seeed studio

INDUSTRIAL PRODUCT DATASHEET

SenseCAP S2105 - LoRaWAN® Soil Moisture, Temperature and EC Sensor

A battery-powered IP66 wireless soil moisture, temperature, and EC sensor, range from 0 ~ 100% (m^3/m^3), -40 ~ 80℃, and 0 to 23 dS/m, equipped with built-in Bluetooth and APP service for OTA configuration and remote device...

SKU	UPDATED	PRICE
114992871	2026-11-13 10:00:40	$146.00(Excl. VAT)



Overview



A battery-powered IP66 wireless soil moisture, temperature, and EC sensor, range from 0 ~ 100% (m^3/m^3), -40 ~ 80℃, and 0 to 23 dS/m, equipped with built-in Bluetooth and APP service for OTA configuration and remote device management. Used in smart farming, smart yard, and environment monitoring solutions.

Key Features

01 **Compatible with Worldwide LoRaWAN® Networks**

Compatible with different types of LoRaWAN® gateways to enable fast connection with LoRaWAN® networks (support the universal frequency plan from 863MHz ~928MHz).

02 **Long Range & Battery powered**

Ultra-wide-transmission range of 2km in urban scenes and 10km in line of sight scenes. Powered by easily replaceable standard Li-SOCl2 battery (type: ER34615) with Max.10 years of battery life.

03 **Designed to Use in Harsh Environments**

-40℃ ~ 85℃ operating temperature and IP66-rated enclosure, suitable for outdoor use, high UV exposure, heavy rain, dusty conditions, etc.

04 **Simple Configuration**

SenseCAP provides a no-code experience that enables users to finish configuration with 4 steps through SenseCAP Mate APP.

05 **High-performance Guarantee**

06 **High-Low Temperature Test - determine performance under adverse temperature conditions.**

07 **Conformance Test - whether the collected values of multiple devices are consistent**

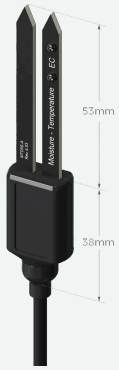
08 **Waterproof Test**

09 **Freezing Test**

10 **Long-Range Communication Test - whether the device loses packets under long-distance transmission**

11 **R&D and Production Test - to test the pass rate of multiple devices under factory conditions**

