



Outdoor LoRaWAN® Gateway

MacLink Gen 2

Industrial outdoor LoRaWAN® gateway with multi-backhaul connectivity, high-capacity packet forwarding, and long-range wireless coverage for large-scale IoT deployments.



Introduction

The MacLink Gen 2 is a high-performance Outdoor LoRaWAN® Gateway engineered for reliable long-range communication across industrial, smart city, agriculture, utility, and infrastructure applications. Designed for carrier-grade outdoor deployments, the gateway enables seamless connectivity between thousands of LoRaWAN® end devices and cloud platforms.

Built with a rugged industrial enclosure and advanced RF architecture, the gateway delivers stable wide-area coverage with high concurrent device handling capability. Supporting multiple backhaul options including Ethernet, Wi-Fi, and 4G/LTE, the MacLink Gen 2 ensures uninterrupted connectivity across remote and distributed environments.

Features

- Dual SIM 4G LTE Backhaul
- Wi-Fi & Ethernet Connectivity
- PoE (Power over Ethernet) Support
- Multi-Channel LoRaWAN® Gateway Architecture
- Global LoRaWAN® Frequency Band Support
- OTA Firmware Upgrade & Remote Management *
- Built-In Node-RED Edge Automation Engine
- Integrated ChirpStack® LoRaWAN Network Server (LNS)

Key Advantages

- Designed for Outdoor & Harsh Environmental Deployments
- Supports High-Density Sensor Network Architectures
- Improves Network Reliability with Multiple Backhaul Options
- Ideal for Remote Monitoring & Industrial Automation Applications
- Supports Scalable Smart Infrastructure & Edge IoT Systems

Main Processing Unit Specifications

Type	ARM Cortex-A7
Number of cores	Quad core
Clock	960 MHz Quad-Core Processor
Memory size	512MB
Memory speed	DDR3 up to 1066 MHz
Internal memory	8GB eMMC
USB	USB Debug Interface

Wireless Specifications

Compatibility	LoRaWAN® , Class A/B/C
Frequency	IN865 / RU864 / EU868 / US915 / AU915 / KR920 / AS923-1/2/3/4
LoRa Demodulators	8-Channel LoRaWAN® Packet Forwarder
Uplinks channel	8
Downlink channel	1
TX power	Up to 27 dBm @ SF12, BW 125 kHz (Region Dependent)
RX sensitivity	Down to -139 dBm @ SF12, BW 125 kHz
Data-rate	Dynamic data-rate adaptation (ADR)
Antenna Connector	N-type female
Embedded LNS Support	Integrated ChirpStack® LoRaWAN Network Server (LNS)

Ethernet Backhaul

Number	1 (PoE)
Type	1 × 10/100 Mbps Ethernet Port

WiFi Backhaul

Bands	2.4 GHz ISM
Standards	802.11 b/g/n
Modulation schemes	BPSK, QPSK, 16 QAM, 64 QAM
Security	WEP, TKIP, and AES, WPA, WPA2
Antenna	Internal Integrated Antenna

Cellular Backhaul

Cellular bands	B1/3/5/7/8/20/28
GPRS slot	Multi-slot class 12/10
SIM card	1 x Nano SIM
Antenna	Internal Integrated Antenna

Operating System

Inbuilt OS	OpenWRT Linux
Forwarder	UDP forwarder
Forward Options	ChirpStack MQTT forwarder
LNS	ChirpStack server
Automation Engine	Node-RED with ChirpStack Support

Power Supply

Power supply	Isolated PoE (IEEE 802.3at)
Power consumption	Average 5W (approx)
Connector	RJ45 (cable through gland)
Power backup	Inbuilt SuperCAP
Backup time	Approx 20s

Physical & Environmental Specifications

Enclosure

Material	Aluminium alloy ADC-12
Treatment	Surtec 650, salt spray duration 96hrs
Dimensions	220 mm × 120 mm × 70 mm (Without Antenna)
Weight	920 grams

Installation

Wall-mounted installation	With Only AL Bracket
Pole - mounted installation	With Only AL Bracket

Environmental Conditions

Operating Temperature	-20 °C to + 50°C
Operating Humidity	0% to 95% RH (Non-Condensing)
Operating IP Class	IP67

Regulatory Certifications & Compliance

Wireless Certification	WPC
Environmental	RoHS compliant

What's in the Box ?

