



iRemove Software

RP2350 FLASHING & WIRING GUIDE

Official hardware setup guide

Supported boards

Waveshare RP2350 USB-A
Waveshare RP2350 Zero
Pimoroni TINY2350
Raspberry Pi Pico 2

Firmware package

<https://bit.ly/3xgFbrx>

Use the file that exactly matches
your board.

Official iRemove Software edition



Before You Start

Choose the exact board and matching UF2 file

This guide explains how to place a supported RP2350 board into its built-in USB bootloader and copy the matching UF2 firmware file. **Always use the firmware whose filename exactly matches your board.**

BOARD	UF2 FILE
Waveshare RP2350 USB-A	usbbliter8.waveshare_rp2350_usb_a.uf2
Waveshare RP2350 Zero	usbbliter8.waveshare_rp2350_zero.uf2
Pimoroni TINY2350	usbbliter8.pimoroni_tiny2350.uf2
Raspberry Pi Pico 2	usbbliter8.pico2.uf2

WHAT YOU NEED

A supported board, a reliable USB data cable, a Windows PC or Mac, and the correct UF2 file.

Important safety notes

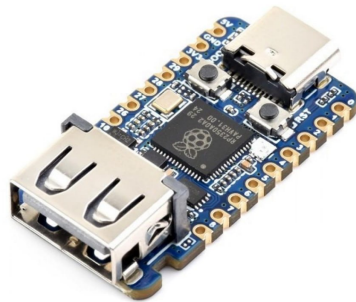
1	Do not disconnect the board while the UF2 file is copying.
2	Do not rename one board's firmware and use it on another board.
3	Use a data-capable USB cable; charge-only cables will not show the boot drive.
4	Firmware package: https://bit.ly/3xgFbrx

AUTHORIZED USE

Use this guide only with devices you own or are explicitly authorized to service.

Waveshare RP2350 USB-A

Recommended - built-in USB-A host connector



SETTING	VALUE
Correct firmware	usbliiter8.waveshare_rp2350_usb_a.uf2
Boot button	BOOT
USB drive name	RPI-RP2 or RP2350

Flashing steps

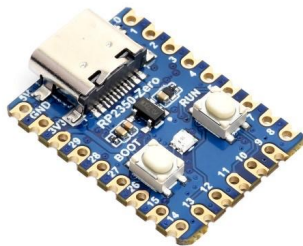
1	Disconnect the board from the computer.
2	Press and hold the BOOT button.
3	While holding the button, connect the board to the computer with a USB data cable.
4	Release the button after the RPI-RP2 or RP2350 USB drive appears.
5	Copy usbliiter8.waveshare_rp2350_usb_a.uf2 onto that drive.
6	Wait until copying is complete. The drive should disconnect automatically as the board reboots.
7	Reconnect the board normally without holding the boot button.

BOARD NOTE

This model includes a USB-A host connector. Use USB-C to connect the board to the computer for flashing.

Waveshare RP2350 Zero

Compact board - soldered USB lead required



SETTING	VALUE
Correct firmware	usbbliter8.waveshare_rp2350_zero.uf2
Boot button	BOOT
USB drive name	RPI-RP2 or RP2350

Flashing steps

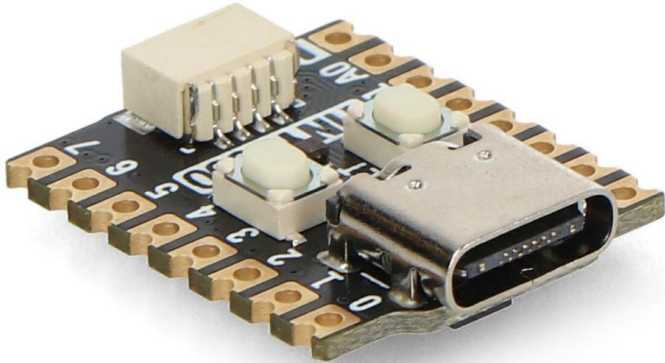
1	Disconnect the board from the computer.
2	Press and hold the BOOT button.
3	While holding the button, connect the board to the computer with a USB data cable.
4	Release the button after the RPI-RP2 or RP2350 USB drive appears.
5	Copy usbbliter8.waveshare_rp2350_zero.uf2 onto that drive.
6	Wait until copying is complete. The drive should disconnect automatically as the board reboots.
7	Reconnect the board normally without holding the boot button.

