# fp

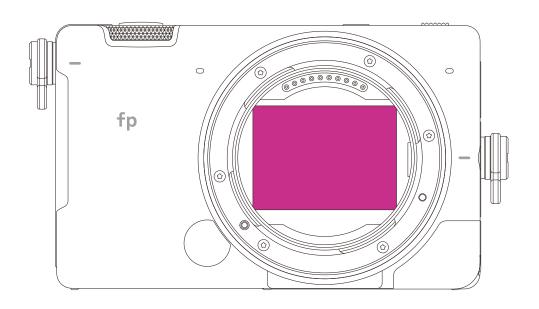
Deconstruction of digital camera

# SIGMA

### SIGMA CORPORATION

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# fortissimo pianissimo

Superior performance. A wide range of lenses to choose from.

Possibilities for creating just the image one desires with the highest quality.

Full-frame interchangeable lens cameras have it all.

Extremely portable and can be taken anywhere. A sophisticated UI that is highly intuitive to use. With the quantum improvement in image quality achieved through advanced technology, smartphones have now solidified their position as the go-to everyday camera.

An open system that is highly customizable from a wide range of equipment.

As the growing need for more pixels and higher resolution pushes towards large format cameras, increasingly more cinema cameras are becoming both more high-performance and scalable.

"Digital cameras" have thus become differentiated into different categories, within which they are becoming more optimized and advanced. In each category, individual models are put in order according to their respective highly specialized purposes and grades, and from there users choose one that suits their style and level: still or video, beginner or advanced, business or pleasure, and so on. In a way, cameras can be a symbol that signifies one's attributes, social class, and orientations.

But should they? That was the question we wanted to ask ourselves again. In the real world, barriers between different genres such as videos and stills are decreasing, while the standards for image quality and usability are increasing for every category of camera.

Also, it is becoming more and more common for one to have both a high-performance interchangeable lens camera and a smartphone camera, using them flexibly, without being strictly limited to one single purpose, for work or for fun.

Meanwhile, tools are not keeping up with the reality of "shooting" which keeps evolving. What we need is a camera that can meet unrecognized needs of real photographers and videographers, namely a "digital camera capable of adapting to the one who shoots," in a true sense. Starting with this belief, we set ourselves to break down the inherentvalue and challenges of the cameras as we knew them, extrapolate only the most essential aspects, put them under scrutiny, and build a camera from scratch.

Deconstruction of digital camera



Seamless and Scalable.

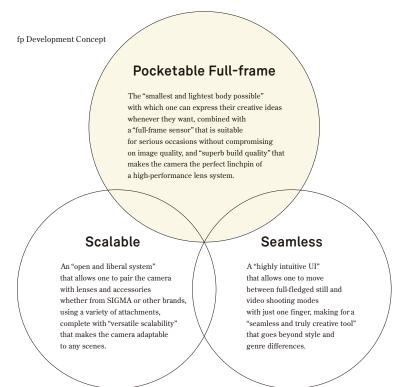
The world's smallest and lightest\* "pocketable full-frame" camera is here.

A "pocketable full-frame" camera: SIGMA fp, is now available.

The SIGMA fp incorporates a 35mm full-frame sensor with 24.6 effective megapixels in a compact body, and boasts great versatility and scalability that allows mixing-and-matching of a variety of interchangeable lenses and accessories.

It is a camera that is casual enough to take anywhere, anytime, and high-spec enough for serious photo-shooting in the highest image quality, all in a robust and classy body.

Regardless of the differences in shooting scenes and styles or genre boundaries between stills and videos, this new camera is set to expand the freedom and possibilities in image shooting and art creation further than ever before.











### 3 Field Style





### **5** Cine Style





45mm F2.8 DG DN | Contemporary + Products from other manufacturers

### Main Features

### World's smallest & lightest

With overall dimensions of 112.6×69.9×45.3mm and a body weight of 370g, without battery and card, the SIGMA fp is the world's smallest and lightest\*interchangeable lens camera equipped with a full-frame sensor. \*As of July, 2019.

### No low-pass filter

Because the SIGMA fp does not have a low-pass filter, it is able to capture images without losing the resolution of the sensor.

