

IoT Solutions Brochure

Seamless Integration, Endless Possibilities

TABLE OF CONTENTS

About novaX IoT	1	Pir & Light Sensor N8-WS202	18
Semi-Industrial LoRaWAN® Gateway N8-UG65	2	Motion & TH Sensor N8-WS203	19
Industrial LoRaWAN® Gateway N8-UG56	3	Magnetic Contact Switch N8-WS301	20
Outdoor LoRaWAN® Gateway N8-UG67	4	Smart Wall Switch N8-WS50x	21
IoT Controller N8-UC300	5	Smart Portable Socket N8-WS523	22
2-in-1 IAQ Sensor N8-AM102	6	Capacitive Level Sensor N8-EM300-CL	23
Ambience Monitoring Sensor N8-AM103	7	LoRaWAN® Pulse Counter N8-EM300-DI	24
9-in-1 IAQ Sensor N8-AM319	8	Magnetic Contact Switch N8-EM300-MCS	25
AI Workplace Occupancy Sensor N8-VS121	9	Membrane Leakage Detection Sensor EM300-MLD	26
Ultra ToF People Counter N8-VS135	10	Leak Detection Sensor N8-EM300-SLD	27
Bathroom Occupancy Sensor N8-VS330	11	Leak Detection Sensor N8-EM300-ZLD	28
Desk & Seat Occupancy Sensor N8-VS34X	12	Temperature & Humidity Sensor N8-EM300-TH	29
Radar Fall Detection Sensor N8-VS373	13	Tilt Sensor N8-EM320-TILT	30
Bathroom Odor Detector N8-GS301	14	ToF Laser Distance Sensor N8-EM400-TLD	31
Smart Button N8-WS101	15	Smart Current Transformer N8-CT101	32
Smart Scene Panel N8-WS156	16	Smart Current Transformer N8-CT3XX	33
Smart Fill Level Monitoring Sensor N8-WS201	17	IoT E-ink Display DS3604	34



About novaX IoT

novaX offers multi-potential sensing products designed to capture meaningful data and make it accessible across various applications. The company innovatively leverages emerging technologies such as AI, 5G, and IoT to address distinct use cases.

In partnership with a global network of distributors and system integrators, novaX is dedicated to developing open ecosystems and enhancing IoT strategies. Its product offerings include IoT Gateways, IoT Sensors, IoT Controllers, and 4G/5G Industrial Routers and Switches, providing comprehensive device-to-cloud solutions for markets such as smart offices, smart buildings, intelligent traffic management, security solutions, smart cities, and smart agriculture.

Semi-Industrial LoRaWAN[®] Gateway

| N8-UG65



Key Features

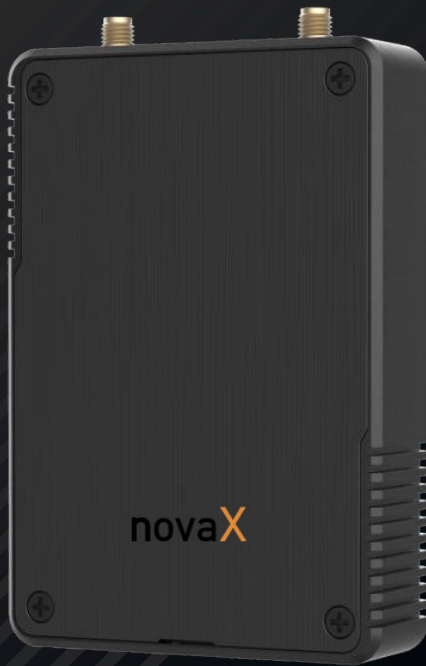
- High-performance quad-core industrial processor with large memory.
- Integrated SX1302 chip for handling higher traffic with lower power consumption.
- IP65-rated enclosure for partial outdoor applications.
- Supports multiple backhaul options: Ethernet, cellular (4G/3G), and Wi-Fi.
- Built-in network server and API (MQTT/HTTP) for seamless integration.

Product Overview

N8-UG65 is a robust 8-channel indoor LoRaWAN[®] gateway designed for smart office, smart building, and similar indoor applications. Equipped with the SX1302 LoRa chip and a high-performance quad-core CPU, it supports over 2000 nodes, with a line-of-sight range of up to 15 km and 2 km in urban environments. N8-UG65 offers multiple backhaul options (Ethernet, Wi-Fi, and cellular) and is compatible with mainstream network servers, ensuring easy deployment and efficient management.

Industrial LoRaWAN® Gateway

| N8-UG56



Key Features

- Quad-core industrial processor with high memory capacity
- Equipped with the SX1302 chip for higher traffic handling and lower power consumption
- Supports multiple backhaul connections: Ethernet, Wi-Fi, and cellular
- Built-in network server and support for mainstream servers like The Things Stack and ChirpStack
- Compatible with BACnet/IP and Modbus for easy integration into building management systems (BMS)

Product Overview

N8-UG56 is a robust 8-channel indoor LoRaWAN® gateway designed for seamless IoT connectivity. Equipped with the SX1302 chip and a high-performance quad-core CPU, it supports up to 2000 nodes and offers a line of sight range up to 15 km, or 2 km in urbanized environments. With its versatile backhaul options (Ethernet, Wi-Fi, and cellular) and compatibility with mainstream network servers, N8-UG56 is ideal for applications like smart buildings and industries. The device also features a built-in network server and development tools for easy deployment and integration.

