

## Main specifications of the long range multi-purpose camera, SX Series

|   | SX800 / SX801   | SX1600   |
|---|---|--|
| Optical zoom  | 40x   |  |
| Digital zoom  | 1.25x, 1.5x, 1.75x, 2x  |  |
| Focal length  | 20mm – 800mm  | 40mm – 1600mm  |
| Maximum aperture ratio                              | 1:4 (20mm), 1:7.4 (800mm)   | 1:8 (40mm), 1:14.8 (1600mm)  |
| Minimum object distance (M.O.D) from the front lens | 10m (20 – 400mm in focal length)<br>20m (401 – 800mm in focal length)                                     | 10m (40 – 800mm in 1/1.8" equivalent focal length)<br>20m (801 – 1600mm in 1/1.8" equivalent focal length)             |
| Angle of view[16:9 (H x V) ]                        | 20mm 21.0° x 11.8°<br>800mm 0.55° x 0.31°   | 20mm 21.0° x 11.9° [at 1.1" (φ17.26mm) capture]<br>1600mm 0.27° x 0.15° [at 1/1.8" (φ8.63mm) capture]                  |
| Effective sensor size                               | 1/1.8"  |  |
| Minimum illumination                                | Color 0.00015 lux (at F1.2) / 0.0017 lux (at F4.0)<br>B/W 0.0001 lux (at F1.2) / 0.0011 lux (at F4.0)     | Color 0.00014 lux (at F1.2) / 0.0064 lux (at F8.0)<br>B/W 0.0001 lux (at F1.2) / 0.0042 lux (at F8.0)                  |
| Focus settings                                      | Continuous AF, Quick AF, Manual   |  |
| Iris  | Auto, Manual (Aperture range : F4 – F16)  | Auto, Manual (Aperture range : F8 – F32)   |
| Shutter speed                                       | Auto (with minimum speed selection of 1/8 – 1/125s), Manual (1 – 1/32000s)                                |  |
| Gain  | AGC, HYPER-AGC, Manual (Setting range : ISO400 – 819200)  |  |
| Optical filter                                      | Visible Light Cut filter (ON / OFF)   |  |
| Day / Night selection                               | Auto, Scheduled, Manual   |  |
| Wavelengths selection                               | 950nm, 940nm, 850nm, 808nm, Visible light   |  |
| Image stabilization                                 | Auto, OIS, EIS, OFF   | Auto (OIS+EIS), OIS, EIS, OFF  |
| Wide dynamic range                                  | Selectable (2 levels)   |  |
| Back light correction                               | Selectable (2 levels)   |  |
| Heat haze reduction                                 | Selectable (3 levels)   |  |
| Fog reduction                                       | Selectable (3 levels)   |  |
| Noise reduction                                     | Selectable (3 levels)   |  |
| Brightness / Contrast / Saturation / Sharpness      | Selectable (100 levels)   |  |
| White balance                                       | AWB, AWB-W, Custom 1 – 2, Fine, Shade, Color Temperature (3000K, 5000K, 9000K)                            |  |
| Video format  | NTSC : 1080p, 720p, 480p / PAL : 1080p, 720p, 576p  |  |
| Video output systems                                | HDMI, HD-SDI, Composite(BNC)  |  |
| Audio input / output                                | Input impedance : 40kΩ / Output impedance : 200Ω  |  |
| External interfaces                                 | Ethernet (10Base -T, 100Base-TX, RJ45 connector),<br>RS-485 (Half duplex), External trigger (Day / Night) | Ethernet (10Base -T, 100Base-TX, RJ45 connector),<br>RS-485 (Half duplex, Full duplex), External trigger (Day / Night) |
| RS-485 compatible protocol                          | Pelco-D / Pelco-P (including extended commands)   |  |
| Power source  | DC12V   |  |
| Power consumption                                   | SX800 : 9.5W / SX801 : 15W  | 15W  |
| Supported SD card (SDHC / SDXC)                     | UHS-1-compatible 8GB+, SD Speed Class 10 or above   |  |
| File recording format                               | MOV (Video encoding : H.264 compliant, Motion JPEG)   |  |
| Network protocols                                   | ICMP, ARP, TCP / IP, UDP / IP, HTTP, RTSP, RTP, DHCP, DNS, RTP/RTCP, SNTP                                 |  |
| Supported OS  | Windows 10  |  |
| Supported browser                                   | Google Chrome 71+ (Only SX800)  | Google Chrome 99+ / Windows Edge 99+   |
| ONVIF support                                       | Yes (Profile S)   |  |
| Number of videos delivered                          | SX800 : 1 / SX801 : 3   | 1  |
| Size (H x W x L)                                    | 139mm x 156mm x 410mm   | 139mm x 156mm x 450mm  |
| Weight  | 6.4kg   | 7.4kg  |
| Filter thread size                                  | M112 x 1mm  |  |
| Operating environment                               | Temperature : -10°C – +50°C / Humidity : 10% – 80% (no condensation)                                      |  |
| Tilt limit  | 45 degrees upward – 45 degrees downward   |  |



