TOPBYTES LTD

Product brochure · Coming soon · topbytes.net/meshdisplay

DESIGNED AND BUILT IN BRITAIN

MeshDisplay

Your Meshtastic radio, without the phone

A 7-inch touchscreen messenger for Meshtastic. It pairs with your radio over Bluetooth, the same way the phone app does, and shows your channels, direct messages, nodes and a map of the mesh. Reply from the on-screen keyboard or a Bluetooth keyboard, and put the radio on MQTT over Wi-Fi. A complete, ready-to-use unit with free over-the-air updates.



The production MeshDisplay (Classic theme). On-screen content is demonstration data.

Phone-free messaging

Channels, direct messages, alerts and delivery ticks on a big screen

Live node map

Every node with a position, on OpenStreetMap over Wi-Fi

Built-in MQTT gateway

Puts your radio on MQTT with no phone and no Wi-Fi in the radio

Meshtastic® is a registered trademark of Meshtastic LLC; MeshDisplay is an independent product.

AT A GLANCE

A screen for your mesh

Meshtastic lets you send text over licence-free LoRa radio, and almost everyone uses it the same way: a small radio in a pocket or on a mast, and a phone app over Bluetooth. That's fine on the move, but at home, in the shack or at an event control point you want something that is always on, always visible and doesn't tie up your phone.

MeshDisplay is a complete 7-inch touchscreen unit, supplied ready to use, that connects to your existing Meshtastic radio over Bluetooth and becomes its desk display, with channels, direct messages, a node list, a map, alerts and a full keyboard. No phone, no app, no account. Wi-Fi is optional: it adds the map background, the MQTT gateway and free updates.

What you see

- Every message the moment it arrives, readable across the room
- Delivery ticks on what you send
- Who's on the mesh, with signal, hops and battery
- Nearby nodes on a map, with distance and bearing

Easy to own

- Works with the Meshtastic radio you already have
- No app or account: everything is set on the touchscreen
- Reconnects by itself after power cuts and link drops
- Free over-the-air updates keep it current

Make it yours

- Four themes: Classic, Neon, Console and Guide
- Type on screen or on a Bluetooth keyboard
- Alerts for direct messages, channels or both
- Up to 8 radios: home, car and portable

7"	BLE	1,500	4
800 × 480 capacitive touch	to any Meshtastic 2.x radio	messages kept per radio	themes, with emoji

