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INDUSTRIAL PRODUCT DATASHEET

SenseCAP S500 V2 5-in-1 Compact Weather Station

S500 5-in-1 Compact Weather Sensor measures air temperature, relative humidity, barometric pressure, wind speed, and wind direction (ultrasonic).

SKU	UPDATED	PRICE
101991021	2026-11-11 09:52:46	$599.00(Excl. VAT)



Overview



S500 5-in-1 Compact Weather Sensor measures air temperature, relative humidity, barometric pressure, wind speed, and wind direction (ultrasonic). It is ideal for application in a rough environment like outdoors, agriculture, or smart cities. Use it with SenseCAP LoRaWAN Data Loggeror SenseCAP 4G Data Logger.

Key Features

01 **5 parameters measurement**

Measures air temperature, relative humidity, barometric pressure, wind speed, and wind direction 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







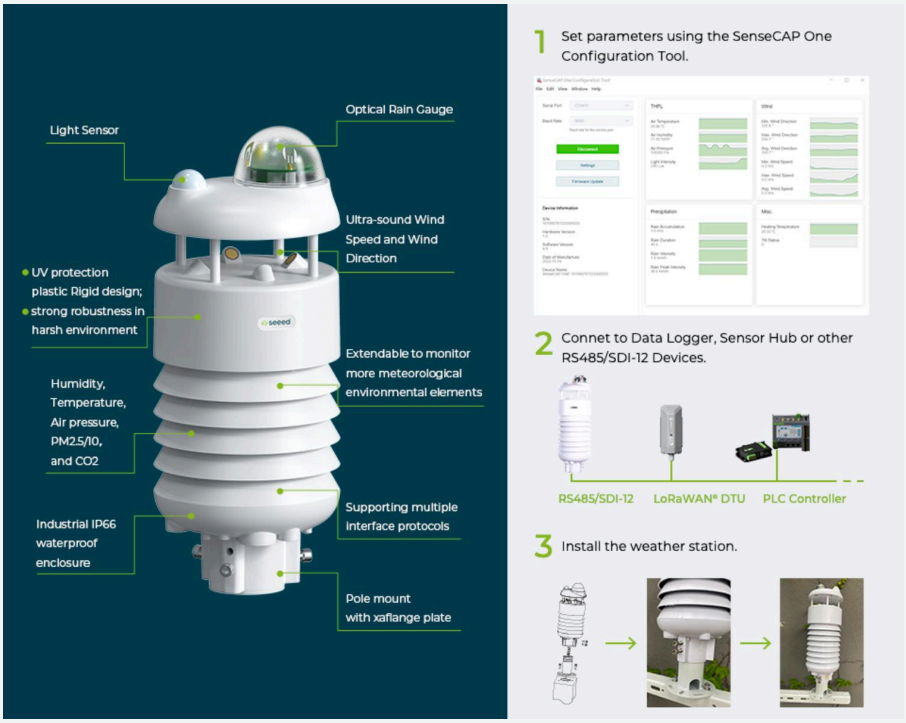








Hardware Overview



Applications

- Backyard and Garden: Measure air temperature and humidity, Rainfall Intensity, UV index, etc. in the backyard and garden to protect your family.
- Smart Agriculture： Enable farmers to obtain climate data and information in time, take scientific management measures into production, and improve agricultural production capacity and level.
- Meteorology: Support applications in the professional meteorological field, for example, timely reflect the changes of various abnormal meteorological conditions in the field of traffic and transportation to provide real-time scientific basis data for traffic management departments.
- Urban Weather: Provide real-time data for urban squares, parks, scenic spots, golf courses, and other urban areas.
- 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 S500 5-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 https://www.seeedstudio.com/SenseCAP-S2100-LoRaWAN-Data-Logger-p-5361.html and https://www.seeedstudio.com/SenseCAP-Sensor-Hub-4G-Data-Logger-with-builtin-battery-p-4852.html suitable 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-S500-5-in-1-Compact-Weather-Station-p-5652.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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