

MeshCore vs. Meshtastic:

Which to Choose

Both MeshCore and Meshtastic are free, open-source LoRa mesh networking platforms. They use different routing architectures and have different community ecosystems. Understanding the differences helps you choose - or know when to run both.

Protocol comparison

	MeshCore	Meshtastic
Routing model	Flood-first, then direct source-routing along the learned path once discovered	Managed flooding (rebroadcast with hop limit and duplicate suppression)
Encryption	AES-128-ECB + 2-byte-truncated HMAC-SHA256 MAC (always on); Ed25519/X25519 identity keys (ECDH)	AES-256-CTR per channel (PSK), plus public-key cryptography (PKC, Curve25519/X25519) for direct messages since v2.5
Network scalability	Designed to reduce airtime/collisions once routes are learned	Flooding can create congestion as node count and traffic grow; the practical limit depends on traffic volume and channel settings, not a fixed node count
Initial connection overhead	Higher - path discovery required	Lower - immediate flooding
Infrastructure model	Repeaters + room servers	Routers + MQTT gateways
App ecosystem	MeshCore App, MeshOS	Meshtastic App (iOS/Android/Web)
Community size	Smaller, growing	Larger, very active globally
Modem presets	No named presets - frequency, spreading factor, and bandwidth are set directly (a community-standardized parameter set is shared informally)	8 named modem presets; community selects by region

Choose MeshCore if

- You're in an area with existing MeshCore infrastructure ([CascadiaMesh](#), WCMesh, [RegionMesh](#), [NoDakMesh](#))
- You want path routing that is designed to reduce airtime in larger meshes once routes are learned
- You need room server integration for internet bridging
- You want MeshOS on a T-Deck standalone device
- You value consistent, community-standardized radio settings across North America

Choose Meshtastic if

- Your local community has standardized on Meshtastic
- You want the largest possible node count on the public map (Meshtastic has more nodes globally)
- You prefer the Meshtastic app's feature set or are already familiar with it
- Your device doesn't have MeshCore firmware support yet
- You need a small, simple deployment without room server infrastructure

Running both

MeshCore and Meshtastic cannot interoperate - they use incompatible packet formats and routing protocols, even though both use 915 MHz LoRa hardware. If your local community uses both protocols, the typical approach is:

- Dedicated infrastructure nodes for each protocol (separate hardware)
- Shared mounting locations but separate radios
- Human bridges: community members with both devices who relay important messages manually

Some operators maintain one device of each type to participate in both communities, using separate radios on the same mounting location.

Revision #8

Created 2026-05-03 03:44:57 UTC by Mesh America Admin

Updated 2026-06-10 01:39:39 UTC by Mesh America Admin