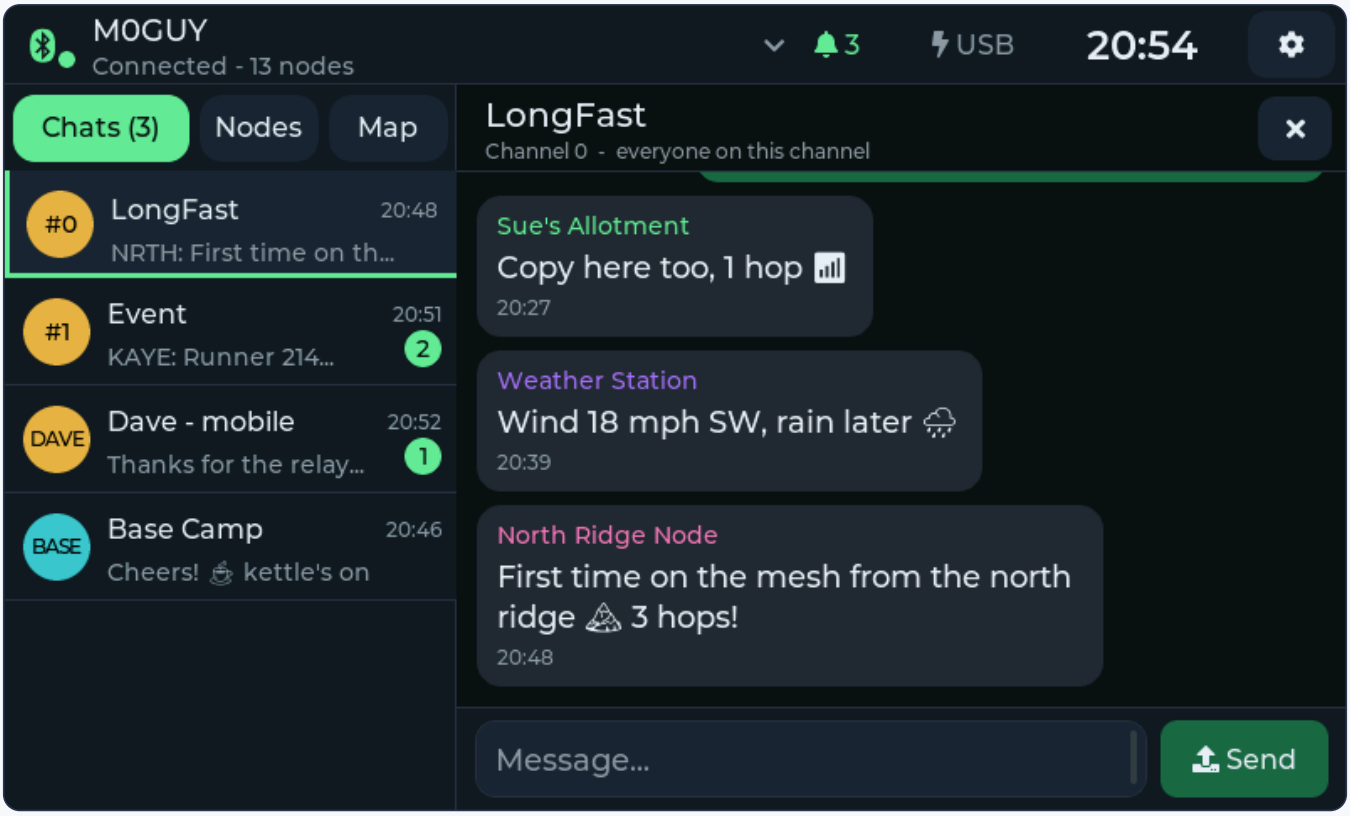
ALWAYS IMPROVING

- Current software (version 0.1.1) adds Bluetooth keyboard support and message details, with one-tap resend for anything that wasn't delivered.
- Free over-the-air updates from the TopBytes update service; a failed update leaves the running software untouched.
- Full user manual online at topbytes.net/meshdisplay, with screenshots, a setup guide and troubleshooting.

