

BLE Wi-Fi Gateway

Overview

The Ya Batho BLE Wi-Fi Gateway is a high-performance bridge for BLE data collection and cloud connectivity. Built on dual ESP32 modules, it supports BLE 5.0 long-range scanning, Ethernet, Wi-Fi, MQTT uplink, and remote beacon management. Ideal for industrial IoT, mining environments, and real-time asset/personnel tracking.



Key Features

- Dual ESP32 architecture (ESP32-WROOM-32E + ESP32-C3-MINI-1U)
- BLE 5.0 with long-range coded PHY (up to 200 m)
- Supports 2.4 GHz Wi-Fi (802.11 b/g/n) and Ethernet
- MQTT v3.1.1 cloud uplink with SSL/TLS security
- IEEE 802.3af PoE IN & PoE OUT
- Advanced BLE filtering (RSSI, MAC, Name, Raw data)
- Remote beacon device management (downlink control)
- Local decoding of iBeacon, Eddystone UID/URL/TLM
- OTA firmware upgrade support
- Optional 540 mAh Li-ion internal battery

Technical Specifications

Material	ABS
Dimensions	210 × 150 × 60 mm
LED Indicators	3 × RGB intelligent LED
Interfaces	PoE In, LAN
Antenna	External 2.4 GHz BLE antenna
Battery (optional)	540 mAh Li-ion rechargeable
Installation	Horizontal, wall or ceiling mount
Operating Temperature	−30 °C to 50 °C
Storage Temperature	−40 °C to 60 °C
Humidity	< 95% RH non-condensing
Power Input	220v AC
MCU	ESP32-WROOM-32E
Flash	4 MB
RAM	512 KB SRAM
Wi-Fi	2.4 GHz, WPA2-Enterprise supported
BLE Module	ESP32-C3-MINI-1U, BLE 5.0
BLE Range	Up to 200 m (open space)
Communication Protocol	MQTT v3.1.1
Encryption	SSL/TLS
Payload Format	JSON

