X5 Sensing Camera

SC31x

X5 Sensing Camera is a cutting-edge AIoT device that leverages active sensing to enable intelligent and versatile applications. It comes equipped with a highly advanced image sensor and customizable capturing modes that can deliver high-quality images for a range of scenarios. The X5 also features embedded low-consumption radar and PIR sensors which provide greater sensitivity. Additionally, the camera has temperature and sound sensors that enables environmental sensing.

Moreover, X5 features wireless connectivity and simple configuration options for easy integration into specific environments. The low-consumption mode and optional solar panel extend its operational life and increase cost-effectiveness. With IP66-rated protection and anti-theft design, the X5 opens up a wealth of potential applications.

X5 Sensing Camera supports simple configuration via Wi-Fi, and facilitates remote management and data transmission via standard MQTT(s) and HTTP protocols to Milesight AIoT Sensing Platform and other platforms.

◆ Features

High-quality Capturing System

- Detect moving objects actively cooperating with PIR and Radar
- Support multi-type picture-capturing modes depending on various kinds of triggering sources:

Radar & PIR, temperature, sound, alarm-in, etc.

- Equipped with one advanced infrared supplement light to increase light levels in dark environment and improve its sensitivity for capturing objects up to 10m away
- Equipped with different HD camera lens(4K/2MP) to satisfy needs of different scenes

High Adaptability & Reliability

- Provide all-in-one camera bracket and rain cover for more simple installation options
- Support multi-type power supply and additional solar panel for outdoor application
- Smart sleep-mode logic and low-power consumption allows a longer service life
- Equipped with heating film for protecting battery in low-temperature environment
- Support IP66 rated protection and anti-theft screw design for adapting to more scenarios

Easy Management & Deployment

- Wireless deployment with stable 4G network
- Support easy configuration via wireless Wi-Fi connection
- Support data transmission via HTTP/MQTT(S)
- Adapt to more applications with rich industrial interfaces
- Support remote management with assorted Milesight AIoT Sensing Platform for extending its applications

◆ Specifications

Model Name	**SC311**	**SC312**
Camera		
Image Sensor	1/2.8" Progressive Scan CMOS	
Day/Night Mode	Day/Night/Auto	
Lens		
Lens	2.8mm	
Field of View	D:125.5° H:107.1° V:57.6°	
Image		
Max. Resolution	1920 × 1080 Pixels (2MP)	3840 × 2160 Pixels (4K)
Image Settings	Brightness/Contrast/Saturation/Sharpness	
Picture Format	JPEG	
Capture Performance		
Capture Mode	Radar & PIR Trigger Capture, Sound Trigger Capture, Temperature	

	Trigger Capture, Alarm-in Capture, Interval Capture, Timed Capture, Debug Capture
Capture Rate	≥ 95%
Capture Distance	6m (Optimal)
Capture Distance	≤10m
Nighttime Illumination Distance	Up to 10m
Triggering Source	
Radar & PIR	
Radar Frequency Range	5.725GHz-5.875GHz
Radar Tx Power	-4dBm
PIR Detection Area	105°Horizontal, 105° Vertical
Sound Sensor	
Range	30dBA ~ 120dBA
Accuracy	± 3dB (0°C to +45°C)
Resolution	1dB
Temperature Sensor	
Range	-20°C ~ 60°C
Accuracy	± 0.3°C (0°C to + 60°C), ± 0.6°C(-20°C to 0°C)
Resolution	0.1°C
Wireless Transmission	
Cellular	4G LTE NA: B2/B4/B5/B12/B13/B25/B26 EU: B1/B3/B7/B8/B20/B28 AU: B1/B2/B3/B4/B5/B7/B8/B28/B66
SIM Slot	1 x Nano- 4FF SIM Slot
Protocol	HTTP/MQTT(s)
Other Interfaces	
Wi-Fi	IEEE 802.11 b/g/n, 2.4GHz (AP Mode for Configuration)
Bluetooth	Bluetooth® 5.3 (Device Wake-up)
GPS	Built-in High-accuracy GPS Module
Alarm I/O	1/1
Serial Port	1 x RS485
USB	1 × Type-C (USB 2.0) for Power Supply and Debug

Button		1 x Power Button, 1 x Reset Button, 1 x Wi-Fi Button	
LED Indicator		1 × Status Indicator	
Storage		1 × MicroSD/SDHC/SDXC Card Slot, support local storage up to 256G	
Solar Power Input		1 x MC4 Connector	
Physical Characteristics			
Power Supply		1) Solar Power via MC4 Connector Solar Power Requirement: Power ≥ 35W, OCV < 22V 2) 7.2V, 6500mAh Cold-weather Performance Rechargeable Lithium-ion Batteries 3) 5V / 1A by Type-C Port	
Battery Life[1]	Full Function Capture Mode[2]	Triggering Upload: Up to 2.4 Days Timing Upload: Up to 6.5 Days	Triggering Upload: Up to 1.9 Days Timing Upload: Up to 5.2 Days
	Low Power Timed Capture Mode[3]	Triggering Upload: Up to 372.2 Days Timing Upload: Up to 738.3 Days	Triggering Upload: Up to 299.7 Days Timing Upload: Up to 655.73 Days
Battery Health		The Battery's Capacity will reduce to 70% after 500 Times of Accumulative Charging and Discharging	
Power Consumption	Full Function Capture Mode[2]	Standby Status: 62mW Capture Status: 1.1W (Daytime), 2.7W (Nighttime with IR On)	Standby Status: 61.1mW Capture Status: 1.6W (Daytime), 3.1W (Nighttime with IR On)
	Low Power Timed Capture Mode[3]	Standby Status: 1.7mW Capture Status: 1.6W (Daytime), 3.9W (Nighttime with IR On)	Standby Status: 1.8mW Capture Status: 2.3W (Daytime), 4.6W (Nighttime with IR On)
Operating Temperature		-20°C ~ +60°C	
Color & Material		Charcoal Grey, ABS + PC (Flame Retardant)	
Ingress Protection		IP66	
Rain Cover Movement Distance		10mm	
Dimension		175 x 111 x 63.2mm (Without Rain Cover)	
Warranty[4]		2 Years	