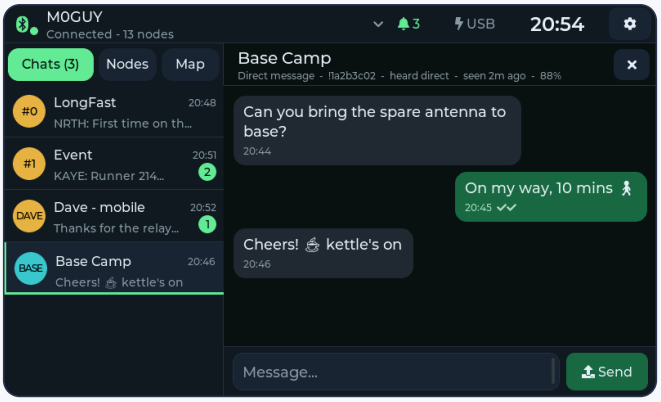
WHAT IT DOES

All your mesh messages, on one screen

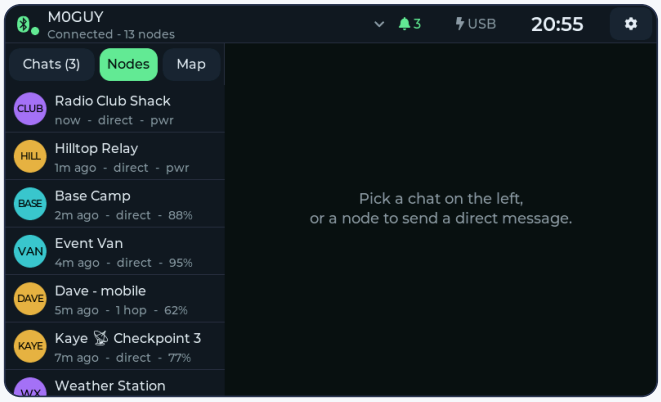
The screen is split the way you already think about messaging: conversations on the left, the open conversation on the right. Every Meshtastic channel and every direct-message thread gets its own entry with an unread count and a preview of the last message.



A channel (Classic theme). Each sender is colour-coded; long messages wrap; emoji are shown in the message text.



Direct messages show the other node's last-heard time, hops and battery. Two ticks mean their radio confirmed delivery.



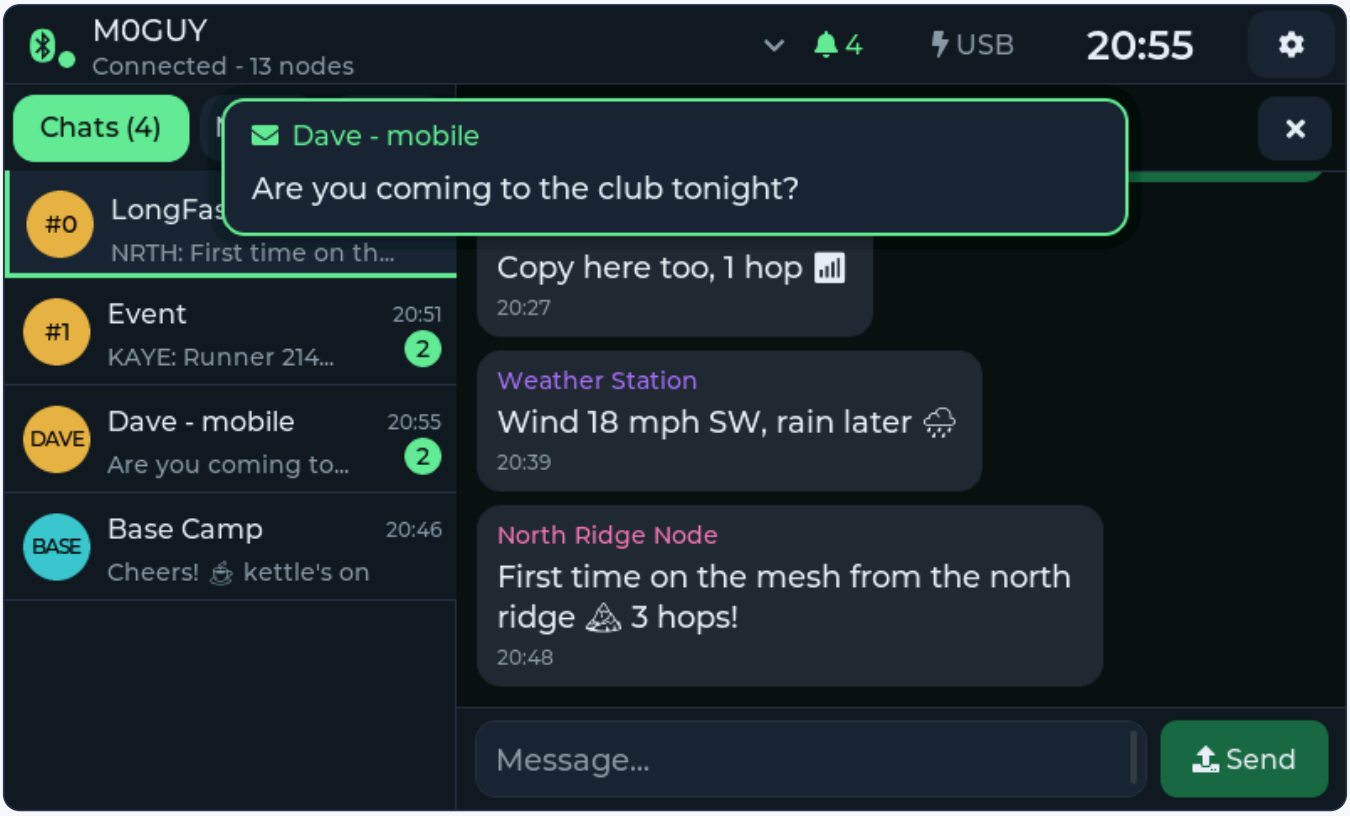
Node list: everyone your radio has heard, with signal, hops and battery. Tap a node to message it.

