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› Meshnology Heltec V3 Case for ESP32 LoRa Development Board (N32 Version, Blue) - Instruction Manual

Meshnology N32 Version

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INSTRUCTION MANUAL

Introduction

This manual provides detailed instructions for the assembly, operation, and maintenance of your Meshnology Heltec V3 Case for ESP32 LoRa Development Boards. This custom-fit case is designed to securely house your Heltec V3 development board, including the battery and antenna, while providing easy access to essential ports and buttons. It is ideal for Meshtastic and LoRaWAN IoT applications, offering durable protection and enhanced portability.

Package Contents

Please verify that all items listed below are included in your package:

- Heltec V3 Case (N32 Version, Blue) - Top and Bottom Shells
- Screws for assembly
- Square nuts for securing components
- Push buttons for board interface
- Antenna connector and cable
- Battery (3000mAh, 3.7V)
- Heltec V3 ESP32 LoRa Development Board (not included with case-only purchase)



Figure 1: Contents of the Heltec V3 Case package. Note: Development board and battery are sold separately unless specified in the product variant.

Setup and Installation

Follow these steps to assemble your Heltec V3 case and integrate your ESP32 LoRa development board. Handle all components with care to avoid damage.

1. **Install Antenna Connector:** Carefully screw the antenna connector into the designated port on the top shell of the case. Ensure it is snug but do not overtighten.
2. **Install Development Board:** Connect the antenna cable to the U.FL connector on the ESP32 LoRa development board. Place the development board into the bottom shell of the case, aligning it with the screw posts and cutouts for the display, buttons, and charging port. Secure the board using the provided small screws and square nuts.
3. **Connect Battery:** Plug the battery connector into the corresponding port on the ESP32 LoRa development board.
4. **Secure Battery (Optional):** If desired, use the provided double-sided tape to fix the battery securely within the case, preventing movement.
5. **Close Case and Secure:** Align the top and bottom shells of the case and snap them together. Use the remaining screws to firmly secure the two halves of the case. Ensure all buttons are properly seated and functional.

Your browser does not support the video tag.

Video 1: Detailed installation guide for the ESP32 LoRa V3 N32 Case, demonstrating each step of assembly.

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Video 2: Assembly instructions for the ESP32 LoRa V3 Board with a 3000mAh battery and N35 Case, providing a visual walkthrough of the process.



Figure 2: Custom-fit design of the case, accommodating the ESP32 LoRa V3 board and a battery up to 6.5cm x 3.5cm.

Operating Instructions

Once assembled, your Heltec V3 case provides a protective enclosure for your ESP32 LoRa development board, allowing you to utilize its full functionality.

- **Accessing Ports and Buttons:** The case features precise cutouts for the USB Type-C charging port, antenna port, display area, and control buttons, ensuring seamless interaction with your device.
- **Meshtastic Firmware:** To enable Meshtastic functionality, you will need to flash the appropriate firmware onto your ESP32 LoRa development board. Refer to the Meshtastic project documentation for detailed instructions on firmware flashing.
- **Connecting to Phone App:** After flashing the firmware, you can connect your device to the Meshtastic mobile application via Bluetooth. This allows for sending messages, tracking locations, and configuring device settings.

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Video 3: A tracking trial demonstrating the Meshtastic functionality, including firmware flashing, device connection, and location tracking.



Figure 3: The USB Type-C charging port is easily accessible for convenient power management.

Maintenance

To ensure the longevity and optimal performance of your Heltec V3 Case, please follow these maintenance guidelines:

- **Cleaning:** Wipe the case regularly with a soft, dry cloth to remove dust and debris. Avoid using harsh chemicals or abrasive materials that could damage the surface.
- **Storage:** Store the case in a cool, dry place away from direct sunlight and extreme temperatures.
- **Inspection:** Periodically check the screws and connections to ensure they remain secure.

Troubleshooting

If you encounter any issues with your Heltec V3 Case, consider the following common solutions:

- **Antenna Port Fit:** If the antenna connector feels too tight, ensure it is correctly aligned before gently screwing it in. Minor adjustments to the case opening may be required in some instances.
- **USB Port Access:** Some standard USB-C cables may have larger connectors that do not fit the recessed port. Try using a cable with a slimmer connector profile.
- **Board Fit Issues:** Ensure the ESP32 board is correctly oriented and all internal components (like the battery) are properly seated before closing the case. If the board does not sit flush, check for any obstructions or misalignments.
- **LED Visibility:** The case design may limit visibility of charging and activity LEDs. This is a design characteristic and not a defect.
- **Button Functionality:** Verify that the small plastic buttons are correctly inserted and aligned with the board's buttons during assembly. Ensure the correct button type (V3 or V4) is used if applicable.

Product Specifications

Brand	Meshnology
Model Name	N32 Version

Item Weight	1.13 ounces
Package Dimensions	5.75 x 3.74 x 0.59 inches
Color	Blue
Included Components	ESP32 Case
Connectivity Technology	LoRa

Warranty and Support

Meshnology products are backed by a standard manufacturer's warranty. For detailed warranty information, technical support, or assistance with your product, please refer to the official Meshnology website or contact our customer service team. Keep your purchase receipt for warranty claims.