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INDUSTRIAL PRODUCT DATASHEET

# SenseCAP S800 8-in-1 Compact Weather Sensor

SenseCAP S800 8-in-1 Compact Weather Sensor measures air temperature, relative humidity, barometric pressure, wind speed, wind direction (ultrasonic), PM2.5, PM10, and noise.

| SKU | UPDATED | PRICE |
| --- | --- | --- |
| 101991023 | 2026-11-11 09:52:52 | $799.00(Excl. VAT) |



# Overview




SenseCAP S800 8-in-1 Compact Weather Sensor measures air temperature, relative humidity, barometric pressure, wind speed, wind direction (ultrasonic), PM2.5, PM10, and noise. It is ideal for application in a rough environment like the outdoors, agriculture, or smart cities. Use it with SenseCAP LoRaWAN Data Loggeror SenseCAP 4G Data Logger.

# Key Features

01 **8 parameters measurement**

Measures air temperature, relative humidity, barometric pressure, wind speed, wind direction, PM2.5, PM10 and noise in 1 single sensor

02 **Industrial-level design**

-40°C to +85°C operating temperature, IP66 rated: waterproof, and dustproof, suitable for outdoor scenarios

03 **Output interface**

RS485 (MODBUS-RTU) / SDI-12

04 **Thermostatically-controlled heating system**

Independent heating power supply for use in extremely cold environments

05 **Powerful Components Included**

A 3m cable for the pole mount; radiation shields are equipped to ensure accurate ambient measurement; ultrasonic wind speed & direction sensors without moving parts

06 **High-performance Guarantee**

07 **Wind tunnel for wind calibration**

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

09 **Structural Test - whether the collected values of multiple devices are consistent**

10 **x-y-z vibration test**

11 **Waterproof and air tightness test**

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

# Product Gallery









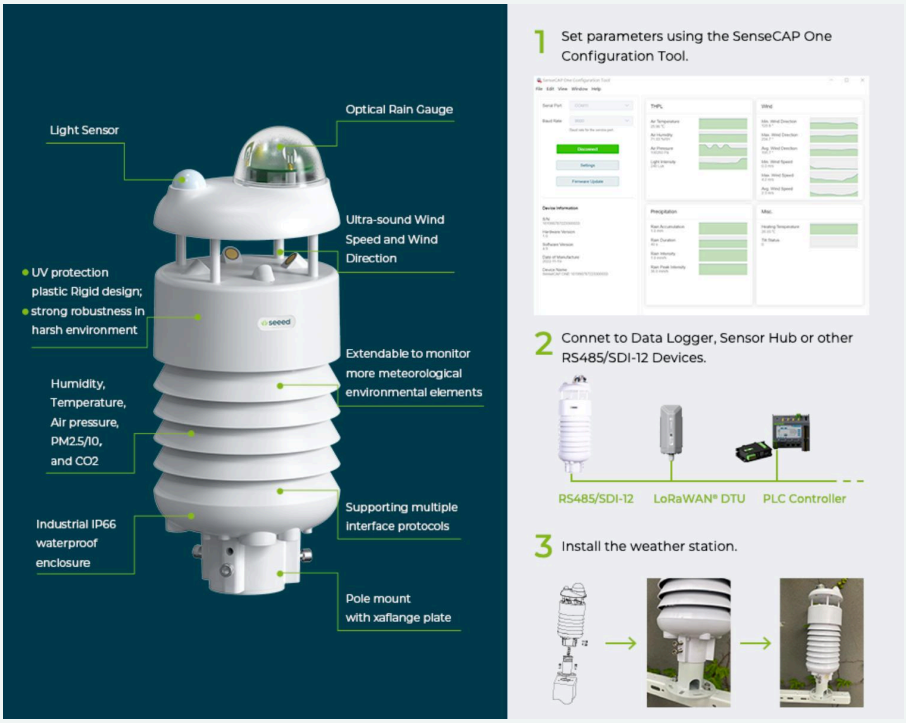








# Hardware Overview



# Applications

- Smart Agriculture: Serves as a compact agriculture and farm weather station, providing localized weather, rainfall, wind, and solar radiation data to support irrigation scheduling, crop management, and daily farm operations.
- Smart City: Provides localized weather data for environmental monitoring, public infrastructure management, and weather-aware urban operations.
- Power Transmission: Monitors wind, rainfall, temperature, and other local weather conditions around transmission infrastructure to support inspection and operational planning.
- Renewable Energy: Measures solar radiation and surrounding weather conditions to support the monitoring and operation of solar and other renewable energy sites.
- Transportation and Traffic: Supplies real-time local weather measurements for roads, transport facilities, and traffic management systems operating under changing outdoor conditions.
- Today, data on localized weather, known as microclimates, is the new frontier for more precise and accurate weather forecasting. As a result, the collection of weather data is becoming increasingly smaller and gridded. In light of this, weather sensors, which are the most convenient means of collecting weather data, are seeing a rise in demand.
- This SenseCAP ONE S800 8-in-1 Compact Weather Sensor can help you collect and monitor environmental and weather data, which are crucial in different application scenarios such as smart city projects and etc. It's IP66 certified, and it features strong robustness to withstand even the toughest outdoor environment. The Sensors to measure wind speed and wind direction use ultrasound instead of a traditional mechanical 3-cup or vane anemometer. The advantage of using ultrasonic sensors is that reducing the movable parts can make the sensor less likely to break and thereby is easier to be maintained without any sacrifices in precision or manpower.
- SenseCAP ONE is a series of all-in-one compact weather sensors, that integrate multiple sensors into this compact device, monitoring up to 10 weather parameters: air temperature, air humidity, atmospheric pressure, light intensity, wind speed, wind direction, precipitation, PM 2.5, PM 10, and CO2.
- The SenseCAP ONE series uses the RS485 (MODBUS-RTU) / SDI-12 communication protocol. Hence, the SenseCAP ONE compact weather sensor can be used with any data logger that supports RS485 (MODBUS-RTU) / SDI-12.
- We offer the SenseCAP S2100 - LoRaWAN® Data Logger - Seeed Studioand Sensor Hub industrial-grade 4G Data Logger with MODBUS-RTU RS485 protocol - Seeed Studiosuitable for SenseCAP ONE series weather sensors, you can transmit the sensor data to public LoRaWAN® network servers(Helium, TTN, etc.,) or private servers.

# Resource Links

- https://www.seeedstudio.com/SenseCAP-S800-8-in-1-Compact-Weather-Station-p-5653.html
- SenseCAP ONE/SenseCAP ONE V2 Compact Weather Station User Guide
- SenseCAP Weather Sensor Catalogue
- SenseCAP Weather Station Power Consumption Table
- SenseCAP Sensor Hub Catalog (Data Logger & Sensor Probes)
- SenseCAP Document Center
- Resource

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