

## SIGMA sd Quattro H

The SIGMA Corporation is pleased to announce the SIGMA sd Quattro H, the new high-image-quality digital camera that incorporates the Foveon X3 direct image sensor (generation name: "Quattro").

The RRP of the SIGMA sd Quattro H is £1,499.99 and they will be available in January 2017.

The SIGMA sd Quattro H is the first camera to feature the newly developed APS-H size Foveon X3 Quattro direct image sensor with incredible 51-megapixel-equivalent resolution. Featuring the SIGMA SA mount, the new camera is compatible with all of the SIGMA GLOBAL VISION lenses in the Contemporary, Art and Sports lines, and it is designed to take full advantage of these lenses' superb optical performance. In addition, it is compatible with DNG format, and imaging software from other companies is also available for higher versatility. The DC Crop Mode, which is automatically activated when DC lenses are attached, makes it possible to take full advantage of your lens assets.



SIGMA sd Quattro H

[Key features]

### Foveon X3 Quattro direct image sensor

Leveraging the light absorption characteristics of silicon, the Foveon X3 Quattro direct image sensor comprises three layers of photodiodes, each at a different depth within the silicon and each corresponding

to a different RGB color. Since it is the only sensor to use this superior vertical color separation technology, it is also the world's only direct image sensor. Requiring no low-pass filter needed to correct the interference caused by a color filter array, the Foveon X3 Quattro direct image sensor is able to take full advantage of the information carried by light, including color information. The sensor features a pixel ratio of 1:1:4 in the bottom, middle, and top layers and applies the brightness data captured by the top layer to the middle and bottom layers. This unique structure makes possible fast resolution and high-speed data processing.

## 51 megapixel-equivalent ultra-high image quality

Other camera typically uses a single-layer photo sensor covered by a Bayer filter mosaic, which comprises 50% green, 25% blue, and 25% red squares. In contrast, the Foveon X3 Quattro direct image sensor uses no low-pass filter and is able to capture 100% of the data for blue, green, and red in each of its three layers. Due to this unique structure, the Foveon X3 Quattro direct image sensor can generate up to twice the resolution data of sensors using a Bayer filter. The SIGMA sd Quattro H features a newly developed APS-H size sensor (26.7 x 17.9mm) with 25.5 megapixels in its top layer for an equivalent total of approximately 51 megapixels. This larger sensor takes Foveon image quality to the next level, delivering more detailed images than ever before.

## Dual TRUE III for high-speed processing of high-volume data

TRUE (Three-layer Responsive Ultimate Engine) III is the dedicated image processing engine for the Foveon X3 Quattro direct image sensor. SIGMA's original algorithm processes data without loss of color detail or other image degeneration to deliver extremely detailed image expression with a noticeable 3D pop. In addition, by using two separate TRUE III engines, the camera is able to process data from the Foveon X3 Quattro direct image sensor at extremely high speed.

## 14-bit RAW data

RAW data records the light information captured by the Foveon X3 Quattro direct image sensor. Using 14-bit (16,384 gradations) signal processing to convert the analog output signal to digital results in photographic data with fine gradations that effectively represent the smooth, natural gradations of the

original subject. RAW data uses lossless compression that prevents image degradation. Moreover, processing RAW data with SIGMA Photo Pro results in images with incomparable natural balance.

## DNG format

In addition to SIGMA's original RAW format (X3F), DNG (Digital Negative) format is available.

DNG is the RAW image data that is developed by Adobe Systems Incorporated. DNG file makes it possible to develop images on other softwares, which gives more choices of expression.

\*It is not possible to record the image data in DNG and JPEG simultaneously. In addition, the number of pixels to be recorded will change depending on the aspect ratio of shooting images.

