



MMB NETWORKS MMB Thread Mesh Extender User Guide

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MMB NETWORKS MMB Thread Mesh Extender



The MMB Thread Mesh Extender is a device designed to extend the range of Thread mesh networks. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules, and the relevant harmonized/designated standards for European Health and Safety Compliance (CE) and UK Conformity Assessment (UKCA).

Product Usage Instructions

To use the MMB Thread Mesh Extender, follow these steps:

1. Ensure that the device is installed and configured to operate with a separation distance of 20cm or more from all persons, in compliance with FCC RF Exposure requirements.
2. Connect the device to an outlet on a circuit different from that to which the receiver is connected to avoid interference.
3. If interference occurs, try reorienting or relocating the receiving antenna, increasing the separation between the equipment and receiver, or consulting a dealer or an experienced radio/TV technician for help.
4. To access the formal Declaration of Conformity (DoC), visit the product web page at <https://www.mmbnetworks.com/mmb-tbr>.

By following these usage instructions, you can effectively extend the range of your Thread mesh network with the MMB Thread Mesh Extender.

FCC STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Suppose this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. In that case, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Federal Communications Commission (FCC-US): This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

To comply with FCC RF Exposure requirements, users of this device must ensure that the device be installed and/or configured to operate with a separation distance of 20cm or more from all persons. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ISED

This device contains license-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

The radiated output power of this device meets the limits of FCC/ISED Canada radio frequency exposure limits. This device should be operated with a minimum separation distance of 20 cm (8 inches) between the equipment and a person's body.

European Health and Safety Compliance (CE)

The MMB TME device has been tested against the relevant harmonized/designated standards and are in conformity with the essential requirements and other relevant requirements of the EMC-Directive (2014/30/EU) and the Radio Equipment Directive (RED) (2014/53/EU). The products are entitled to carry the CE Mark and a formal Declaration of Conformity (DoC) is available at the product web page which is reachable starting from <https://www.mmbnetworks.com/mmb-tbr>

UK Conformity Assessment (UKCA)

The MMB TME device has been tested against the relevant harmonized/designated standards and are in conformity with the essential requirements and other relevant requirements of SI 2016 No. 1091 ("The Electromagnetic Compatibility Regulations 2016") and SI 2017 No.1206 ("The Radio Equipment Regulations 2017"). The products are entitled to carry the UKCA Mark and a formal Declaration of Conformity (DoC) is available at the product web page which is reachable starting from <https://www.mmbnetworks.com/mmb-tbr>

