MMB OpenThread Border Router

When developing a custom IoT ecosystem, time to market and ease of development are critical. Leveraging OpenThread technology and over a decade of experience in IoT product development, the MMB OpenThread Border Router allows users to create Thread networks and connect them to the internet.

When configured as an OpenThread Repeater, it allows users to expand their network for large scale deployments. It is the ideal platform for customers looking to deploy their own Thread-based IoT solution for consumer or commercial applications. With minimal development effort, the MMB OpenThread Border Router can be configured to form a network, connect to other devices, and communicate data to the cloud, all while supporting your custom applications.

Simple Path to Market

Reduce budget uncertainty and engineering time.

Pre-certified and tested, low cost OpenThread-compliant solution.

Go from proof of concept to scaled manufacturing with white label friendly enclosure and packaging options.

Focus on building unique features for your customers, leave the connectivity to MMB.

Better Performance

Create a great customer experience with a secure, wired or wireless end-to-end ecosystem.

Maximum network range with minimal energy consumption.

Read sensor and telemetry data in the cloud with powerful local control and processing.

Compatible with existing onsite 802.11 b/g/n and ethernet network connectivity backbones.

Flexible Solution

Work in your own dev environment with an off the shelf gateway based on the popular and well-supported Espressif ESP32.

Friendly and easy to work with, with a large and engaged developer community.

Pull in more features to increase market share and functionality by leveraging on board MMB and open source libraries.

Tech Specs

Hardware

Processors	ESP32 Host MCU processor EFR32MG21 802.15.4 / OpenThread SoC
RAM	8MB
Memory	16MB
Network Interfaces	Thread - 802.15.4 2.4GHz Wifi - 802.11 b/g/n 2.4GHz BLE - 802.15.1 2.4GHz Ethernet
Power Consumption	5V/160mA typical
Power Supply Options	USB-C or PoE options available
Other	Status LEDs (3), programmable buttons (2)
White Labeling	Customizable enclosure color(s), top panel printing, and packaging to match target brand language
Dimensions	91.9 x 76.9 x 26 mm
Mounting Options	Wall-mount Slide Bracket (Included)

Software

OpenThread Supported Features: Border Router	Thread 1.2 and 1.3 Feature Support Border Router Prefix Advertisement Thread Commissioner Allow List Thread Diagnostic Endpoint LAN/WLAN Metrics Logging Large Network Support 32 direct child connections
OpenThread Supported Features: Repeater	OpenThread Repeater (REED) Functionality SRP Client
Web UI	Customizable Web UI branding and localization options available
APIs	HTTP-based Border Router commissioning and diagnostics CoAP-based repeater diagnostics
Upgrade Support	OTA Upgrade via CoAP or HTTP

Ordering Information

OpenThread Border Router	BRD21-OTBR
OpenThread Repeater	BRD21-TR

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