

# MeshCore vs Meshtastic

Two open-source protocols dominate the LoRa mesh networking space: **MeshCore** and **Meshtastic**. Both run on similar hardware, both are free, and both accomplish the same basic goal - but they make different design choices that affect performance, battery life, and network behavior. Both firmwares are free and open source; the official MeshCore phone app is freemium, with some optional features (such as certain T-Deck capabilities) behind a paid unlock.

## Side-by-side comparison

Characteristic	MeshCore	Meshtastic
<b>Message routing</b>	Path discovery (targeted delivery)	Managed flooding for broadcasts (nodes suppress redundant rebroadcasts); since v2.6, direct messages use next-hop routing
<b>Battery life</b>	Depends mostly on the board (nRF52 boards last far longer than ESP32) and settings; both firmwares support low-power operation	
<b>Private messages</b>	End-to-end encrypted by default	Channel messages AES-256-CTR encrypted (shared PSK); per-pair public-key (PKI) direct messages available since v2.5
<b>Network load</b>	Low - messages go where needed	Higher - broadcasts are rebroadcast by multiple nodes (with suppression of redundant rebroadcasts)
<b>High-traffic behavior</b>	Path-based routing generates fewer rebroadcasts per message than flooding, which can help under heavy traffic	
<b>Community size</b>	Growing	Very large, well-established
<b>App maturity</b>	Actively developed	Mature, polished apps
<b>Interoperability</b>	MeshCore devices only	Meshtastic devices only

## Which should you choose?

There is no universally correct answer - it depends on your situation:

- Choose **MeshCore** if you prioritize battery efficiency, privacy by default, and intelligent routing that scales better as the network grows.

- Choose **Meshtastic** if you want a large existing community, more polished apps, more device support, and easier initial setup for beginners.

MeshCore and Meshtastic devices **cannot communicate with each other** - they use different protocols. If you want to connect with others in your area, find out which platform your local community uses first.

# Compatibility note

Most popular LoRa hardware (Heltec, LilyGo, RAK, etc.) can run either firmware. You are not locked in by hardware - you can reflash a device to switch platforms if you change your mind.

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