Milesight

4G Solar-powered Perimeter Sensing Camera

| AI | PIR | AOV | 4G | Solar -powered | 1TB | GPS |

KEY FEATURES

AI-Powered Precision Sensing Integrating **PIR and AOV (Always-on Video)** technology, the system achieves an industry-leading sensing range of **up to 30m.** By utilizing E**dge-AI secondary filtering**, it intelligently excludes irrelevant motion—such as animals, foliage, or light changes—to focus strictly on targets that matter for perimeter security.

Wire-free 4G Solar Deployment Designed for remote areas without power or network infrastructure. This all-in-one system combines **4G LTE connectivity with high-efficiency solar power**, enabling rapid, 100% wireless deployment in any outdoor perimeter.

Superior 4MP Low-light Imaging Equipped with a **1/1.8'' large sensor** and **F1.0** aperture, the camera captures more light to ensure sharp 4MP resolution. It delivers transparent, low-noise imagery with rich details, providing reliable visual evidence for day and night monitoring.

Ultra-low Power Design Engineered for extreme energy efficiency with a standby power as low as **38mW.** With three flexible power modes and high-capacity battery support, the system ensures **year-round 24/7** autonomous operation even during prolonged overcast periods.

Multi-Dimensional Sensing Integrated with GPS and multiple sensors (Light, Sound and Temperature) for comprehensive spatial awareness, anti-masking, and anti-theft protection.

Battery pack is available

4G Solar-powered Perimeter Sensing Camera

	SC411 (4MP)
Image Trigger Mode	1- **PIR (All Day):** 24/7 Trigger-only capture. 2- **AOV (Day) + PIR (Night):** Always-on by day; Trigger-only by night.

Event		SC411 (4MP)
Event	Event Type	Supports Motion Detection (with AI-based human filtering), Noise Detection, Scheduled Tasks, One-Click Disarm, and Exception events (Tamper Detection, SD Card Exception, Battery Status Alert, Data Usage Alert, PIR Overtrigger Alert).
	Trigger Actions	Snapshot group (1–5 images) / Video clip (2–5 seconds) / Combined snapshot & video clip (2–5 seconds)
	Data Push	HTTP(s) POST, MQTT(s) POST, SMTP upload.
	Alarm Actions	Capture images, send video clips, or play audio (supports custom uploaded audio files).
Trigger Distance[1]		Up to 30 m (Optimal)
Supplement Light	Light Type	IR Strobe Light (4 light beads)
	IR Wavelength	850nm
Noise Trigger Source	Sound Sensor	Range: 31dBA ~ 120dBA Accuracy: ± 3dB Resolution: 1dB
Lens	Lens	Fixed focal lens, 4mm
	Aperture	F1.0
	Field of View	D: 111.8°/ H: 93.1°/ V: 49.8°
	DORI	D: 78.4m/ O: 30.8m/ R: 15.4m/ I: 7.7m
Image	Image Sensor	1/1.8" Progressive Scan CMOS
	Day/Night Mode	Day/Night/Auto/Customize
	Image Setting	Brightness/Contrast/Saturation/Sharpness
Video	Max. Image Resolution	4MP (2688*1520)
	Stream	Max 5fps@(2688*1520, 2304*1296, 1920*1080, 1280*720)
	Video Compression	H.265+/H.265(HEVC)/H.264+/H.264
	Video Bit Rate	16Kbps~6Mbps(CBR/VBR Adjustable)

