



# Mesh Node Repeater (Meshtastic Firmware)



The **Mesh Node Repeater** is a rugged infrastructure mesh transceiver based on the Heltec **WiFi LoRa Node V3** (Semtech® SX1262 LoRa® chip) and **Meshtastic firmware**. It features an integrated UPS with Li-ion cells (3Ah capacity) for continuous 5V USB-C powered operation (external US-plug PSU included) or extended runtime on battery only. Management via WiFi or Bluetooth LE. The durable rubberized plastic case includes two 1/4-20 UNC mount points and a flexible 1/2λ whip antenna.

## Features:

- **Radio.** Heltec Automation WiFi LoRa 32 V3 Node. 470~510Mhz, 863~928MHz. Max TX 21±dBm. WiFi, BLE.
- **Firmware.** Factory-loaded with latest MeshCore firmware; contact for custom options.
- **Power.** Internal UPS, Li-ion 3Ah reservoir. Primary power via 5V PSU (included) for continuous operation.
- **Antenna.** Factory-tested 915MHz 1/2λ flexible whip (SMA).
- **Case.** Durable rubberized coating on plastic; user buttons, and cyan OLED display; Includes two 1/4-20 UNC mount points.

## Applications:

- Industrial sensor telemetry and equipment monitoring.
- Field reconnaissance and situational awareness.
- Off-grid team communications and GPS tracking.
- Search-and-rescue and emergency response.
- Agricultural and environmental monitoring.
- SCADA mesh extension and asset tracking.
- Wilderness safety and backcountry messaging.
- Event and festival staff coordination.

## Resources:

- ↗ [Meshtastic Web Documentation](#)
- ↗ [Heltec LoRa 32 V3 Web Documentation](#)
- 📄 [Heltec LoRa 32 V3 PDF Datasheet](#)
- 📄 [Semtech SX1261/2 PDF Datasheet](#)

## Availability:

- Production samples of SKU-VOSGES-MNR01-G0-MT are available from the Project Tarn [Sample Store](#).
- The SKU-VOSGES-MNR01-G0-MT design is available for licensing – exclusive or non-exclusive manufacturing and distribution licenses are available; please contact [licensing@tarn.parts](mailto:licensing@tarn.parts) for more information.

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