- MacLink Gen-2 Model
- Mounting Clip
- User Manual
- Warranty Card
- IP68 Cable Extender *
- Mounting Screws
- Power Adapters *

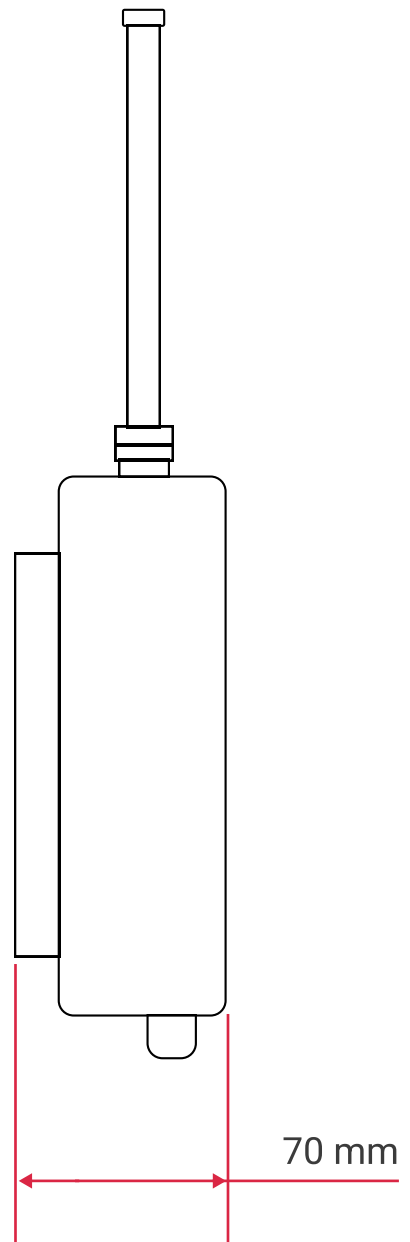
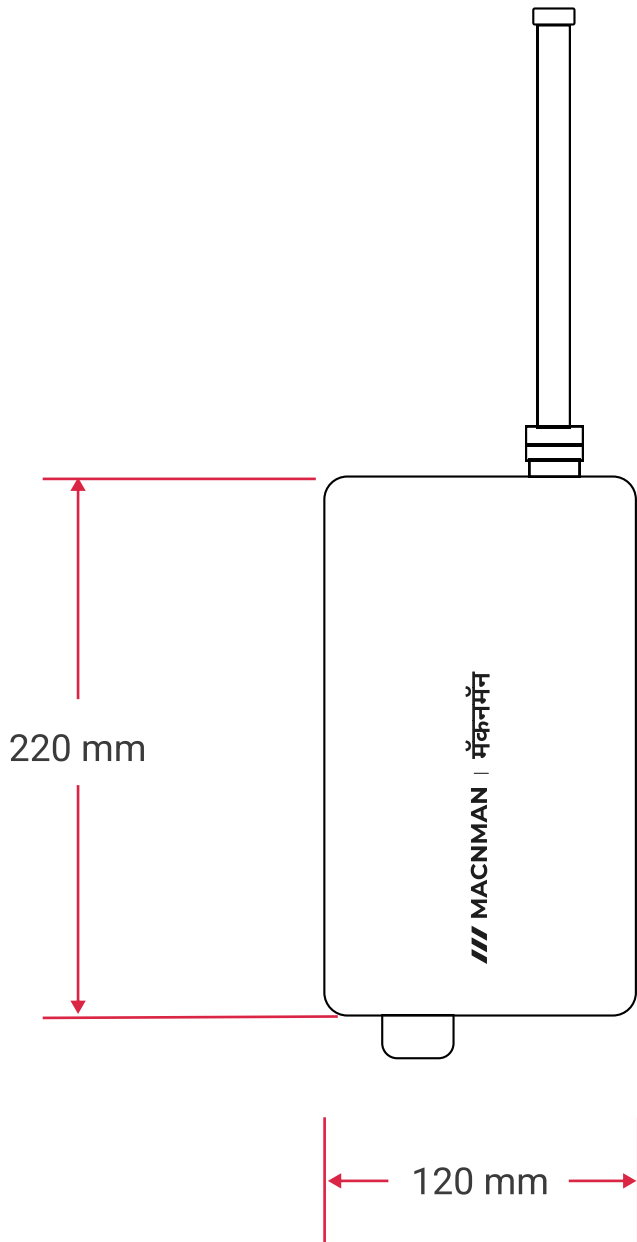
Models & Ordering Information

Variant Name	Power Source
MacLink Gen-2	External Power (PoE)

Notes

- For OTA updates and remote management, users must use the Macnman VPN service.
- (*) Marked accessories must be purchased separately

Device Dimensions






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