


# MeshPocket V2

Beyond Charging,

Unleashing a New Wireless Connectivity Experience



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## Document Version

| Version | Time | Description | Remark |
|---|---|---|---|
| Rev. 0.0.0 | 2026-04-20 | **Dev-Preview Version** | Richard |
| Rev. 1.0.0 | 2026-11-03 | **Release Version** | Richard |

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# 1. Overview

## 1.1Introduction

MeshPocket V2 is a Qi2-compliant magnetic wireless power bank. It integrates LoRa, BLE wireless communication, a TFT-LCD screen and GNSS positioning. It natively supports multiple open-source LoRa mesh firmware including Meshtastic and MeshCore. It works as a power bank for daily use, and can instantly switch into an emergency communication device when needed.

## 1.2Features

- 10000 mAh high-capacity Li-Po battery (38.7 Wh)
- Qi2-compliant magnetic wireless charging: 5 W / 7.5 W / 10 W / 15 W
- Dual USB-C ports, both support input and output
- Pass-through charging support; simultaneous wired + wireless output
- Supports both BLE and LoRa for ultra-low-power communication.
- Built-in GNSS positioning module and 1.08-inch color TFT-LCD display
- Multiple built-in protections: OVP / OCP / short-circuit / temperature / over-discharge / charging-timeout

# 2. General Specifications

Table2.1: General Specifications

| Parameter | Specifications |
|---|---|
| Model | HT-5262KDH |
| Battery Capacity | 10000mAh / 3.85V |
| Rated Capacity | 6000mAh |
| USB-C Output Max | USB-C1: 9V-2.22A / 5V-3A; USB-C2: 5V-3A |
| USB-C Intput Max | USB-C1: 9V-2.22A / 5V-3A; USB-C2: 5V-3A |

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| Parameter | Specifications |
|---|---|
| Wireless Charging Output | Qi2 magnetic: 5W / 7.5W / 10W / 15W |
| Communication | BLE, LoRa |
| Dimension | 104.5 mm × 74 mm × 13.9 mm |
| Weight | 193 g |
| Housing Material | PC + ABS |
| Display | 1.08-inch Color TFT-LCD |

# 3. Electrica Specifications

Table 3.1: Battery Specifications

| Parameter | | Specifications |
|---|---|---|
| Wireless Charging IC | | N9008 / N9006B |
| Battery Protection IC | | XB8886M |
| Power-Bank IC | | SW6236W |
| Authentication IC | | T91-206 |
| Pass-Through Charging | | PD 20W USB-C + Wireless 7.5W |
| Simultaneous Output Max | | 15W total: USB-C 5V-2A + Wireless 5W |
| Full Charge Time | | PD3.0 20V adapter: Wired: 1.5±0.5h, Wireless: 3±0.5h |
| Battery | Capacity | 10000 mAh |
| | Chemistry | Li-Po lithium-polymer cell |
| | Cell Quantity | 2 pcs |
| | Nominal Voltage | 3.85V |
| | Cell limit voltage | 4.5V |
| Low-Power Cutoff | | ≤ 5%-20% SOC |

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# 4. Environmental Characteristics

Table 4.1: Environmental Specifications

| Item | Specifications |
|---|---|
| Charging Temperature | 0 ℃ ~ +45 ℃ |
| Discharging Temperature | -10 ℃ ~ +45 ℃ |
| Storage Temperature | -20 ℃ ~ +55 ℃ |
| Reconmended Operating Humidity | 10% ~ 80% RH, non-condensing |

# 5. RF Module Information

## 5.1 MCU & BLE

Table 5.1: MCU & BLE Specifications

| Item | Specifications |
|---|---|
| MCU | nRF52840 Cortex-M4F @64MHz |
| Bluetooth | Bluetooth 5.0 LE |
| Memory | 256KB RAM, 1MB Flash |
| TX Power | 8dBm Max |
| Antenna | SMD (Learn More) |

## 5.2 LoRa

Table 5.2: LoRa Specifications

| Item | Specifications |
|---|---|
| LoRa Chip | SX1262 |
| Frequency | 863-928MHz |

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| Item | Specifications | |
|---|---|---|
| TX Power | 21±1 dBm | |
| Power Consumption | 21 dBm | 200mA |
| | 16 dBm | 158mA |
| Antenna | FPC(Learn More) | |

## 5.3 GNSS

Table 5.3: GNSS Specifications

| Item | Specifications |
|---|---|
| GNSS Chip | UC6580 |
| Frequency | L1/L5[①] |
| Constellation | BDS, GPS,Galileo,GLONASS,QZSS, SBAS(L1) |
| Update Rat | 1 Hz / 5 Hz / 10 Hz |
| Power Consumption | ~40mA |
| Backup Consumption | 5μA |
| Antenna | FPC(Learn More) |

## 5.4 Pin Description

Table5.4: Pin Description

| Pin | Description | |
|---|---|---|
| P0.26 | N9006 TX | |
| P0.04 | N9006 IO1 | |
| P0.05 | $I^2C$ SCL | |

① Antenna supports **L1 band only**.