Outdoor LoRaWAN® Gateway

| N8-UG67



Key Features

- Powered by a high-performance quad-core processor for efficient handling of high traffic with minimal power consumption.
- Designed to withstand harsh outdoor conditions with an IP67-rated waterproof case.
- Supports Ethernet, Wi-Fi, and cellular connections for flexible network integration.
- Provides secure communication through multiple VPNs including IPsec, OpenVPN, and WireGuard.
- Compatible with mainstream network servers like The Things Stack and ChirpStack for seamless deployment.

Product Overview

N8-UG67 is a robust outdoor LoRaWAN® gateway featuring 8 channels and the SX1302 LoRa chip, paired with a high-performance quad-core CPU. This gateway supports connections with over 2000 nodes, offering a line of sight up to 15 km and housed in an IP67-rated waterproof case. Ideal for smart agriculture, smart metering, and a variety of outdoor applications, the N8-UG67 provides versatile backhaul options including Ethernet, Wi-Fi, and cellular. It integrates seamlessly with mainstream network servers, ensuring easy deployment and reliable operation in diverse environments.

IoT Controller

| N8-UC300



Key Features

- Multiple I/O interfaces for versatile device connectivity
- Supports LoRaWAN® and 3/4G wireless communication
- Autonomous operation with multiple trigger conditions and actions
- Industrial-grade metal case with wide operating temperature range
- Easy integration and management with Milesight IoT Cloud

Product Overview

N8-UC300 Series is an advanced IoT controller designed for remote control and data acquisition from a wide range of devices. With multiple I/O interfaces including analog input, digital input, relay output, serial ports, and PT100 RTD input, it supports seamless data transmission via LoRaWAN® or 3/4G networks. The controller can operate autonomously with multiple trigger conditions and actions, even during network interruptions. Its robust industrial design and IP30 metal enclosure make it ideal for indoor applications such as smart factories and building automation. Integration with Milesight IoT Cloud enables easy monitoring and management through web or mobile platforms.

2-in-1 IAQ Sensor

| N8-AM102



Key Features

- High-Precision Sensor: Utilizes Sensirion high-precision sensors to detect subtle changes in temperature and humidity.
- E-Ink Screen Display: Visualizes environmental data with an easy-to-read E-ink screen.
- Long Battery Life: Operates for more than 7 years without battery replacement.
- NFC Configuration: Built-in NFC for simple and quick configuration.
- LoRaWAN® Compatibility: Compatible with standard LoRaWAN® gateways and network servers for seamless integration.

Product Overview

N8-AM102 is compact indoor ambience monitoring sensors designed for measuring temperature and humidity. These sensors display real-time data on an E-ink screen, allowing users to easily quantify indoor environmental conditions and comfort levels. Ideal for use in offices, stores, classrooms, and hospitals. When integrated with Milesight LoRaWAN® gateways and IoT Cloud solutions, users can manage sensor data remotely and visually.

Ambience Monitoring Sensor

| N8-AM103



Key Features

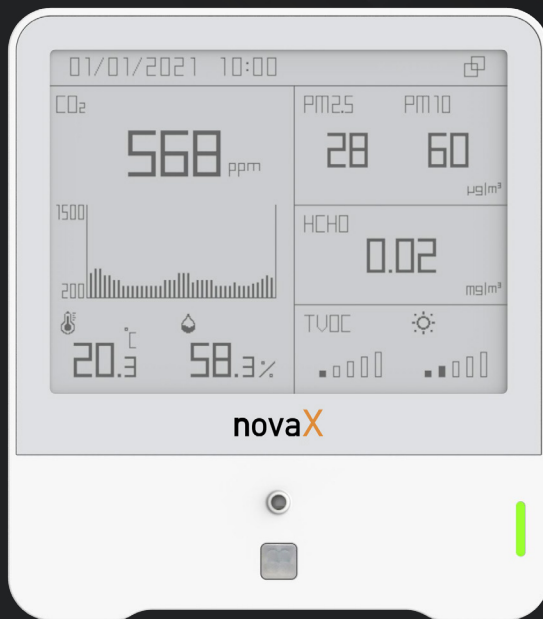
- Incorporates sensors for humidity, temperature, and CO2 to provide comprehensive environmental monitoring.
- Displays visual data and emoticons for easy understanding of comfort levels.
- Features a traffic light indicator for multi-level CO2 threshold alarms.
- Operates for over 3 years without replacing batteries.
- Built-in NFC for easy and quick configuration.

Product Overview

N8-AM103 is compact indoor ambience monitoring sensors designed to measure temperature, humidity, and CO2 levels. These sensors display real-time data on an E-ink screen, enabling users to easily assess indoor environmental conditions and comfort. Ideal for use in offices, stores, classrooms, and hospitals, the N8-AM103 transmits data via LoRaWAN® technology, allowing for over 3 years of operation with two replaceable batteries. When integrated with Milesight LoRaWAN® gateways and IoT Cloud solutions, users can manage sensor data remotely and visually.