### Aluminum body

A body covered with die-cast aluminum on the front and the back ensures superior robustness and heat dissipation while keeping the body weight light.

### Dust- & splash-proof structure

The SIGMA fp is protected with the dust- and splash-proof sealing on a total of 42 points over the camera's body. When combined with a dust- and splash-proof lens, the SIGMA fp will be ready for shooting in any environments.

### High-precision AF

The SIGMA fp employs high-precision contrast AF, available in three modes: Single AF, Continuous AF, and Manual Focus. There are 49 AF points to choose from, as well as Free Movement mode, and

### Full-time electronic shutter

The SIGMA fo employs a full-time electronic shutter. enabling to shoot virtually without sound, and no camera shake due to shutter shock. Even when shooting in quick succession at a frame rate of 18 frames/sec., it eliminates the tiniest of shakes. In addition, as opposed to conventional mechanical shutters, it does not cause irregularities on the screen display in a high-speed shutter setting. Furthermore, the absence of a mechanical shutter makes the SIGMA fo's camera structure simpler. which in turn improves its reliability as a camera.

### Low light AF

The SIGMA fp incorporates the low light AF, which enables AF to work even in a low light condition. Shooting is available at the light level down to 5EV.

### Large choice of dedicated accessories

The SIGMA fp is complemented by a wide choice of dedicated accessories, expanding the possibilities of how one uses the camera.

### Electronic image stabilization

Comes with the electronic image stabilization (EIS) function. Taking advantage of the electronic shutter, the SIGMA fp is capable of instantaneously taking four frames (two when movie recording), comparing them, and creating a composite image into a still image or video with minimum blur.

### External power supply

By using a DC connector (CN-21) (sold separately), the SIGMA fp can be powered from an AC power adaptor or a V-mount battery plate.

### Face/Eye Detection AF

In addition to Face Priority, the SIGMA fp also has Eve Priority AF. The camera will automatically detect the eyes of a human subject, allows bringing them into focus instantly and precisely





### 1 Full-frame sensor

Employs a back-illuminated 35mm full-frame Bayer sensor with 24.6 effective megapixels.

### 2 L-Mount

The SIGMA fp uses the L-Mount, characterized by a short flange focal length, large diameter, and superior durability. Thanks to the L-Mount Alliance, L-Mount lenses from Leica Camera AG and Panasonic Cornoration can also be used on the SIGMA fp, realizing a camera system with great scalability. Furthermore, SIGMA SA mount lenses designed for previous lines of SIGMA cameras from one's lens investment can be used by applying the SIGMA MOUNT CONVERTER MC-21.

\*The L-Mount Trademark is a registered Trademark of Leica Camera AG.

### Independent UIs

Going instantly from the Still mode to the Cine mode at the touch of a switch. Each mode comes with a dedicated control system and screen display, making it possible to check information and displays on the screen that is necessary for specific scenes

### 4 LCD screen

The 3.15-inch (3:2) liquid-crystal display is complete with a touch screen, for intuitive operation.

### 6 Large heat sink

Designed and inspired by those used on professional cinema cameras, a large-size heat sink is mounted between the LCD and camera body. This achieves highly effective heat dissipation and prevents over-heating at high temperatures or in long hours of use.

### 6 QS button

Camera functions that one use most often can be allocated to the Quick Set menu complete with the QS (Quick Set) button to access the menu.

### TONE button

This button gives a quick access to the Tone Control menu

### **8** COLOR button

This button gives a quick access to the Color Mode menu.

### **Enhanced ISO**

The SIGMA fp's native ISO settings range between 100 and 25600. With the enhanced ISO settings, an even larger choice of sensitivity with ISO 6, 12, 25, 50, 51200 and 102400 is available.

### ISO Auto

In ISO Auto mode, the lower and upper limit of the ISO range can be set at will.

### Flicker-control shooting

The SIGMA fp detects and controls image flickering, a phenomenon that can occur when shooting with artificial light sources.

### Large choice of color modes

The SIGMA fp offers as many as 12 different color modes. Color modes available: Standard; Vivid: Neutral: Portrait: Landscape: Monochrome: Cinema; Teal and Orange; Sunset Red; Forest Green: FOV Classic Blue: FOV Classic Yellow

### Color mode adjustment

The SIGMA fo offers a selection of color modes. where color tone and contrast tuned to best suit different shooting scenes. It has also newly introduced the "effect" slider to its adjustment menu. It sets the strength of an effect to apply in 11 levels, from -5 to +5, enabling the fine-tune for the color mode effects.