BOARD NOTE

Confirm that this is RP2350-Zero, not RP2040-Zero. The firmware is not interchangeable.

Pimoroni TINY2350

Compact RP2350 development board



SETTING	VALUE
Correct firmware	usbbliter8.pimoroni_tiny2350.uf2
Boot button	BOOT
USB drive name	RPI-RP2

Flashing steps

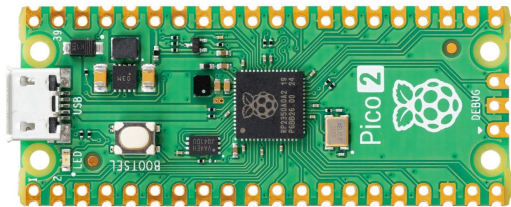
1	Disconnect the board from the computer.
2	Press and hold the BOOT button.
3	While holding the button, connect the board to the computer with a USB data cable.
4	Release the button after the RPI-RP2 USB drive appears.
5	Copy usbbliter8.pimoroni_tiny2350.uf2 onto that drive.
6	Wait until copying is complete. The drive should disconnect automatically as the board reboots.
7	Reconnect the board normally without holding the boot button.

BOARD NOTE

Use the button marked BOOT. The second button is RESET; do not hold RESET by itself when entering bootloader mode.

Raspberry Pi Pico 2

Standard RP2350 board



SETTING	VALUE
Correct firmware	usbliter8.pico2.uf2
Boot button	BOOTSEL
USB drive name	RPI-RP2

Flashing steps

1	Disconnect the board from the computer.
2	Press and hold the BOOTSEL button.
3	While holding the button, connect the board to the computer with a USB data cable.
4	Release the button after the RPI-RP2 USB drive appears.
5	Copy usbliter8.pico2.uf2 onto that drive.
6	Wait until copying is complete. The drive should disconnect automatically as the board reboots.
7	Reconnect the board normally without holding the boot button.

BOARD NOTE

Use this firmware only for the standard Raspberry Pi Pico 2 shown here.



Flashing Troubleshooting

Quick checks for the most common bootloader issues

NO USB DRIVE APPEARS	Try another USB data cable and USB port. Hold BOOT or BOOTSEL before connecting the board.
DRIVE APPEARS, THEN DISAPPEARS	Repeat the bootloader procedure. Hold the button before power is applied.
WINDOWS ASKS TO FORMAT THE DRIVE	Cancel the prompt, disconnect the board, and retry bootloader mode.
UF2 FILE WILL NOT COPY	Fully extract the ZIP archive before copying the UF2 file.
BOARD DOES NOT REBOOT	Wait 10 seconds, reconnect normally, then re-enter bootloader mode if needed.
WRONG FIRMWARE WAS COPIED	Re-enter bootloader mode and copy the correct UF2 for the exact board model.
FIRMWARE PACKAGE	https://bit.ly/3xgFbrx

Wiring Guide - Before You Wire

For boards without an onboard USB-A host connector

Use the cut Lightning end of a Lightning-to-USB-A cable. The Waveshare RP2350 USB-A board does not require soldered wiring; connect the Lightning cable directly to its USB-A port.