## New Super-Fine Detail exposure mode

The new Super-Fine Detail (SFD) exposure mode brings out the full performance of the Foveon X3 Quattro direct image sensor. One push of the shutter generates seven different exposures, creating RAW data in the X3I file format. Using this data with the SIGMA Photo Pro software package, the photographer can create noiseless images with an extensive dynamic range. With this new mode, the more detailed imaging potential of the Foveon X3 Quattro direct image sensor is fully leveraged. From each X3I file, individual X3F files may also be generated. The value of SFD exposure mode is especially apparent in studio photography.

Note: To prevent camera shake, SIGMA recommends the use of a tripod.

## DC Crop Mode

The Sigma sd Quattro H incorporates an APS-H sized image sensor, and it automatically switches to DC Crop Mode, when DC lenses are attached. Also, it is possible to select On/Off of the DC Crop Mode manually. When a DG lens is mounted and the DC Crop Mode [On] is selected, the coverage of the LCD monitor and the view finder automatically becomes within APS-C size, which makes it easy determining the composition.

\*If [On] is selected, the angle of view will be equivalent to 1.5 times longer than the focal length of the lens and the number of pixels to be recorded will be smaller.

## Exclusive SIGMA Photo Pro software

SIGMA Photo Pro makes possible intuitive processing of RAW data, leveraging the full power of the information captured by the Foveon X3 Quattro direct image sensor. Operation is easy: the user simply adjusts horizontal sliders while viewing the photographs to create images that perfectly match his or her vision. In addition, the software turns X3I files created using the camera's Super-Fine Detail function into high-resolution, noiseless images with outstanding dynamic range. Various modes allow the user to take full advantage of the image sensor's fine tones and gradations and create monochrome images of impressive depth.

### SIGMA Capture Pro software

SIGMA Capture Pro allows the user to control and capture photographs with the camera via a personal computer. After connecting the camera to the computer with a USB cable, the user can take photos and adjust the aperture value, shutter speed, and other settings. The photographs taken using the software may be downloaded to the camera's SD card, to the computer, or both at the same time. The software also allows the user to continuously shoot a set number of photographs. While connected to the computer, the camera may still be operated and used to take photographs manually.

### RAW onboard data processing

The camera can process RAW data (X3F files) into JPEGs without the need for a personal computer. The user can adjust the exposure correction, white balance, color mode, and aspect ratio while viewing the photographs on the LCD monitor.

### Combination of two AF detection methods

Phase detection AF is superior for speed performance, while contract detection AF is superior for focusing accuracy. Combining these two methods in a single system delivers AF that is fast and precise at the same time. In addition, this approach to autofocus takes full advantage of the characteristics of high-performance lenses. The Single AF mode is optimal for everyday photography, while the Continuous AF mode is optimal for focusing on a moving object. In the latter mode, pressing the shutter button halfway causes autofocus to operate continuously, while Movement Prediction AF operates at the same time for more accurate autofocusing. A variety of other AF modes are also available. 9-Point Selection AF mode allows the user to

select among nine focus frames. Free Movement AF mode allows the user to select the focus frame with high precision. Face Detection AF mode detects human faces and prioritizes focusing on them. The AF assist light incorporated in the camera body makes possible the use of AF even in low-light conditions.

### Focus peaking function

This function puts a colored outline (white, black, red, or yellow) around the subject in the viewfinder for instant confirmation of the person or object currently in focus.

### Continuous shooting of up to 8 images in RAW format

The DDR III high-speed, high-volume memory is approximately twice the capacity of that of the SIGMA dp Quattro. This allows the SIGMA sd Quattro H to capture up to 8 RAW images (X3F files) in High size during continuous shooting. Leveraging high-speed data transfer and processing, the SIGMA sd Quattro H offers a continuous shooting speed of up to 4.4 frames per second. (4.8 frames per second when it is set as DC crop Mode.) As a further option, when Low size is used, the SIGMA sd Quattro H offers a continuous shooting speed of up to 6.2 frames per second and continuous shooting of up to 16 images. (6.8 frames per second when it is set as DC crop Mode.)