9-in-1 IAQ Sensor

| N8-AM319



Key Features

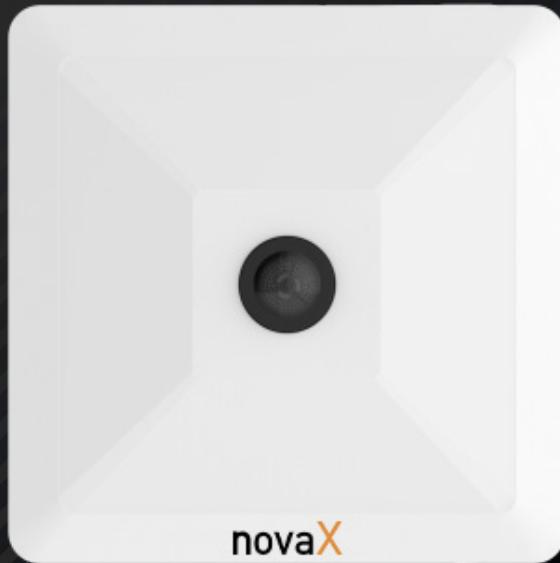
- Integrated with multiple sensors, including temperature, humidity, CO2, light, PM2.5, and PM10.
- Real-time data display on a 4.2-inch E-Ink screen with intuitive comfort level indicators.
- Supports both battery and DC power supply options.
- Equipped with traffic light indicators and buzzer for device status and threshold alarms.
- Stores up to 18,000 historical records locally with retransmission to prevent data loss.

Product Overview

N8-AM319 is a compact indoor ambient monitoring sensor designed for measuring temperature, humidity, CO2 concentration, light, barometric pressure, PM2.5, PM10, and more. The data is displayed in real-time on a 4.2-inch E-Ink screen, providing clear and intuitive insights into indoor environmental comfort. Leveraging LoRaWAN® technology, N8-AM319 ensures reliable data transmission and seamless integration with Milesight IoT Cloud for remote management. It is widely applicable in offices, classrooms, hospitals, and other indoor spaces.

AI Workplace Occupancy Sensor

| N8-VS121



Key Features

- Achieves up to 98% recognition rate with advanced AI algorithms.
- Supports regional people counting, occupancy detection, and dwell time analysis for up to 16 mapped regions.
- Provides bi-directional people counting with smart U-turn filtering to eliminate redundant counts.
- Equipped with privacy masks (up to 8 regions) to protect sensitive areas.
- Offers data retransmission to prevent data loss and ensure secure collection.

Product Overview

N8-VS121 is an AI-powered workplace occupancy sensor designed to monitor space utilization and occupancy in modern workspaces. With an advanced AI algorithm, it achieves up to 98% recognition accuracy. N8-VS121 comes in two versions: LoRaWAN® and Ethernet, catering to diverse application needs. The LoRaWAN® version ensures seamless integration with standard LoRaWAN® gateways and supports Wi-Fi for easy configuration. The Ethernet version provides extended functionality with rich industrial interfaces (DI, DO, RS485) and supports data transmission via HTTP/MQTT. Both versions are equipped with privacy masks and data retransmission features to ensure security and reliability.

Ultra ToF People Counter

| N8-VS135



Key Features

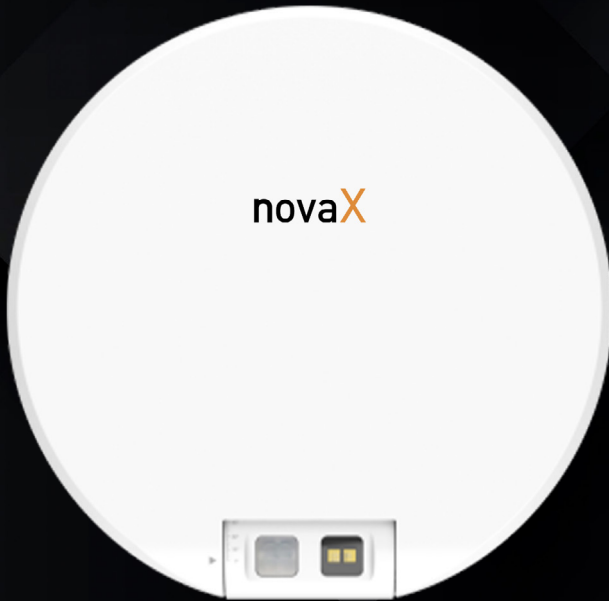
- Achieves up to 99.8% accuracy using second-generation ToF technology and AI algorithms.
- Operates without image capturing, ensuring privacy is maintained.
- Functions effectively in low-light or completely dark environments.
- Differentiates between children and adults, and detects staff via identification for clearer analysis.
- Provides seamless connectivity, ensuring efficient space management.

Product Overview

N8-VS135 is a high-end people counting sensor designed specifically for LoRaWAN® connectivity. Utilizing deep learning AI and second-generation ToF technology, it adapts to various complex scenarios while ensuring privacy protection, achieving up to 99.8% accuracy in people counting. Designed for both indoor and outdoor applications, it supports high ceiling mounting up to 6.5 meters and features an IP65 waterproof rating, making it adaptable to any environment.

Bathroom Occupancy Sensor

| N8-VS330



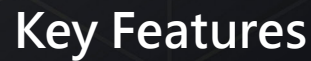
Key Features

- Industry-leading detection accuracy of over 99.5% using ToF and PIR technologies.
- Ensures 100% anonymity and GDPR compliance with no personal data collected.
- Adjustable sensor angles (0° to 75°) to support various mounting methods.
- Ultra-low power consumption with a battery life of up to 4 years.
- Reliable performance in low-light or completely dark environments with damp-proof coating for durability.

