

Product Description

ThinkNode M1 is a multifunctional device integrating advanced wireless communication technologies and multiple sensors. It employs the nRF52840 as its primary processor – a powerful chip that provides core controller functionality while supporting Bluetooth technology, enabling device configuration and monitoring via smartphones. Combined with the SX1262 wireless transceiver chip, the device achieves efficient LoRa signal transmission and reception, delivering reliable long-range communication capabilities.

Developed against this technological backdrop, the M1 product aims to provide users with a highly integrated smart device that meets diverse needs such as outdoor adventures, environmental monitoring, and emergency communications. By incorporating LoRa and GPS technologies, it facilitates effective device connectivity and data exchange. In areas without cellular network coverage or during emergencies, the ThinkNode M1 serves as a standalone communication solution, ensuring critical safety assurance.

Product Features

- ThinkNode M1's firmware is adapted to the Meshtastic protocol, it can realize efficient and stable transmission and reception of LoRa signals;
- Built-in GPS module, providing accurate positioning functions including GPS, GLONASS, BeiDou, QZSS;
- RTC clock can keep accurate time records even when power is off, and can realize faster hot start of the device, support interruption/wake-up;
- Built-in 1200mAh lithium battery, it can work continuously for more than 48 hours;
- Low power consumption, the maximum working current is about 85mA (CPU+LoRa transceiver), and the low power consumption is about 5.6 μ A;
- Compatible with the Meshtastic official App. Users can use the App to configure and manage parameters of the M1 device, communicate messages, share maps and locations, monitor network status, record and export data, customize settings, etc.;
- The closed shell with integrated design is compact and portable, easy to carry and durable;
- External LoRa antenna ensures the stability and efficiency of signal transmission;
- Compliant with LoRaWAN 1.0.3 standard specifications.
- Supported frequency bands: 868(EU)/915 MHz(FCC) LoRa[®]/(G)FSK.
- LoRaWAN activation methods: Over-the-Air Activation (OTAA) and Activation by Personalization (ABP).
- Data rate (LoRa): 0.018 – 62.5 kbps.
- LoRa point-to-point (P2P) communication.
- Temperature-compensated crystal oscillator (TCXO) utilized.
- Operating temperature range: -10° C to +50° C.
- Supply voltage: 5V/1A, supports USB or lithium battery power supply
- Size: 82*51.6*26.3mm.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction