

Indoor Ambience

Monitoring Sensor

Featuring LoRaWAN®

NB300 Series



◆ Introduction

NB300 series is a compact indoor ambience monitoring sensor for measurement of temperature, humidity, light, CO₂ concentration, HCHO/O₃ level, TVOC, barometric pressure, PM2.5, PM10 and motion. The data will be shown on the E-ink screen in real-time, which helps to measure the indoor environment and comfort. NB300 series is widely used for offices, stores, classrooms, hospitals, etc.

Sensor data is transmitted using LoRaWAN® technology. Combining IQnexus LoRaWAN® gateway and the NBnano or IQnexus platform, users can manage all sensor data remotely and visually

◆ Features

- Integrated with multiple sensors like humidity, temperature, CO₂, light, barometric pressure, PM2.5, PM10, etc.
- Multiple display modes and clear emoticon to easily understand the comfort levels via screen
- Support batteries or DC power supply
- Equipped with traffic LED and buzzer to indicate device status and threshold alarms
- Support more than 20,000 data records store locally
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with IQnexus IoT Platform

◆ Specifications

Model	NB307	NB319
Wireless Transmission		
Technology	LoRaWAN®	
Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923	
Tx Power	16dBm(868MHz)/22dBm(915MHz)/19dBm(470MHz)	
Sensitivity	-137dBm @300bps	
Work Mode	NB307: Class A NB319: Class C	
Sensors		
Temperature		
Range	-40 °C - 85 °C	
Accuracy	± 1 °C	
Resolution	0.1 °C	
Humidity		
Range	0% - 100% RH	
Accuracy	± 3%	
Resolution	0.5% RH	
PIR		
Detection Area	80 ° Horizontal, 55 ° Vertical	
Detection Range	5 m	
Status	Vacant/Occupied	
Light		
Range	0-60000 Lux (display as 6 levels, 0-5)	
TVOC		
Range	0-500 (IAQ Index)	
Accuracy	±15%	
Barometric Pressure		
Range	300 - 1100 hPa (-40 °C - 85 °C)	
Accuracy	±0.6 hPa	
Resolution	0.1 hPa	
CarbonDioxide(CO₂)		
Range	400 - 5000 ppm	400 - 2000 ppm
Accuracy	±30 ppm or ±3 % of reading	±50 ppm or ±5 % of reading

Resolution	1 ppm	1 ppm
PM2.5 & PM10		
Range	—	0 - 1000 µg/m ³
Accuracy	—	0-100(±10µg/m ³), 100-1000(±10 %)
Resolution	—	1 µg/m ³
Formaldehyde (HCHO)¹		
Range	—	0 - 6 mg/m ³
Accuracy	—	±10%
Resolution	—	0.01 mg/m ³
Ozone (O₃)²		
Range	—	0 - 10 ppm
Accuracy	—	±5 % FS
Resolution	—	0.01 ppm
Display & Configuration		
Display	4.2-inch Black & White E-Ink Screen	
Button	1 × Power Button + 1 × Reset Button	
LED & Buzzer	1 × Traffic Light Status Indicator + 1 × Buzzer	
Configuration	1. Mobile App via NFC 2. PC software via NFC or USB Type-C port	
Physical Characteristics		
Power Supply	4 × 2700 mAh ER14505 Li-SOCl ₂ battery	5V/1A by Type-C Port
Operating Temperature	-20 °C - 60 °C (E-Ink Screen: 0 °C - 40 °C)	
Relative Humidity	10% - 90% (non-condensing)	
Ingress Protection	IP30	
Dimension	100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in)	
Installation	Wall Mounting	

¹ This function is valid in the measurement of either HCHO or O₃.

² O₃ electrochemical sensor working life is 2 years.