- Channels and direct messages: up to 8 channels and 64 chats
- Delivery status: sending, sent, delivered or not delivered
- Message details: touch and hold for hops, SNR, RSSI and the full time
- Locations in chats: positions, waypoints and map links open on the map
- History kept on the display: the newest 1,500 messages per radio
- Clock set from the mesh or the internet, in your time zone

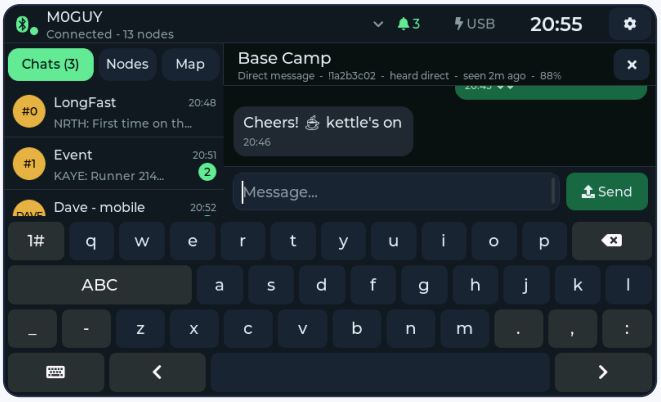
ALERTS AND REPLIES

Never miss a message again

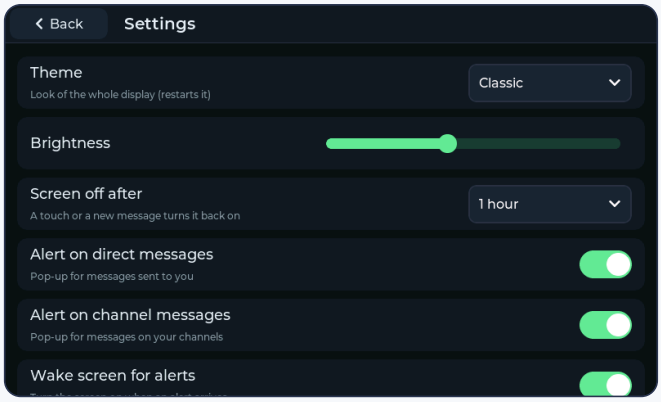
A phone buries mesh messages under every other notification, and the radio itself usually has no screen at all. MeshDisplay puts each new message on a large, bright screen the moment it arrives, and lets you reply straight away.



A new direct message arriving while another chat is open. Tap the pop-up to jump to the conversation.



Replying on the on-screen keyboard: up to 200 characters, with a key to send your location.