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| | | |
|---|---|---|
| P0.07 | nRF52840 RX | |
| P0.08 | nRF52840 TX | |
| P1.09 | N9006 IO2 | |
| P0.11 | LoRa NRSET | Pull-up |
| P0.12 | CW INT | |
| PO.13 | $I^2C$ SDA | |
| PO.14 | LoRa NSS | Pull-up |
| PO.15 | N9006 RX | |
| P0.16 | TFT CS | |
| P0.18 | nRF52840 RST | Pull-up |
| P0.20 | IO CSA | Default pull-down → USB print off;<br>Pull-up enable → USB print on |
| P0.22 | V_GNSS Ctrl | Pull-up; pull-down enable |
| P0.24 | TFT RES | Pull-up |
| P0.25 | TFT LED K | Pull-down; pull-down enable |
| P1.00 | TFT RS | |
| P1.01 | TFT SCLK | |
| P1.02 | GNSS TX | |
| P1.04 | GNSS RX | |
| P1.06 | GNSS RST | Pull-up |
| P1.07 | TFT SDIN | |
| P0.09 | V_Screen Ctrl | Pull-up; pull-down enable |
| P0.10 | GNSS PPS | |
| P1.10 | Button 1 | Pull-up |
| P1.11 | User | Pull-up |
| P1.13 | LoRa SCK | |

| | | |
|---|---|---|
| P1.15 | LoRa MOSI | |
| PO.02 | LoRa MISO | |
| P0.29 | LoRa BUSY | |
| P0.31 | DIO1 | |

## 5.5 Power Consumption

Test condition: TEMP = 25 ℃, **Meshtastic Firmware v2.8.2.**

Note: Power consumption varies with different firmware versions.

Table 5.5: Meshtastic Consumption

| Item | Condition | Value | Unit |
|---|---|---|---|
| Meshtastic | BLE Connected, GNSS ON | 77-86 | mA |
| | BLE Connected, GNSS OFF | 45 | mA |
| | BLE Disconnected, GNSS ON | 77-84 | mA |
| | BLE Disconnected, GNSS OFF | 45 | mA |
| | Light Sleep | 8.75 | mA |
| | Shutdown | 340-420 | uA |
| LoRa | 21dBm | 200 | mA |
| | 16dBm | 158 | mA |

# 6. Display

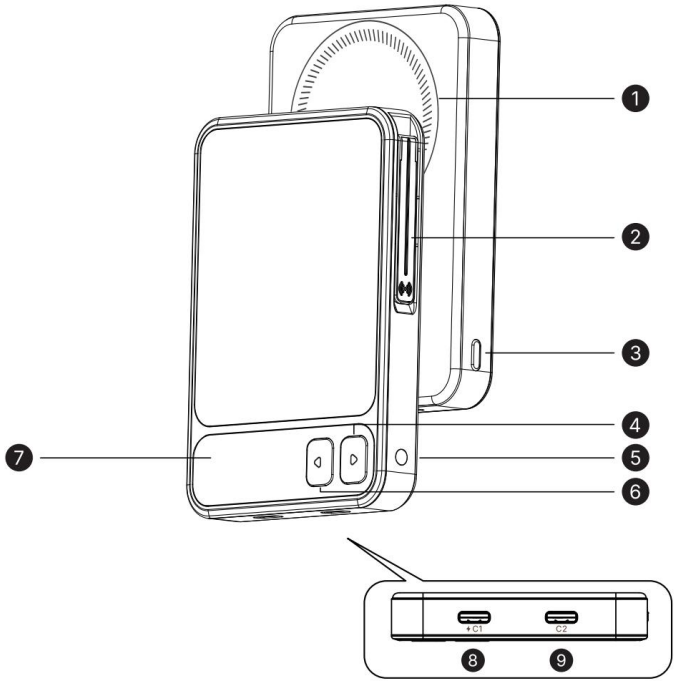
Table 6.1: Disaplay Specifications

| Item | Specifications |
|---|---|
| Model | NV3001B TFT LCD |
| Size | 1.08 Inch |
| Resolution | 128(RGB)(H) x 220(V) |
| Interface | 4-wire SPI |

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| Item | Specifications |
|---|---|
| Color | 262,144-color |

