

Little Squirrel Smart Parking Space Management Device SV-PR-L2A-EX

Making Cities Better

Product Overview

The Little Squirrel Smart Parking Space Management Device SV-PR-L2A-EX is defined as a roadside low-power sensing device. It integrates a dual-lens 400W starlight camera, fill light, and LiDAR, and can manage 2 roadside parking spaces. The product transmits data over 4G networks and is mounted on existing poles such as parking meters using a snap-on installation method. With an all-in-one design, it offers simple installation, low cost, and convenient commissioning. It is primarily designed for parking management applications, providing 24/7 real-time management.

The device uses image technology to detect whether a parking space is occupied or abnormally occupied. Relevant data is uploaded to the backend platform in real time for publication, helping drivers find available parking spaces. The sensors only detect whether a parking space is occupied; they do not collect or store any personal data, vehicle model information, or vehicle registration numbers.

Product Appearance



BLUE ROBOT AI

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Functional Features

- Uses a dual-lens 400W starlight camera and dual LiDAR for detection; can manage 2 parking spaces, with configurable detection areas and intervals;
- Equipped with an ultra-low-power SOC and ultra-low-power detection module; supports radar-triggered activation and scheduled activation;
- Built-in AI chip with on-device AI recognition processing capability, enabling accurate identification of parking space status and occupancy; supports three parking space status detections: space occupied/space vacant/abnormal occupancy; parking space status detection accuracy exceeds 99%;
- Supports identification of abnormal items occupying parking spaces, such as hand carts, shopping carts, traffic cones, guardrails, building materials, construction debris, tires, garbage, cardboard boxes, metal cages, and other fixed containers, as well as other undefined non-vehicle objects;
- Supports detection of individual and clustered objects with a volume greater than 300 mm x 300 mm x 300 mm within the detection area;
- Supports low battery alarms, sensor cleaning alarms, connection anomaly alarms, fall alarms, and position offset alarms, and can generate 2 images at 1-minute intervals; when network connectivity is restored, images captured upon alarm triggering can be uploaded to the management platform;
- Built-in intelligent fill light that provides supplemental lighting on demand based on events;
- Supports European-band 4G wireless communication module; supports GPS positioning and tracking;
- Solar charging capability with integrated all-in-one 4 W solar panel;
- Compatible with existing installation structures of parking meter facilities; safe and reliable installation method;
- Adaptable to different application scenarios, sites, climate conditions, and ambient noise levels;
- Supports 7x24 uninterrupted operation with no performance degradation; battery endurance/replacement cycle exceeds 60 days; self-sustaining under good lighting conditions.

Technical Parameters

Parameters Name	Parameters Value
Basic Parameters	
Image Sensor	Dual-lens 1/2.7-inch 4 MP CMOS sensor
Focal Length	1.8mm
Maximum Covered Parking Spaces	2

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Electronic Shutter	Auto/Manual 1/25s ~ 1/1000s
Image Resolution	Captures still images up to 2560 × 1440 in JPEG format
Video Resolution	2560 × 1440 @ 15fps 1920 × 1080 @ 15fps 1280 × 720 @ 15fps
Noise Reduction	3D noise reduction supported
Wide Dynamic Range	Supported
White Balance	Auto / Manual
Video Compression Standard	H.264, H.265
Image Encoding Format	JPEG
Video Bit Rate	256 Kbps ~ 16 Mbps
Edge Enhancement	Supported
Exposure Mode	Auto / Manual
Functional Parameters	
Security Mode	Authorized username & password; HTTPS encrypted communication
Shutter Mode	Single shutter
OSD Overlay	Supports overlay of time, date, location and other information
Alarm Events	Sensor cleaning reminder, low battery, drop, position offset, connection failure
Large Model Compatibility	Cooperates with cloud large model servers to identify non-vehicle objects occupying parking bays
Offline Data Resume Transmission	Supported; cached offline detection data will be uploaded once network recovers
Intelligent Analysis Functions	
Parking Bay Status Detection	Detects occupied/vacant bays, non-vehicle occupancy and identifies occupying objects
External Interfaces	
Storage Interface	TF card slot
Network Interface	4G (supports all mainstream 4G frequency bands for operators in Asia and Europe)
Fill Lights	2 units; auto switch based on ambient brightness with adjustable brightness
General Parameters	
Power Supply	Ternary lithium battery pack
Battery Capacity	70Ah @ 3.7V
Average Operating Power Consumption	Less than 300 mW
Battery Replacement Cycle	Over 60 days without sunlight; self-sustained under sufficient sunlight
Operating Mode	Scheduled wake-up, radar trigger wake-up
Solar Panel Power	4 W
Operating Temperature	-20°C ~ +60°C
Operating Humidity	10% ~ 95% (non-condensing)
Ingress Protection Rating	IP66
Impact Resistance	IK10
Product Dimensions	204 × 140 × 472 mm

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Net Weight	7.5 kg
Installation Method	Snap-on quick mounting; installation takes 15~20 minutes
Operation & Maintenance	
O&M Modes	Switchable between maintenance mode and working mode
O&M Alerts	Low battery alert, sensor cleaning reminder, connection failure alert, drop alert, position offset alert; two images captured at 1-minute intervals generated per alarm
Firmware Upgrade	Supports remote batch upgrade
Configuration	Supports remote parameter modification
Alarm Mute	Position offset alarm can be disabled during transportation or maintenance
Security Features	
Position Tracking	GPS positioning supported; location data uploaded at configurable intervals (e.g. every 3 minutes)
Data Clearing	Built-in data clearing program; remote data erasure can be executed via management portal upon position offset alarm trigger

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