### Aspect ratio selection

To accommodate various photographic needs, six different aspect ratios are available, including 3:2 (standard), 1:1 (square), 21:9 (similar to cinema widescreen), and 7:6 (similar to 6x7 camera format). When using an aspect ratio other than 3:2, the user may select a black or semi-transparent frame. The semi-transparent frame can serve as a sports finder, allowing the user to monitor activity outside the frame.

The aspect ratio of images recorded as RAW data can also be changed in SIGMA Photo Pro.

\*It is not possible to change the aspect ratio of DNG files after shooting.

### High-resolution electronic viewfinder

The high-resolution 2.36 mega-pixel electronic viewfinder features near-100% viewfinder coverage and a 1.09 magnification ratio. The viewfinder incorporates three lenses with the outermost lens specially coated to ensure a clear field of view. Using a switch next to the viewfinder, the user can toggle between displaying

the image in the viewfinder and the monitor. In AUTO mode, the camera automatically switches to the viewfinder display when the user is looking through it and to the monitor when he or she is not. This mode allows seamless use of the viewfinder to take photographs and use of the monitor to access settings and confirm results. For extra convenience, many functions of the monitor are available via the electronic viewfinder itself, such as setting values, grid lines, electronic level, zoom, focus peaking and more.

### Dual monitors

In addition to the 1.62 mega-pixel 3.0 inch TFT LCD main monitor, the rear of the camera features a sub-monitor that displays the number of remaining shots on the SD card, shutter speed, aperture value, ISO level, and more. This extra monitor makes it easy to watch the live view and confirm key information at the same time. A sheet of special material lies between the two LCDs and the protective glass that covers them. This sheet prevents air pockets from forming and minimizes reflections, ensuring excellent display visibility in sunlight.

### Electronic level

Allowing the user to view the camera's horizontal and vertical position while shooting, this function is useful in precisely establishing composition.

### Tough magnesium alloy body

The exterior and main frame of the camera body features a tough magnesium alloy. The rigidity and strength of this alloy significantly contribute to the reliability and quality of the camera as a whole.

### Dust- and splash-proof design

O-rings and sealing material effectively seal buttons and seams to prevent the intrusion of dust and water, making the camera an excellent choice for pros working under tough conditions.

### Dust protector on lens mount

To prevent the intrusion of dust and debris into the camera body, the lens mount features a dust protector sealed with optical glass. Additional sealing around the mount further lessens the chance of dust entering

the camera body.

### Intuitive user interface helps user focus attention on creative work

Building on the success of previous SIGMA user interfaces, the new UI is more intuitive than ever. Located next to the shutter button, the Quick Set button provides instant access to the Quick Set Menu, which allows the user to quickly adjust commonly used settings while continuing to look through the viewfinder. Located on the top of the body, the LOCK switch prevents the accidental pressing of buttons, helping keep the user's attention on the creative work. The buttons that are locked with this switch may also be customized by the user. Located on the rear of the camera near the selector are several controls for commonly used functions. Easily accessed with the thumb of the right hand, they include the menu button, focus frame button, and AEL/AF button with lever.

### Quick Set Menu

Located next to the shutter button, the Quick Set button provides instant access to eight commonly used functions, including aspect ratio, ISO, white balance, and color mode. The user can quickly adjust settings using the selector and front and rear dials. Users can also customize the functions included in the Quick Set Menu and the order in which they appear.

### System camera compatible with all SIGMA GLOBAL VISION lenses

Featuring the SIGMA SA mount, the new camera is compatible with all of the SIGMA GLOBAL VISION lenses in the Contemporary, Art and Sports lines, and it is designed to take full advantage of these lenses' superior optical performance.

### High-resolution Super-High size images

A variety of file sizes is available to accommodate a wide range of user needs. Using High-size files brings out the best performance from the image sensor, while using Low-size files increases the number of shots that can be stored in memory. In both of these file sizes, the camera can simultaneously create RAW and JPEG data. In addition, the camera can create JPEG files in S-HI size, appropriate for large prints, as well as in S-LO size, which is ideal for online sharing.