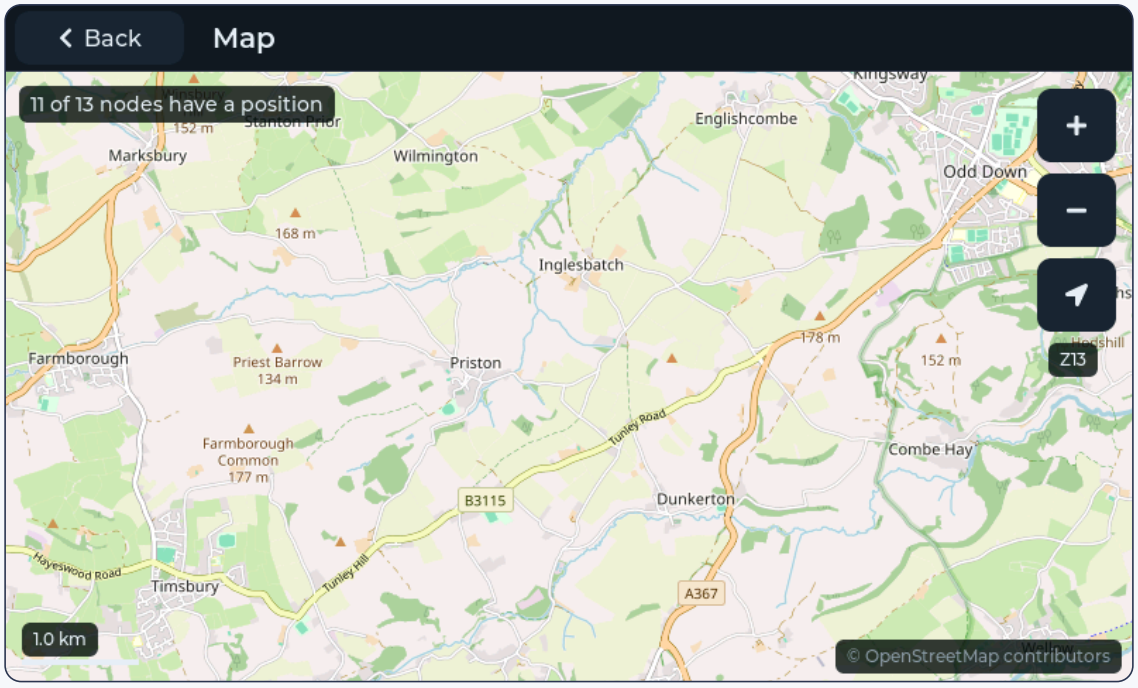
Theme, brightness, screen-off and alert settings, all on the touchscreen.

- Pop-up alerts for direct messages, channel messages or both
- Wake on message: the screen can sleep and switch back on for new traffic
- Unread counters on every chat and a total in the top bar
- Bluetooth keyboard: pair a Bluetooth LE keyboard (UK or US layout) and type while the radio stays connected
- Resend a message that wasn't delivered from its details panel

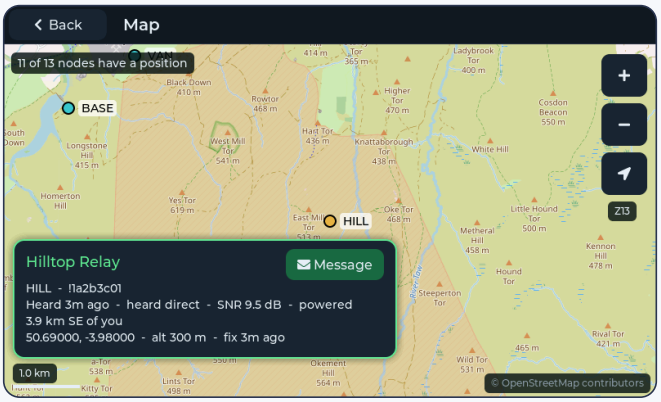
MAP AND MQTT GATEWAY

See the mesh, and put it online

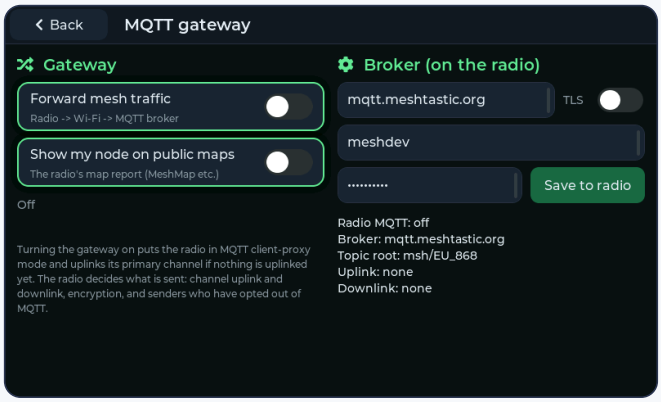
Over its own Wi-Fi, MeshDisplay draws your radio's nodes on a live OpenStreetMap map, and it can act as your radio's internet gateway so the mesh appears on MQTT services, with no phone and no Wi-Fi in the radio.



