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INDUSTRIAL PRODUCT DATASHEET

SenseCAP Industrial Environmental Sensing Kit

A one-stop industrial environmental sensing kit with durable, industrial-grade sensors and cloud connectivity, ideal for smart agriculture, smart cities, and industrial monitoring.

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Overview



The SenseCAP Industrial Environmental Sensing Kit is a comprehensive IoT solution that includes a SenseCAP Sensor Hub and six industrial sensors for monitoring water quality, soil properties, atmospheric conditions, and weather. Designed for long-term outdoor use, it features robust MODBUS-RTU RS485 communication, a waterproof solar panel, and 4G LTE connectivity for reliable data transmission to the cloud.

Key Features

Why Monitor the Environment?

Even as urbanisation and digitalisation heavily transform the world, the natural environment remains an integral part in both daily living and industries. Environmental monitoring through IoT allows parties to maintain a data-driven understanding of the environment that they live and work in to drive decisions that improve not only productivity but also quality of living!

Introducing Seeed's Industrial Environmental Sensing Kit

The Industrial Environmental Sensing Kit is a one-stop comprehensive solution for all your environmental sensing needs - consisting of the SenseCAP Sensor Hub and 6 additional industrial sensors to measure a wide range of environmental data. The kit provides robust capabilities in monitoring water quality and soil properties, as well as atmospheric and weather conditions.

The kit comes with a Waterproof PV-12W Solar Panel to supply power to remote sensor infrastructure, a sensor system can generate its own power. In most cases, the cheapest and most convenient method is solar panels combined with a battery. When the sun is bright enough solar panels provide enough electricity to power the sensor system and charge the battery for the night or during times when the sunlight is not sufficient.

Kit components are designed with IoT solution longevity in mind - boasting reliable build quality for prolonged outdoor deployment in a variety of conditions. Furthermore, all of them use the reliable Industry-Standard MODBUS-RTU **RS485** protocol which has proven to be effective even in noisy environments. This also means that you can easily add other RS485-compatible sensors to the SenseCAP Sensor Hub (which can host up to 32!).

Collected data can be subsequently easily transmitted to the cloud through the Sensor Hub using 2G/3G/4G LTE.

The SenseCAP Industrial Environmental Sensing Kit allows you to monitor the following environmental data:

- Atmospheric Temperature/Humidity/Atmospheric Pressure/Light with waterproof **SenseCAP ORCH S4 4-in-1 Weather Sensor (A1B)**
- CO2 Concentration with **SenseCAP SOLO CO2 5000 (A2)**
- Water Conductivity, Salinity, and Total Dissolved Solids (TDS) with **Industrial EC & TDS Sensor (B)**
- Soil Moisture and Temperature with **S-Soil MT-02B Industrial Soil Moisture & Temperature Sensor**
- Leaf Wetness & Temperature with **S-YM-01B Industrial Leaf Wetness and Temperature Sensor**

Kit Features:

- Durable: suitable for long-term outdoor applications
- Complete Set of Industrial Sensors - Monitor Water Quality, Soil, Atmosphere and Weather Properties
- Robust, Cross-Compatible Industry-Standard Communication Protocol with MODBUS-RTU RS485 and sturdy frame protects the solar panel from deformation
- Excellent Build Quality Designed for Longevity - Robust Industrial Grade Waterproof Aviation Connectors and Housings
- Powered by the SenseCAP Sensor Hub 4G Data Logger with Diverse Wireless Connectivity Options

- Access to the SenseCAP Ecosystem, including the SenseCAP portal, mobile application and API

Applications

- Agricultural Development
- Green / Smart Cities
- Industrial Productivity
- Industrial Safety
- Environmental Preservation
- Distributed Healthcare

Why Use the SenseCAP Industrial Environmental Sensing Kit?

SenseCAP is focusing on industrial sensing applications: smart agriculture, precision farming, and smart city. It consists of hardware products (sensors, data-loggers & gateways, etc.), software services (SenseCAP portal, mobile App, open dashboard), and API for device & data management.

- Accurate data for environmental monitoring, insights and decision making
- Simplify hardware acquisition efforts with a convenient, comprehensive sensor suite
- Robust hardware for solution longevity, reducing long-term maintenance costs
- Ready-to-use solution with the SenseCAP ecosystem's extensive documentation software stack

Documentation

- **SenseCAP Sensor Hub Catalog (Data Logger & Sensor Probes)**
- **SenseCAP Sensor Hub 4G Data Logger User Guide**
- **SenseCAP Document Center**

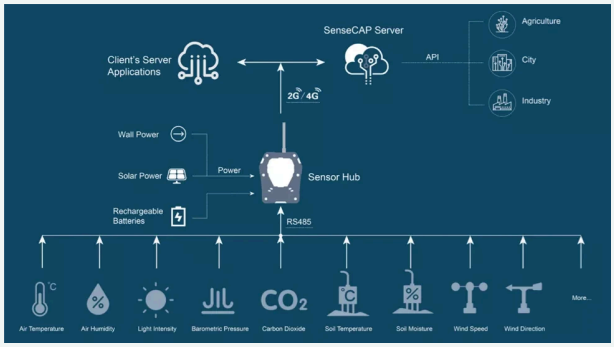
Read More About Our IoT and Environmental Sensing Portfolio

- **LoRa & LoRaWAN: Vertical Solutions for the Real World**
- **Getting Started with Gas Sensors in Industrial IoT**
- **IoT in Smart Agriculture: LPWAN Technologies & Applications**
- **SenseCAP LoRaWAN Use Case: Baoneng Cold Storage Warehouse – Industrial IoT solution for Food Traceability**

Product Gallery









Applications

- **Complete Set of Industrial Sensors:** Monitor Water Quality, Soil, Atmosphere and Weather Properties
- **Robust Cross-Compatible Communication Protocol with MODBUS-RTU RS485:** Robust, Cross-Compatible Industry-Standard Communication Protocol with MODBUS-RTU RS485 and sturdy frame protects the solar panel from deformation
- **Excellent Build Quality Designed for Longevity:** Robust Industrial Grade Waterproof Aviation Connectors and Housings
- **Powered by SenseCAP Sensor Hub 4G Data Logger:** Powered by the SenseCAP Sensor Hub 4G Data Logger with Diverse Wireless Connectivity Options
- **Access to the SenseCAP Ecosystem:** Access to the SenseCAP Ecosystem, including the SenseCAP portal, mobile application and API

Resource Links

- https://www.seeedstudio.com/SenseCAP-Industrial-Environmental-Sensing-Kit-p-5012.html

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