



## 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



## 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

y to serve you. तुमची सेवा करण्याची संधी दिल्याबद्दल धन्यवाद. మీకు సేవ చేసే అ  
के अवसर के लिए धन्यवाद भवतः सेवायाः अवसरस्य कृते धन्यवादः તમારી સેવા કરવાની

## Say Hello 🙌

- 🌐 [www.macnman.com](http://www.macnman.com)
- ✉ [info@macnman.com](mailto:info@macnman.com)
- 📞 +91 7972856163
- 📍 SHOP-15, 635 1B, Bibwewadi, Pune,  
Maharashtra 411037

### Support Mails

- ✉ [chat@macnman.com](mailto:chat@macnman.com)
- ✉ [helpdesk@macnman.com](mailto:helpdesk@macnman.com)
- ✉ [support@macnman.com](mailto:support@macnman.com)

This manual and all its contents are the intellectual property of Macnman Technologies Pvt. Ltd. and are protected under Indian copyright laws and applicable international conventions.

All trademarks, certifications, and logos mentioned in this document or related products are used with appropriate licensing. These may include, but are not limited to, certifications such as CE, FCC, RoHS, REACH, BQB, WEEE, and others. Ownership of trademarks, logos, and trade names remains with their respective owners. For instance, the Bluetooth® trademark and logo are the property of Bluetooth SIG, Inc. Other trademarks belong to their rightful proprietors.

Given the compact size of the module, the "®" symbol is omitted from Bluetooth-related trademarks in compliance with applicable regulations.

Macnman Technologies Pvt. Ltd. reserves the right to modify the content of this manual to align with advancements in technology. Updated versions may be released without prior notification. Unauthorized modification, reproduction, or use of part or all of this manual without written consent from Macnman Technologies Pvt. Ltd. is strictly prohibited. Legal action will be taken against violators in accordance with Indian law.

By using this manual, you agree to comply with the terms stated herein.

Device Dimensions