Map: every node that has shared its position. Drag to pan and zoom from the whole Earth to street level.



Tap a node for distance, bearing, last heard, signal, battery, GPS position and Maidenhead locator, and a button to message it.



MQTT gateway settings: one switch to start, map reporting, and the broker (stored on the radio).

Map

- Nodes come from your radio's node list and live position reports
- Tiles are cached on the display; without Wi-Fi the nodes still show on a plain grid
- Map data © OpenStreetMap contributors, credited on screen

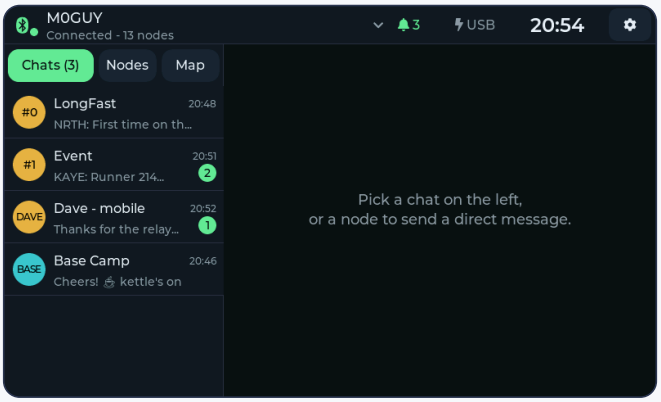
MQTT gateway

- Uses Meshtastic's client-proxy mode: your radio passes its MQTT traffic to the display over Bluetooth, and the display sends it on over Wi-Fi
- Ideal for radios without Wi-Fi: online around the clock without a phone
- Your radio's settings still decide what is shared

FOUR LOOKS, ONE PRODUCT

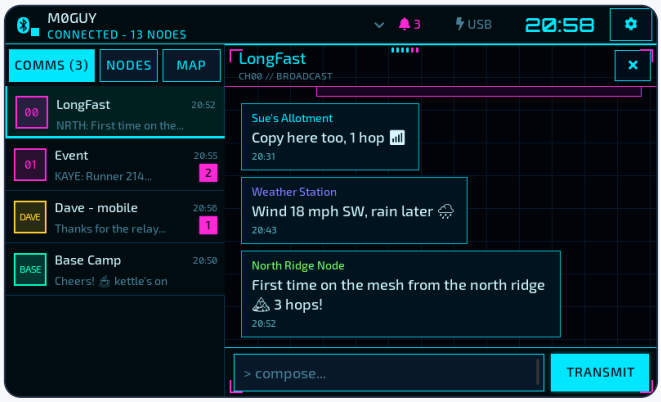
A display you want on your desk

MeshDisplay comes with four complete themes, chosen in Settings. Each changes colours, fonts, shapes and even some of the wording, while the layout and features stay the same. Pick the one that suits your room, and change it whenever you like.



Classic

A calm dark messenger with green accents and rounded message bubbles. The default.



Neon

A futuristic heads-up display: cyan and magenta on deep black, sharp corners, corner brackets and a faint grid.



Console

A retro control console: orange, lilac and blue blocks, an elbow frame and condensed capitals. Chats become COMMS and nodes become CREW.



