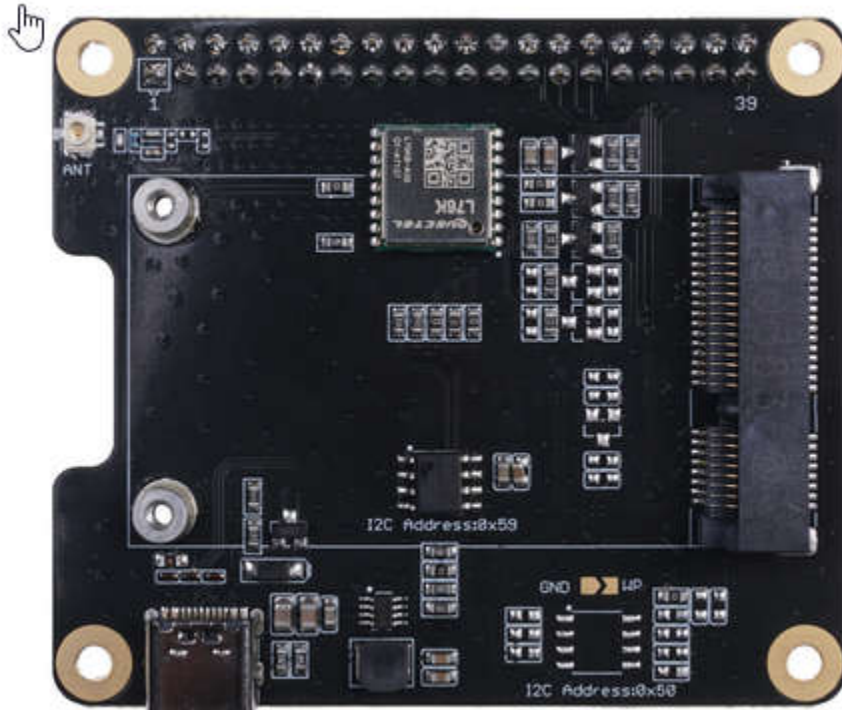


WM1302 Raspberry Pi Hat



Features

- Standard Pi Hat form factor with 40 pins female pin header
- Raspberry Pi versions up to 4B compatible
- GPS Module embedded
- LoRaWAN authentication chip embedded

WM1302 Pi HAT is an add-on expansion board designed specifically for attaching the WM1302 LoRaWAN Gateway module based on SX1302 to Raspberry Pi versions up to Raspberry Pi 4B. It also integrates the LoRaWAN authentication chip and GPS module.

[WM1302 module](#) is a new generation of LoRaWAN gateway module with mini-PCIe form-factor. Based on the Semtech® SX1302 baseband LoRaWAN® chip, WM1302 unlocks the greater potential capacity of long-range wireless transmission for gateway products. It features

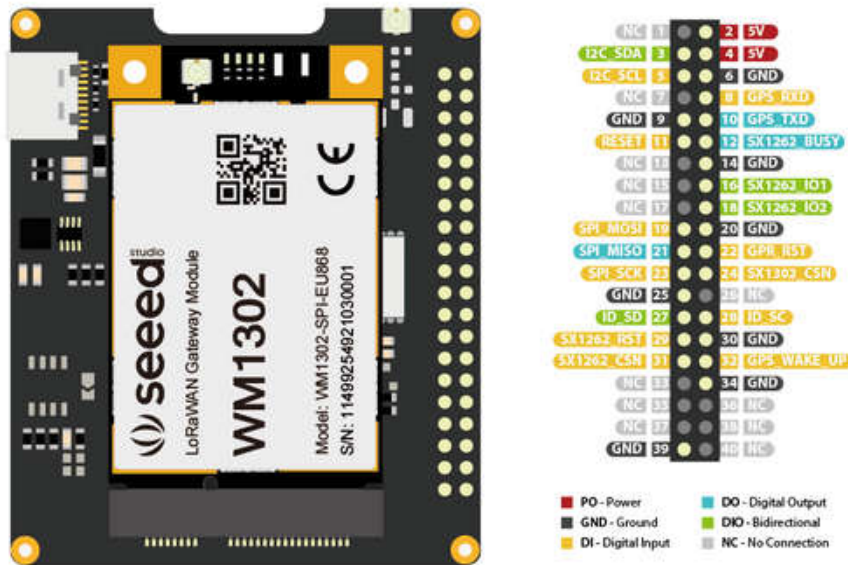
higher sensitivity, less power consumption, and lower operating temperature than the previous SX1301 and SX1308 LoRa® chip.