**FUJINON**

Long Range Multi-Purpose Camera **FUJIFILM SX Series**



**For Your Safety**

**Warning** Be certain to read the instruction for use before using any equipment.

\*Product specifications, appearance, price, etc. are subject to change without advance notice.

\*Product colors in this catalog may differ in appearance from the actual product due to photography and printing conditions.

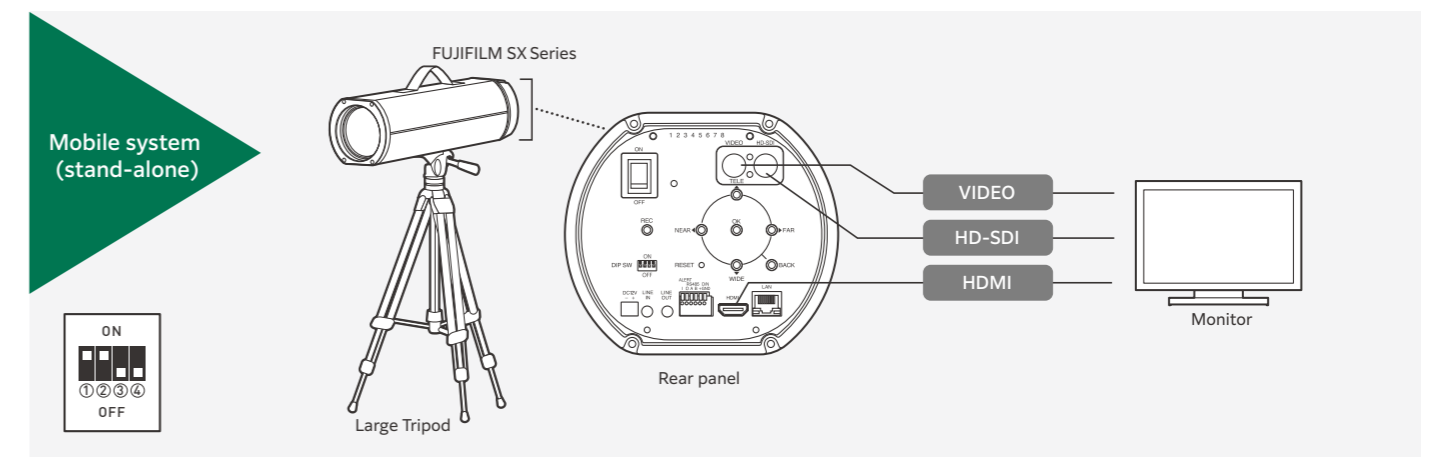
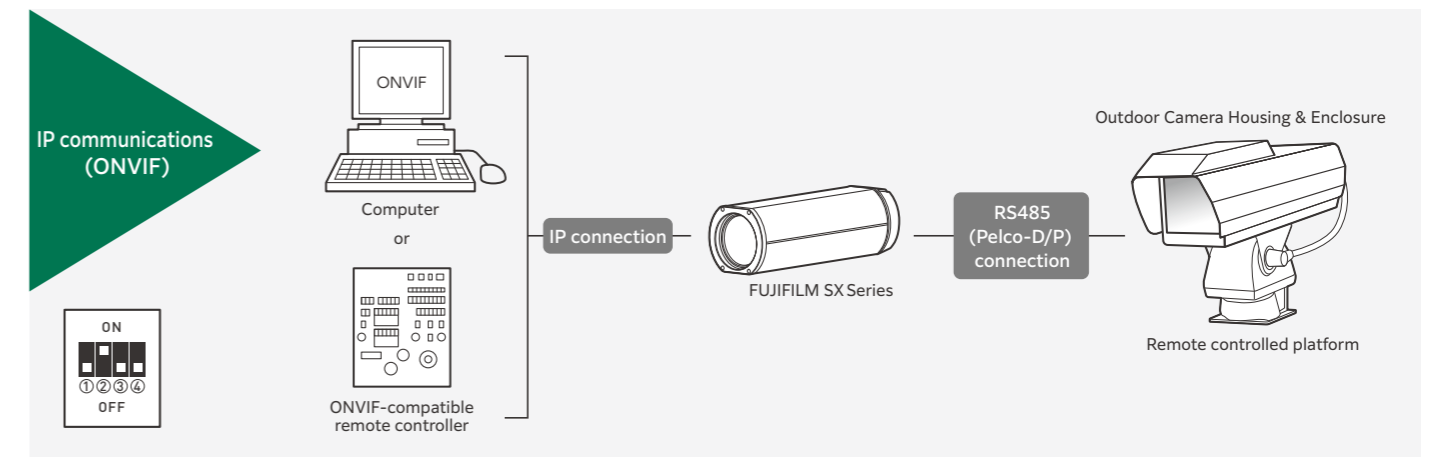
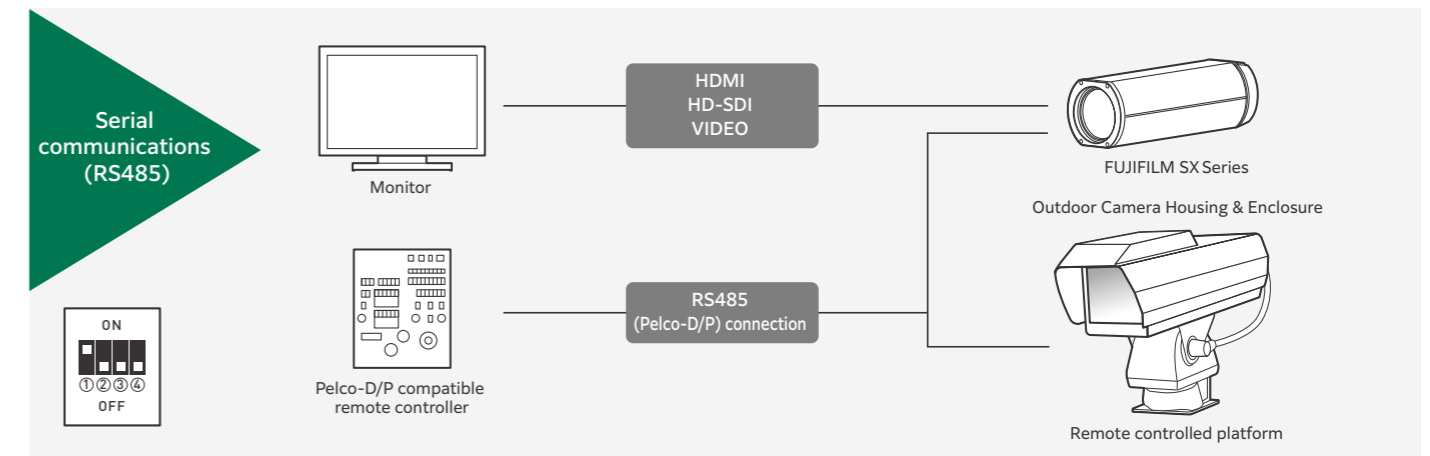
## Advanced Safety, Security and Quality

The fusion of our high performance and quality lens manufacturing technology and our cutting edge image processing technology has resulted in our new SX camera series.



## Supporting various interfaces to enable diverse system administration

The SX800 supports both serial communications [RS485] and IP communications [ONVIF] so that it can be incorporated into customers' existing systems in place. The RS485 protocol supports Pelco-D / Pelco-P\* and can be downloaded from the FUJIFILM website.