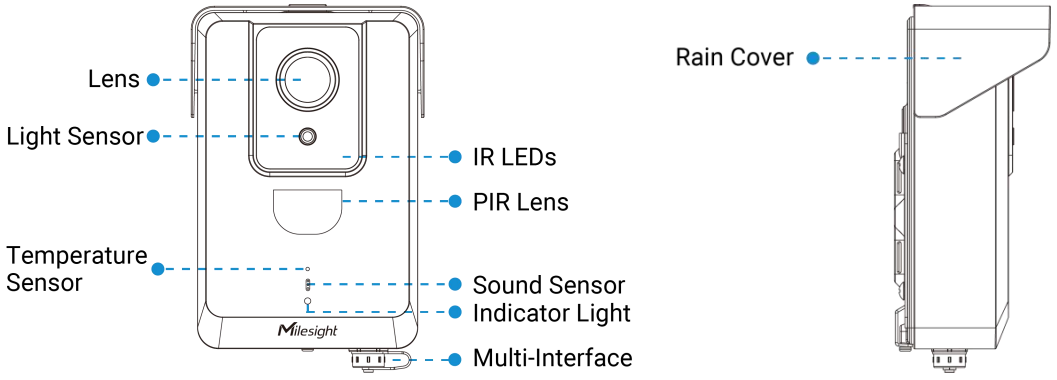
[1] Tested under laboratory conditions and for guideline purposes only.

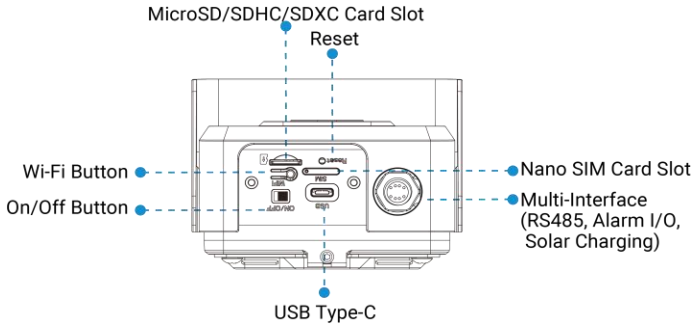
[2] Powered solely by internal batteries, 500 daytime captures and 500 nighttime captures per day.

[3] Powered solely by internal batteries, all sensors turned off, 4 daytime captures per day.

[4] For detailed information, visit our website https://www.milesight.com.

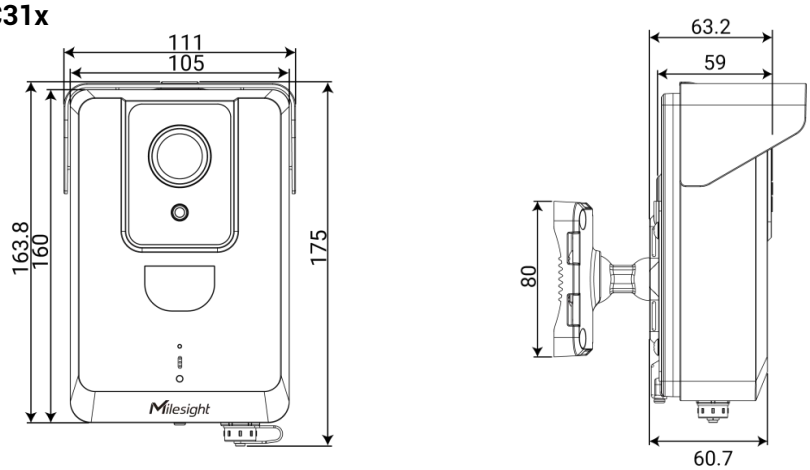
◆ Hardware Overview



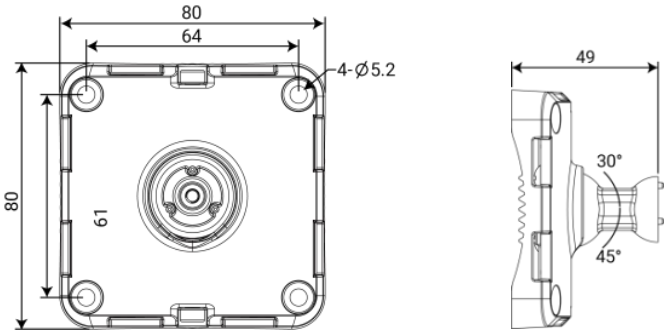
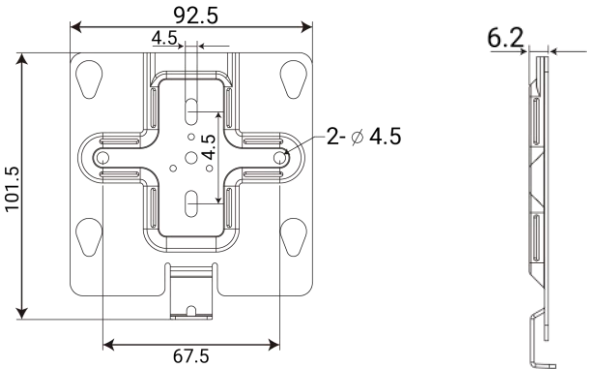


◆ Dimension(mm)

SC31x



3-Axis Ball Mounting Bracket



Backplane