## Higher-precision white balance

A new algorithm enhances the precision of auto white balance, even optimizing white balance in images with multiple light sources. The Auto (Lighting Source Priority) mode leaves the color of light sources intact for extra atmosphere, while the Auto (Default) mode allows the camera to automatically make white balance adjustments. In total, twelve white balance modes are available, including three custom modes. It is also possible to adjust white balance based on the specific image and to set the color temperature in Kelvin. Moreover, each white balance mode can be fine-tuned for detailed correction of white balance and creative filter effects.

## Full range of Color Modes

Color Modes can adjust color tones and contrast to best suit each photographic scene. The range of color modes includes Cinema, which reduces saturation and emphasizes shadows for a film-like effect; and Sunset Red, which emphasizes red for more impressive sunset shots. Color Modes make artistic expression easier than ever.

\* It is not possible to select some of the Color Modes when it is set as DNG.

## Custom bracketing display

This function allows the user to take a single shot but save several versions of the photograph with customized white balance, Color Mode, and other settings. This function can be combined with auto bracketing to help increase the chance of getting the perfect shot.

## Monochrome options

The Filtering Effect allows contrast to be changed as if the images had been taken using a color filter for black and white photography. The Toning Effect allows warm, cold, sepia, and other color tones to be added to monochrome photos to emphasize the subject in creative ways. SIGMA Photo Pro makes possible optimal monochrome processing of RAW data without any color processing, producing high-resolution monochrome images with exceptional dynamic range and outstanding reproduction of the tones of highlights and shadows.

## SD card

The camera is compatible with compact and portable SD, SDHC, and SDXC cards. The camera features the UHS-I standard, allowing large volumes of data to be recorded at high speed. The camera is also compatible with Eye-Fi, allowing wireless transfer of images to personal computers, smartphones, and more when an Eye-Fi card is inserted (sold separately).

## Dedicated high-capacity rechargeable lithium-ion battery

The camera includes the high-capacity BP-61 lithium-ion battery and BC-61 charger. The optional SAC-7 AC adapter allows the camera to run AC power from a wall outlet.

## Dedicated cable release

By connecting the dedicated CABLE RELEASE CR-31 (sold separately) to the camera's USB port, the user can release the shutter without touching the camera. This function is useful when the user wishes to release the shutter from a distance, avoid camera shake, or shoot with a low shutter speed.

## USB 3.0 port

The USB 3.0 Micro B port allows the user to connect the camera to a personal computer to download high-volume image files at high speed.

## HDMI port

The MINI HDMI Type C port allows the user to connect the camera to an HD television with an HDMI cable (sold separately) and view photographs, camera menus, and even the viewfinder image in high definition on a big screen.

### [Specification]

Format	Interchangeable-Lens Digital Camera
Compatible Lenses	SIGMA SA mount interchangeable lenses
Lens Mount	SIGMA SA bayonet mount
Angle of View	Equivalent to approx. 1.3 times the focal length of the lens (on 35mm cameras)
Image Sensor	Foveon X3 direct image sensor (CMOS)
Image Sensor Size	26.7×17.9mm (1.0in. ×0.7in. )