### Tone control

Optimizes a tone curve to adjust an image with natural tones even in a high contrast scene. In addition to the two already available options (Strong/Mild), a manual setting option has newly been introduced, which allows users to adjust the tone curve by themselves.

### **HDR Shooting**

Taking advantage of an electronic shutter to take multiple pictures of different exposures (3 frames for still photography and 2 frames for video) at once, which can then be merged into a single nicture or video with a great dynamic range and a natural look, all in-camerea.

\*The HDR shooting in the Cine mode is to become available via firmware update scheduled at a later date.

### Fill Light

The SIGMA fp has within its body a "Fill Light" function, which is useful to adjust the brightness of an image by adding extra light energy into the shadow regions without altering the exposure of highlighted regions. The adjustment range, which was formerly ±2.0, has been expanded to ±5.0, making it possible to fine-tune the brightness even more.

### Cinemagraph

The SIGMA fp can be used to create cinemagraphs in-camera, which are animated GIFs, in which parts of a still image keep moving (Length of up

\*The Cinemagraph function is to become available via firmware undate scheduled at a later date

### DNG format STILL

Supports DNG (Digital Negative) format for raw data recording in the Still mode. Data can be edited on SIGMA Photo Pro and a number of other DNG-compatible image development software.

### 14-bit processing STILL

The SIGMA fp can record lossless compressed 14-bit RAW(DNG) files for still photography. It can also shoot in RAW+JPEG simultaneously.

### High-speed shutter STILL

The SIGMA fp is capable of taking pictures at shutter speeds of up to 1/8,000 sec.

### Focus peaking

The focus peaking function highlights the edges of the parts of the scene that are in focus in a color (of the choice from among 4 colors). It quickly identifies which parts of the subject are in focus.

### Multi-aspect

The SIGMA fp has a wide range of aspect ratios to choose from With the newly introduced "A size" mode, it shoots in √2:1, which is the A size standards. Aspect ratios available: [21:9] / [16:9] / [3:2] / [A size (\(\sigma\_2:1)\)] / [4:3] / [7:6] / [1:1]

### Auto-bracketing STILL

Has an automatic bracketing function with settings for ±3 EV.

### Auto crop

When using one of DC lenses (SIGMA's APS-C lenses), the SIGMA fp has the option of cropping the shots automatically to the APS-C angle of view.

### Supports 12-bit CinemaDNG CINE

The SIGMA fo can record raw video at UHD/24fps in a 12-bit format, and UHD/30, 25, or 24fps in a 10or 8-hit format \*The feature of playing CinemaDNG footages in-camera

is to become available via firmware update scheduled

### Dynamic range of 12.5 stops CINE

With a dynamic range of 12.5 stops\*, the SIGMA fp enables video shooting with a great dynamic range. \*At 12bit Cinema DNG.

### Supports UHD 4K/24, 25 & 30 fps CINE

Capable of shooting UHD 4K (3840 × 2160) videos at 24, 25 or 30 fps.

### Supports FHD/60 fps CINE

Capable of shooting high-speed FHD (1920 × 1080) video at max 60 fns

### Supports ATOMOS Open Protocol CINE

The SIGMA fp supports the ATOMOS open protocol, with which allows the user to start or pause recording on an external recorder, directly on the camera's side.

### Director's viewfinder CINE

Comes with a director's viewfinder function that allows the user to simulate different framings of cinema cameras from select manufacturers. Cinema cameras supported:[ARRI] ARRICAM / ARRIFLEX, ALEXA LF-ALEXA Mini LF, ALEXA SXT/ ΔΙ ΕΧΔ Mini / ΔΜΙΒΔ / ΔΙ ΕΧΔ 65 / ΔΙ ΕΧΔ ΧΤ [SONY] VENICE [RED] MONSTRO 8K / HELIUM 8K / DRAGON 6K/EPIC MX 5K/GEMINI 5K

\* The feature of recording/playing video with the director's viewfinder function enabled is to become available via firmware update scheduled at a later date.

