MeshCore Device Compatibility

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MeshCore is a lightweight mesh firmware optimised for LoRa networks. The following devices are supported as of early 2026 (the supported list changes - always check flasher.meshcore.io for the latest list before purchasing hardware specifically for MeshCore).

Supported Devices

Device	MCU	Notes
Heltec V3	ESP32-S3	Most popular beginner choice; stock BT antenna issue (see Budget Devices page)
Heltec V4	ESP32-S3	~22 dBm (confirm against Heltec's current spec - some sources cite 28 dBm via an integrated PA, others ~22 dBm); solar charging interface
Heltec T114	nRF52840	Lower power than ESP32; DFU (double-tap) flashing
Heltec Wireless Paper	ESP32-S3	E-ink display (250×122); ~20 µA deep sleep (figure quoted for Heltec's V4; verify against the Wireless Paper datasheet)
LilyGo T-Beam	ESP32	GPS built-in; 18650 holder
LilyGo T-Deck	ESP32-S3	QWERTY + touchscreen standalone node
LilyGo T-Echo	nRF52840	E-ink + GPS + NFC; ~850 mAh internal battery (~5 - 7 day runtime)
RAK4631 (WisBlock)	nRF52840	Modular platform; DFU flashing
Wio Tracker L1	nRF52840	OLED + GPS; bare board

Device	MCU	Notes
Wio Tracker L1 Lite	nRF52840	Most affordable Wio option; includes L76K GPS (drops the OLED screen vs the standard L1, not GPS)
Wio Tracker L1 Pro	nRF52840	Rugged enclosed, GPS, built-in battery
SenseCAP T1000-E	nRF52840	Credit-card size, IP65, GPS; LR1110 radio
Station G2	ESP32-S3	High-power base station (SX1262 + 35 dBm PA + LNA, ~36.5 dBm US915 output). Note: 36.5 dBm conducted exceeds the US FCC Part 15.247 30 dBm conducted limit; full-power US use requires amateur Part 97. See Base Station Nodes.

Firmware Variants

When flashing MeshCore you choose a firmware variant:

- **Companion:** Personal device that pairs with a phone app over BLE or USB.
- **Repeater:** Autonomous mesh relay node; no user interaction needed after setup.
- **Room Server:** Acts as a message store-and-forward hub for a channel.

nRF52 vs ESP32 Considerations

nRF52840-based devices (T-Echo, T114, RAK4631, Wio series, SenseCAP T1000-E) draw significantly less power than ESP32 equivalents, making them better suited for battery-critical deployments. The trade-off is a different flashing workflow: nRF52 devices typically use USB DFU with a double-tap reset (the UF2/USB DFU bootloader) rather than the BOOT-button (esptool) bootloader used on ESP32 boards. See the Meshtastic nRF52 flashing docs.

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