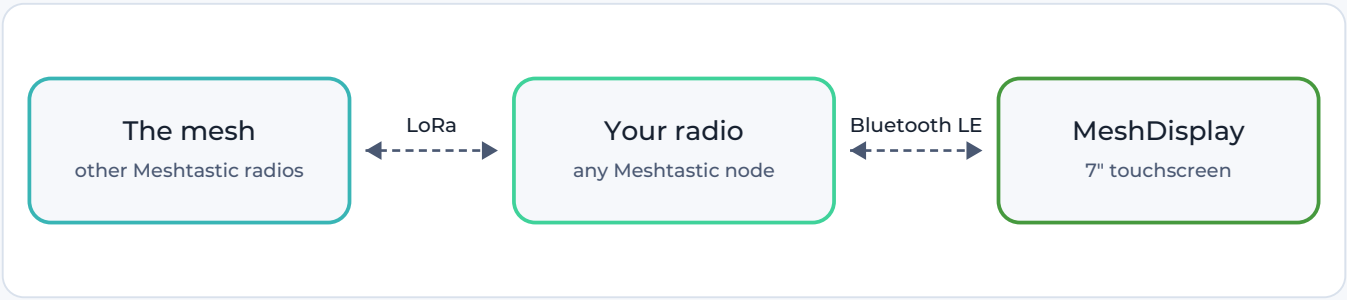
Guide

A friendly galactic travel guide: deep-space navy, green and orange, rounded shapes and stars.

Emoji appear throughout (messages, names, previews and alerts). Changing theme restarts the display to apply it.

SETUP AND HOW IT WORKS

Out of the box in under a minute



1 Power it up

Any 5 V USB-C supply or power bank; the cable is in the box.

2 Pick your radio

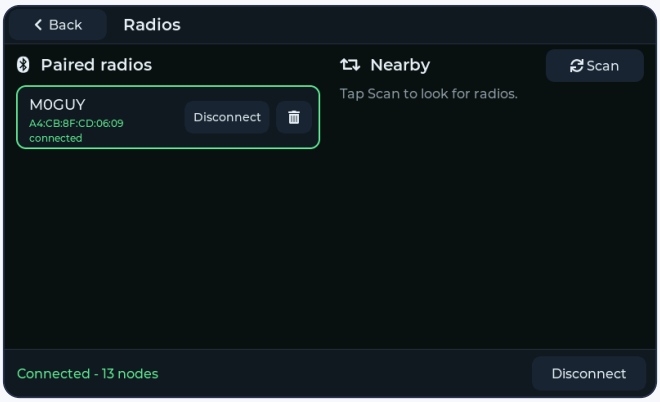
The display scans and lists nearby Meshtastic radios with signal strength.

3 Enter the PIN

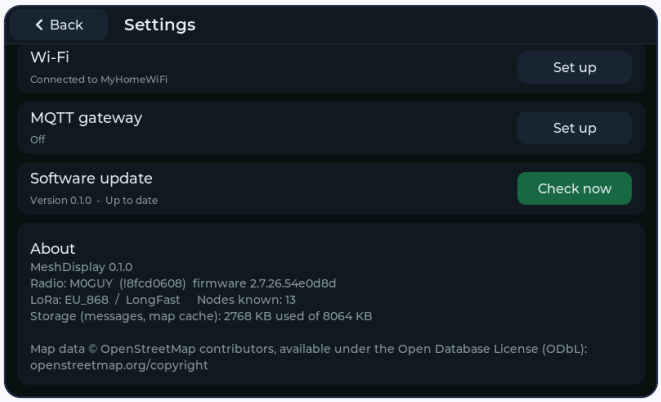
Type the radio's Bluetooth PIN on the touch keypad, or tap the default PIN.

4 Done

Channels, nodes and messages load in seconds. It reconnects by itself after power cuts.



Radio picker: paired radios on the left, a live Bluetooth scan on the right.



The end of Settings: Wi-Fi, MQTT gateway, software update and About.

MULTIPLE RADIOS

Got more than one radio (home, car and portable, say)? Pair up to eight. The display connects to one at a time, keeps a separate message history for each, and switches in two taps. Meshtastic radios accept one Bluetooth app at a time, so the phone app and the display take turns: leave the display connected at home and use the phone when you're out.