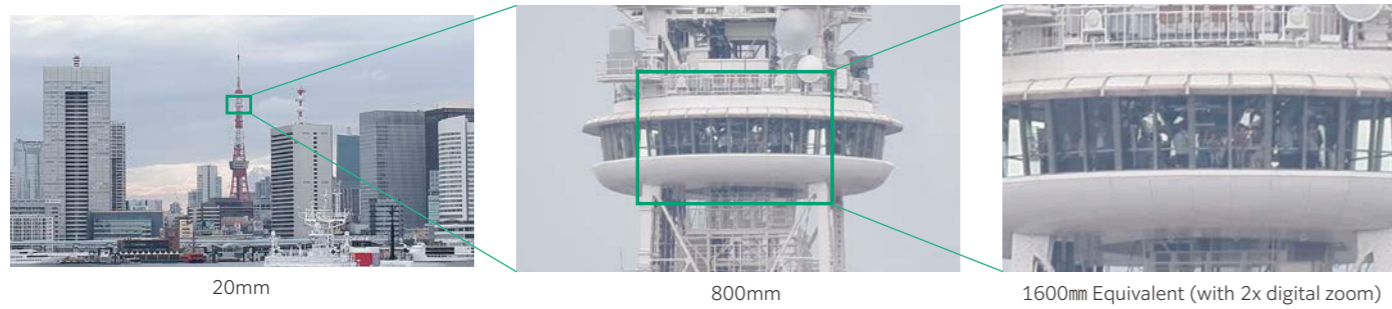
Note: This product is NOT waterproof. For outdoor use, please install in an outdoor housing.

# Developing Systems & Technologies SX800/SX801

## 01 Long-range surveillance

### Optical telephoto range 800mm (with digital zoom up to 1600mm, 80x zoom)

The SX800 is equipped with a 40x optical zoom lens that covers a broad range of focal lengths from 20mm on the wide angle end to 800mm on the telephoto end. It is complemented up to 2x digital zoom to achieve long-range surveillance equivalent to 1600mm in focal length.



## 02 High-performance image stabilization

### New image stabilization system

The SX800 combines optical image stabilization (OIS) and electronic image stabilization (EIS) to accurately compensate for camera shake, typically caused by gusts and footing vibrations at the site of camera installation. The system is particularly effective when shooting in the ultra-telephoto range, which is susceptible to even the slightest of shakes.



### New ceramic bead roller system

The SX800's OIS uses a unique "ceramic bead roller" system. Ceramic beads, processed in ultimate precision, minimize friction and resistance to achieve advanced responsiveness and excellent durability in image stabilization.

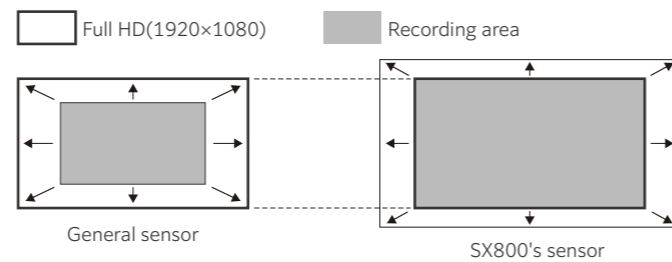


### Use of new devices

The SX800 sports high-precision gyro sensors to accurately detect minute vibrations that could not be detected previously. The use of newly-developed high-thrust linear motor delivers an advanced level of accuracy and tracking performance.

### High-performance EIS

In the EIS mode, the SX800 uses a sensor large enough for its lens's effective diameter to secure full HD resolution (1920 x 1080), thereby delivering footage of premium quality. The combined use with OIS also improves the durability of the image stabilization system substantially.



