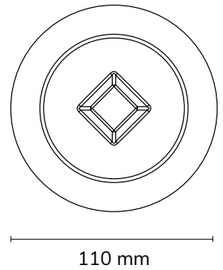
MG4 Rechargeable PoE Gateway

Dual chip concurrency and offline data buffering capture every event.

MG4 is a rechargeable PoE gateway built for smooth data flow from Blueooth tags and sensors. It maintains a stable Wi-Fi backhaul while a two-chip design with dual antennas scans beacons concurrently at high throughput and low latency. A 2000 mAh backup battery and an offline data buffer preserve every record during outages and sync on return, keeping histories intact. Smart filtering and support for BLE 5 extended advertising packets turn noisy airwaves into clean, structured datasets that cut cloud costs and improve analytics. MG4 delivers dependable visibility across occupancy, assets, and environmental conditions without overbuilding the network.

Basic Info.

Model	MG4
Network	Wi-Fi/Ethernet
Flash	16MB
Operating Temperature	–20~55°C
Charging Temperature	0~45°C
Working Humidity	10%~90%RH
Firmware Upgrade	OTA / LAN

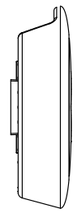


Bluetooth Specs.

Bluetooth version	Bluetooth® LE 5.1
Number of Received Data Packages	About 350 packets per second
Scan Range	Up to 180m (open space, 0dBm Beacon)

WiFi Specs.

WiFi protocols	IEEE 802.11 b/g/n
Network protocol	MQTT (SSL/TCP), HTTP (HTTP/HTTPS)
Wireless encryption	WEP, WPA_PSK, WPA2_PSK, WPA_WPA2_PSK



FEATURES ▶

Dual Chip Architecture Boosts Concurrency

ESP32-S3 handles application processing while nRF52833 scans and parses BLE 5 extended advertising. Dual-chip split with dual-antenna isolation sustains up to 350 packets per second, cuts latency, and prevents backlog so time-critical data arrives on time.

Continuous Operation With Battery Backup

PoE or DC power is backed by a 2000 mAh rechargeable battery providing up to 12 hours during outages. Sites stay protected and data capture continues when local power is unavailable.

Fast Safe Configuration With MinewLink

Configure via the MinewLink app using smart provisioning, Bluetooth setup, or AP mode. Teams deploy faster, make fewer mistakes, avoid return visits, and scale rollouts with simpler staging and verification.

Resilient Ethernet & Wi-Fi Backhaul With Failover

Use Gigabit Ethernet for stable backhaul with Wi-Fi on standby. During disruptions, teams switch paths in seconds to keep services running. MG4 timestamps and buffers data, then forwards on recovery.

Edge Filtering Delivers Clean Data

Apply RSSI thresholds, MAC allow or deny lists, and regex on raw data at the edge. Links stay reliable in RF-congested areas while bandwidth use and cloud costs drop.

Preassigned Static IPs Simplify Operations

With preconfigured static IPs for batch deployment, devices are ready at power-up. No per-device setup, fewer interruptions, faster troubleshooting, and consistent visibility that helps protect uptime.

Resilient Ethernet & Wi-Fi Backhaul With Failover

Use Gigabit Ethernet stable backhaul with WiFi on standby for temporary deployments. If the link becomes unstable, teams can switch paths in seconds and keep critical services running. The MG4 gateway timestamps and stores data locally, then forwards it on recovery.

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