What you need

- A Meshtastic radio with Bluetooth (ESP32 or nRF52) on Meshtastic 2.x
- A 5 V USB-C supply rated 1 A or more, or a USB-C power bank
- Optional: 2.4 GHz Wi-Fi for the map, MQTT gateway and updates

Good to know

- MeshDisplay has no LoRa radio of its own: your radio does all the transmitting
- Messages travel over Bluetooth, so they work with no internet at all

WHO IT'S FOR

For every Meshtastic owner

MeshDisplay doesn't replace your radio: it makes it more useful. Anyone who runs a Meshtastic node at home, in the shack or at a fixed site will get more out of it.

Amateur radio shacks

Adding Meshtastic alongside HF and VHF? A station display beats another phone notification.

Clubs and events

Event control, rally stands and public-service events: a large screen at control lets everyone follow the traffic.

Home and off-grid

Family or neighbourhood messaging and resilience: a kitchen or hallway screen that works without the internet.

Outdoor groups

Walking, climbing and expedition groups with a base-camp node: see where everyone is and what they've sent.

PART OF THE TOPBYTES 7-INCH FAMILY



The production MeshDisplay.

MeshDisplay is built on the same 7-inch screen and enclosure as DX Spotter Pro, SatTracker and FlightRadar and, like them, comes as a complete unit with its firmware pre-installed. That means:

- the same USB-C power and the same simple setup
- Wi-Fi networks carried over from other TopBytes firmware on first start
- free over-the-air firmware updates, like the rest of the range
- online manuals for every product

GOES WELL WITH

- DX Spotter Pro: live DX cluster spots, propagation and DX alerts on the same 7-inch screen.
- SatTracker: amateur satellites on a live world map, with pass times and Doppler-corrected frequencies.
- FlightRadar: a radar scope of the aircraft overhead, with type, route and a photo.

SPECIFICATION

Product details

Display	7-inch IPS, 800 × 480, capacitive touch; brightness and screen-off timer; 180° rotation
Processor	ESP32-S3 dual-core, 16 MB flash, 8 MB PSRAM
Connection to radio	Bluetooth LE, Meshtastic client API (the one the phone apps use); PIN pairing, bonds remembered
Compatible radios	Meshtastic radios with Bluetooth (ESP32 and nRF52) on Meshtastic firmware 2.x
Radios remembered	Up to 8, one connected at a time; automatic reconnect
Messaging	Up to 8 channels, 64 chats and 300 nodes; 200-character messages with emoji; newest 1,500 messages kept per radio
Keyboard	On-screen, or a Bluetooth LE keyboard (UK or US layout) alongside the radio
Map	OpenStreetMap tiles over Wi-Fi, zoom 2 to 17, cached on the display; grid view offline
MQTT gateway	Meshtastic client proxy over Wi-Fi; MQTT 3.1.1, plain or TLS
Wi-Fi	Optional, 2.4 GHz 802.11 b/g/n; up to 3 networks; map, gateway, clock and updates
Power	5 V USB-C, 2–4 W typical; a 1 A supply or better
Themes	Classic, Neon, Console, Guide; Latin, Latin Extended-A and Cyrillic
Updates	Free over-the-air (Wi-Fi) software updates

IN THE BOX

- MeshDisplay unit, firmware installed and ready to go
- USB-C power cable

HELP AND SUPPORT

- User manual and release notes at topbytes.net/meshdisplay
- Email support@topbytes.net

Coming soon from Martin Lynch & Sons (ML&S)

MeshDisplay is not on sale yet. Like the rest of the TopBytes range it will be sold exclusively through Martin Lynch & Sons Ltd. To ask about availability, email support@topbytes.net or get in touch at topbytes.net.

Screenshots are captured directly from the unit's display; conversation content is demonstration data. Map data © OpenStreetMap contributors. Meshtastic® is a registered trademark of Meshtastic LLC; MeshDisplay is not affiliated with or endorsed by the Meshtastic project.