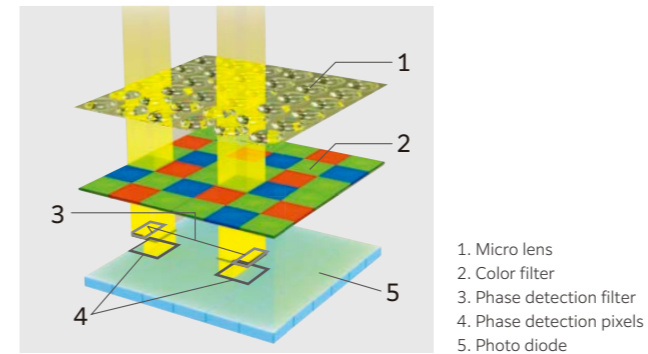
Link to the product introduction video.  
<https://youtu.be/KH0tewwMMRU>



## 03 High-speed AF system

### On-sensor phase detection AF

The on-sensor phase detection AF uses phase detection pixels across the sensor to instantaneously measure distance according to the displacement of incident lights. The SX800 also offers "contrast AF," which detects areas of high contrast in images at high accuracy, and automatically switches to the optimum AF setting.



### Rear Focus mechanism

The use of the Rear Focus mechanism has significantly reduced the weight of the focusing lens group. This has also dramatically increased the focus drive speed to enable "continuous AF." Users can choose between "Continuous AF," "Quick AF" and "Manual Focus" according to the conditions where the camera is used.

**Continuous AF:** Auto focus continues to operate and keeps adjusting the focus.  
**Quick AF:** Automatically focuses on a subject once after zoom operation.  
**MF:** Manually focus on the subject.

## 05 Simplified setup

### Cameras with built-in lens

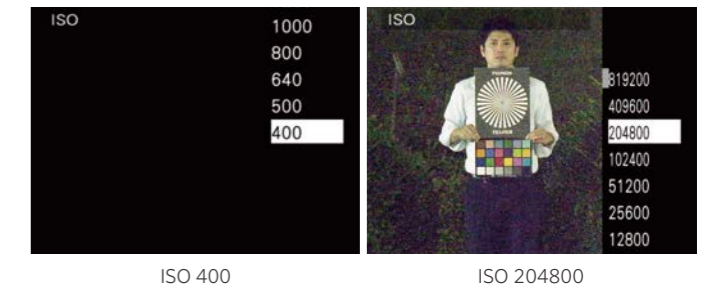
Conventional surveillance systems require the adjustment of optical axis and flange focal length when mounting a lens on a camera. The SX800, which carries a built-in lens, is shipped with such settings optimally adjusted to bring out maximum performance. The design also eliminates the need for complicated wiring, thereby significantly reducing man-hours at the time of installation.



## 04 Image processing technology

### Low light conditions

The use of the highly sensitive sensor and the effect of advanced noise reduction mean the SX800 can shoot clear footage with minimal noise even in low light conditions.



### Fog reduction

The SX800 uses a unique imaging technology to bring vivid clarity to hazy images caused by light diffusion with airborne mist droplets and dust.



### Heat haze reduction

The SX800 uses a unique image processing technology to reduce the shimmering effect of heat haze, caused by large difference in atmospheric temperatures, to make the entire images easier to see.

## 06 Robustness

### New design with advanced rigidity and portability

The SX800's aluminum extrusion body is highly rigid and exceptionally robust. A carrying handle\* may be attached to the body, using screw holes at the top, for transporting convenience.



\* FUJIFILM does not offer a carrying handle.  
 \* This product is NOT waterproof.