WM1302 Pi HAT supports the WM1302 module's mini-PCIe form-factor and can automatically configure the standard 52-pin golden fingers to the Raspberry Pi GPIO connector with a 40-pin compatible header. This simplifies the development process for users to integrate with Raspberry Pi. WM1302 Pi HAT works as an extension board and helps add the functionality of SX1302 on the Raspberry Pi, to support LoRaWAN and LoRa protocols for long-range wireless transmission. The GPS module integrated also enhances the accuracy of timing and location of the WM1302 module.

WM1302 Pi HAT, together with the WM1302 Gateway Module and Raspberry Pi, can help construct your very completed and compacted LoRaWAN wireless communication gateways supporting smart agriculture, smart cities, and other IoT scenarios.

Hardware Overview

WM1302 Pi Hat Pinout



Specification

Dimensions	56*65mm
Weight	0.501
Operating Voltage	5V
Power Interface	40 Pin Header or USB
Raspberry Pi 40-Pin Headers	Support Raspberry Pi 5 Support Raspberry Pi 4 B Support Raspberry Pi 3 A+/B/B+ Support Raspberry Pi 2 B Support Raspberry Pi A+/B+ Support Raspberry Pi Zero/Zero W
PCIe Header	52 Pin Mini-PCIe Header
GNSS	Suport GPS L1, GLONASS L1, BeiDou B1
Battery	Exclude

Part List:

WM1302 Pi Hat *1

GPS Antenna *1

M2.5*6mm Screw *8

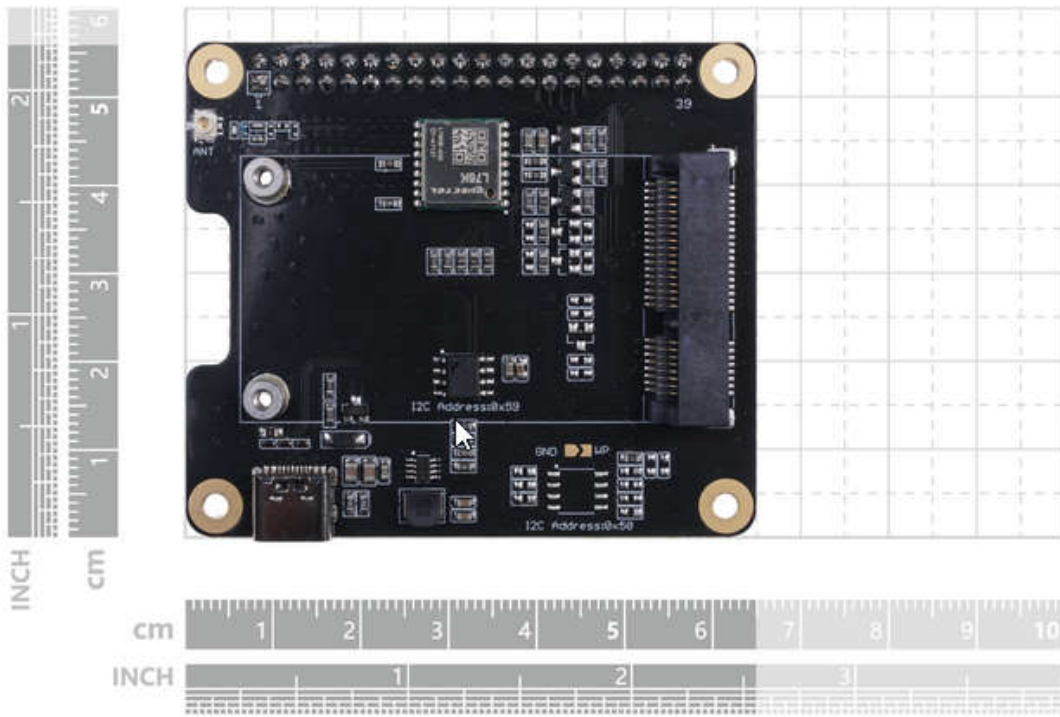
M2.5*11.0mm Stud *4

M2.0*H6.0mm Screw *2

Application

- LoRaWAN Gateway device/hotspot development
- Long-distance wireless communication application development
- Any learning and experimentation based on Raspberry Pi
- LoRa and LoRaWAN application learn and research

Dimensions



Documents

[WM1302 Pi Hat v1.0.sch](#)

[WM1302 Pi Hat v1.0.pdf](#)

[WM1302 Pi Hat v1.0.brd](#)