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Interface	Alarm I/O	1*Alarm Output
	Audio I/O	1*Audio Output Built-in Microphone
	Power Input & RS485	M12 (5-pin) connector to power and RS485 interface
	USB	1*Type-C (USB 2.0) for Power Supply and Debug
	Button	1*Power Button, 1*Reset Button, 1*Wi-Fi Button
	LED Indicator	1*Status Indicator
Wireless Network	WLAN	WiFi AP Mode for Configuration (IEEE 802.11 b/n/g, 2.4GHz) WiFi STA Mode
	Cellular	4G LTE EU: LTE-FDD (B1/3/7/8/20/28A); LTE-TDD (B38/40/41) NA: LTE-FDD(B2/4/5/12/13/14/66/71) AU: LTE-FDD(B1/2/3/4/5/7/8/28); LTE-TDD(B40)
	SIM Card	Nano SIM
	Wireless Data Rate — Cellular	Uplink: 30–50 Mbps Downlink: 42–150 Mbps
	Wireless Data Rate — Wi-Fi	Up to 120 Mbps (UL/DL)
System	Work Mode	ActiveGuard Mode (Proactive Protection Mode): The system remains in a dynamic state, intelligently waking up via PIR or AOV sensors to perform real-time target detection and alarm actions.
		EcoSnap Mode (Energy-saving Timed Capture Mode): Optimized for long-term monitoring with minimal power. It supports timed snapshots and remote wake-up only; motion and noise detection are disabled.
		Standby Mode: The device remains in deep sleep to maximize battery life, activated only via manual remote wake-up for on-demand inspection.
	Device Wake-up Method	MQTT/ TCP/ Call
	GPS	Built-in High-accuracy GPS Module
	Storage	Support microSD/SDHC/SDXC Card Local Storage, up to 1TB
	System Compatibility	API, MQTT, HTTP
General	Working Temperature	Charging: -20 °C to 45 °C (-4 °F to 113 °F) Discharging: -20 °C to 60 °C (-4 °F to 140 °F)
	Working Humidity	0~95% (Non-condensing)

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	Power Supply	Battery (7.2V, 6400mAh, 46.8Wh)
		5V / 2A by Type-C Port (5V / 3A recommended for cold-weather reliability)
	Battery Health	The Battery's Capacity will reduce to 70% after 500 Times of Accumulative Charging and Discharging
	Power Consumption[2] (Daily Average)	ActiveGuard Mode: 2.70 Wh/day (based on 48 events/day) EcoSnap Mode: 1.29 Wh/day (based on timed snapshots) Standby Mode: 0.94 Wh/day (ultra-low power standby)
	Weather Proof	IP67
	Weight	Net Weight: 0.9 kg Gross Weight: 1.7 kg
	Camera Dimensions	175*111*74 mm (Without Rain Cover)
	Warranty	2 Years
Certification	EMC	CE-EMC (EN 55032, EN 55035), FCC (PART 15B, PART 15.247), RCM (AS/NZS CISPR 32:2015+A1(2020))
	Safety	CE-LVD (EN IEC 62368-1), RCM(ASNZS 62368)
	RF	CE-RED (EN 301 489-1, EN 301 489-17, EN301 489-19, EN301 489-52, EN 301 511, EN 301 908-1, EN 301 908-2, EN 301 908-13, EN300 328, EN 303 413, EN50665, EN IEC62311) RCM (AS/CA S042.1, AS/CA S042.4, AS NZS 4268, AS/NZS 2772.2)
	Environment	CE-ROHS (Directive (EU) 2015/863 amending 2011/65/EU)

[1] At the default installation height of 2.1 m with a 12° downward tilt, optimal conditions provide effective horizontal and vertical coverage.

Note: PIR performance decreases when ambient temperature nears human body temperature or when targets wear thick winter clothing.

[2] **Note:** The power consumption data is measured under typical operating scenarios. Actual power consumption may vary significantly depending on the frequency of event triggers, the number of images/videos captured daily, and network signal strength.

