Nano G2 Ultra Setup Guide

⚠ **ANTENNA SAFETY - ALL DEVICES:** Always connect an antenna (or a 50-ohm dummy load) **before** transmitting on any LoRa device, to avoid stressing the power amplifier. Transmitting without an antenna stresses the PA and risks damage, especially at higher power. The Nano G2 Ultra's SX1262 has improved tolerance to antenna mismatch (per its datasheet), so a brief unloaded transmit is less likely to destroy it than on older PA/FEM boards - but do not rely on that; attach an antenna or dummy load first.

Nano G2 Ultra - Setup Guide

The Nano G2 Ultra is a premium nRF52840-based node whose board is matched and filtered for roughly 815 - 940 MHz, with a 1.3" OLED display and approximately 3.5 days of battery life (figures per the manufacturer; price as of 2026-06-08). Its tuning range covers the 868 MHz and 915 MHz bands, so the same hardware can be configured for different regional frequency plans. It is not usable on 433 MHz - that is outside the board's 815 - 940 MHz matching network, even though the SX1262 chip itself tunes wider.

⚠ **US legal band:** In the United States, only **902 - 928 MHz** is authorized for unlicensed Part 15 operation. The 868 MHz (EU) setting and any other out-of-band frequency this hardware can tune to are illegal to transmit on in the US. Set region to US and do not transmit outside 902 - 928 MHz domestically. Only transmit on frequencies authorized in your country/region.

Specifications

Attribute	Value
MCU	nRF52840
Radio	SX1262 (the chip tunes ~150-960 MHz; this board is matched/filtered for ~815-940 MHz)
Board frequency range	~815 - 940 MHz matched (covers 868 & 915 MHz bands; US-legal portion is 902-928 MHz only)
Display	1.3" OLED
Battery Life	~3.5 days typical (manufacturer figure)
Price	$85 - 90 (as of 2026-06-08)

Strengths	Wideband-capable radio, ~3.5-day battery, premium build, 1.3" OLED

Wideband Note: The Nano G2 Ultra's board is matched for roughly 815 - 940 MHz, so the same hardware can be configured for 868 MHz (Europe) or 915 MHz (US/Canada) frequency plans. This makes it useful for multi-region hardware, but you must always operate only on a band that is legal in your region (902 - 928 MHz in the US/Canada). Configuring it onto a band not authorized where you are is illegal and can interfere with other services.

Driver Installation

No driver installation required on any operating system. The nRF52840 presents as a USB mass storage device, visible automatically on Windows, macOS, and Linux.

Entering Bootloader / DFU Mode

1. Connect the device via USB-C.
2. **Rapidly double-tap the RESET button.**
3. The device appears as a USB drive in your file manager/Finder/Explorer.

Firmware Flashing

Method A - Web Flasher:

1. Enter DFU mode (double-tap RESET).
2. Open Chrome or Edge and navigate to:
   - **MeshCore:** flasher.meshcore.io
   - **Meshtastic:** flasher.meshtastic.org
3. Select **Nano G2 Ultra** from the device list.
4. Click **Flash**.

Method B - Drag and Drop:

1. Download the `.uf2` firmware file for Nano G2 Ultra.
2. Enter DFU mode.
3. Drag and drop the `.uf2` onto the USB drive.
4. Device reboots and applies firmware automatically.

Post-Flash Configuration

1. Set **region to US** (selects 915 MHz frequency plan; keeps you within the legal 902-928 MHz band).
2. For other regions, select the appropriate region code in the app - only choose a region whose band is legal where you operate.
3. Configure node name and channel settings via Bluetooth app.

Known Quirks

- Wideband hardware does not automatically configure for all bands - region must be set correctly in firmware, and only to a band legal in your country.
- The board is matched for ~815-940 MHz; despite the SX1262's wider chip-level tuning range, 433 MHz operation is not supported on this board.
- Double-tap reset timing is similar to other nRF52840 devices - may take a couple of attempts.

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