Product Gallery

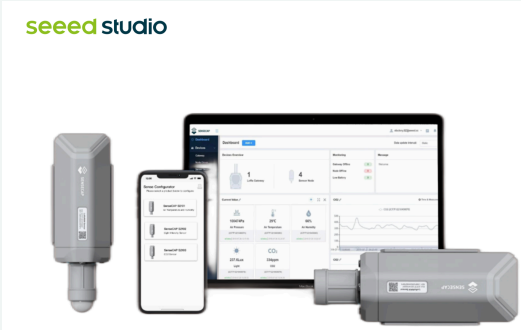






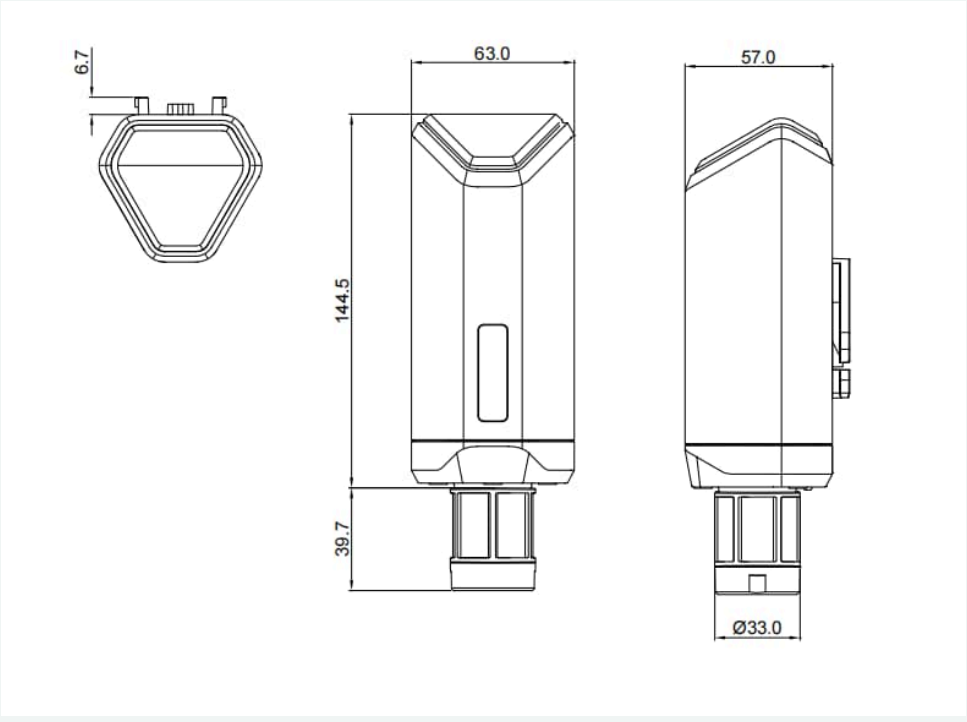






Hardware Overview





Applications

- **Agriculture Irrigation, Greenhouse, Garden Planting, Drought Monitoring, Turf and Lawn Management:** SenseCAP S210X is compatible with LoRaWAN® V1.0.3 protocol and can work with Gateway - LoRaWAN Device - SenseCAP.
- **LoRaWAN® gateways can provide LoRaWAN® network coverage which is required when using such sensors. S210X can be connected to different LoRaWAN® gateways while what Seeed provides offers you a seamless user experience.**
- **Helium Network: Sensors work in areas covered by Helium Network (Check on Helium Explorer). You can check the SenseCAP M1 LoRaWAN Indoor Gateway - US915 - Seeed Studio and SenseCAP M2 Light Hotspot and Software License - Seeed Studio.**
- **LoRaWAN Network: Sensors work in LoRaWAN® networks, like The Things Network, Loriot, Chirpstack, etc. You can check the SenseCAP Gateway - LoRaWAN EU915 - Seeed Studio and the SenseCAP-Multi-Platform-LoRaWAN-Indoor-Gateway-SX1302-US915-p-5472 - Seeed Studio.**
- **We highly recommend that you use our SenseCAP M2 Multi-Platform LoRaWAN Gateway, which is a standard LoRaWAN® gateway that supports connection to different network servers. With its affordable price of $99, its cost-effectiveness becomes a standout advantage, especially when building your private LoRaWAN network.**
- **Seeed provides the SenseCAP Portal platform and SenseCAP Mate APP to help users better manage and check data remotely**
- **SenseCAP Portal, for Device, Data, and Access Key Management - Seeed Studio IIoT Solutions is a web service to enable users to manage SenseCAP devices and view data through the web.Bind and manage all devices in one account**
- **Includes Dashboard, Device Management, Data Management, and Access Key Management**
- **Provides MQTT and HTTP API to users for further development:** SenseCAP APP in iOS and Android Versions - Seeed Studio IIoT Solutions is a powerful APP for data visualization and remote device management.Save time - provides a scan-and-play experience to enable users to complete the whole configuration in 4 steps
- **Works for people with less or no technical background to get started with sensor data easily**
- **Acquire and view data on clean user interfaces**
- **Set time intervals: improve the battery efficiency**

Resource Links

- https://www.seeedstudio.com/SenseCAP-S2105-LoRaWAN-Soil-Temperature-Moisture-and-EC-Sensor-p-5358.html
- SenseCAP S210X LoRaWAN Sensor Catalogue
- S210X Sensors User Guide
- S210X CE_FCC Certification Report
- Connect S210X Sensors to Azure IoT Central User Guide
- Battery Life Prediction Table
- SenseCAP S210X Decoder

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com