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Structure Diagrams

Lens

Light Sensor

ToF

Sound & Temperature Sensor

Rain Cover

IR LEDs

Indicator Light

PIR Lens

Mic

Solar Charging Interface

M12-5 PIN

PV(-)

PV(+)

PV(RS485)

M12-8 PIN

M12-5 PIN

Alarm Out & Audio Out

MicroSD/SDHC/SDXC Card Slot

Reset

Wi-Fi Button

On/Off Button

Nano SIM Card Slot

Solar Charging Interface

USB Type-C
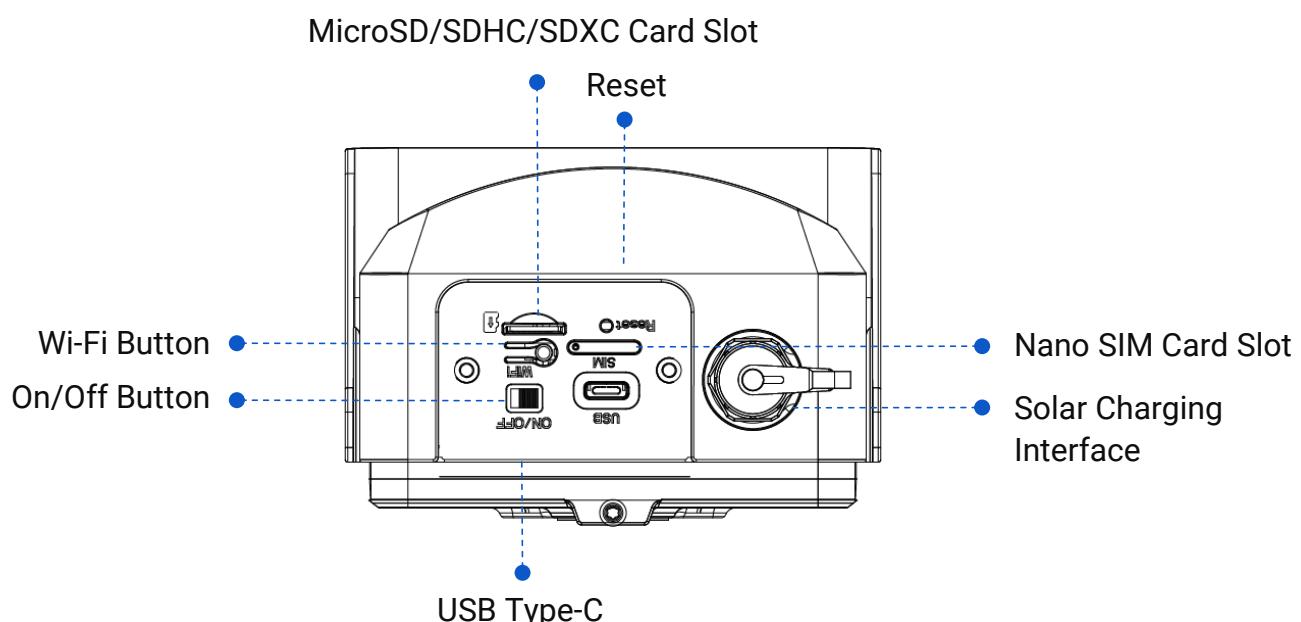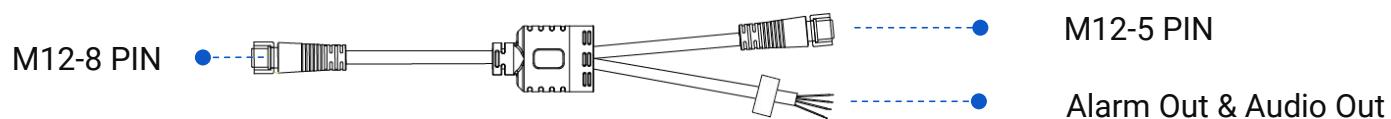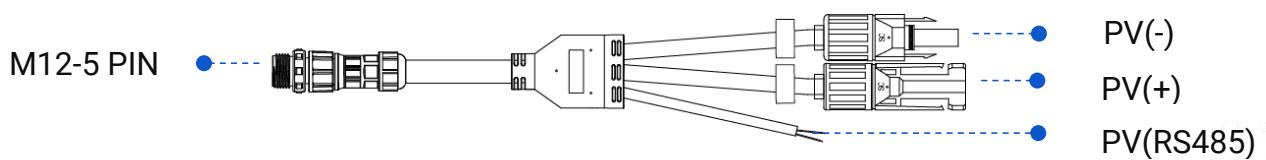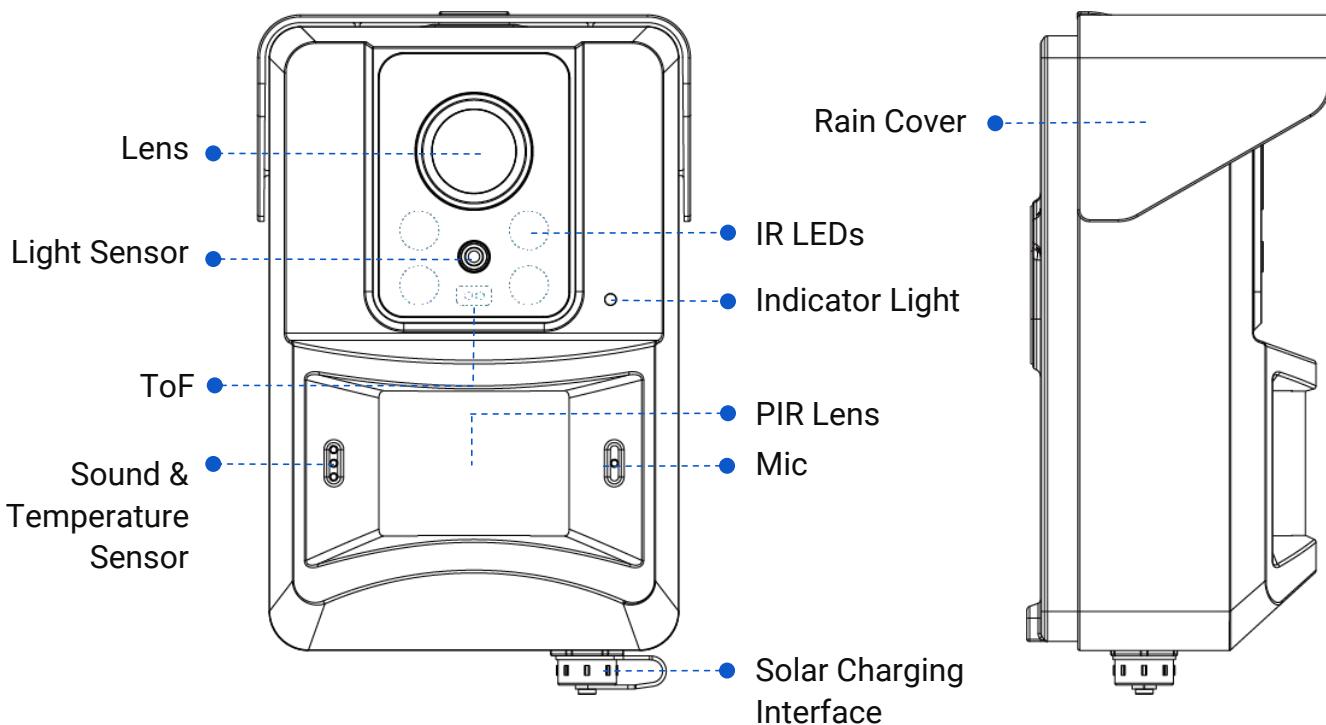
SC411
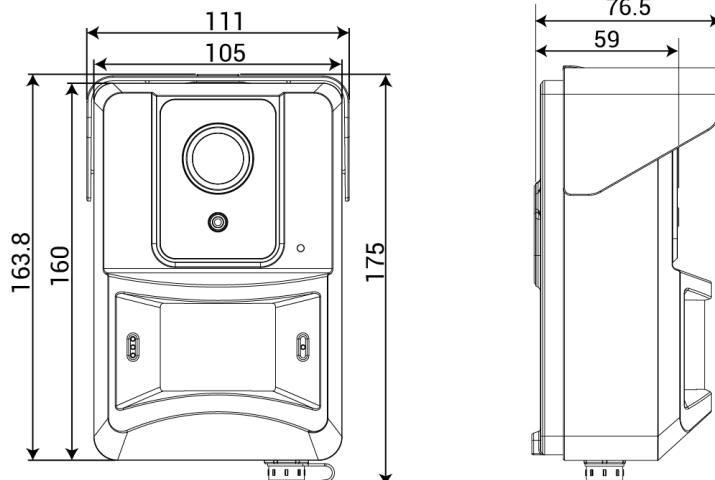
Adjustable Pole Mount Bracket
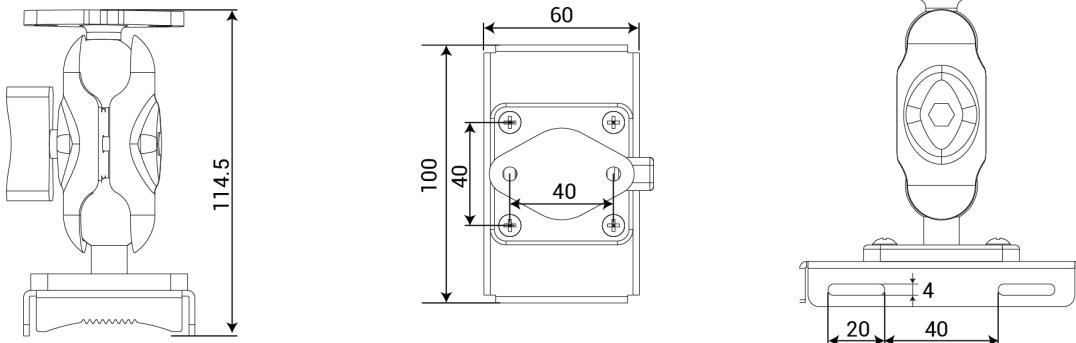
Units: mm

