Can I run MeshCore and Meshtastic simultaneously on the same hardware?

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The short answer is: **no**. You can only run one firmware at a time on a given LoRa node. However, there are practical workarounds if you need coverage of both protocols at one location.

Why only one at a time

Both MeshCore and Meshtastic are compiled firmware images flashed directly to the microcontroller (ESP32, nRF52840, RP2040, etc.) on your LoRa board. When you flash a firmware image, it replaces whatever was there before. There is no multi-boot capability, no virtual machine layer, and no way to timeshare the LoRa radio hardware between two independent firmware stacks. The LoRa transceiver (SX1276, SX1262, LR1121, etc.) is a single physical peripheral that can only be driven by one firmware at a time.

Additionally, even if you could somehow run both, they would need to use the same LoRa radio simultaneously - which is physically impossible without two separate radio modules. Each transmission requires exclusive use of the transceiver.

Switching between firmwares

You can re-flash a node from MeshCore to Meshtastic (or vice versa) at any time using the appropriate web flasher or CLI tool. The process takes a few minutes and requires a USB connection. However, you lose all configuration from the previous firmware when you do so, making it impractical to switch frequently.

Running both protocols at one location

If your community or deployment site genuinely needs to participate in both a MeshCore mesh and a Meshtastic mesh, the practical solution is two separate physical nodes:

- **Node A:** Running MeshCore (REPEATER_FIRMWARE or ROOM_CLIENT_FIRMWARE as appropriate)
- **Node B:** Running Meshtastic firmware

Both nodes can be co-located at the same site, connected to the same power supply, and mounted on the same antenna mast (using a splitter or separate antennas). Many community infrastructure operators run exactly this configuration at hilltop repeater sites to serve both ecosystems.

The future: software-defined gateways

Community developers have discussed building a software gateway that runs on a host computer (Raspberry Pi, etc.) and uses two LoRa radio modules - one for each protocol - to bridge messages between the two networks at the application layer. As of today, no such gateway exists in a production-ready state. Any such project would also need to handle the fundamental differences in addressing, encryption, and routing described in the cross-protocol FAQ page.

Recommendation

For most communities, the right answer is to **choose one protocol and standardize**. Mixed-protocol communities face ongoing friction in coordination, troubleshooting, and user experience. If your regional mesh has already standardized on one platform, matching that choice eliminates the need for dual-protocol coverage entirely.

If you are starting a new community from scratch and expect to attract users from both ecosystems, deploying two nodes at each infrastructure site is a legitimate and manageable approach - the hardware cost of an extra node (~$30 - 60 USD) is usually worth the interoperability it provides.

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