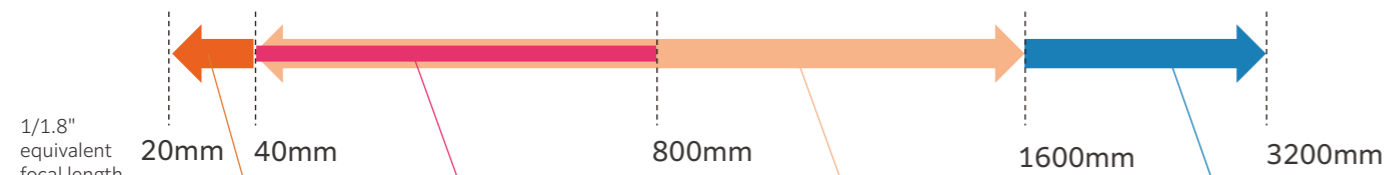
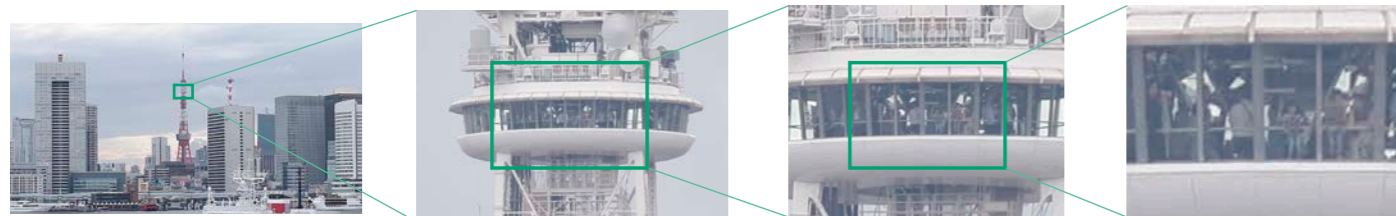
# Developing Systems & Technologies SX1600

## 01 Super long-range surveillance

### Optical telephoto range 1600mm (with digital zoom up to 3200mm, 160x zoom)

The SX1600 is equipped with a 40x optical zoom lens that covers a broad range of focal lengths from 40mm on the wide angle end to 1600mm on the super-telephoto end. The effective area of the image on the sensor can be extended to 1.1" and widened to 20mm, a focal length similar to that of the SX800. Combined with a digital zoom of up to 2x, this enables a zoom range from a wide angle of 20mm to a telephoto of 3200mm equivalent\* (160x zoom). When the effective area is extended, higher resolution images over Full HD (1920x1080) can be resized and processed to provide higher quality, clearer images.

\* 1/1.8" equivalent focal length



The effective area of the image on the sensor can be extended to 1.1" which allows for a wider 20mm focal length.

Effective area 1.1" provides clearer images by resizing the video signal.

40x optical zoom covering a wide range of focal lengths up to a super-telephoto 1600mm.

Up to 2x digital zoom functionality allows for a zoom range of 3200 mm.

## 02 Optical & Electronic capable image stabilization system

### Stabilization correction angle 1.5x greater than SX800

The SX1600 offers a new developed image stabilization system with independent control of the optical stabilization (OIS) and electronic stabilization (EIS). The angle at which stabilization can be performed is increased by 1.5x which enables the stabilizer to compensate for greater vibration.

## 03 High-speed and high-precision AF

### Minimum 0.1 second high-speed and high-precision AF

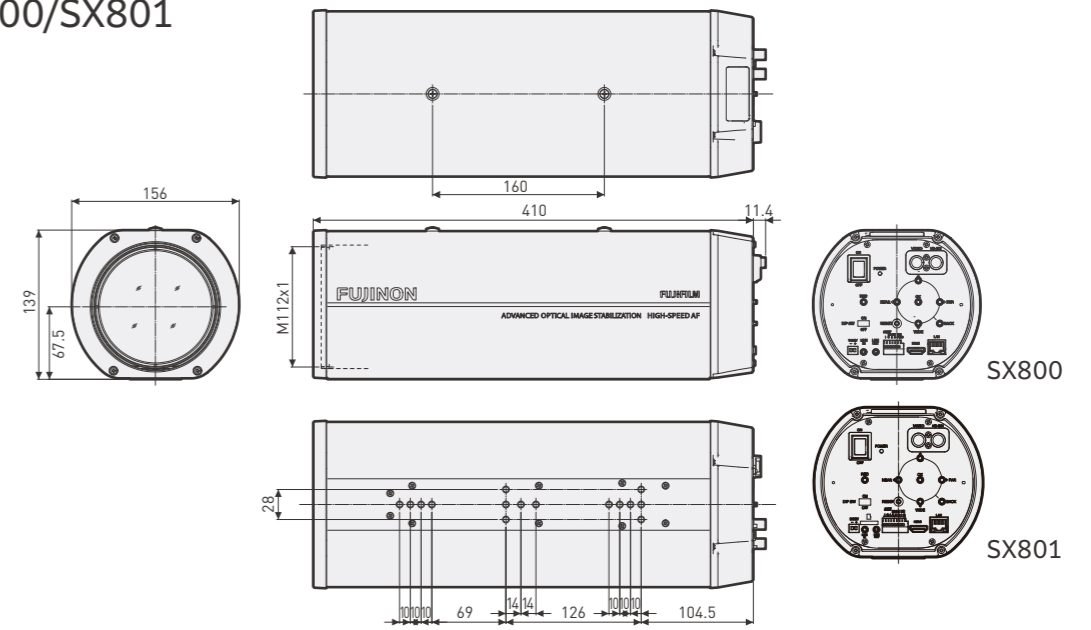
The SX1600 combines on-sensor phase detection AF, which instantly measures distance using phase detection pixels across on-sensor, and contrast AF, which detects areas of high contrast in images at high accuracy, to achieve an AF time with a minimum of 0.1 second. The AF area for focusing can now be set more precisely, from 9 to 45 segments. It can be freely customised to suit the size and position of the objects.