Product Overview

N8-VS330 is a LoRaWAN® bathroom occupancy sensor designed to provide a cost-effective solution for monitoring the occupancy status of public bathrooms and cubicles in various scenarios. Combining advanced Time-of-Flight (ToF) technology and Passive Infrared (PIR) sensors, N8-VS330 achieves industry-leading accuracy exceeding 99.5%. It ensures 100% anonymity, making it GDPR-compliant, and features ultra-low power consumption. With adjustable sensor angles, N8-VS330 supports multiple mounting methods and can be managed remotely via Milesight IoT Cloud or mobile apps. A damp-proof coating inside ensures reliable performance under diverse environmental conditions.

| N8-VS34X



- ## Product Overview

12

Radar Fall Detection Sensor

| N8-VS373



Key Features

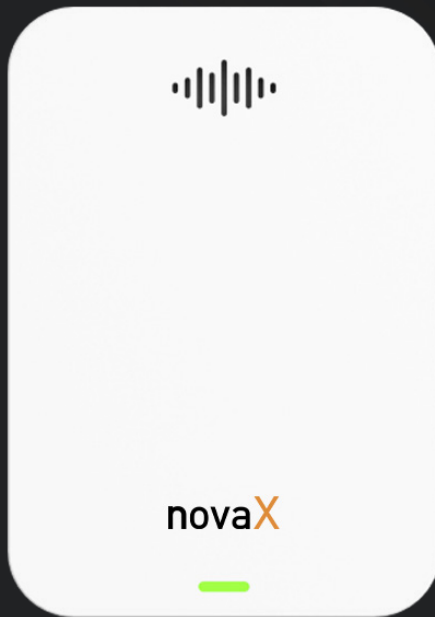
- Advanced Millimeter Wave Radar with 24 transmitters and 22 receivers for high precision detection.
- Achieves up to 99% fall detection accuracy with less than 1% false alarm rate.
- Supports in-bed detection and sub-region occupancy monitoring.
- 100% privacy protection with no image capture.
- IP65-rated design for stable operation in diverse conditions.

Product Overview

N8-VS373 is a Radar Fall Detection Sensor with advanced Millimeter Wave Radar technology. It provides non-contact person detection and fall alarms with a detection accuracy rate of up to 99%. N8-VS373 ensures 100% privacy protection by avoiding image capture and supports real-time monitoring for enhanced safety. With seamless integration into LoRaWAN® gateways and the Milesight Development Platform, remote management and timely notifications are enabled. Designed for spaces like living rooms, bathrooms, hospital wards, and care homes, the N8-VS373 is ideal for environments where fall detection is critical. Its IP65-rated design ensures durability in various conditions.

Bathroom Odor Detector

| N8-GS301



Key Features

- High-accuracy electrochemical sensors with a lifespan exceeding three years for NH₃ and H₂S detection.
- Built-in temperature and humidity sensors for comprehensive environmental awareness.
- Wireless power supply using replaceable batteries, reducing installation costs.
- Equipped with LED indicators and a buzzer for local threshold alarms.
- Supports Mulesight D2D protocol for ultra-low latency control without gateways.

Product Overview

N8-GS301 is a 4-in-1 LoRaWAN® bathroom odor detector designed to monitor ammonia (NH₃) and hydrogen sulfide (H₂S) concentrations, as well as temperature and humidity. Utilizing high-accuracy electrochemical sensors with a lifespan of over three years, the N8-GS301 ensures precise detection and timely alarms via LED indicators and a buzzer when gas concentrations exceed preset thresholds. Its built-in battery enables wireless power supply, reducing installation costs. Integrated with LoRaWAN® gateways and IoT Cloud solutions, the N8-GS301 supports remote monitoring and control, making it an essential part of smart bathroom solutions. Additionally, the N8-GS301 is equipped with Mulesight D2D protocol for ultra-low latency control without gateways.

Smart Button

| N8-WS101



Key Features

- Supports multiple press actions for device control, scene triggers, and emergency alarms.
- Compact design with easy installation and portability.
- Built-in LED indicator and buzzer for press actions, network status, and low battery alerts.
- Ultra-wide wireless transmission range of up to 15 km in open areas.
- NFC configuration and LoRa D2D protocol for ultra-low latency control without gateways.

Product Overview

N8-WS101 is a LoRaWAN®-based smart button designed for wireless controls, scene triggers, and emergency alarms. It supports multiple press actions, which can be customized to control devices or trigger specific actions such as sending SOS alarms. Compact and battery-powered, the N8-WS101 is easy to install and portable. With built-in LED indicators and a buzzer, it provides real-time feedback for press actions, network status, and low battery warnings. Integrating seamlessly with LoRaWAN® gateways and IoT Cloud solutions, the N8-WS101 enables remote control of devices via web or mobile apps. It is ideal for applications in smart homes, offices, hotels, and schools.

Smart Scene Panel

| N8-WS156



Key Features

- Offers flexible display options for different scenes
- Allows setting up to six scenes, each comprising multiple devices.
- Facilitates easy one-touch setup and supports card emulation mode.
- Enables ultra-low latency control without gateways.
- Multiple installation methods without wiring.

Product Overview

N8-WS156 is a LoRaWAN® Smart Scene Panel designed to offer versatile control through a multi-button interface, allowing users to activate different predefined scenes with a single press. It features a programmable E-ink screen for flexible display, making it suitable for various environments such as smart offices, homes, and hotels. The N8-WS156 supports both LoRaWAN® and Mulesight D2D communication protocols, enabling seamless integration and control of other Mulesight devices without additional development. Easy to install without wiring, the N8-WS156 provides a convenient solution for multi-scene control.