### SIGMA CINE LENS CINE

The SIGMA CINE LENS line of lenses, which are SIGMA's interchangeable lenses for video shooting, are compatible with the SIGMA fp. It also supports T value-based transmission\*1

https://www.sigma-global.com/en/cine-lenses/

- \*SIGMA MOUNT CONVERTER MC-21 for FE-I or the PI -I Adaptor is required.
- \*1 FF mount only.

### Supports ALL-I recording CINE

Supports All-I (All-Intra) recording which helps make data smaller in size and easier to edit at the same time

### Shutter angle display CINE

The SIGMA fp can display the shutter angle, a feature commonly found on professional cinema

### Zebra patterning

The SIGMA fp has a zebra pattern display, which shows areas of the image that are of specified brightness levels in strines. This helps to check for overblown highlights and adjust exposure accordingly

### Waveform display CINE

The SIGMA fp has a waveform display that shows video data to check the video in a numerical manner based on its signal information.

### Supports time code CINE

In the Cine mode, the SIGMA fp supports time code recording, which is useful in video editing. It offers either "Free Run" or "Rec Run," and also switch between "Drop frame (DF)" and "Non- drop frame (NDF)," which allows the camera to send time code via HDMI output

### Supports UVC (USB Video Class) CINE

By simply connecting it to a PC via USB, the SIGMA for can be used as a webcam. It is canable of recording audio while shooting a video. It will bring a full-frame camera quality to live streaming.

\*The camera menu setting for connecting to UVC devices is to become available via firmware update scheduled

### Supports external SSD recording CINE



With a built-in USB host inside the camera, the SIGMA fp supports high-speed recording to external SSBs.



### Expanding the world of L-Mount lenses

To choose lenses flexibly with minimum restrictions imposed by manufacturers—so that you can use your precious lenses for a long time without losing their value. SIGMA is determined to achieve a flexible and liberal future mirrorless system that enables configuration of truly user-oriented systems.



### 45mm F2.8 DG DN I Contemporary

Compact size is realized while maintaining high image quality and is compatible with full-frame mirrorless cameras.

This prime lens refines the concept of the Contemporary line.



### 35mm F1.2 DG DN I Art

The world's first\* 35mm F1.2 as L-Mount and Sony E-mount lens for full-frame mirrorless system. The high image quality of the Art line that pursues ultimate performance is realized by F1.2 maximum aperture. 'As an autofocus lens



### 14-24mm F2.8 DG DN I Art

Large-diameter, ultra-wide-angle zoom lens or full-frame mirrorless cameras.

While pursuing the ultimate image quality of the Art line, the size is reduced thanks to the exclusive design for mirrorless cameras.

## SIGMA MOUNT CONVERTER MC-21 enhancing the extensibility of the L-Mount system.

The SIGMA MOUNT CONVERTER MC-21 allows SIGMA SA mount and SIGMA's CANON EF mount interchangeable lens owners to use their lens investment on L-Mount camera bodies. The converter allows more freedom of choice for L-Mount cameras, enhancing the extensibility of the L-Mount system.

\*The L-Mount Trademark is a registered Trademark of Leica Camera AG.













