SensorNode LoRaWAN®

All 868, 902-928MHz LoRaWAN® regions supported

Robust and rugged LoRaWAN® datalogger with inputs/outputs and I²C sensor interface for asset and sensor monitoring

GPS/GLONASS

High-precision GPS/GLONASS tracking device

Battery-Powered or Wired

Flexible Power Options – 3 x AA Batteries with up to 5 years battery life or wired to power

Ultra-Rugged

Weatherproof and ultra-rugged IP67 Housing

Inputs/Outputs

2 x Analog Inputs, 2 x Digital Inputs

Interfaces

I²C Sensor Interface

Connectivity

LoRaWAN	Highly sensitive radio receiver is available in 868 or 902 - 928 MHz versions. Internal antenna.
LoRaWAN Regions	AU915 AS923-1 AS923-2 AS923-3 EU868 IN865 KR920 RU864 US915

Batteries

User-Replaceable Batteries	3 x AA
Battery Life	Up to 5 years of battery life at once-daily position updates, 2 years battery life at once-hourly position updates
Supported Battery Types	Alkaline Lithium (LiFeS2) - recommended *Please dispose of Lithium batteries in a safe and responsible manner

Location

Module	uBlox SAM8-M8Q GP
Constellation	Concurrent GPS / GLONASS
Channels	72 Channel High Sensitivy Receiver
Tracking Sensitivity	-165 dBm tracking performance
Low Noise Amplifier	GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail
LoRaWAN Gateway Geolocation Fallback	LoRaWAN gateway geolocation fallback when there is no GNSS

Power

Input Voltage	Flexible Power Options: 4-6V DC (max) 3 x AA Cell Battery holder fitted. Screw terminals for line power.
Sleep Current	<10uA* *Average current in lowest power configuration

Mechanics / Design

Dimensions	135 x 90 x 35 mm (5.31 x 3.54 x 1.38”)
Weight	218 g (7.69 oz)
Housing	ABS Polycarbonate Plastic
IP Rating	IP67 rated housing ensures device can withstand fine dust, high-pressure spray, submersion for 30 mins in 1m of water, and extreme temperatures
Installation	Compact and Concealable. Multiple installation options for covertly and easily securing the device to assets with screws, bolts, cable ties, rivets, and more. Caters for a number of cable glands (2 fitted as standard) to allow for waterproof cable entry to the housing.
Operating Temperature	-20°C to +60°C
GPS Antenna	Internal
Diagnostic LED	Diagnostic LED signifies operation status

Interfaces

Analog Inputs	2 x 0-30V Analog Inputs, Auto Ranging, 12-bit ADC 0-5V range: 1.22mV precision 0-30V range: 7.32mV precision
Digital Inputs	2 x digital inputs with configurable pull-up/down 0-48V DC input range On/Off thresholds: Pull-up enabled: low at 0.8V, high at 1.0V Pull-down enabled: low at 2.0V, high at 2.4V Can be used for pulse counting
I^2C	I^2C (inter-IC communications) is an interface commonly used in sensor modules
Switched Power Out	Used to control the 3.3V power to external sensors and peripherals. Load limited and short circuit protected. Can be toggled via downlink.

Smarts

Environmental Monitoring	Interface with a range of sensors such as temperature, humidity, moisture, depth, and more

Device Management

Flexible Configuration	Configure sensors and polling rate
Configuration App	Manage device firmware updates and parameters via a USB configuration cable and app. Some parameters can be changed via downlink.

Integration

Third-Party Integration	Easy integration with comprehensive documentation and a flexible and open payload format

Security

Data Security	LoRaWAN networks use AES-128 Encryption so your data is protected

Warranty

Manufacturer's Warranty	One year manufacturer's warranty

Certifications

Please contact us for a full list of compliance specifications and documentation for your region.	ACMA (DoC), CE (Doc)