Smart Fill Level Monitoring Sensor

| N8-WS201



Key Features

- Provides accurate detection ranges from 1 to 55 cm.
- Enables wireless deployment and monitoring.
- Ensures durable battery life with standby mode.
- Compact size and NFC configuration for quick setup.
- Ensures stable operation in various conditions.

Product Overview

N8-WS201 is a wireless fill-level monitoring sensor designed for small containers, particularly tissue boxes. Utilizing Time-of-Flight (ToF) technology, it offers high-precision detection from 1 to 55 cm, making it ideal for close-range applications. The sensor features ultra-low power consumption with a standby mode, ensuring long battery life. Its compact design and damp-proof coating allow it to function reliably in various environments, including metal surfaces and bathrooms. Equipped with NFC for easy configuration, the N8-WS201 is compatible with novaX LoRaWAN® gateways and IoT Cloud solutions, enabling real-time monitoring and effective remote management of container fill levels.

PIR & Light Sensor

| N8-WS202



Key Features

- Motion and occupancy detection using passive infrared technology with a detection range of up to 8 meters.
- Built-in light sensor for linking PIR results to trigger scenes based on custom thresholds.
- Ultra-wide wireless transmission range of up to 15 km line of sight.
- Compact size with NFC configuration for easy installation and operation.
- Compatible with LoRaWAN® gateways and IoT Cloud solutions for remote monitoring and control.

Product Overview

N8-WS202 is a LoRa-based PIR and light sensor designed for motion or occupancy detection using passive infrared technology and a Fresnel lens. It can detect motion within a range of 6–8 meters and report changes through the LoRaWAN® network. The built-in light sensor enables scene triggers by linking PIR detection results with light intensity. With its compact size, battery-powered design, and NFC configuration, the N8-WS202 is easy to install and operate. Compatible with LoRaWAN® gateways and IoT Cloud solutions, the N8-WS202 provides remote monitoring and control, making it ideal for smart homes, offices, schools, and warehouses.

Motion & TH Sensor

| N8-WS203



Key Features

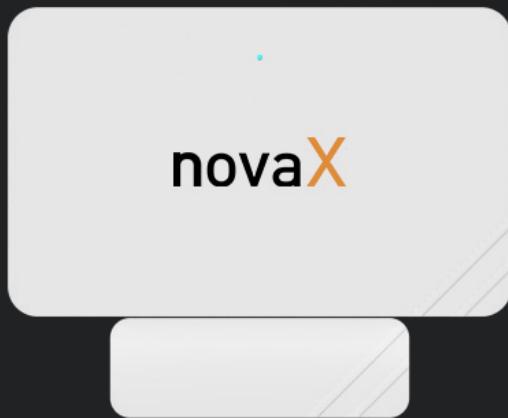
- Enables precise motion and occupancy detection.
- Provides accurate temperature and humidity readings.
- Allows adjustable field angles and detection ranges.
- Stores 1000 historical records to prevent data loss.
- Supports one-touch setup and card emulation mode.

Product Overview

N8-WS203 is an advanced environmental monitoring device that integrates motion and temperature/humidity (TH) sensors. Utilizing passive infrared (PIR) technology, it can detect motion within an 8-meter range and trigger TH detection. The device periodically reports environmental status over a LoRaWAN® network, offering a reliable solution for space and TH optimization. With easy wireless configuration, the N8-WS203 is suitable for smart offices, buildings, hospitals, and more. Compatible with novaX LoRaWAN® gateways and IoT Cloud platforms, it enables real-time occupant status monitoring for effective remote management.

Magnetic Contact Switch

| N8-WS301



Key Features

- Compact and wireless design, suitable for various doors/windows of different materials.
- Ultra-wide-distance transmission up to 15 km line of sight.
- Built-in tamper detection and LED indicators for network, open/close, tamper, and low battery status.
- Equipped with NFC for one-touch configuration and supports Milesight LoRa D2D protocol for ultra-low latency control without a gateway.
- Long battery life of over 5 years with a replaceable 1200 mAh battery.

Product Overview

N8-WS301 is a compact and wireless magnetic contact switch designed for monitoring the open/close status of doors, windows, or other objects. By placing a minimal magnet on the movable part and the sensor on the fixed part, N8-WS301 detects movement and transmits data via the LoRaWAN® network. With its minimalist design and easy installation, the N8-WS301 is ideal for smart homes, offices, and factories. It features ultra-wide-distance transmission, tamper detection, and long battery life, ensuring reliable real-time monitoring. Compatible with LoRaWAN® gateways and IoT Cloud, it enables users to receive instant alarms and manage devices

Smart Wall Switch

| N8-WS50X



Key Features

- Supports high-reliability relay for controlling lights and appliances.
- Measures voltage, current, power, and electrical consumption, with overload protection.
- Enables bulk control of switches for efficient management.
- Allows one-touch setup and supports card emulation mode.
- Offers ultra-wide-distance transmission of up to 15 km line of sight.

Product Overview

N8-WS50x is a smart LoRaWAN® wall switch designed for both local and remote control of lights and electrical appliances. With its two standard sizes, it can directly replace traditional wall switches, ensuring compatibility with most international wall switch types. The N8-WS50x supports advanced features such as overload protection, multicast control, and ultra-low latency via Mulesight D2D protocol. It is compatible with Mulesight LoRaWAN® gateways and IoT Cloud solutions, enabling seamless monitoring and control via web or mobile applications. Ideal for indoor applications, the N8-WS50x is suited for homes, offices, hotels, and museums.