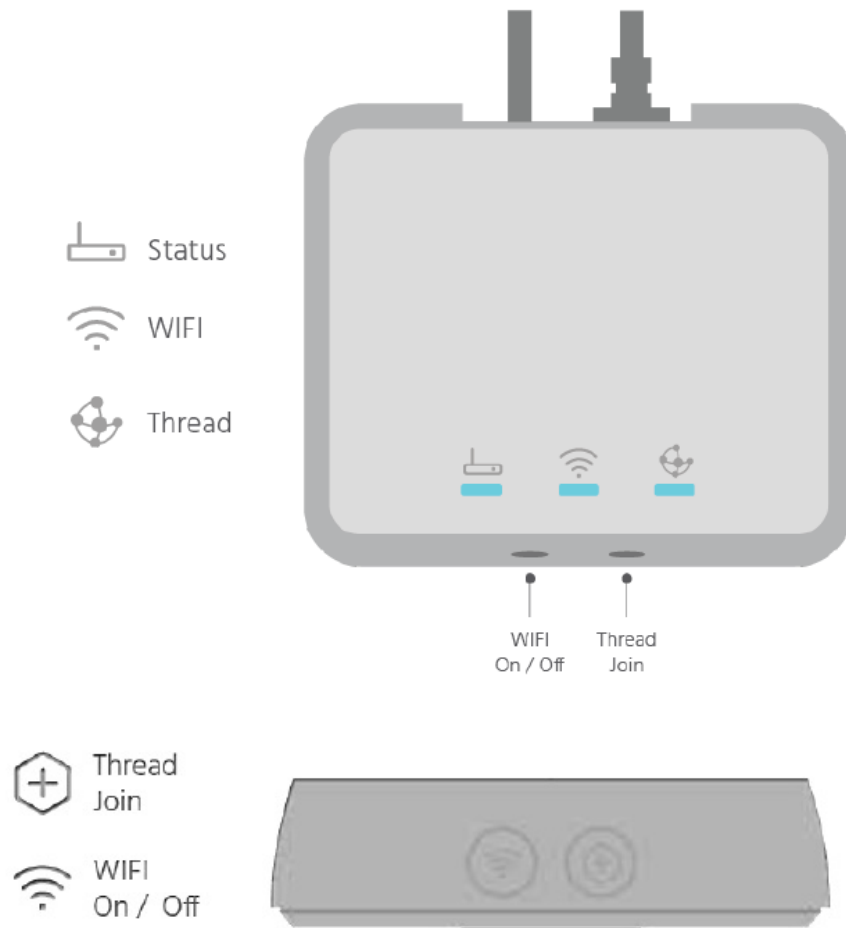
Box Contents

1. MMB TME Device
2. USB-C Power Adapter





3. Screws and wall plugs
4. Mounting guide

Getting Started














MMB TME Device Overview





LED Patterns

| LED Pattern | Illustration | Comment |
|---------------|---|-------------------------------------|
| On |  | LED on constantly |
| Off |  | LED off constantly |
| Flashing |  | LED flashing every 2 seconds |
| Fast Flashing |  | LED flashing every 200 milliseconds |

LED Patterns

|  Status |  WIFI |  Thread |
|--|---|---|
| Startup  | Switched On  | Not Commissioned  |
| Normal Operation | Switched Off  | Joining  |
|  | Traffic  | Commissioning Mode  |
| | | Network Lost  |
| | | Joined to a Thread Network  |

Device Control Using Front Panel Buttons

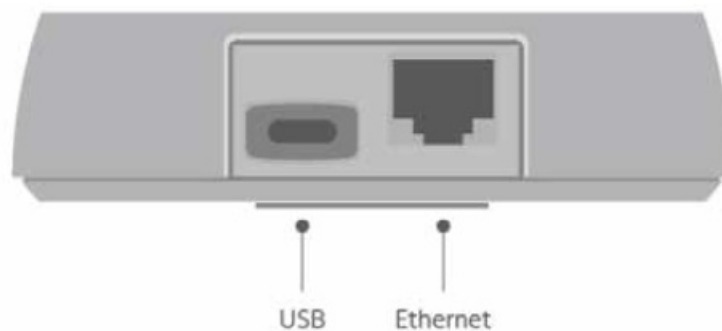
| | |
|--|---|
|  WIFI On / Off |  Thread Join |
| Factory Reset (Press > 20 seconds) | (on MMB TME only) Start Thread on Mesh Joiner with PSKD (Toggle: Press < 2 seconds) |

Setup MMB Thread Mesh Extender

1. Download and set up a DM-Code Reader on your mobile device (most free QR code readers can also scan datamatrix codes).



2. Using the reader, scan the DM-Code on the front of the MMB TME. Details of the format of the DM-Code are available at MMBNetworks.com/mmb-tbr.
3. Upload the TME's device's Thread joiner credentials to the MMB Thread Border Router's WebUI or through the addThreadDeviceTask REST-API. If not using a Thread Border Router enter the MMB TME TME's Thread joiner credentials into the target Thread network's on or off mesh commissioner.



4. On the rear of the MMB TME, connect the USB-C- Power Adapter. Wait for the Status LED to turn Solid Green.
5. When first booted, the MMB TME will boot into Thread On-Mesh Joiner mode, during which the 'Thread Network' LED will flash. (Note that this mode will timeout after power-up – if so, you can press the 'Thread ON/OFF' button to reenter the joiner mode.
6. The TME's 'Thread Network' LED will light solid when joining is complete.

Mounting Instructions

Note: The MMB TME should be commissioned onto the Thread network before mounting if access to the MMB TME buttons will be restricted once installed.

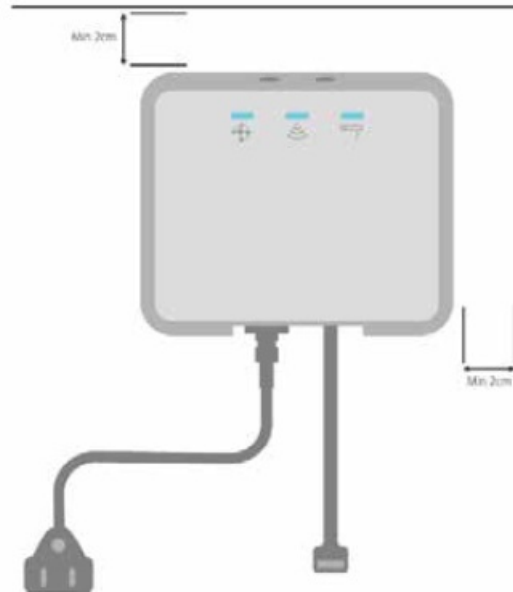
What you'll need

1. Drill or Screwdriver
2. #4 Flat Head Screws
3. Wall Plugs (optional, depending on material mount is affixed to)
4. Safety and Protective Equipment

Installation

- The MMB TME can be mounted easily and securely.
- As a wireless networking device, a more central and unobstructed location will provide the best possible range and performance to your Thread network.