# 7. Interface & Button Description




1. Wireless Charging Area: magnetic Qi2 charging position for Mag-Safe compatible phones.

2. LoRa Antenna: external LoRa antenna for long-range mesh communication.

3. TRI Power Button: power-bank output on / off.

4. RST Button: Meshtastic wake-up / sleep / screen switch.

5. Left / Right Tab Navigation Buttons: Meshtastic menu navigation.

6. Color OLED-TFT Display: Meshtastic status, message and GNSS position display.

7. USB-C Port 1: fast-charge input & output.

8. USB-C Port 2: input & output.

Table 7.1: Interface & Button Description

| NO. | Button | Operation | Function |
|---|---|---|---|
| 3 | TRI Button | Single press | Enable power-bank output |

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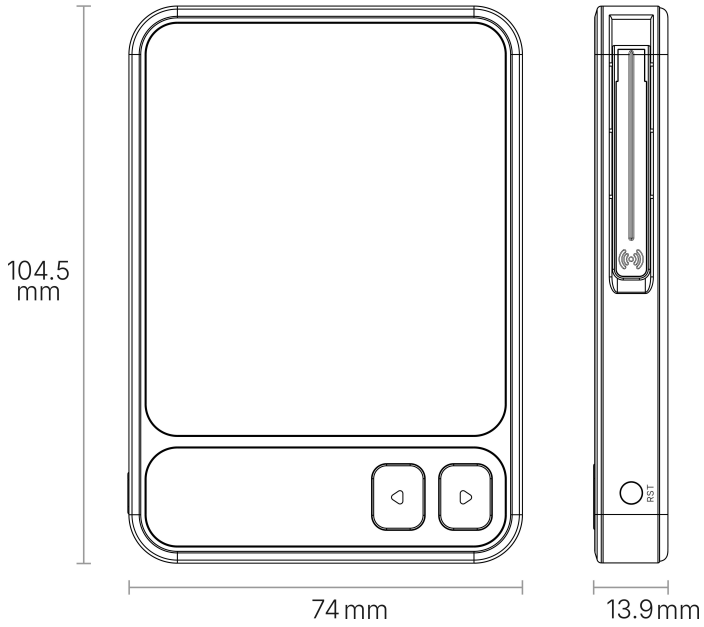
| NO. | Button | Operation | Function |
|---|---|---|---|
| | | Double press | Turns off wireless charging whilekeeping the C1 and C2 output statesunchanged. If neither port is in use,the power bank shuts down anddisables inductive wakeup charging |
| | | Long Press | Turns off wireless charging and both C1and C2 outputs, shuts down the powerbank, and disables inductive wakeupcharging. Shutdown is unavailable whilethe power bank is being recharged |
| 5 | RST Button | Single press | Reset |
| | | Double press | Enter DFU mode |
| 4 | Tab Key (Next / Down) | Single press | UI tab switch next / down |
| | | Long press | Select |
| 6 | Tab Key (Prev / Up) | Single press | UI tab switch previous / up |

# 8. Software Development Kit

- Hetec nRF52840 Development Environment

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# 9. Dimensions




# 10. Precautions

**1.** For **first-time use**, fully discharge the power bank, then recharge the device to 100%.

**2.** Wireless charging operation will significantly degrade RF performance, which will restore to normal after deactivation.

**3.** When the wireless charging output is abnormal or a foreign object (FOD) is detected, the wireless charging indicator light flashes yellow and recovers within 5S after it is released.

**4.** You can manipulate the Meshtastic interface with the RST and USER button.

**5.** To ensure battery life, please charge it at least once every three months.

**6.** Do not expose this product to high-temperature environments or around heating equipment, such as cars, sunlight, heaters, microwave ovens, ovens and other high-temperature environments, as it may cause an explosion.

**7.** It is strictly prohibited to use unapproved or incompatible power adapters, charging cables, etc., which may cause fire, explosion or other dangers. Please use original or certified data cables.

**8.** Do not leave this product in an unventilated space for a long time, such as a handbag, etc. Confined spaces can easily cause fire and other dangers.

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**9.** This product contains lithium-ion batteries. It is strictly prohibited to disassemble the product casing without permission to avoid damage to the battery core or fire hazard.

**10.** Do not drop, squeeze, puncture, short-circuit this product, or put it into water or fire to avoid fire hazards. Please dispose of this product in accordance with local regulations. Do not dispose of this product as domestic waste. Improper disposal may cause explode.

**11.** Please do not use this product during thunderstorms to avoid product failure or click hazards.

**12.** Do not come into contact with liquids and avoid dropping the product. If it has battery swelling, leakage, deformation, etc., please stop using it.

**13.** Please keep this product out of reach of children.

# 11. Resource

- Resource station: resource.heltec.cn
- Schematic Diagram
- User Guide(Detailed User Manual)
- User Manual (Quick Start Guide)
- Hetec nRF52840 Development Environment
- Firmware

# 12. Heltec Contact Information

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