

Fujifilm releases long range surveillance camera with built-in lens “FUJIFILM SX800”

- Entering into the surveillance camera market with the use of cutting-edge optical technology and image processing technology
- Realizes 40x optical zoom up to the world's longest 800mm telephoto length^{*1}
- Captures clear image of distant subjects with advanced image stabilization performance, and fast and accurate autofocus with AF speed as fast as 0.3 second

Tokyo, July 23, 2019 —FUJIFILM Corporation (President: Kenji Sukeno) has announced that it will release “FUJIFILM SX800” (“SX800”), a new long-range surveillance camera equipped with built-in lens, on July 26, 2019. The SX800, developed with the cutting-edge optical technology and image processing technology, features a high-performance built-in FUJINON zoom lens, capable of 40x optical zoom to offer a focal length range extending to 800mm, the world's longest telephoto coverage. It is an epoch-making surveillance camera that features advanced image stabilization performance, fast and accurate autofocus with AF speed as fast as 0.3 second, and outstanding heat haze / fog reduction function, making it possible to instantaneously capture clear footage of a distant subject.

The release of this product marks Fujifilm's entry into the surveillance camera market in its drive to expand the business further.



FUJIFILM SX800 long range surveillance camera with a built-in lens

Today, there is an increasing recognition of security for the safe and secure society. More recently, along with the changing international affairs, long-range surveillance cameras capable of monitoring distant subjects are being introduced not only at international border controls but also at large-scale public facilities such as ports and airports. However, conventional long-range surveillance cameras often have issues including their susceptibility to camera shake in gusty winds and slow autofocus. Fujifilm has been working on developing innovative products to resolve such issues by combining its unique optical technology, nurtured through the development of a wide range of lenses including 4K/8K-compatible broadcast lenses and cinema camera lenses, with cutting-edge image processing technology found in the “X Series” of digital cameras.

The SX800, the first to be launched in this initiative, is a long-range surveillance camera with 40x optical zoom to cover the focal length range from 20mm to 800mm. When combined with the digital zoom of up to 1.25x, the camera can reach the focal length equivalent to 1000mm in long-range surveillance. This means it can capture the vehicle registration plate^{*2} on a car at about 1km away. Fujifilm's proprietary image stabilization mechanism accurately controls camera shake without any time lag. Furthermore, the use of the Rear Focus mechanism^{*3} and other features delivers high-speed and high-accuracy AF, attaining focus in as fast as 0.3 second. The camera's high-speed image processing engine achieves detection and real-time correction of heat haze and fog. These features make this model an ideal choice for conducting surveillance operations at national borders, forests and large-scale public facilities including ports, airports and highways.

Fujifilm is engaged in the research, development, manufacture and marketing of various FUJINON-branded lenses including broadcast lenses and cine lenses. The company has also been expanding its scope of business, making an entry into the projector market with the launch of the FUJIFILM PROJECTOR Z5000^{*4}, an ultra-short throw projector equipped with the world's first "two-axial rotatable lens" mechanism. Fujifilm will achieve further business growth by continuing to develop innovative products that meet the diverse needs of various markets.

*1 Among long-range surveillance cameras with built-in lens, as of July 23, 2019 according to Fujifilm

*2 Capable of identifying the sequential vehicle designation number on a registration plate

