

NSS55 ASSET TRACKER PANIC BUTTON ALARM

SECURE, SCALABLE WIRELESS SENSORS FOR LONG RANGE IOT APPLICATIONS

NviroSense's NSS55 is a **battery powered, long range GPS module** leveraging the benefits of LoRaWAN allowing users to send data over extremely long ranges at low data-rates. Its small, rugged form factor contains the low power GPS module as well as 9-axis accelerometer for motion and attitude detection. MCU controls the power for both the GPS module as well as the accelerometer to achieve the best energy profile possible for different applications. At its core, the NSS55 utilises NviroSense's field proven and reliable NviroSense hardware, providing LoRaWAN options in 868, 915, and 923 MHz frequencies. Based on the Semtech SX1276/1278 and Ultra Low Power STM32L072 MCU, it offers a LoRa range up to 15 kilometers with a local 2.4 GHz connectivity option to smartphones and tablets and offers high interference immunity while consuming as little current as possible. Using 1 000mA Li-on battery in conjunction with the Ultra Low Energy feature of the NSS55 allows for users to have the ability to program the device to work from weeks to months depending on the required use.

- **Multi-wireless:** LoRaWAN (868/915/923 MHz).
- **Multi-sensor:** GPS module and 9-axis accelerometer.
- **Fully certified** for CE.
- **Simple wireless configuration** using mobile application and BLE.
- **Integrated out of the box networks:** Default configuration with NviroSense's NSS5000 gateways for simple, out-of-the-box cloud connectivity.



KEY SPECIFICATIONS

Category	Feature	Specification
Chipset	LoRa	Semtech SX1276/1278
	Ultra Low Energy	STM32L072 MCU
LoRa	Frequencies	863-870MHz (EU), 902-928MHz (US), 915-928MHz (AU+AS923)
Sensors	Accelerometer	9-axis: triple-axis MEMS gyroscope, triple-axis MEMS accelerometer, triple-axis MEMS magnetometer
	GPS	Accuracy: <2.5m CEP
Power	Battery	1000mA Li-ion battery
Software	Web Application	NviroSense for Environmental Monitoring: Onsite, Cloud, Hybrid Multi-site or API Monitoring, Reporting & Control
	Mobile application	Android and iOS - Remote sensor display and config + firmware updates

LED	Status	Tri-colour - BLE and LoRa status
Button	User Input	Alarm button
Physical	Dimensions	85mm x 48mm x 15 mm
Environmental	Operating Temperature	-40°C ~ 85°C
Regulatory	Approvals	CE
Warranty	Time-period	One-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.



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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NEW: The NviroSense NSS450 Series now offers a range of additional sensor options available via expansion port. For more details, visit the [EUCAsore](#)