Accessories Support

Solar Power System

Model: S100B55/S100B96

S45 Solar Power Modules

Weight: 510g

Dimensions: 580*385*25mm

S100 Expansion Module

Model: SA100

Note: To expand S100B55 or S100B96 to dual solar panel system

Solar Power System Bracket

Model: BJ-N

Weight: 3.5kg

Dimensions: 220*217.5*30 mm

# 4G Solar-powered Perimeter Sensing Camera

S100B55 Solar Power System

S100B55

Weight: 13kg

Dimensions:

765*630*69 mm

825*690*105 mm

(with Package)
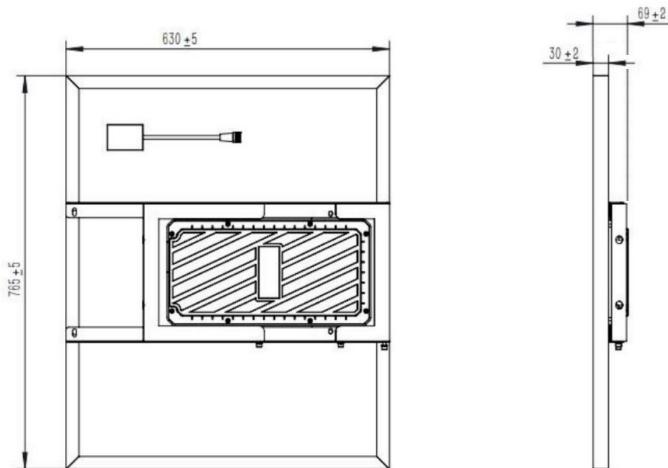

S100B96 Solar Power System

S100B96

Weight: 16kg

Dimensions:

765*630*112.5 mm

825*690*140 mm

(with Package)

V1.0