

Note: Firmware for Version 4.3

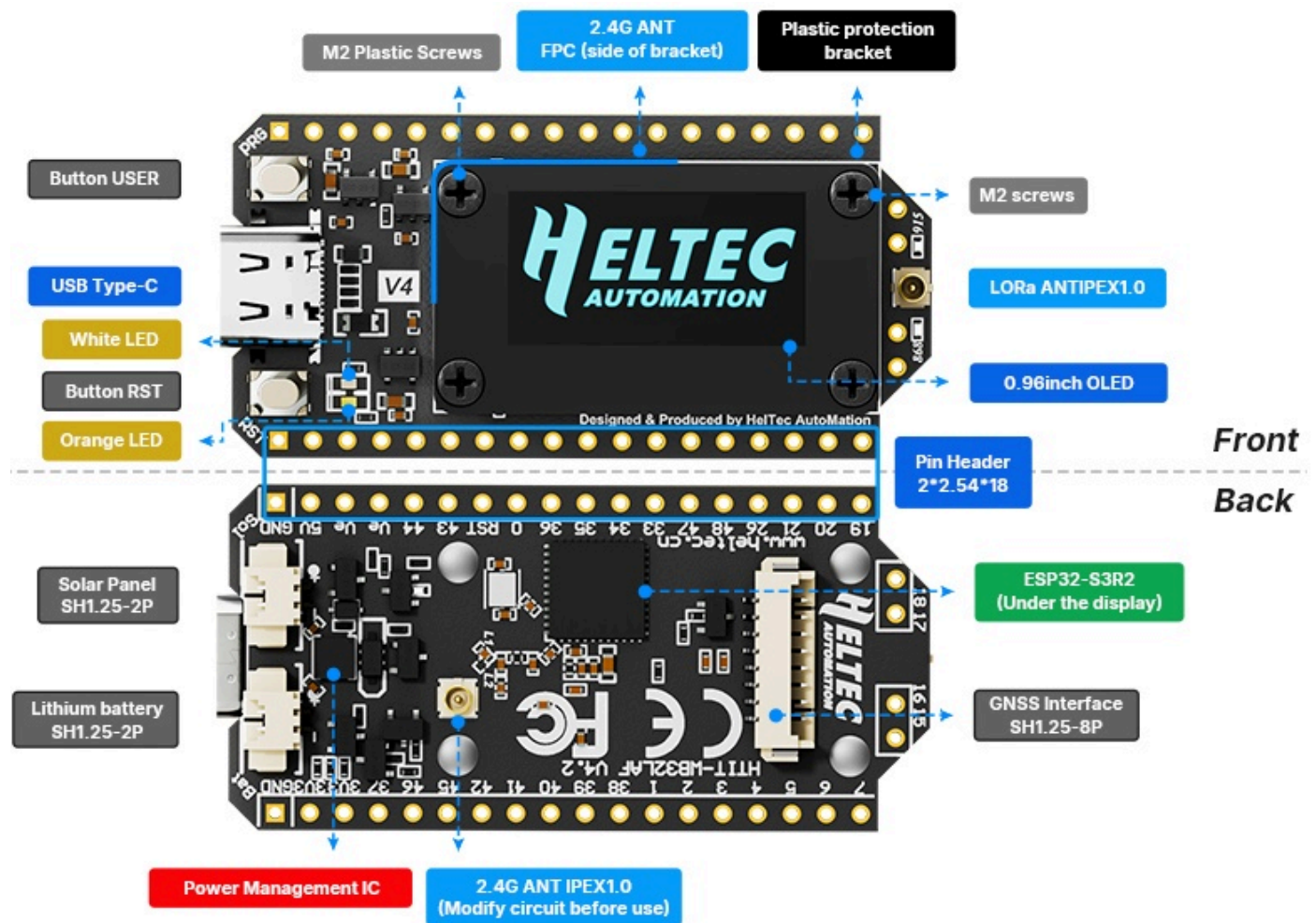


Hardware version 4.3 requires new firmware.

[Schematic of V4.3](#)

- If you are using **Heltec's development framework**, please update the board package and LoRa library to the latest via GitHub.
- **Meshtastic**, please use firmware version 2.7.20 or above.
- **MeshCore**, please use firmware version 1.15.0 or above.

WiFi_LoRa_32_V4



The classic WiFi LoRa 32 development board has been upgraded to the all-new V4 version. While retaining the advantages of previous editions, it features comprehensive improvements in craftsmanship and enhanced performance.

Product characteristics

- Based on ESP32-S3R2 + SX1262, supporting Wi-Fi b/g/n, BLE, and LoRa.
- Equipped with 2MB PSRAM and 16MB external Flash for UI and complex applications.
- Available in high-power (28 dBm) and low-power (22 dBm) versions.

- Added SH1.25-2Pin solar panel and SH1.25-8Pin GNSS interfaces.
- PC casing with integrated antenna, optimized battery management, and ultra low power consumption ($<20\ \mu\text{A}$).

Hardware Version Comparison

Parameters	V3	V4
MCU	ESP32-S3FN8	ESP32-S3R2
Flash	8MB (integrated)	16MB (external)
USB to Serial Chip	CP2102	Removed CP2102
Power Management	Standard Li-ion management IC	Upgraded IC supporting solar input
Solar Input	Not available	Added SH1.25-2P interface
LoRa TX Power	21±1 dBm	28±1 dBm
2.4G Antenna	Metal spring antenna	FPC antenna + IPEX connector
GPS Interface	Not available	Added SH1.25-8Pin interface
Peripheral I/F	36-pin	40-pin
Screen Connection	Soldered	Soldered + B2B connector
Pin Craft	Silver-plated	Gold-plated
Screen Bracket	Partial protection	Full protection

Important Resources

- [Datasheet](#)
- [Schematic diagram](#)
- [Pin Map](#)

- [Related links](#)

Product Usage Guide

The following documentation will help you get started quickly with the product

- [Install development environment](#)
- [Three Development Platforms](#)
- [Applied to LoRaWAN](#)
- [Applied to Meshtatic](#)
- [How to use license](#)