Smart Portable Socket

| N8-WS523



Key Features

- Requires no wiring and supports most international socket standards.
- Allows users to turn devices on/off and create delay switch schedules.
- Measures voltage, current, power, and consumption with overload protection.
- Equipped with a capacitor for power failure notifications.
- Provides ultra-wide-distance transmission up to 15 km line of sight.

Product Overview

N8-WS523 is a LoRaWAN® smart portable socket designed for monitoring and controlling electrical appliances. Supporting multiple international socket types, the N8-WS523 allows users to turn devices on or off locally or remotely, while also collecting power consumption data and sending overcurrent alarms. Equipped with NFC for easy configuration and compliant with Milesight LoRaWAN® gateways and IoT Cloud solutions, the N8-WS523 can be monitored and controlled via web or mobile applications. It is ideal for wireless control of indoor lights, fans, heaters, and other appliances, offering a reliable and efficient solution for smart energy management.

Capacitive Level Sensor

| N8-EM300-CL



Key Features

- Real-time liquid level detection with high stability and timely alarms.
- Ensures hygiene and easy integration with non-metallic containers.
- Built-in 4000mAh replaceable battery lasting over 10 years.
- IP67-rated transceiver for reliable operation in various environments.
- Supports ultra-wide-distance transmission up to 10 km line of sight.

Product Overview

N8-EM300-CL is a non-contact liquid level sensor utilising capacitive sensing technology and LoRaWAN® communication. It is designed to monitor liquid levels in containers, such as hand wash dispensers, and trigger alarms when the liquid level is insufficient. The sensor can be seamlessly integrated with various container shapes and sizes, making it ideal for smart hygiene management systems. With IP67 waterproof performance, a built-in high-capacity battery lasting over 10 years, and compatibility with Mulesight IoT Cloud, the N8-EM300-CL ensures reliable and efficient remote monitoring. It promotes timely replenishment and water conservation while supporting smart data management.

LoRaWAN® Pulse Counter

| N8-EM300-DI



Key Features

- Flexible pulse counting and digital input modes for various metering needs
- Embedded temperature and humidity sensors for comprehensive environment monitoring
- IP67 waterproof enclosure for reliable operation in harsh environments
- Ultra-wide-distance LoRaWAN® transmission up to 10 km line of sight
- Long-lasting, replaceable 4000 mAh battery for up to 5 years of maintenance-free operation

Product Overview

N8-EM300-DI is a compact LoRaWAN® pulse counter designed to convert traditional water meters into intelligent, wireless meters. With its robust IP67 waterproof enclosure, it is suitable for demanding environments and supports both indoor and outdoor applications. The device features an extended battery life and advanced data management functionalities, enabling remote monitoring and efficient water usage. It integrates seamlessly with Milesight LoRaWAN® gateways and IoT Cloud, making it ideal for agricultural irrigation, industrial water management, and property meter reading.

Magnetic Contact Switch

| N8-EM300-MCS



Key Features

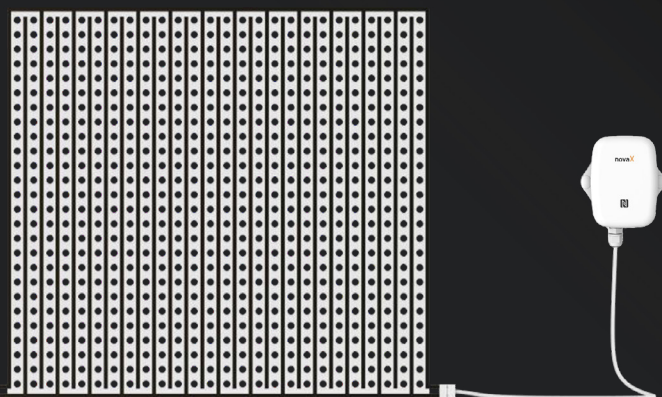
- High sensitivity for detecting door and window open/close status.
- Integrated temperature and humidity sensors for environmental monitoring.
- Ultra-wide transmission range of up to 10 km (line of sight).
- IP67-rated UV-resistant and waterproof enclosure for harsh environments.
- Built-in 4000 mAh replaceable battery with over 5 years of operation.

Product Overview

N8-EM300-MCS is a compact magnet switch sensor designed for detecting the open/close status of doors, windows, or other objects. It transmits alarms using LoRaWAN® technology and supports ultra-low latency control via the Mulesight D2D protocol. The device integrates temperature and humidity sensors, making it ideal for applications such as home automation, office monitoring, and industrial environments. With IP67-rated waterproof protection and a replaceable 4000 mAh battery, the N8-EM300-MCS can operate for over 5 years without replacement. It supports seamless integration with Mulesight IoT Cloud for remote management and alarm notifications.

Membrane Leakage Detection Sensor

| N8-EM300-MLD



Key Features

- Detects leaks over a larger area with a reusable and customisable design.
- Green materials with 100% reusability and no harmful emissions.
- Built-in 4000mAh replaceable battery lasting up to 10 years.
- IP67 waterproof and UV-resistant enclosure for harsh environments.
- Supports Milesight D2D protocol for ultra-low latency and direct control without gateways.

