MeshCore – Part 2

Download as PDF

This is the second part of the Meshcore Guide. See the first part here.

Repeaters

- Install a repeater like the *SenseCAP Solar Node P1-Pro* from Seeed Studio or RobotShop
- Use an antenna like:
  - ALFA Network AOA-915-5ACM 5 dBi
  - 5.8dBi Meshtastic Lora 915MHz Fiberglass Antenna
  - RAKwireless 8dBi Fiberglass
  - One of these from AliExpress.
- Use the shortest cable possible, like:
  - Bingfu SMA Male to N Female Bulkhead Mount RG58 Coaxial Cable 1 ft
  - Superbat N Type Female to SMA Male RG316 Coaxial Cable 15cm

Installing the Bootloader for the First Time.

This step is required to be able to perform future updates over-the-air (OTA) via Bluetooth. It is **not** required for (or compatible with) ESP32 devices like the Heltec V or T beam.

If you already have MeshCore installed (but not the bootloader), download your current settings:

- Go to https://config.meshcore.io/
- Connect your device to your computer with a USB cable.
- Click on "`Connect`"
- Click on "`Export`"
- Click on "`Disconnect`"
- Locate the "`.json`" file (probably in your Downloads folder).

Download the bootloader:

- Go to https://meshcore.io/flasher
- Select your device
- Select "`Repeater`" (or "`Room Server`")
- Click on "`Download`"
- Select the "`*bootloader-x.x.x-OTAFIXx.x.uf2`" file
- Locate the "`.uf2`" file (probably in your Downloads folder).

Copy the bootloader over to your device:

- Connect your device to your computer with a USB cable.
- Double-click on the reset button.
- Open the drive that just mounted on your computer
- Copy the "`.uf2`" file to the drive.
- The drive may close on its own right away. This is normal.

Flash the MeshCore Firmware:

- Go to https://meshcore.io/flasher
- Select your device
- Select "`Repeater`" (or "`Room Server`")
- Select "`Enter DFU Mode`"
- Select "`Erase Flash`"
- Select "`Flash`"

Re-upload your settings:

- Select "`Configure via USB`" from the previous page, or navigate to https://config.meshcore.io/
- Select "`Connect`"
- Select "`Import`"
- Select your "`.json`" file
- Scroll down to the "`Access`" section and retype your "`New Admin password`" (it doesn't remember it)
- Scroll down and select "`Save settings`"
- Select "`Disconnect`"

Updating the Firmware OTA

Set up the Over-the-Air (OTA) update app (first time only):

- Download the “nRF Device Firmware Update” app by “Nordic Semiconductor ASA” (Android, Apple)
- Open the “DFU” app
- In the settings, check “Packet receipt notification”

Perform an OTA update:

- Using your phone's browser, navigate to https://meshcore.io/flasher
  - Select your device
  - Select “Repeater” (or “Room Server”)
  - Select “Download”
  - Select the firmware “zip” file (**not** the bootloader file)
- Using the MeshCore app, log in to your repeater (or room server) using the admin password.
  - For Room Servers: go to “Remote Management”
  - Go to the “Command Line”
  - Type “start ota”; you should get a message that says: “OK - mac: xx:xx:xx:xx:xx:xx”
- Open the “DFU” app
  - Under “File”, click “Select” to choose the firmware “.zip” file
  - Under “Device”, click “Select” and choose the device that has “DFU” in the name. If there are no devices with “DFU” in the name, select the device with “OTA” in the name.
  - Under “Progress”, click “Start”
  - If you selected a device with “OTA” in the name, the process will fail at “DFU initialization”. choose “Abort” the process and go back to the previous step, and now you should be able to select a device with “DFU” in the name.

See Scott Baker's article for more information.

More Advanced: Sensors

- Install sensors.

Sunshine Coast Repeater Project

Here's how to use MeshCore's Antenna Coverage tool to model line-of-sight coverage:

- Navigate to the web version of the MeshCore App
- You don't need to connect to an actual MeshCore device.
- Click on ⋮ in the top right corner and then select "`Tools`"
- Enter the "`Antenna Coverage`" tool
- Where it says "`0 Coverage Layers`", click on ⋮ and select "`Import JSON`"
- Import this file

To Do

- Edit the whole document
- Add more details to the sunshine_coast_repeater_project section.

– *Patrick, VA7FI 2026/10/25 12:12*

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