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INDUSTRIAL PRODUCT DATASHEET

SenseCAP A1102 - LoRaWAN Vision AI Sensor

SenseCAP A1102 - LoRaWAN Vision AI Sensor with on-device TinyML inference, no-code AI model deployment, LoRaWAN connectivity, and IP66-rated environmental durability for person detection, people counting, face detection,...

SKU	UPDATED	PRICE
101991343	2026-10-29 02:32:55	$79.00(Excl. VAT)



Overview



The SenseCAP A1102 LoRaWAN Vision AI Sensor is a smart edge device that runs TinyML AI models locally, transmitting only inference results via LoRaWAN (863-928MHz) for enhanced privacy and power efficiency. It features pre-deployed models for human detection, people counting, and meter reading, plus no-code access to 300+ pre-trained models or custom model training through SenseCraft AI, with IP66-rated durability and built-in battery for long-range AI applications.

Key Features

The SenseCAP A1102 LoRaWAN® Vision AI Sensor is a smart edge device that runs TinyML AI models locally, transmitting only inference results via LoRaWAN® (863-928MHz) for enhanced privacy and power efficiency. Operating at 480×480 resolution with 10 FPS, it comes with three pre-deployed models for human detection, people counting, and meter reading, while offering no-code access to 300+ pre-trained models or custom model training through the **SenseCraft AI** platform. It also supports model deployment from **TensorFlow Lite** and **PyTorch** frameworks. Users can configure the device and the frequency bands via the **SenseCraft App**, and deploy the IP66-rated sensor in harsh indoor or outdoor environments. With a built-in battery, making it ideal for various AI applications requiring long-range communication.

- **Advanced Edge AI Camera**: Equipped with a powerful MCU-based vision camera processor performing local inference at 480×480 resolution at 10 FPS. By transmitting only inference results, it ensures data privacy and minimizes network bandwidth usage.
- **No-Code AI Model Deployment and Training**: Pre-loaded with three on-device AI models (human detection, people counting, and meter reading) for out-of-box vision applications. Natively integrates with **SenseCraft AI** , a web-based platform offering 300+ pre-trained models for instant deployment and simple 3-step training workflow for classification and detection models. This enables rapid model training and deployment without coding expertise. Moreover, the devices also supports custom AI models converted from TensorFlow and PyTorch frameworks for edge deployment.
- **LoRaWAN® Connectivity**: Supports global frequency bands (863-928 MHz) with transmission range up to 10 km in optimal conditions, enabling reliable long-distance communication.
- **2 Power Options**: Features a 19Ah SOCl2 D-size battery inside. Compatible with external DC power supply via optional junction box.
- **IP66 Rating Environmental Durability**: Features IP66-rated protection against dust ingress and strong water jets. Operates reliably in temperatures from 0°C to 70°C, suitable for diverse indoor and outdoor deployments.
- **SenseCraft Cloud Integration**: Includes SenseCraft Mate mobile app and web portal for easy device configuration, device management and quick data visualization. Features open API support and 3-month FREE trial access, it's compatible with third-party IoT platforms.