MOUNT CONVERTER MC-21 CANON EF-L

or PL MOUNT ADAPTER

### **fp** Specifications

Туре	Туре	Interchangeable-ler	s SLR Ty	pe Digital Camera		
	Storage Media	SD/SDHC/SDXC memory card (UHS-II supported)/ Portable SSD(USB 3.0 connection, USB bus power supported)				
	Lens Mount	L-Mount				
Image	Туре	35mm full-frame(3	5.9mm × 2	3.9mm) Back-illuminated Bayer CMOS sensor		
Sensor	Camera effective pixels/Total pixels					
	Aspect ratio	3:2				
	Color filter System	RGB Primary color filter				
	Still Image File Format	Lossless compression RAW(DNG) data12/14 bit, JPEG (Exif2.3), RAW(DNG)+JPEG: recording is possible				
	Image Aspect ratio	[21:9]/[16:9]/[3:2]/[A Size(\(\sqrt{2}:1)]/[4:3]/[7:6]/[1:1]				
File Size	RAW		HIGH LOW	6,000 × 4,000 (3,840 × 2,560) *(): In DC Crop Mode 3,008 × 2,000 (1,920 × 1,280)		
	JPEG	[21:9]	HIGH MED LOW	6,000 × 2,576 (3,840 × 1,648) 4,240 × 1,824 (2,736 × 1,168) 3,008 × 1,288 (1,920 × 824)		
		[16:9]	HIGH MED	6,000 × 3,376(3,840 × 2,160) 4,240 × 2,392(2,736 × 1,536)		
		[3:2]	HIGH MED	3,008 ×1,688 (1,920 ×1,080) 6,000 × 4,000 (3,840 ×2,560) 4,240 × 2,832 (2,736 ×1,824)		
		[A Size(√2:1)]	HIGH MED	3,008 × 2,000 (1,920 × 1,280) 5,664 × 4,000 (3,616 × 2,560) 4,000 × 3,930 (3,560 × 1,564)		
		[4:3]	LOW	4,000 × 2,832 (2,560 × 1,824) 2,832 × 2,000 (1,808 × 1,280) 5,344 × 4,000 (3,408 × 2,560)		
		[4.3]	MED LOW	3,776 × 2,832 (2,416 × 1,824) 2,672 × 2,000 (1,712 × 1,280)		
		[7:6]	HIGH MED LOW	4,672 × 4,000(2,992 × 2,560) 3,312 × 2,832(2,112 × 1,824) 2,336 × 2,000(1,488 × 1,280)		
		[1:1]	HIGH MED LOW	4,000 × 4,000 (2,560 × 2,560) 2,832 × 2,832(1,824 × 1,824) 2,000 × 2,000(1,280 × 1,280)		
Crop		Equivalent to appro		s the focal length of the lens(on 35mm cameras)		
Color Space		sRGB/Adobe RGB				
Movie	Camera Internal Record	Movie Format		DNG(8bit/10bit/12bit)/MOV:H.264(ALL-I/GOP)		
Recording	Camera internal Record	Audio Format	Linear PCM (2ch 48kHz/16bit)			
Format		Recording Pixels / Frame Rate	3840 × 2160 (UHD 4K)/23.98p, 25p, 29.97p, FHD(1,920 × 1,080) 23.98p, 25p, 29.97p, 59.94p, 100p, 119.88p			
		CinemaDNG Memory Media		: UHS-I FHD 10bit 30 fps or less, UHS-II UHD 10bit 24 fps or less, FHD 12bit 60 fps or less		
		Limitation	Portable SSD: UHD 12bit 24 fps or less, FHD 12bit 60 fps or less, FHD 8 bit 120 fps or le			
	HDMI External Output	Movie Format		HDMI loop out *External recorder record: ATOMOS Ninja Inferno, Blackmagic Video Assist 4Ksupporte		
		Audio Format	Linear P	CM(2ch 48kHz/16bit)		
		Recording Pixels/ Frame Rate	3840 x 2160(UHD 4K)/4:2:28bit 29.97p/25p/23.98p/1920 x 1080(FHD)/ 4:2:28bit 119.88p/100p/59.94p/50p/29.97p/25p/23.98p			
Focus	Auto Format/Focus Mode	Contrast detection system, Single AF, Continuous AF(with moving object prediction function), Manu		ingle AF, Continuous AF(with moving object prediction function), Manual Foo		
	AF Measurement Distance Detecton Range, AF mode	-5~18EV(F1.4:ISO100)/Auto, 49-points selection mode, Free Movement mode, Face/Eye Detection AF mode, Tracking AF mode				
	AF Lock	Half-press the shutter button, or press the AEL button.				
	Other Focus Functions	AF+MF, MF Assist, MF Guide, Focus Peaking, Release Focus Function, AF-ON, Pre-AF, AF during Image Magnification				
Exposure	Metering System	Evaluative, Spot, Center Weighted Average				
Control				0)		

