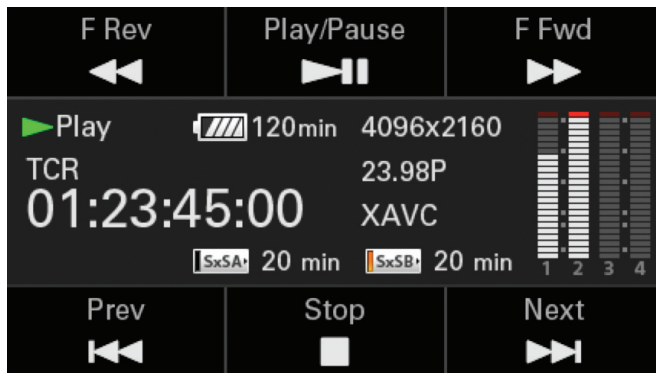
Sony CineAlta PL-mount prime lenses: A new generation

With the F55, Sony introduces our second generation of cost-effective PL mount prime lenses, featuring a dramatic improvement in build quality. Thanks to refined glass, all are certified for 4K capture, while minimizing geometric distortion, vignetting and breathing. A 9-blade iris delivers beautiful bokeh. The focus rings rotate 240°. The series includes focal lengths of 20, 25, 35, 50, 85 and 135 mm. For easy lens changes, all have the same T2.0 aperture, the same external diameter, matte box diameter, and gear locations for follow focus and aperture. All are the same size except for the 135 mm.



More than just a pretty interface

Carefully designed with significant input from cinematographers, the F55 provides an incredibly rich range of controls. And the interface is nicely intuitive. Instead of diving through menus, you get direct, one-touch access to key shooting parameters including frame rate, shutter speed, color temperature, ISO sensitivity and gamma. Assignable buttons mean that favorite adjustments are always at your fingertips.



The high-resolution status display confirms major settings for confident operation. Six soft keys above and below the display are context sensitive and give you direct access to key shooting parameters.

Real-time 4K output and other vital connections

The camera offers powerful connections, including real-time 4K output, up to 60p, to a compatible monitor. It's made possible by four 3G-SDI outputs. There's also HDMI®, USB, DC in connection, a removable XLR audio module and a removable time code/genlock module. The XLR inputs accept balanced analog signals, provide 48-Volt phantom power and will accept four channels of AES/EBU digital audio with an expected firmware upgrade.

Long-life Olivine Battery

At Sony, we don't just know about cameras. We're also a leader in battery technology. The F55 takes advantage of Sony's innovative BP-FL75 battery pack, which uses Olivine—Lithium Iron Phosphate—instead of conventional Lithium Ion cathodes. The result is a substantial increase in charge-discharge cycles, compared to previous Sony batteries.

The Olivine battery works with Sony's BC-L90 quick charger.