Product Overview

N8-EM300-MLD is an innovative membrane leakage detection sensor designed for precise and efficient detection of conductive liquids such as water, weak acids, and weak bases. Its flexible printed membrane enables customised coverage for larger areas, offering adaptability for various applications. With a built-in 4000mAh replaceable battery that lasts up to 10 years, and an IP67 waterproof and UV-resistant enclosure, the EM300-MLD is reliable even in harsh environments. It supports Milesight LoRaWAN® gateways and IoT Cloud solutions for remote monitoring and alarm notifications via web or mobile applications, ensuring timely responses to leakage events.

Leak Detection Sensor

| N8-EM300-SLD



Key Features

- Detects the presence of liquids using a small water probe based on the conductive principle.
- Integrated temperature and humidity sensors for environmental monitoring.
- Ultra-wide transmission range of up to 10 km (line of sight).
- IP67-rated UV-resistant and waterproof enclosure for harsh environments.
- Built-in 4000 mAh replaceable battery with over 5 years of operation.

Product Overview

N8-EM300-SLD is a compact spot leakage detection sensor designed to detect the presence of water or other conductive liquids and transmit alarms using LoRaWAN® technology. With ultra-low power consumption, the device operates up to 5 years on a replaceable 4000 mAh battery. It integrates temperature and humidity sensors, making it suitable for applications like pipe leakage monitoring, basement flooding prevention, and pump failure detection. The IP67-rated waterproof enclosure ensures reliable performance in harsh environments, while seamless integration with Milesight IoT Cloud allows for remote management and alarm notifications.

Leak Detection Sensor

| N8-EM300-ZLD



Key Features

- Detects liquid presence using a 3m long detection cable based on the conductive principle.
- Includes temperature and humidity sensors for comprehensive environmental monitoring.
- IP67-rated waterproof and UV-resistant enclosure for harsh environments.
- Built-in 4000mAh replaceable battery lasting over 5 years.
- Supports Mulesight D2D protocol for ultra-low latency and direct control without gateways.

Product Overview

N8-EM300-ZLD is a compact zone leakage detection sensor designed to detect the presence of water or other conductive liquids over large areas. Using LoRaWAN® technology, it provides reliable alarm notifications and remote monitoring capabilities. Equipped with integrated temperature and humidity sensors, the N8-EM300-ZLD is suitable for applications such as pipe leakage monitoring, basement flooding, and pump failure detection. Its IP67-rated waterproof and UV-resistant enclosure ensures durability in harsh environments, while the replaceable 4000mAh battery provides a lifespan of more than 5 years. With seamless integration into Mulesight IoT Cloud, it allows users to manage data visually and receive real-time alerts via mobile applications.

Temperature & Humidity Sensor

N8-EM300-TH



Key Features

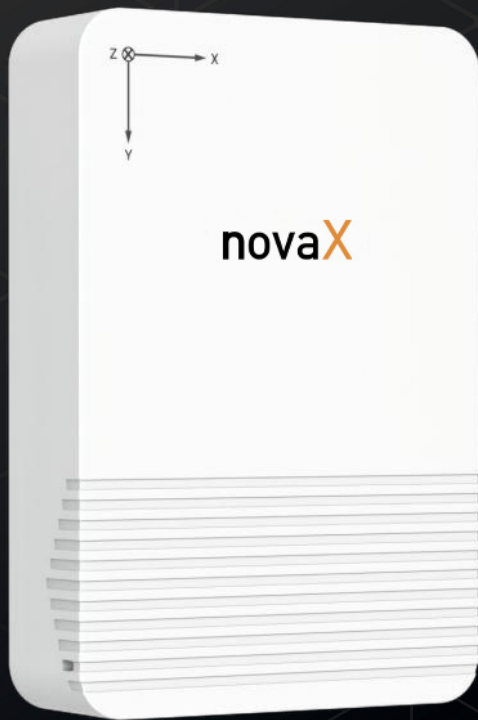
- Embedded with a high-precision Sensirion sensor chip for accurate temperature and humidity measurements.
- IP67-rated UV-resistant and waterproof enclosure for harsh environments.
- Built-in 4000 mAh replaceable battery with over 5 years of operation.
- Supports local storage of 3,000 historical records with data retransmission to prevent loss.
- Compatible with LoRaWAN® gateways, IoT Cloud, and supports NFC for easy configuration.

Product Overview

N8-EM300-TH is a compact LoRaWAN® temperature and humidity sensor designed for environmental monitoring. Embedded with a high-precision Sensirion sensor chip, it ensures accurate measurements and reliable performance in various environments. The device features an IP67-rated waterproof and UV-resistant enclosure, making it suitable for both indoor and outdoor applications. With a built-in 4000 mAh replaceable battery, N8-EM300-TH can operate for over 5 years without replacement. It supports local data storage to prevent loss and integrates seamlessly with LoRaWAN® gateways and IoT Cloud for remote management. Ideal for offices, hospitals, factories, greenhouses, and more.

Tilt Sensor

| N8-EM320-TILT



Key Features

- Built-in 3-axis MEMS accelerometer to measure X, Y, and Z tilt angles with high accuracy.
- Customisable threshold settings for angle changes with real-time alarm notifications.
- IP67 waterproof enclosure and anti-theft back cover for secure and durable installation.
- Ultra-wide-distance transmission up to 15 km line of sight.
- NFC-enabled for one-touch configuration via mobile applications.