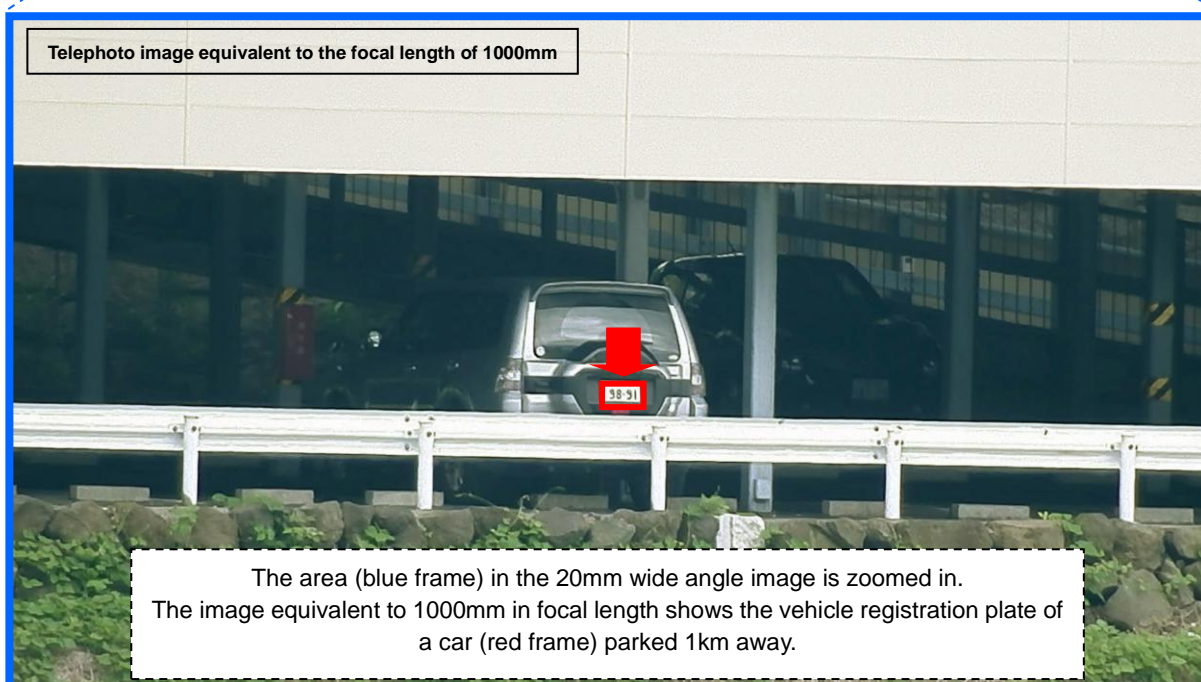
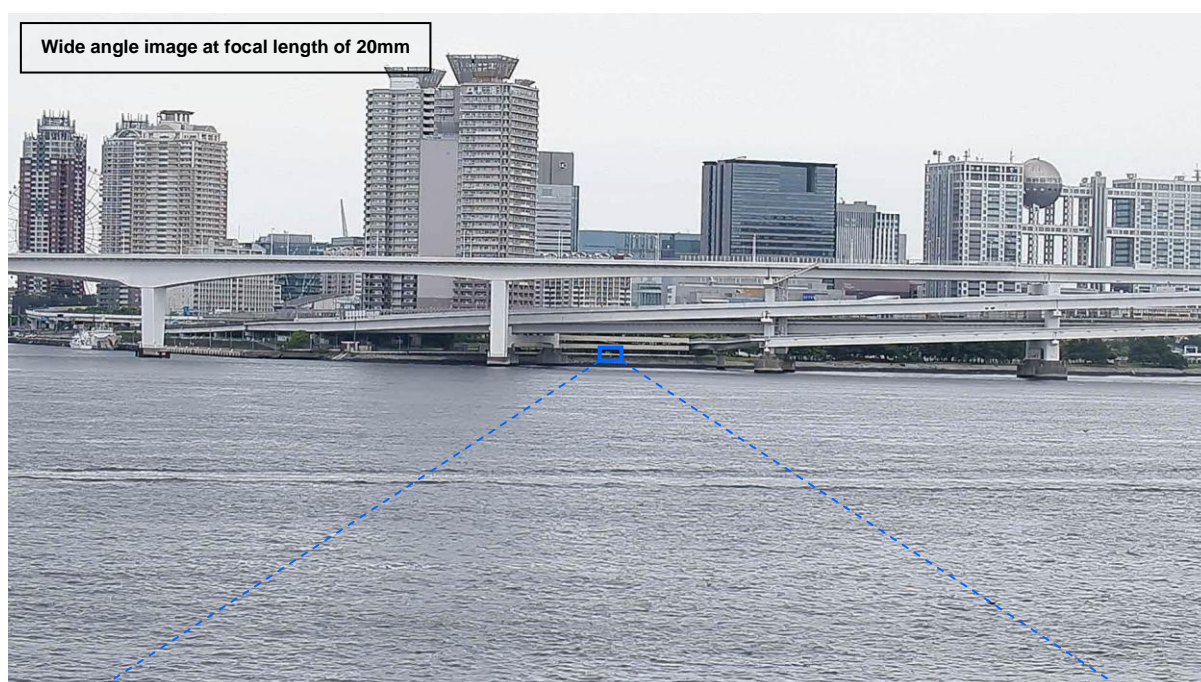
*3 Auto-focusing method that drives a rear group of small-diameter lens elements at high speed