Placement and Orientation

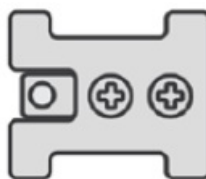


The MMB TME can be mounted on walls or ceilings. The ideal orientation is vertically on a flat wall, with Power and Ethernet cables facing down. A clearance of 2cm on all sides should be maintained.

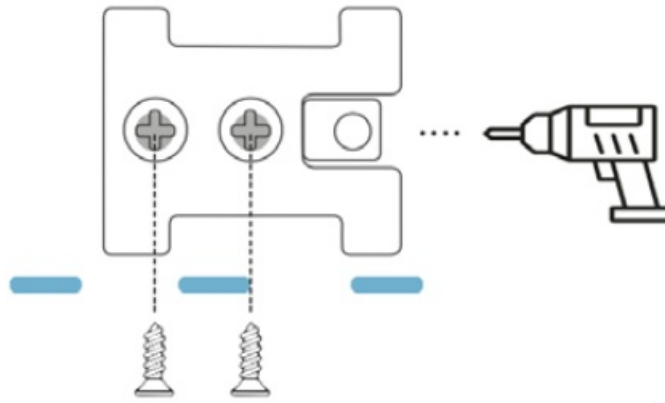
The MMB TME should:

1. Not be installed in a cabinet or metal container.
2. Not be installed behind walls or other obstructions which would interfere with line of sight to other Thread devices on your network.
3. Not be installed low to the ground.
4. Be installed in a central location which offers best coverage for devices in the premise.
 - MMB TME Repeater devices can be added to your Thread network to improve network coverage.
5. Not be installed on rough or uneven surfaces.

Installing the Mounting Bracket

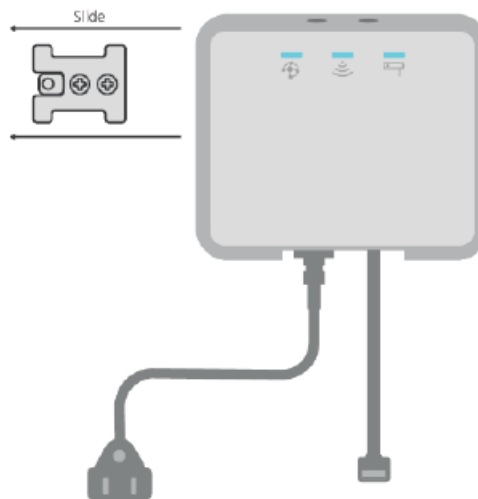


- The Mounting Bracket is installed using two #4 Flat Head Screws, provided with the unit. All personal safety precautions should be taken by you before installing the mounting bracket.
- When choosing a location for the mounting bracket, ensure final placement of the device is not obstructed.
- Please ensure the mounting bracket is installed with enough clearance for the MMB TME to slide onto the mounting bracket. Final placement of the MMB TME in respect to the Mounting bracket can be seen below.



Caution: Do not overtighten screws. Screws must be flush with the mounting bracket. Use # 4 Flat Head screws only. The mounting bracket should be level and installed flush to the wall or ceiling surface material.

Attaching MMB TME




Once the mounting bracket is correctly installed, and with Ethernet and Power cables connected to the MMB TME, slide the MMB TME onto the bracket from left to right to mount.

MMB Networks

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- (416) 636-3145

Rev 0.2 MMB Networks 2023 QSG MMB TME

Documents / Resources

| | |
|---|--|
|  <p>MMB Thread Mesh Extender Quick Start Guide Version 0.2</p> | <p>MMB NETWORKS MMB Thread Mesh Extender [pdf] User Guide MMB, MMB Thread Mesh Extender, Thread Mesh Extender, Mesh Extender</p> |
|---|--|

References

-  [Home - MMB Networks](#)

Manuals+.