Typical USB 2.0 wire colors

WIRE	FUNCTION
Red	+5V / VBUS
Black	GND
Green	D+
White	D-

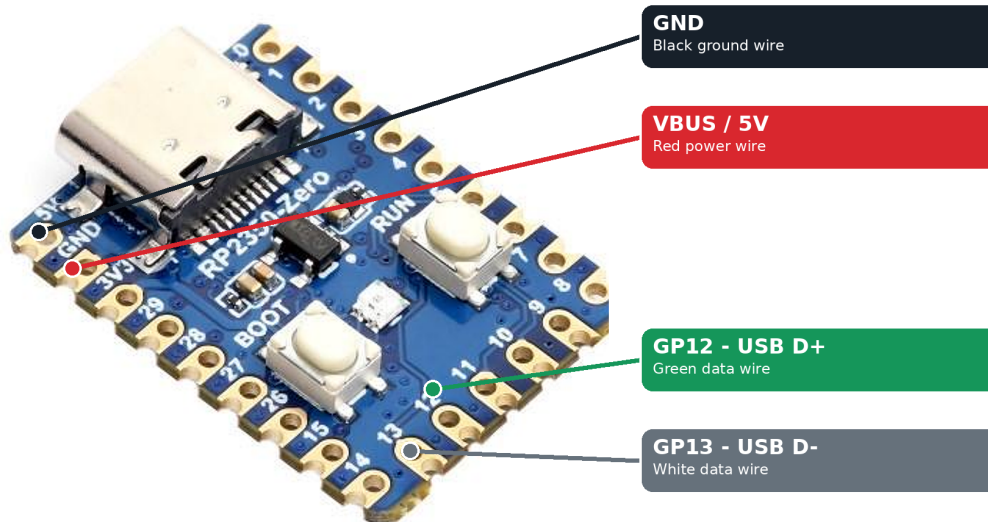
Board-specific pin mapping

BOARD	RED +5V	BLACK GND	GREEN D+	WHITE D-
RP2350 Zero	VBUS / 5V	GND	GP12	GP13
Raspberry Pi Pico 2	VBUS pin 40	GND pin 38	GP12 pin 16	GP13 pin 17
Pimoroni TINY2350	5V / VBUS	GND	GP2	GP3

IMPORTANT	Do not connect the red +5V wire to a 3V3 pin. Use only VBUS or the pad marked 5V.
VERIFY CABLE	Wire colors are typical, not guaranteed. Identify +5V, GND, D+ and D- with a multimeter.
DATA PINS	TINY2350 uses GP2 for D+ and GP3 for D-. It does not use GP12/GP13.

Waveshare RP2350 Zero

D+ = GP12 / D- = GP13



CONNECTION	DETAIL
Firmware	usbbliter8.waveshare_rp2350_zero.uf2
Power	Red -> VBUS / 5V; Black -> GND
USB D+	Green -> GP12
USB D-	White -> GP13

Wiring steps

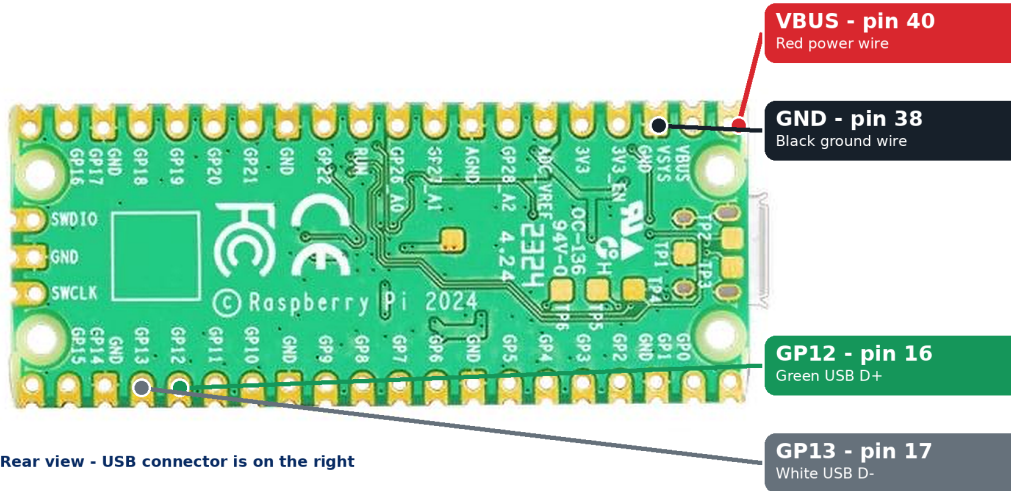
1	Flash the matching UF2 before soldering.
2	Solder red to 5V/VBUS and black to GND.
3	Solder green D+ to GP12 and white D- to GP13.
4	Check for shorts before applying power.

BOARD NOTE

Confirm this is RP2350-Zero, not RP2040-Zero.

