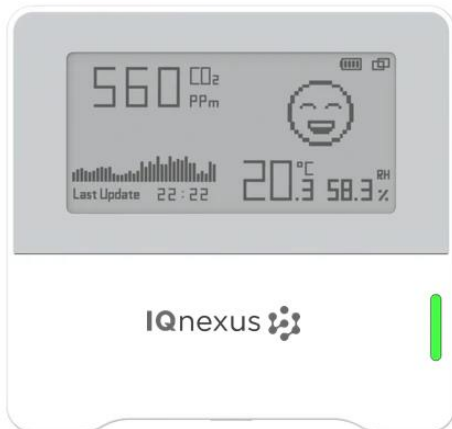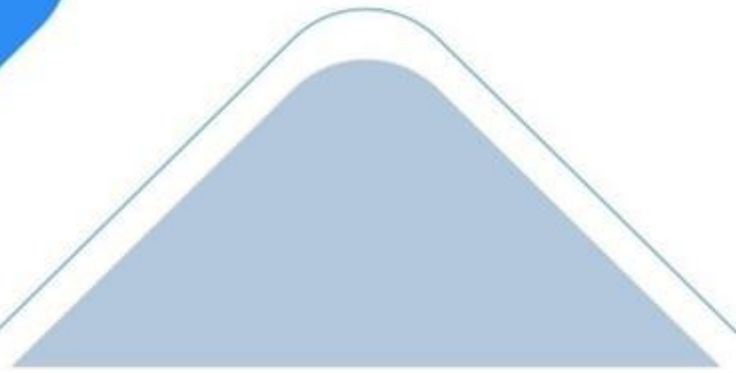# Indoor Ambience Monitoring Sensor

Featuring LoRaWAN®

NB100 Series

IQnexus

◆ Introduction

NB103 is a compact indoor ambience monitoring sensor for measurement of temperature, humidity, and CO_2. These data will be shown on the E-ink screen in real time, which allow to quantify the indoor environment and comfort. NB103 is widely used for office, store, classroom, hospital, etc. Apart from screen display, sensor data can also be transmitted using LoRaWAN®. With this low-power technology, NB103 can work for more than 3 years with 2 replaceable batteries. Combining with IQnexus LoRaWAN® gateway and the NBnano or NBnexus platform, users can manage all sensor data remotely and visually

◆ Features

➢ Integrated with multiple sensors like humidity, Temperature and CO2.

➢ Visual data and clear emoticon to easily understand the comfort levels easily via E-ink screen

➢ Equipped with traffic light indicator to multi-level CO2 threshold alarms

➢ More than 3 years work without replacing batteries.

➢ Built-in NFC for easy configuration

➢ Compliant with standard LoRaWAN® gateways and network servers

➢ Quick and easy management with IQnexus IoT Platform

◆ Specifications

Wireless Transmission

Technology	LoRaWAN®
Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923
Tx Power	16dBm(868MHz)/22dBm(915MHz)/19dBm(470MHz)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A

Sensors

Temperature

Range	-20°C - 70°C
Accuracy	0°C to + 70°C(+/-0.3°C), -20°C to 0°C (+/-0.6°C)
Resolution	0.1°C

Humidity

Range	0% - 100% RH
Accuracy	10% - 90% RH (±3%), below 10% and above 90% RH (±5%)
Resolution	0.5% RH

CarbonDioxide(CO_2)

Range	400 - 5000 ppm
Accuracy	± (30 ppm or + 3 % of reading)
Resolution	1 ppm

Display & Configuration

Display	NB103:2.13-inch Black & White E-Ink Screen
	NB103L: NA
Button	1 x Power Button
LED	1 x Traffic Light Status Indicator
Configuration	Mobile App via NFC

Physical Characteristics

Power Supply	2 × 2700 mAh ER14505 Li-SOCl₂ Replaceable Batteries
Battery Life* [10 min interval]	NB103: 3 Years
	NB103L: 4 Years
Operating Temperature	-20°C - 60°C (E-ink Screen: 0°C - 40°C)
Relative Humidity	0% to 95% (non-condensing)
Ingress Protection	IP30
Dimension	68 x 65 x 20.5 mm
Installation	Wall Mounting

*Test under laboratory conditions and for guideline purposes only.

◆ Dimensions (mm)

68

49.4

24.4

65

20.5

68

20.5