How do I update my Meshtastic firmware?

The Easy Way: Web Flasher

The Meshtastic web flasher at flasher.meshtastic.org handles everything automatically. It works in Chrome and Edge (Firefox does not support WebSerial).

1. Connect your device to your computer via USB
2. Open flasher.meshtastic.org in Chrome or Edge
3. Click "Connect" and select your device's serial port
4. The flasher auto-detects your board type and shows the latest stable release
5. Click "Flash" and wait 2-3 minutes for the process to complete
6. The device reboots automatically when done

Your configuration is preserved during a normal update. Settings stored in flash persist through firmware updates in most cases. However, feature releases (e.g., 2.2.x to 2.3.x) can occasionally reset settings - always export your config before any update.

Exporting Config Before Updating

```
meshtastic --export-config > my-node-config.json
```

This saves all your settings to a JSON file. If the update resets your config, restore with:

```
meshtastic --import-config my-node-config.json
```

Over-the-Air (OTA) Updates

ESP32-based boards (such as Heltec and most T-Beam variants) are updated over USB with the Web Flasher (or the CLI/esptool) - they are not flashed over Bluetooth. nRF52840 boards such as the RAK4631 and T-Echo do support Bluetooth OTA via the Nordic nRF DFU process (in addition to USB UF2 drag-and-drop flashing) - note that DFU OTA carries some risk of a failed update, so keep USB recovery available. A few nRF52840 boards (for example the Seeed XIAO nRF52840) are UF2/USB-only and cannot be updated over Bluetooth. When an in-app "Firmware Update" option is available for your board in the Android app, it is convenient for nodes that are accessible but not near a computer.

How Often Should I Update?

For personal devices: update when you want new features or bug fixes. There's no urgency unless a security issue is announced. For community infrastructure nodes: test new firmware on a non-critical node first, then coordinate with the community before updating. Avoid updating repeaters mid-event or during high-use periods.

When NOT to Update

- During an active emergency operation - never update infrastructure during an event
- If your network is working well and other nodes are on older firmware - major version jumps can cause compatibility issues until all nodes update
- Right before a planned use - allow 24 hours to discover and fix any update-related issues

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