MacSync-LD Overview

MacSync-Datalogger is an industrial-grade RS485-to-LoRaWAN® data logger designed to interface with Modbus-enabled field devices, collect data at defined intervals, store logs locally, and transmit periodically over LoRaWAN® networks.

Built for harsh environments and long-term deployments, it supports energy meters, flow sensors, temperature transmitters, PLCs, and more. Ideal for retrofitting industrial setups with wireless logging and monitoring.

Interfaces	1 X RS485	2 X Analog	2 X Digital

Wireless Technology — LoRa

Features

RS485 (Modbus RTU) Interface
Compatible with energy meters, PLCs, Transmitters

4-20 mA , 0-10 V & Digital Inputs
Multiple Analog channels

Robust & Weatherproof
Designed for industrial & outdoor environments

Supports periodic, threshold-based, & event-driven uplinks

BLE Support
Easy local configuration and diagnostics with Maya

Massive 19Ah built-in lithium battery
Up to 10+ years depending on settings

Supports Macnman Beam Protocol
Direct control, & local device-to-device actions

Secure onboarding with pre-flashed DevEUI / AppEUI / AppKey

Optional Onboard Data Buffering
To prevent data loss in case of network downtime

Compatible with all LoRaWAN® network servers & gateways

Specifications

Measurement

RS485 Interface	1
4-20 mA Analog Channels	2
0-10 V Analog Channels	2
Digital Inputs	2
Data Storage	Onboard flash memory for 10,000+ records
Secure Onboarding	OTAA with AES-128 encryption
ADC Resolution	16-bit

Wireless Transmission

Technology	LoRaWAN® (v1.0.4), Macnman Beam Protocol
Antenna	Internal high-efficiency antenna
Supported Bands	IN865 / RU864 / EU868 / US915 / AU915 / KR920 / AS923-1/2/3/4
Tx Power	16 dBm @ 868 MHz 20 dBm @ 915 MHz 19 dBm @ 470 MHz
Sensitivity	-137 dBm @ 300 bps
Activation	OTAA / ABP
LoRaWAN® Class	Class A (default), Configurable to Class C via Maya

Led Status

LED Type	1 Internal Multi-Color LED
Solid Blue	Device is connected with Maya App
Flashing Blue	OTA (Over-the-Air) update in progress
Slow Blinking Green	Attempting to connect to the LoRaWAN® network
Single Red Blink	A confirmed parameter of MacSync is being modified

Configuration

Configuration	Via Macnman Maya Android App
Maya Fatures	Threshold / Trigger / Sample based alarm triggers
Stored Records	30,000 Records (accessible via Maya) (optional)
Remote Configuration	Yes - JSON format Data

Physical Characteristics

Power Supply	Inbuilt Battery - 19,000 mAh , Optional Solar Panel , Power Operated
Operating Temp	-40°C to +80°C
Humidity Range	0% to 100% RH (non-condensing)
Ingress Protection	IP65 standard (IP67 optional variant)
Housing Material	Glass field Nylon
Color	Matte White
Weight	~190g (with 19Ah battery)
Dimensions	Approx. 152 mm X 43 mm X 63 mm (customizable branding available)
Mounting Options	Pole Mounting / Wall Mounting

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🌐   www.macnman.com

@   info@macnman.com

📞   +91 7972856163

📍   SHOP-15, 635 1B, Bibwewadi, Pune,
      Maharashtra 411037

Support Mails

@   chat@macnman.com

@   helpdesk@macnman.com

@   support@macnman.com

Device Dimensions

43 mm

152 mm

62 mm