

MeshCore Open (Free & Open Source)

Overview

MeshCore Open is a free, open-source companion app for MeshCore devices, developed by zjs81 and a community of contributors (25+ as of 2026-06-08) under the MIT license. It is not affiliated with the MeshCore core team but is widely used as a full-featured alternative - particularly for users who need offline maps, advanced CLI access, or multi-platform support without paywalls.

Project Stats

- **Source:** github.com/zjs81/meshcore-open
- **License:** MIT
- 383+ GitHub stars, 7 alpha releases (latest Alpha7, Mar 2026). Star and contributor counts are volatile - figures are as of 2026-06-08; see the GitHub repo for current numbers.

Platforms & Installation

Platform	Availability	Install Method
Android (API 21+)	Stable	APK from GitHub releases, or Obtainium for auto-updates
iOS (12+)	Beta	TestFlight (see TESTFLIGHT_GUIDE.md in the repo; confirm current distribution channel)
Linux	Stable	Prebuilt binaries on releases page
Windows	Supported	Flutter - check the releases page for a prebuilt binary; build from source if none is available

Platform	Availability	Install Method
macOS	Supported	Flutter - check the releases page for a prebuilt binary; build from source if none is available
Web (Chrome)	Beta	WebSocket bridge required

Connection Methods

- BLE
- USB
- TCP

Key Features vs. Official App

Feature	MeshCore Open	Official App
Repeater / room server CLI access	Full, no paywall	Some features paywalled
Offline maps	Yes (tile downloads, deep zoom)	No
MGRS coordinates	Yes	No
Path visualization / route management	Yes	No
Emoji reactions & threaded replies	Yes	No
Auto-retry with path clearing	Yes	No
TX power / radio settings control	Yes	Yes
SNR tracking per contact	Yes	Limited
3-level debug logging	Yes	No
Languages	15	1 - 2
Off-Grid Repeat mode	Yes	No
Platforms	Android, iOS, Linux, Win, Mac, Web	Android, iOS

Note: GPX export and explicit line-of-sight terrain analysis are not confirmed in the current MeshCore Open documentation as of 2026-06-08; the app provides path visualization and route management. Verify against the app's current feature list before relying on a specific capability.

Off-Grid Repeat Mode

Off-Grid Repeat is described as enabling a connected companion device to forward mesh packets while your phone is connected - turning a standard companion node into a temporary repeater without reflashing firmware. This named feature and its exact behavior are not confirmed in a primary source as of 2026-06-08; verify against the MeshCore Open documentation before relying on it for emergency communications.

How to Enable

1. Go to **Settings > Node Settings > Radio Settings** (menu path may differ in the current build - verify in-app)
2. Select an **Off-Grid preset**: Off-Grid 433 MHz, Off-Grid 869 MHz, or Off-Grid 918 MHz
3. Toggle **Off-Grid Repeat ON**

Region/legality warning: For unlicensed US/Canada use, choose the **918 MHz** preset (inside the 902-928 MHz Part 15 ISM band). The **433 MHz** preset falls in the US 70 cm amateur band (Part 97 license required, no encryption, station ID) and **869 MHz** is an EU SRD band (863-870 MHz) outside the US 902-928 MHz Part 15 band - neither is legal for unlicensed US operation. Operators must select the preset legal for their region.

Limitations

- Only 3 preset frequencies available (433, 869, 918 MHz) - these span three different regulatory regimes, so pick the band legal for your region (918 MHz for unlicensed US; 869 MHz is EU SRD; 433 MHz overlaps amateur allocations)
- Phone battery drains faster while active
- Phone must remain awake with the app open
- BLE/USB/TCP connection must stay active throughout

Use Cases

- Emergency response - instant temporary repeater anywhere
- Events - supplement fixed infrastructure
- Bootstrapping a new mesh area
- Temporary coverage extension

Revision #3

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