

Product Brief

Model: LAS-201 Series

Particles (PM2.5) and Temperature & Humidity



Ver:1.4

LAS-201 is designed to measure Particle, Temperature and Humidity by LoRa long-range and low-power wireless connectivity. It is integrated LoRa wireless technology, Laser dust (PM2.5) Sensor knowhow and high-performance MCU solution for various IoT markets usage. With calibrated dust (PM2.5) sensor module and compensated Temperature/Humidity sensor integration, the data is ready for use. It is perfect to detect the dust in the air, like air purifier, air conditioner and air monitor.

Features

- LoRaWAN compliant/TELEC Certificate
- High Receiver Sensitivity and long range solution
- Integrated with calibrated Dust Particles sensor
 - Range: 0-500 $\mu\text{g}/\text{m}^3$
- Integrated with Compensated Temp/RH sensor
- Micro-USB DC power-in, 5V
- Display PM2.5 concentration, Temp/ RH

Wireless	
Lora Module	Kiwi TLM 922S-P01A module
Frequency	862-932 MHz ISM bands
Tx Power	< 100 mW
Sensitivity	-137 dBm
Receiver	LoRaWAN comply Receiver Gateway
Antenna	2dBi SMA Male connector
Sensor Operation	
Sensing element	Dust: laser light scattering principle Temperature & humidity: CMOS sensor
The unit of measurement	µg/m ³
Response time	Dust: < 10 sec Temperature: min. 3 sec. ; max. 30sec. at τ63% Humidity: < 8 sec. at τ63%
Accuracy (at 25°C)	Temperature: ±0.5°C Humidity: ±5 %RH
Repeatability	Dust: ±10% @ 100~500 µg/m ³ , ±10µg/m ³ @ 0~100µg/m ³ Temperature: ±0.3°C Humidity: ±0.3 %RH
Zero Drift	Temperature: < 0.04 °C/yr. Humidity: < 0.5 %RH/yr.
Measurement range*	Dust: 0-500 µg/m ³ Temperature: -10 ~ +60°C (Limit by PM2.5 sensor) Humidity: 0 ~ 95 %RH
System operation	
Temperature	-10 ~ + 60 °C
Humidity	0 ~ 99%RH
Storage temperature	-10 ~ +60 °C.
Warm-up time	≤ 1 min. (at full specs ≤ 15 minutes)
Power supply	Wide range DC power-in, 8~12V/ or Micro-USB DC power-in, 5V
Installation	Wall-mount
Dimension (mm)	Wall-mount: 113.57(H) x 80(W) x 28.79(D)
Case material	ABS
Certifications	TELEC/VCCI