Exposure	Still Image Shooting Mode	(P) Program AE (Program Shift is possible), (S) Shutter Speed Priority AE, (A) Aperture Priority AE, (M) Manu			
Control	Movie Shooting Mode	(P) Program AE, (S) Shutter Speed Priority AE, (A) Aperture Priority AE, (M) Manual			
	ISO Sensitivity	ISO 100-25600,			
	(Recommended exposure value)	Expanded sensitivity ISO6,12,25,50,51200,102400			
	Exposure Compensation	±5 EV(in 1/3-stopincrements)			
	AE Lock	Half-press the shutter button, or press the AEL button (setting change required).			
	Exposure Bracket	3-frame/5-frame stage exposure ±3EV (1/3 Step,Standard→Underexposure→Overexposure)(Sequence changeable)			
Image Stabilization	n System	Electronic system			
White Balance		12 types(Auto, Auto(Lighting Source Priority), Daylight, Shade, Overcast, Incandescent, Fluorescent Color Temperature, Flash, Custom 1, Custom 2, Custom 3)			
Shutter	Shutter Type	Electronic shutter			
	Shutter Speed	30 to 1/8000 sec., Bulb			
	Self-Timer / Remote control	2 sec./10 sec.(Self-Timer)			
Drive	Drive Modes	Single shooting, Continuous shooting, Self-timer, Interval shooting			
	Continuous shooting speed	HI: 18 fps, MED: 5 fps, LO: 3 fps			
	Maximum number of shots	HIGH: 12-frame, MED: 12-frame, LOW: 24-frame.			
Monitor	Type / Coverage	TFT color Monitor, Aspect Ratio 3:2, 3.15, Approx. 2,100,000 dots/ Electrostatic capacitance system touch panel/Approx.100%			
Flash	Light Emission Mode	S-TTL automatic light control, Manual, Wireless flash, Multi-emission			
(when to use external flash)	Flash Mode	Red-eye effect reduction, Slow synchronization, 2nd Curtain Synchronization			
external nasir)	Exposure Correction	Max. ±3EV in 1/3EV-step increments			
	Flash Tuning Speed	Max. 1/30 sec. *1/15 sec. or less at 14bit			
	External Flash Support	Available when the HOT SHOE UNIT HU-11(supplied with this product) is mounted.  (S-TTL, Wireless support, X contact)			
Interval shooting		Available			
Color Mode (Photo Style)		12types(Standard, Vivid, Neutral, Portrait, Landscape, Cinema, Teal & Orange, Sunset Red, Forest Green,FOV Classic Blue, FOV Classic Yellow, Monochrome)			
Other Functions	Recording Mode	STILL Mode Fill Light / Shading Correction / HDR shooting			
		CINE Mode Still image shooting during movie shooting / HDR shooting / Director's viewfinder			
	Playback Mode	STILL Mode In-camera DNG Development			
		CINE Mode Cinemagraph / still image cut-out			
Built-in Microphon	e, Speaker	Stereo microphone, Monaural speaker			
Display Language		English / Japanese / German / French / Spanish / Italian / Simplified Chinese / Traditional Chinese / Korean / Russian / Dutch / Polish / Portuguese / Danish / Swedish / Norwegian / Finnish			
Interface	USB	USB3.1 GEN1 TypeC			
	HDMI	TypeD(Ver.1.4)			
	Release Terminal	Also used as an external microphone terminal.			
	External Michrophone	Available (Plug-in power support)			
	Headphone output	Unavailable  Unavailable			
	Flash-synchro Terminal	Dedicated terminal (with HOT SHOE UNIT HU-11 (supplied with this product) mounted)			
Power		Li-ion Battery BP-51 *USB power supply available (when the power is turned off)			
Dimensions/	Dimensions	112.6 × 69.9 × 45.3 mm			
Weight	Weight	422g (including battery and SD card), 370g (Camera Body Only)			
Operating	Operating Temperature	0~+40°C			
Environment	Operating Humidity				
Accessories	LI-ION Battery BP-51	85% or less(no condensing)  Strap			
Optional Accessories	HAND GRIP HG-11  ■ LAR     BASE PLATE BPL-11  ■ DO	GE HAND GRIP HG-21 © LOD VIEW FINDER LVF-11 © CABLE RELEASE CR-41  C CONNECTOR CN-21 © BATTERY CHARGER BC-71 © AC ADAPTER SAC-7P  STRONIC FLASH EF-630 © MOUNT CONVERTER MC-21			