

NSS700 7-IN-1 INDOOR AIR QUALITY SENSOR

PRECISE, LOW-POWER, COMPREHENSIVE INDOOR AIR QUALITY MONITORING SYSTEM

NviroSense's NSS700 is a cutting-edge indoor air quality sensor system that offers comprehensive monitoring of various ambient parameters. With an efficient E-Ink screen display, this device can be configured via NFC and is powered by either 2 AA alkaline batteries or via USB. The system is designed for longevity, with features like low power consumption and multi-year battery operation.

It serves a vital role in improving indoor air quality by constantly monitoring and alerting for changes in various parameters, such as temperature, humidity, motion, light, CO₂, TVOC, and barometric pressure. This makes it essential for creating a healthy and comfortable indoor environment, and it can also aid in reducing the risk of airborne viruses.

- **Activity Level (PIR):** Detect people's presence and monitor activity levels.
- **Humidity:** Measure and record humidity data with high accuracy.
- **Temperature:** Monitor and display real-time temperature.
- **Light:** Acquire real-time luminance data.
- **CO₂:** Monitor CO₂ concentration to respond to indoor air quality problems.
- **TVOC:** Monitor indoor TVOC and alarm if it exceeds the threshold value.
- **Barometric Pressure:** Measure and record barometric pressure.
- **Low Power Consumption:** Includes smart screen mode for battery saving.
- **Multi-Year Battery Operation:** Powered by 2 AA alkaline batteries or USB type-C.



KEY SPECIFICATIONS

Category	Feature	Specification
Hardware	Frequency	EU868
	Tx Power	20dBm
	Sensitivity	-137dBm @300bps
	Mode	OTAA/ABP
	Power Supply	2 × alkaline AA batteries or powered via USB type-C
	Battery Lifetime	Various durations (e.g., 1.5 years at SF7)
Sensors	Temperature Range	-20°C to +70°C (screen: 0-45°C)
	Temperature Accuracy	±0.3°C (0°C – 70°C), ±0.6°C (-40°C – 0°C)
	Humidity Range	0% to 100% RH
	Humidity Accuracy	±3% RH (10% – 90%), ±5% RH (0% – 10%, 90% – 100%)
	PIR Detection Area	94° Horizontal, 82° Vertical
	PIR Detection Distance	5 m
	Light Range	60000 lux (Visible + IR, IR)
	Light Accuracy	±30%
	CO ₂ Range	400 – 5000 ppm

Sensors	CO2 Accuracy	±30 ppm or ±3% of reading
	TVOC Range	0 – 60000 ppb (total VOC)
	TVOC Accuracy	±15% of reading
	Barometric Pressure Range	300 – 1100 hPa (-40°C – 85°C)
	Barometric Pressure Accuracy	±1 hPa
	Long-term Stability	1.3% accuracy drift per year

FEATURES AT A GLANCE



YOUR WIRELESS NETWORK

Develop a fully owned private LoRa network to capture, route and process IoT data for your application at multiple facilities.



RUGGED DURABILITY WITH A BROAD SENSOR ARRAY

Robust enclosures provide a resilient platform for recording and delivering data from within a range of harsh environments.



COMPREHENSIVE SECURITY AND RELIABILITY

Robust multi-layer security at each interface to safeguard your network at every level.



BROAD CERTIFICATION AND APPROVALS

CFR 21 (part 11), PPECB, FCC, IC, CE, ASNZS, NCC, and Bluetooth SIG listing.



THE PLATFORM FOR BUILDING ACTIONABLE IoT INTELLIGENCE

Route sensor data to the cloud with NviroSense's simplified wireless connectivity deployment.



PERSONAL SUPPORT FOR YOUR IMPLEMENTATION

Support works with NviroSense engineering to help configure and deploy your application.

APPLICATION AREAS



PHARMACEUTICAL WAREHOUSING



COLD CHAIN MANAGEMENT & FOOD SAFETY



IN-FIELD AGRICULTURAL MONITORING



INDUSTRIAL & MINING APPLICATIONS

NVIROSENSE SUPPORT



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