Product Overview

N8-EM320-TILT is a LoRaWAN® tilt sensor designed for precise angle measurement and asset movement detection. Equipped with a built-in 3-axis MEMS accelerometer, it measures the X, Y, and Z tilt angles of objects, making it ideal for monitoring trees, poles, grounds, and other structures. The sensor supports flexible threshold settings and real-time alarm notifications when angle changes occur. With an IP67 waterproof enclosure, it is suitable for outdoor applications and features anti-theft design for secure installation. Seamlessly integrating with Milesight LoRaWAN® gateways and IoT Cloud solutions, the N8-EM320-TILT enables remote monitoring and management via web or mobile applications.

ToF Laser Distance Sensor

| N8-EM400-TLD



Key Features

- 2–350 cm detection range with minimal blind zone, perfect for small waste bins or containers.
- Integrated NTC sensor for detecting and alarming trash burning events.
- Built-in 3-axis accelerometer for monitoring device tilt status.
- IP67 waterproof enclosure with internal damp-proof coating for outdoor use.
- Available in LoRaWAN® and NB-IoT/Cat.M versions for diverse application needs.

Product Overview

N8-EM400-TLD is a versatile ToF (Time of Flight) laser distance sensor designed for accurate fill level and position status detection in small waste bins or containers. Its wide detection range of 2–350 cm and minimal blind zone make it ideal for compact spaces. Equipped with an NTC temperature sensor, it provides security alerts for trash burning. The sensor's IP67 waterproof enclosure and internal damp-proof coating ensure durability in outdoor environments. Available in both LoRaWAN® and NB-IoT/Cat.M versions, the N8-EM400-TLD supports remote management and GNSS tracking, offering flexible solutions for various IoT applications.

Smart Current Transformer

| N8-CT101



Key Features

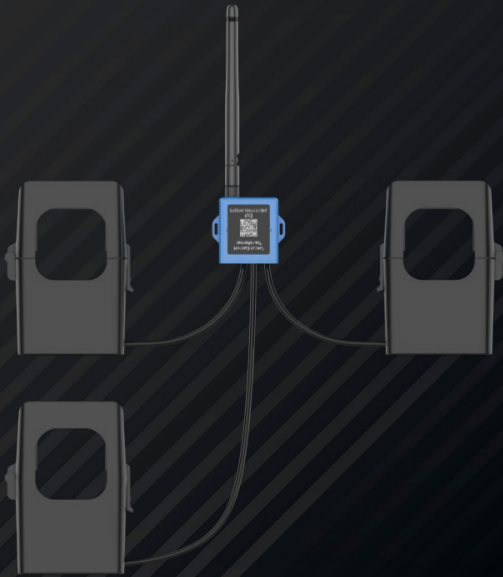
- Report RMS current and accumulated data with high accuracy and a sampling frequency of up to 3.3 kHz.
- Detachable and non-invasive clamp design ensures safe and easy installation without de-energizing.
- Self-powered via induced current, eliminating the need for batteries or external power.
- Equipped with LED indicators for status and alarm notifications.
- Real-time monitoring with a sampling rate of up to 1 second and support for Firmware Update Over the Air (FUOTA).

Product Overview

N8-CT101 is a LoRaWAN® Smart Current Transformer designed for energy monitoring and consumption analysis. It supports multiple current ranges, allowing flexible energy monitoring with real-time threshold alarms. With a detachable and compact clamp design, N8-CT101 ensures safe and quick installation without de-energizing facilities. Compliant with LoRaWAN® gateways and the Development Platform, it enables remote monitoring via a user-friendly webpage. N8-CT101 is ideal for smart buildings, machine failure detection, and energy management applications.

Smart Current Transformer

N8-CT3XX



Key Features

- Reports RMS current and accumulated data with a sampling frequency of up to 3.3 kHz.
- Compact clamp design allows safe installation without power de-energising.
- Operates without batteries or external wires, supporting USB power for lower current detection.
- Enables a 1-second sampling rate for quick alarm responses and real-time data updates.
- Supports three-phase detection with optional current ranges of 300A, 500A, or 1000A.

Product Overview

N8-CT303, N8-CT305, and N8-CT310 are LoRaWAN® Smart Current Transformers designed for energy monitoring and remote usage analysis. These devices provide high-accuracy RMS current measurement with sampling frequencies up to 3.3 kHz. Their compact, non-invasive clamp design ensures quick and safe installation without de-energising facilities, making them ideal for indoor use. The transformers are self-powered and support external temperature sensors for cable temperature monitoring. Seamlessly integrated with Milesight LoRaWAN® gateways and IoT Cloud solutions, they enable real-time data reporting, threshold alarms, and remote firmware updates for efficient energy management in smart buildings, machine monitoring, and more.

IoT E-ink Display

N8-DS3604



Key Features

- 4.2-inch three-colour e-ink screen with 400 × 300 resolution and ultra-wide 180° viewing angle.
- Supports remote and local updates of text, images, and QR codes.
- Displays up to 150 languages, including English, Chinese (Simplified & Traditional), Spanish, French, and more.
- Ultra-low power consumption with a battery life of up to 5 years.
- Compatible with LoRaWAN® gateways and supports multicast for bulk configurations.

Product Overview

N8-DS3604 is a 4.2-inch IoT e-ink display designed for flexible and energy-efficient content presentation. With a high-resolution three-colour e-ink screen (black, white, and red), it supports displaying text, images, and QR codes, making it suitable for diverse applications. The device enables remote and local content updates, supports up to 150 languages, and offers customisable display templates. Its ultra-low power consumption ensures a battery life of up to 5 years with minimal maintenance. Compatible with LoRaWAN® gateways and network servers, the N8-DS3604 integrates seamlessly into IoT ecosystems for remote management and bulk configurations.

