Uniconverge Technologies
CONVERGING UNIVERSE

Reliable IoT for a Smarter, Connected World
MONITOR | OPTIMIZE | TRANSFORM

DATASHEET

4-20 mA LoRaWAN NODE

Wireless Monitoring for Industrial & Remote Applications



- Long Range (up to 3KM+) Rural LOS)
- Ultra Low Power Up to 10 Years*
- Remote Configuration (OTAA & ABP)
- Powers Sensor 12 – 24 V DC (On-board Boost)
- Easy Installation (DIN Rail / (Wall Mount)

Product Overview

The 4–20 mA LoRaWAN Node is designed for reliable, long-range wireless monitoring of industrial sensors and devices. It supports single-channel 4–20 mA input and powers the sensor using an on-board boost converter (12–24 V DC). With ultra-low power design and a high-capacity 19Ah battery, it delivers **up to 10 years** of battery life (depending on communication interval). Ideal for remote and hard-to-access installations, this node ensures stable performance and seamless integration with any standard LoRaWAN network server.

Applications

- Environmental Monitoring
- Smart Agriculture
- Industrial Automation
- Process Data Monitoring
- Water & Wastewater Management
- Utility Management
- Predictive Maintenance
- Remote Asset Monitoring

Key Features

- Single-channel 4–20 mA Input
- 19Ah Li-ion Battery Up to 10 Years*
- Powers Sensor 12 – 24 V DC (On-board Boost)
- OTAA & ABP Support
- Remote Configuration
- Optional Reed Switch (for reset & on-demand uplink)
- Rugged & Weatherproof Design
- Easy Installation (DIN Rail / Wall Mount)

Technical Specifications

Analog Input

Input Type	Single-channel 4–20 mA analog input
Input Accuracy	±0.1% FS (typical)
Input Impedance	~ 120 Ω
Sensor Power Output	12 – 24 V DC (on-board boost converter)

Power Supply

Battery	3.7V, 19,000 mAh Li-ion (D-cell type)
Battery Life	Up to 10 years* (depending on communication interval)

General

Indication	Power (Red), Status (Green)
Enclosure	ABS (Standard)
Dimensions	130 mm x 70 mm x 55 mm (approx.)
Mounting	DIN Rail / Wall Mountable
Operating Temperature	0 to 65°C
Storage Temperature	-10 to 70°C
Operating Humidity	5 – 95% RH (non-condensing)

LoRaWAN® Connectivity

Standard	LoRaWAN® v1.0.2 / v1.0.3
Activation	OTAA and ABP Support
Frequency	865 MHz (IN) (other bands on request)
Antenna	External SMA antenna (recommended)
Data Rate	Adaptive Data Rate (ADR)
Transmission Interval	Configurable (e.g., 1 min to 24 hours)
Configuration	Remote configuration (via LoRaWAN downlink)

Optional Features

Reed Switch	Optional magnetic reed switch for manual reset and on-demand uplink
Sensor Power	Optional loop power (if required)

ATEX version can be done using External FLP enclosure.

* Battery life depends on communication interval, network conditions and environment.

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