

## A | Art

## SIGMA 20mm F1.4 DG HSM

## The world's first F1.4 ultra-wide-angle lens for full-frame DSLRs

1. World's first\* 20mm F1.4 lens—thanks to advanced lens manufacturing technologies
2. The ideal high-speed lens for snapshots and much more
3. Art line delivers high-level artistic expression
4. Metal lens cap available (sold separately)
5. SIGMA USB DOCK makes customisation and flexible adjustment possible
6. New SIGMA GLOBAL VISION product lines are setting new benchmarks for image quality



Launch: Beginning of November 2015

SRP: £849.99 (including VAT)

Accessories: Case, Cover Lens Cap (LC907-01)

AF Mounts: SIGMA, NIKON, CANON

\* Appearance and specifications are subject to change without notice.

\* Among interchangeable lenses for digital cameras with 35mm full-frame image sensors (SIGMA research as of October 2015).

## **Incredible rendering performance delivers unprecedented visual experiences. Enjoy enhanced control of light and composition.**

SIGMA has extensive experience in leveraging its advanced design capabilities and leading-edge technologies to craft large-aperture prime lenses that bring out the full potential of ultra-high-megapixel DSLRs. As its latest achievement in this category, SIGMA has created an ultra-wide-angle lens with F1.4 brightness. With a focal length of 20mm and F1.4 aperture, this lens delivers outstanding large-aperture brightness and bokeh, delivering unprecedented visual experiences. Allowing the photographer to leverage the perspective provided by the wide-angle and the shallow depth of field provided by the large aperture, this lens is ideal not only for such ultra-wide-angle subjects as landscapes and starry skies, but also for snapshots in low light, indoor photography, portraits with a natural bokeh effect, and much more.

### **[Key features]**

#### **1. Advanced technologies make possible a 20mm F1.4 lens**

##### **● World's first\* 20mm F1.4 lens — thanks to advanced large-diameter aspherical lens manufacturing technologies**

To offer an ultra-wide-angle 20mm focal length and F1.4 brightness at wide-open aperture, this lens incorporates a large double aspherical lens 59mm in diameter. Lenses of this type had been considered extremely difficult to manufacture, but SIGMA took on the challenge to realise an F1.4 ultra-wide-angle lens that fulfils the strict performance requirements of the SIGMA Art line. What made this breakthrough possible were SIGMA's advanced manufacturing technologies, which the company has developed over time by producing a wide range of ultra-wide-angle and large-aperture lenses. For example, milestone lenses such as SIGMA 12-24mm F4.5-5.6 EX DG ASPHERICAL HSM, SIGMA 8-16mm F4.5-5.6 DC HSM, and SIGMA 18-35mm F1.8 DC HSM | Art were completely original products that helped SIGMA develop outstanding design and production know-how and its current high-precision, high-efficiency production system. In turn, these advances made possible the new SIGMA 20mm F1.4 DG HSM | Art. Moreover, SIGMA's advanced optical design minimises distortion, transverse chromatic aberration, sagittal coma flare, and the reduction of brightness toward the edges

of the image. Delivering top performance even at wide-open aperture, this lens can be considered the culmination of SIGMA's Art line.

### ● **Minimised chromatic aberrations**

This lens minimises chromatic aberrations, a common issue in large-aperture ultra-wide-angle lenses. It features two FLD ("F" Low Dispersion)\* glass and five SLD (Special Low Dispersion) glass elements to minimise transverse chromatic aberration, which is mainly visible around the edge of the image. The optimised lens power distribution helps minimise axial chromatic aberration. As a result, this lens delivers high image quality in every situation without colour smearing, and its rendering performance is consistently sharp with high contrast.

\* FLD glass is ultra-low-dispersion glass that offers performance of the highest level. Highly transparent, its refractive index and dispersion are extremely low as compared to conventional types of glass. It offers characteristics very similar to those of fluorite, which is valued for its high anomalous dispersion. These characteristics minimise residual chromatic aberration (secondary spectrum), which cannot be corrected by ordinary optical glass, while helping to produce sharp, high-contrast images.

### ● **Minimised distortion**

Distortion is a common issue in wide-angle lenses, and it is not possible to correct it simply by changing the aperture value. For this reason, a lens must be designed from the start to minimise this issue. By adjusting the incidence angle of light starting with the first lens element and incorporating optimally positioned aspherical glass elements, the SIGMA 20mm F1.4 DG HSM | Art lens minimises distortion throughout the entire image.

### ● **Designed to minimise flare and ghosting**

From the start of the design process, SIGMA took steps to minimise flare and ghosting and establish an optical design that is resistant to strong incidental light sources such as backlight. At the prototyping stage, SIGMA used not only simulations but actual photographic experiments to assess flare and ghosting under multiple criteria, identify the causes of these issues under a wide range of situations, and take measures to mitigate them. In addition, SIGMA's Super Multi-Layer Coating helps further reduce flare and ghosting and provide sharp, high-contrast images even in backlight conditions.

## 2. The ideal high-speed lens for snapshots and much more

### ● Top-level performance for the ultra-high-megapixel era

At the dawn of the film camera, there was very little high-sensitivity film, and bright lenses that worked well in low-light conditions came to be known as “high-speed lenses.” These lenses are ideal for shooting indoors, in the evening, under cloudy skies, or in any low-light situation. Since the SIGMA 20mm F1.4 DG HSM | Art provides the benefits of an ultra-wide angle lens with minimal distortion, it is ideal for photographing landscapes, starry skies, and architecture. In addition to capturing wide-angle shots with the whole scene in focus, the photographer can leverage wide-open aperture to take snapshots with the subject in focus and the background blurred with an attractive bokeh effect. Designed for ultra-high-megapixel digital cameras, this high-performance lens delivers outstanding resolution and high-clarity image quality even at wide-open aperture.