Raspberry Pi Pico 2

Rear view / D+ = GP12 / D- = GP13



CONNECTION	DETAIL
Firmware	usbliter8.pico2.uf2
Power	Red -> VBUS pin 40; Black -> GND pin 38
USB D+	Green -> GP12 pin 16
USB D-	White -> GP13 pin 17

Wiring steps

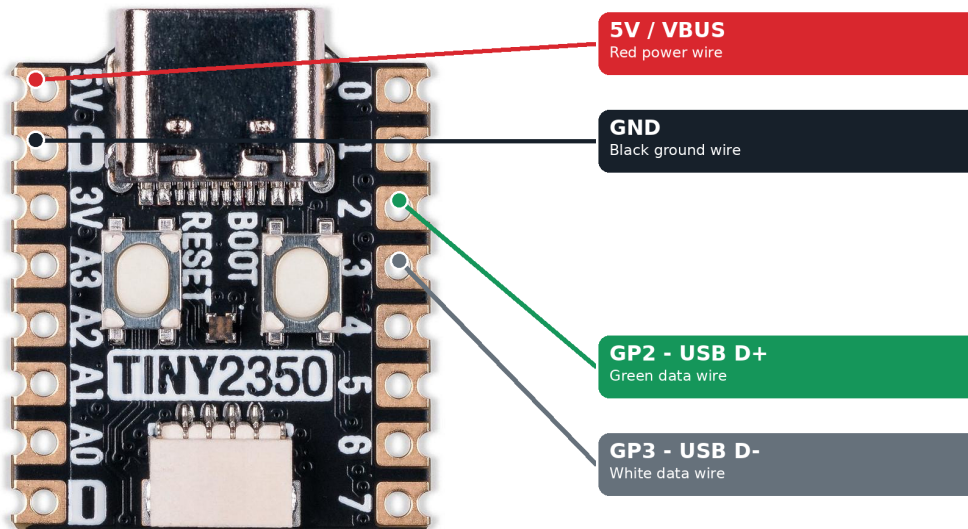
1	Flash using BOOTSEL and the RPI-RP2 drive.
2	Use VBUS at the upper-right and the nearby GND pad.
3	Connect green D+ to GP12 and white D- to GP13.
4	Verify continuity to all four solder joints.

BOARD NOTE

Do not use VSYS or 3V3 for the red wire. Use VBUS.

Pimoroni TINY2350

D+ = GP2 / D- = GP3



CONNECTION	DETAIL
Firmware	usbliter8.pimoroni_tiny2350.uf2
Power	Red -> 5V/VBUS; Black -> GND
USB D+	Green -> GP2
USB D-	White -> GP3

Wiring steps

1	Flash the matching UF2 before wiring.
2	Connect red to 5V and black to GND.
3	Connect green D+ to GP2 and white D- to GP3.
4	Inspect for solder bridges and shorts.

BOARD NOTE

This board uses GP2 for D+ and GP3 for D-.

Final Checks & LED Status

Complete these checks before connecting a device

MULTIMETER CHECKLIST	AFTER FLASHING & WIRING
• No short between VBUS/5V and GND. • No short between D+ and D-. • Power, ground, and data wires reach the correct conductors. • No loose strands or exposed wire can touch another pad.	• Put the Apple device into normal DFU mode while connected to a Mac or PC. • Disconnect it and connect the Lightning lead to the RP2350 board. • The operation normally completes in about 0.7 to 1.2 seconds. • After success or failure, reboot the RP2350 board before trying again.

LED status reference

STATE	RGB LED BOARD	SINGLE-COLOR LED
Booting	Blinking orange	Slow blink
Ready	Steady orange	Breathing
In progress	Blue	Rapid blink
Success	Green	Steady on
Failure	Red	Off

Common problems

PROBLEM	CHECK
No board LED / no power	Recheck VBUS/5V and GND; confirm cable conductors with a meter.
Device does not respond	Confirm correct UF2, data pins, DFU mode, and D+ / D- orientation.
Red LED / LED turns off	Reboot the board, inspect solder joints, and retry with a shorter lead.
TINY2350 fails	Use GP2 and GP3, not GP12 and GP13.

AUTHORIZED USE

Use only on devices you own or are explicitly authorized to test. Keep the board disconnected while changing wiring.