Product Gallery









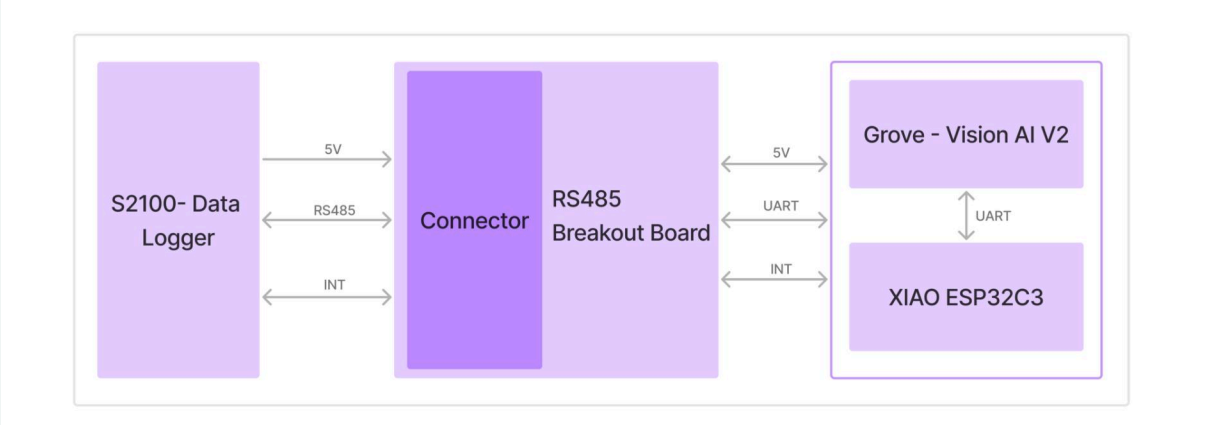


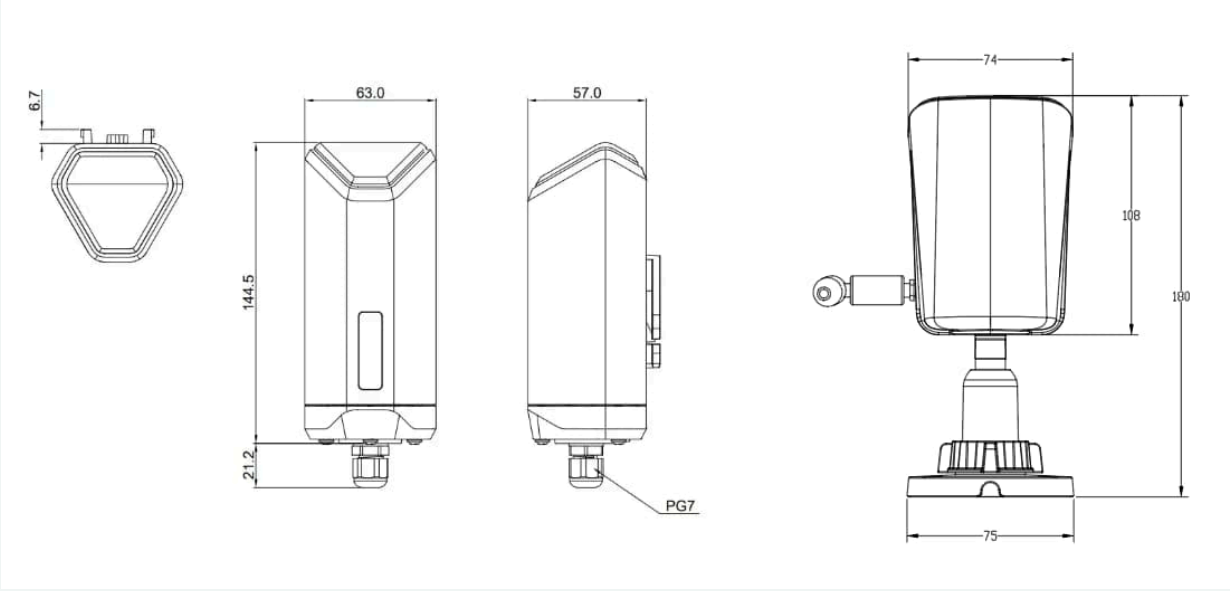
Specification

Product Model	SenseCAP A1102
Microcontrollers	Vision AI: Himax-6538 LoRaWAN Network: Wio-E5 (STM32WLE5JC)

Camera	Module: OV5647 Lens size: 1/4" Focal length: 3.4 mm (adjustable) Resolution: 2592 × 1944 pixels Pixel size: 1.4 µm × 1.4 µm Maximum frame rate: 1080p @ 30 fps, 720p @ 60 fps FOV: 62°
Model Execution and Inference	480 * 480 >10 fps
LoRaWAN® Transmission	Protocol: LoRaWAN v1.0.3 Class A
	LoRaWAN® Frequency: IN865/EU868/US915/AU915/ AS923
	Communication Distance: 2 to 10km (depending on the environment)
	Max Transmitted Power: 19dBm
Power Supply	Built-in Battery or DC 12V/1A (with external junction box wiring)
Power Consumption	102mA
Battery	Capacity: 19Ah (non-rechargeable)
	Type: Standard D-size SOCl2 Battery
Local Storage Memory	8GB MicroSD Card (Class 10) for storaging up to 20,000 images with timestamp and supports to export
IP Rating	IP66
Operating Temperature	0-70 °C
Operating Humidity	0-100% RH (non-condensing)
Cable Length	2 meters
Device Weight	719g
Device Dimensions	Camera:180mm*75mm*70mm□DTU: 144.5mm*63mm*57mm

Hardware Overview





Applications

- **Person Detection**
- **People Counter**
- **Face Detection**
- **Specific Object Detection**

Part List

SenseCAP A1102 - LoRaWAN Vision AI Sensor	x1
2.4GHz Rod Antenna	x1
Waterproof Aviation Plug	x1
Phillips Screwdriver	x1
Instruction Guide	x1
Screws Package	x1
Base Positioning Sticker	x1

Compliance & Logistics

HSCODE	9031809090
USHSCODE	9031808085
UPC	
EUHSCODE	9013101000
COO	CHINA

Resource Links

- https://www.seeedstudio.com/SenseCAP-A1102-LoRaWAN-Vision-AI-Sensor-p-6347.html
- Wiki

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