Link to the product introduction video.  
<https://youtu.be/OsoT4c5GI-4>

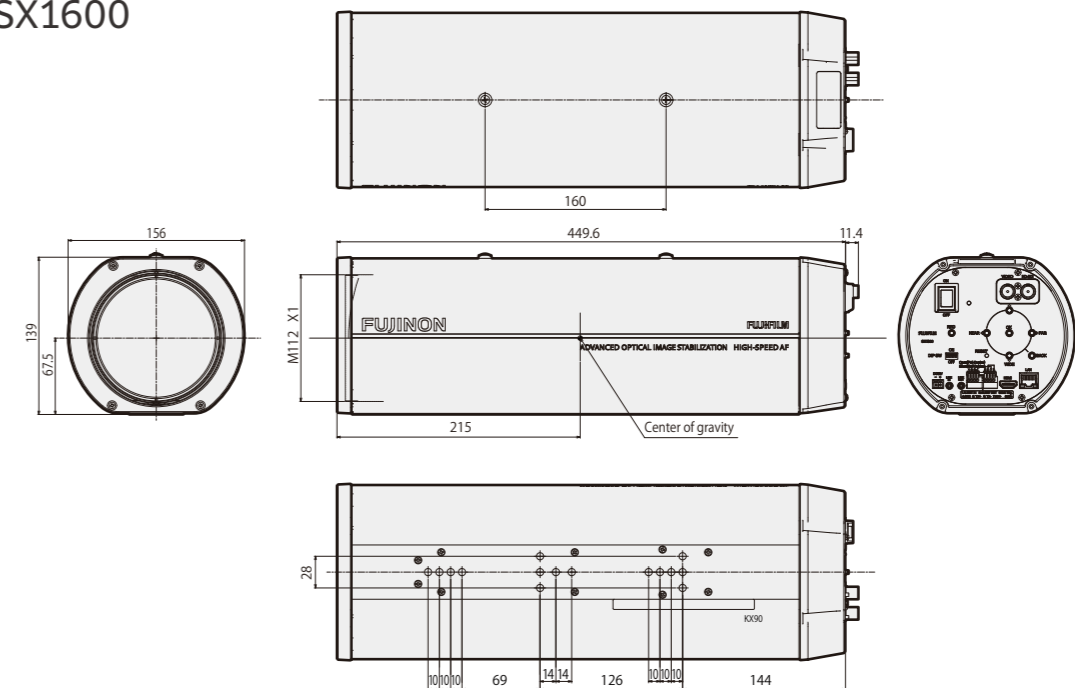


## Exterior view

### SX800/SX801



### SX1600



**CAUTIONS**

- Use M4 screws with a thread engagement length of at least 4 mm and a protrusion of no more than 6 mm.
- Do not use the screw holes on top of the camera for any other purpose.

**Screw Hole Specifications** The specifications for the screw holes on the top and base of the camera are as follows:

|      | Type                | Quantity | Depth                              | Tightening torque |
|------|---------------------|----------|------------------------------------|-------------------|
| Top  | M4                  | 2        | Pass through (threaded depth 4 mm) | 80-100 N-cm       |
| Base | 1/4", UNC 20 thread | 15       | 10 mm                              | 240-300 N-cm      |