Number of Pixels	Effective Pixels : Approx. 38.6MP T (Top) : 6,200x4,152 / M (Middle) : 3,100x2,076 / B (Bottom) : 3,100x2,076 Total Pixels: Approx. 44.7MP			
Aspect Ratio	3:2			
Storage Media	SD Card, SDHC Card, SDXC Card, Eye-Fi Card			
File Format	Lossless compression RAW data (14-bit : X3F/X3I), DNG (No compression RAW Data 12-bit), JPEG (Exif2.3), RAW(X3F)+JPEG			
JPEG Image Quality	FINE, NORMAL, BASIC			
Color Mode	11 types (Standard, Vivid, Neutral, Portrait, Landscape, Monochrome, Cinema*, Sunset* Red*, Forest Green*, FOV Classic Blue*, FOV Classic Yellow*) * it is not possible to select the mode when it is set as DNG.			
File Size	RAW			
	X3F	DC Crop Mode [Off]	HIGH	T : 6,192x4,128 / M : 3,096x2,064 / B : 3,096x2,064
			LOW	T : 3,088x2,056 / M : 3,088x2,056 / B : 3,088x2,056
		DC Crop Mode [On]	HIGH	T : 5,424x3,616 / M : 2,712x1,808 / B : 2,712x1,808
			LOW	T : 2,704x1,808 / M : 2,704x1,808 / B : 2,704x1,808
	DNG [3:2]*	DC Crop Mode [Off]	HIGH	6,192x4,128
			LOW	3,088x2,056
		DC Crop Mode [On]	HIGH	5,424x3,616
			LOW	2,704x1,808
	JPEG		DC Crop Mode [Off]	DC Crop Mode [On]
	[21:9]	S-HI	8,768x3,752	7,680x3,296
		HIGH	6,192x2,648	5,424x2,328
		LOW	3,088x1,320	2,704x1,160
		S-LO	1,920x816	1,920x816
	[16:9]	S-HI	8,768x4,928	7,680x4,320
		HIGH	6,192x3,480	5,424x3,048
		LOW	3,088x1,736	2,704x1,520
		S-LO	1,920x1,080	1,920x1,080
	[3:2]	S-HI	8,768x5,840	7,680x5,120
		HIGH	6,192x4,128	5,424x3,616
		LOW	3,088x2,056	2,704x1,808
		S-LO	1,920x1,280	1,920x1,280
	[4:3]	S-HI	7,792x5,840	6,816x5,120
		HIGH	5,504x4,128	4,816x3,616
		LOW	2,736x2,056	2,400x1,808
		S-LO	1,696x1,280	1,696x1,280
	[7:6]	S-HI	7,296x5,840	6,352x5,120
HIGH		5,152x4,128	4,480x3,616	
LOW		2,560x2,056	2,224x1,808	
S-LO		1,584x1,280	1,584x1,280	
[1:1]	S-HI	5,840x5,840	5,120x5,120	
	HIGH	4,128x4,128	3,616x3,616	
	LOW	2,048x2,048	1,808x1,808	

