

WxS8800-423016

LoRaWAN 8-in-1 Outdoor AQI Air Quality MicroStation

Product Highlights

- ❖ **LoRaWAN 1.0.4 Compliance**
- ❖ **iEdge 4.0 OS:** Powered SW-defined sensors and controllers HW platform
- ❖ **LoRaWAN 1.0.4 Compliance:** Supports Class A and C operation, configurable via software
- ❖ **Power supply** DC12V or Solar power supply system
- ❖ **Multi AQI parameter integration:** PM1/2.5/10/TSP, CO, O3, SO₂, NO₂
- ❖ **Support the expansion of other sensors**, such as temperature, humidity, and atmospheric pressure, Wind Speed, Wind Direction, H₂S, NH₃, NO, TVOC
- ❖ **Open architecture: modular and configurable BYOD (Build-Your-Own-Devices) features supported**
- ❖ Equipped with **sheath gas protection and gas path protection functions**
- ❖ **Capable of automatic zero calibration and cross calibration**
- ❖ **Combined with intelligent algorithms**, it has stronger adaptability to the environment, more accurate detection, and stable zero point
- ❖ **Good anti-toxicity**, no consumption of chemical materials, more than 5 years life time
- ❖ **Fast response**, fast return to zero
- ❖ Working with Polysense WxS SW-defined sensor platform to provide various data transmission technologies, including WxS8800 for LoRaWAN, WxS9800 for NB-IoT, WxS9900 for LTE Cat M and WxSC800 for LTE Cat1
- ❖ **Antenna:** Integrated internal antenna
- ❖ **Configuration and Management**
 - **ConfigurationTool Software (PC-based) for:**
 - Terminal and sensors firmware/driver updates
 - Configuration of LoRaWAN parameters (Class A/C, regional sub-bands, uplink cycle)
 - Sensor Parameters Configuration and reading
 - Data report Cycle and threshold configuration
 - **OTA and FOTA features:**
 - FOTA (Firmware Over The Air): update terminal firmware (OS loader and application images)
 - OTA (Over The Air): configure terminal and sensor parameters configurable
- ❖ Optional (Public/Private) IoT cloud platform PolySuite iView and LoRaWAN network iServer



Product parameters

Parameters		
PM1/2.5/10/TSP	PSS-21S139	PM1/2.5/10/TSP and Particles 0.3/0.5/1.0/2.5/5.0/10 Detection range:0~50mg/m³ Resolution:0.1(ug/m³) Calibration method: automatic zero calibration, span calibration External Protection: Sheath gas & gas path protection Constant Flow Control: Flow feedback-enabled, stable sampling volume, high accuracy >2years life with 24 hours working mode
CO	PSS-21R09D	Detection range: 0 ~100ppm Resolution:0.1ppm
O3	PSS-21R0EC	Detection range: 0 ~5ppm Resolution:0.001ppm
SO2	PSS-21R0FC	Detection range: 0 ~5ppm Resolution:0.001ppm
NO2	PSS-21R0HC	Detection range: 0 ~5ppm Resolution:0.001ppm
Expandable Options		
Temperature	PSS-403022	Detection range:- 40 °C ~ 125 °C Accuracy:0 ~ 65 °C,± 0.2 °C
Humidity	PSS-403022	Detection range:0~100% RH Accuracy:10~90%, ± 2% RH
Barometric pressure	PSS-403022	Detection range:300mbar~1200mbar Accuracy:700 to 1100 mbar from 0 °C to 50 °C ± 1.5 mbar
Wind Speed	PSS-314622	Detection range:0~60m/s Resolution:0.1m/s Start wind speed:≤0.2m/s
Wind Direction	PSS-319212	Detection range:8 indication directions (or 360 °)
H2S	PSS-21R0AC	Detection range:0~50ppm Resolution:0.1ppm
NH3	PSS-21R0CC	Detection range: 0 ~10ppm Resolution:0.001ppm
NO	PSS-21R0GG	Detection Range: 0 ~2ppm Resolution: 0.001ppm
TVoC	PSS-21R0PC	Detection range:0~10ppm Resolution:0.01ppm
Wireless		
ISM Regional Parameters	AS923 (AS923-1, AS923-2, AS923-3, AS923-4) AU915 CN470 CN779 EU433 EU868 IN865 KR920 RU864 US915	
Maximum Link Budget	168dB	
Distance	Up to 5km in NLOS; up to 18km in LOS	
Antenna	Integrated internal antenna or external 1/2 wavelength whip antenna (SMA)	

Regulatory FCC(America): 2AO7W-WXS8000,
 IC(Canada): 23701-WXS8000
 CE(European Union): B1810246
 ROHS(European Union): R2BJ180927F0664E

Application

Suitable for municipal engineering, park environments, agricultural fields, school environments, hospital environments, yard docks, chemical enterprises, steel material plants, subway transportation, as well as large-scale air quality grid online monitoring projects.