## 3. Art line delivers high-level artistic expression

SIGMA is organising all its interchangeable lenses into three product lines: Contemporary, Art, and Sports, each with a distinctive concept. Designed with a focus on sophisticated optical performance and abundant expressive power, our Art line lenses deliver high-level artistic expression. Offering astonishing rendering performance that meets the highest standard, they are perfect for landscapes, portraits, still-lives, close-ups, and casual snaps. They are made for the kind of photography that unleashes the inner artist. A powerful ally in every genre of photography, SIGMA’s Art line lenses excel both in the studio for formal works and outdoors for impressive shots of architecture, starry skies, and many other scenes.

## 4. Metal lens cap available (sold separately)

Matching the high-quality finish of the lens exterior, the optionally available metal lens cap LC907-02 will go on sale simultaneously with the lens. Featuring materials identical to those of the lens barrel, this metal lens cap establishes a new level of unity within SIGMA’s new lens lines.

## 5. SIGMA USB DOCK makes customisation and flexible adjustment possible

### ● SIGMA USB DOCK for SIGMA GLOBAL VISION lenses (optional)

With the optional SIGMA USB DOCK, you can update your lens firmware and adjust the focus position and other settings. Simply connect the lens to the SIGMA USB DOCK and the dock to a computer to use the dedicated SIGMA Optimization Pro software and perform various types of customization and adjustment.

## 6. New SIGMA GLOBAL VISION product lines are setting new benchmarks for image quality

### ● High-quality design features

In our new product lines, the lens caps and AF/MF switches are newly designed to improve usability. To ensure precise operation, internal parts feature generous use of metal and Thermally Stable Composite (TSC)\*, which is highly compatible with metal parts. The lens barrel is engraved with the year of release for instant access to this information.

\* TSC offers thermal expansion characteristics similar to those of aluminium. Parts made with TSC deform less, making lens construction of extremely high precision possible. As compared to polycarbonate containing 20% glass, a commonly used material, TSC offers approximately 70% higher elasticity. As compared to polycarbonate containing 30% glass, it offers 25% higher elasticity. (Comparison is between SIGMA-produced components.)

### ● Evaluation with SIGMA's own MTF measuring system: A1

We used to measure lens performance with a Modulation Transfer Function (MTF) measuring system using conventional sensors. However, we have developed our own proprietary MTF measuring system (A1)\* using 46-megapixel Foveon direct image sensors. Even previously undetectable high-frequency details are now within the scope of our quality control inspections. All SIGMA 20mm F1.4 DG HSM | Art lenses are checked using this A1 system before they are shipped.

\* A1: Aizu1

## ● Made in Japan

With only a few minor exceptions, all of SIGMA's manufacturing, including moulds and parts, takes place under a single integrated production system in Japan. We are now one of the very few manufacturers whose products are truly made in Japan. We like to think our products are somehow imbued with the essence of our homeland, blessed as it is with clean air and water, and focused, hard-working people. We pride ourselves on the authentic quality of SIGMA products, born of a marriage between highly attuned expertise and intelligent, advanced technology. Our sophisticated products have satisfied professionals and lovers of photography all over the world because our manufacturing is based on genuine craftsmanship, underpinned by the passion and pride of our experts.

## [Other features]

### ● Rounded diaphragm

The 9-blade rounded diaphragm creates an attractive blur in the out-of-focus areas of the image.

### ● Hyper Sonic Motor ensures high AF speed

The Hyper Sonic Motor (HSM) ensures silent, high-speed autofocus, while the optimised AF algorithm helps realise even smoother AF performance. At any time during AF, users may access MF simply by rotating the focus ring. This feature makes faster focus adjustment possible, since there is no need to use the AF/MF focus mode switch. Also, the optional SIGMA USB DOCK allows the user to set the lens to conventional full-time manual focus override.

Note: The operation of full-time MF may vary based on mount type.

### ● Brass bayonet mount

This lens features a brass bayonet mount of highly precise and durable construction. A special surface treatment enhances the mount's strength and long-term wear-resistance.

## ● Mount Conversion Service available\*

An experienced lens manufacturer offering a diverse range of interchangeable lenses, SIGMA provides the innovative Mount Conversion Service, in which we change the mount of a lens in one of our new product lines to another mount of your choice (charges apply). This service can give new life to your favourite lenses when you wish to use them with a different camera body.

\* If you require Mount Conversion Service, please contact your nearest SIGMA subsidiary or authorized distributor.

### **[Specification]** For SIGMA

Lens construction: 15 elements in 11 groups | Minimum aperture: F16 |

Angle of view (35mm): 94.5° | Minimum focusing distance: 27.6cm/10.9in. |

Dimensions (diameter x length): ø90.7mm x 129.8mm/3.6in. x 5.1in. |

Number of diaphragm blades: 9 (rounded diaphragm) | Maximum magnification ratio: 1:7.1 | Weight: 950g/33.5 oz. | SRP: £849.99

### **[UPC Code]**

SIGMA : 0085126 412562    Nikon : 0085126 412555    Canon : 0085126 412548

### **[Accessories]**

COVER LENS CAP LC907-01 (included) : 0085126 931926

COVER LENS CAP LC907-02 (sold separately) : 0085126 931971

REAR CAP LCR II (included)

SIGMA : 0085126 929497, NIKON : 0085126 929503, CANON : 0085126 929510

SIGMA USB DOCK (sold separately)

SIGMA : 0085126 878566, NIKON : 0085126 878559, CANON : 0085126 878542

### **[Contact]**

For the further information, please contact Sigma Imaging (UK) Ltd on 01707 329 999 or by email [sales@sigma-imaging-uk.com](mailto:sales@sigma-imaging-uk.com).

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### **[Information]**

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