	S-L0	1, 280 × 1, 280	1, 280 × 1, 280
White Balance	12 types (Auto, Auto (Lighting Source Priority), Daylight, Shade, Overcast, Incandescent, Fluorescent, Color Temperature, Flash, Custom 1, Custom 2, Custom 3)		
Viewfinder Type	Electronic viewfinder (approx. 2,360,000 pixels color LCD monitor)		
Viewfinder Frame Coverage	approx. 100%		
Viewfinder Magnification	approx. 0.96x (-1m <sup>-1</sup> , 50mm F1.4 at infinity)		
Eye point	approx. 21mm (-1m <sup>-1</sup> )		
Diopter Adjustment Range	approx. -4m <sup>-1</sup> to +2m <sup>-1</sup>		
Auto Focus Type	Phase difference detection system + Contrast detection system		
AF Point	9 points select mode, Free move mode (It is possible to change the size of Focus Frame to Spot, Regular and Large), Face Detection AF Mode		
AF Operating Range	EV -1~EV 18 (ISO100 F1.4)		
Focus Mode	Single AF, Continuous AF (with AF motion prediction function), Manual		
Focus Lock	AEL/AF lock button is pressed or shutter release button is pressed halfway		
Metering Systems	Evaluative Metering, Spot Metering, Center-Weighted Average Metering		
Metering Range	EV 0~EV 17 (50mm F1.4 ISO100)		
Exposure Control System	(P) Program AE (Program Shift is possible), (S) Shutter Speed Priority AE, (A) Aperture Priority AE, (M) Manual		
ISO Sensitivity	ISO 100-6400		
Exposure Compensation	±5 EV (in 1/3 stop increments)		
AE Lock	AEL/AF lock button is pressed or shutter release button is pressed halfway		
Auto Bracketing	Number of shots: 3, or 5 (Appropriate, under, over; 1/3EV steps up to ±3EV for appropriate exposure)		
Shutter Type	Electronically Controlled Focal Plane Shutter		
Shutter Speed	1/4000 - 30 sec., Bulb (With Extended Mode : Max. 2 min.)		
External Flash Sync.	X-Sync (1/180)		
Flash Connectivity	Hot shoe (contact X synchronization at 1/180 sec. or less, with dedicated flash linking contact)		
Sync Terminal	Available		
LCD Monitor Type	TFT color LCD monitor		
Monitor Size	3.0"		
LCD Pixels	Approx. 1,620,000 pixels		
Coverage	100%		
Reviewing Images	Single frame display, 9 frames multi display, Zoom, Slide Show		
Highlight Display	Available		
Histogram	Available		
LCD Monitor Language	English/Japanese/German/French/Spanish/Italian/Simplified Chinese/Traditional Chinese/Korean/Russian/Dutch/Polish/Portuguese/Danish/Swedish/Norwegian/Finnish		
Interfaces	USB (USB3.0, micro B),HDMI (Type C mini-pin HDMI connector), Remote		
Power Source	Li-ion Battery BP-61, Battery Charger BC-61, AC adapter SAC-7 (optional) [DC connector CN-31, AC cable (supplied)]		
Dimensions	147mm/5.79"(W) × 95.1mm /3.74"(H) × 90.8mm/3.57"(D)		
Weight	635g / 22.4oz. (without battery and card)		
Operating Temperature	0 - +40°C		

\* The appearance and specifications are subject to change without notice.

[Optional accessories]

### POWER GRIP PG-41



This accessory boosts the battery capacity of the camera by holding up to two dedicated batteries. In combination with the battery inside the camera, this accessory makes it possible to enjoy up to 200% more shooting time. Offering outstanding usability in both the horizontal and vertical positions, the grip incorporates an ON/OFF button, two command dials, an AF/AEL button, and a FUNC button. It is designed for an exceptionally comfortable grip and is dust-proof and splash-proof.

### ELECTRONIC FLASH EF-630 (SA-STTL)



The high-power EF-630 flash enables S-TTL automatic flash metering. It has wireless flash connectivity and a high-speed synchronization function that can be used at high shutter speeds, giving photographers further scope for creative expression.

### FLASH USB DOCK FD-11



This accessory is used to dock the EF-630 and update its firmware in the exclusive SIGMA Optimization Pro software. The dock is connected to a personal computer via a USB cable.

### CABLE RELEASE CR-31



Mounting the camera on a tripod and connecting the cable release to the camera's USB port, the user can release the shutter without touching the camera. This function is useful when the user wishes to release the shutter from a distance, avoid camera shake, or shoot with a low shutter speed. Cable length is 1 m.

Barcode : 0085126 930271

### LITHIUM-ION BATTERY BP-61



This dedicated battery is included as standard equipment with the camera.

### BATTERY CHARGER BC-61



This dedicated battery charger is included as standard equipment with the camera.

### AC ADAPTER SAC-7

This accessory is recommended for supplying power from a wall outlet when the user is shooting, viewing photos, or using the camera with a personal computer for an extended period of time. It is used in combination with DC CONNECTOR CN-31 (included with camera).

#### [Contact]

For the further information, please find the nearest authorized SIGMA Service Station from the link below.

<http://www.sigma-photo.co.jp/english/network/>

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#### [Information]

SIGMA GLOBAL VISION: <http://www.sigma-global.com>