*4 Projector capable of projecting images in various directions by changing the orientation of the lens to face upward, downward, forward, backward, left and right

1. Main Features

(1) 40x optical zoom to cover a focal length range of up to 800mm, the world's longest telephoto length

- The SX800 is equipped with a built-in high-performance FUJINON lens capable of 40x optical zoom to cover focal lengths from 20mm on the wide angle end to the world's longest telephoto length of 800mm. It also features digital zoom capability of up to 1.25x to enable long-range surveillance equivalent to 1000mm in focal length.



(2) Advanced image stabilization performance

- The SX800 features a newly-developed image stabilization mechanism, using optical and mechanical design technologies fostered through the development of broadcast lenses and interchangeable lenses for digital cameras. High-performance gyro sensors detect even the smallest of vibrations. The use of ceramic beads, processed in precision, in the mechanism's drive section has minimized friction and resistance during image stabilization for accurate compensation of camera shake without time lag. That means the camera can be installed at high positions susceptible to gusty winds or at places that suffer large vibrations such as highways and airports.

(3) Rear Focus mechanism for fast and accurate autofocus with AF speed as fast as 0.3 second

- The SX800 uses the Rear Focus AF mechanism, which drives a rear group of small-diameter lens elements at high speed. The combination of on-sensor phase detection AF and contrast AF achieves autofocusing as fast as 0.3 second, attaining focus on a subject instantaneously. This is a substantial improvement in AF speed compared to several seconds to around 10 seconds it took for the conventional system that drives a front group of large-diameter lens elements.
- The mechanism is capable of continuous AF, maintaining focus on a subject in real time. The camera automatically switches to the optimum AF system according to the shooting site's lighting conditions and other factors, so as to achieve AF of advanced precision and high speed in a variety of situations.

(4) Outstanding capability to control heat haze and fog to produce clear images

- The camera's image processing engine uses the latest compensation algorithm and handles computation at high speed to detect and correct heat haze and fog accurately in real time, producing clear images. Heat haze, in particular, typically makes it difficult to distinguish a subject from other moving objects within the frame, making it necessary to use a dedicated external device for image correction. With the SX800, no such external device is needed to produce clear footage.
- The lens is applied with multi-layer coating to support a wide range of wavelengths from visible lights to near infrared rays. This has boosted light transmittance to the ultimate level to effectively control lens flare and ghosting.
- The use of high-performance image sensor^{*5} and cutting-edge image processing technology achieves clear images with minimal noise even in low light conditions with high sensitivity settings.

*5 Effective image size of 1/1.8 inches. The effective image size refers to the area of the image sensor used to record visual images.

(5) Significant simplification in installation procedures

- The SX800 has been designed and assembled with a lens integrated into the camera body so as to bring out the maximum performance from both components. This has eliminated the need for the conventionally-required steps of adjusting optical axis and flange focal length, thereby simplifying installation procedures substantially.

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