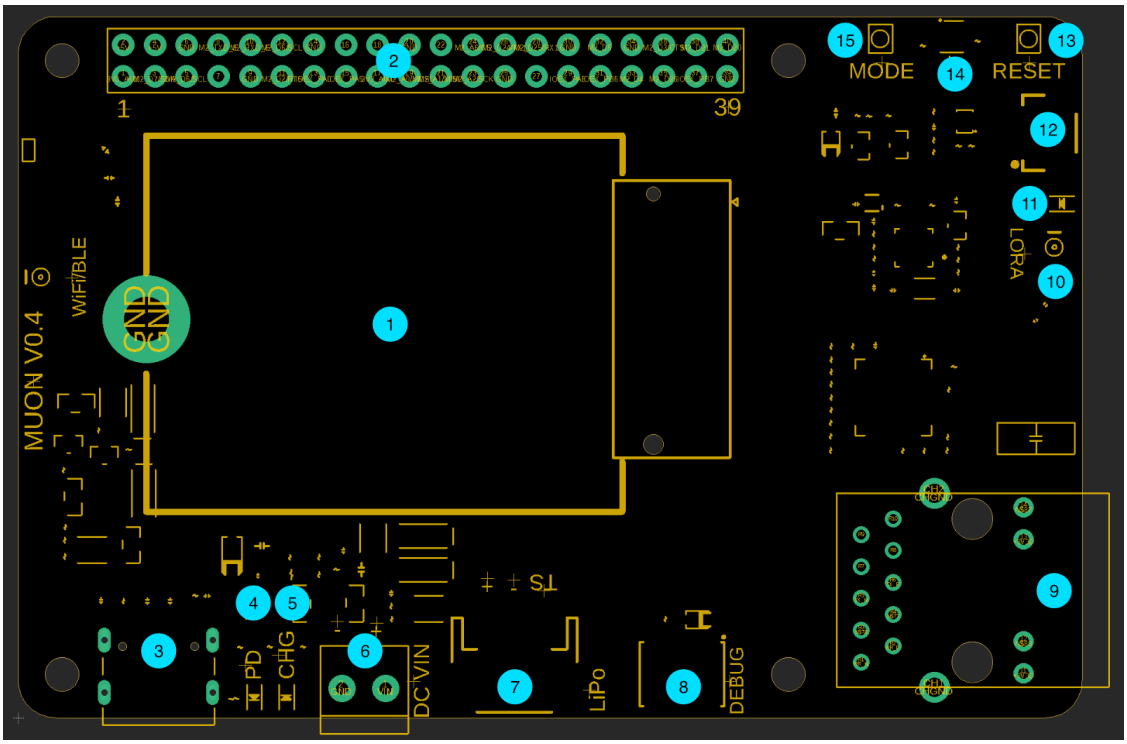
{{title}} 2
Features 3
Engineering samples 4
Device setup 5
USB-C cable warning 6
Errata (v0.5) 7
DETAILS & IMPACT - ERRATA (V0.5) 7
PREVENTIVE MEASURES - ERRATA (V0.5) 8

{{title}}

For the complete datasheet, see Muon preview datasheet.

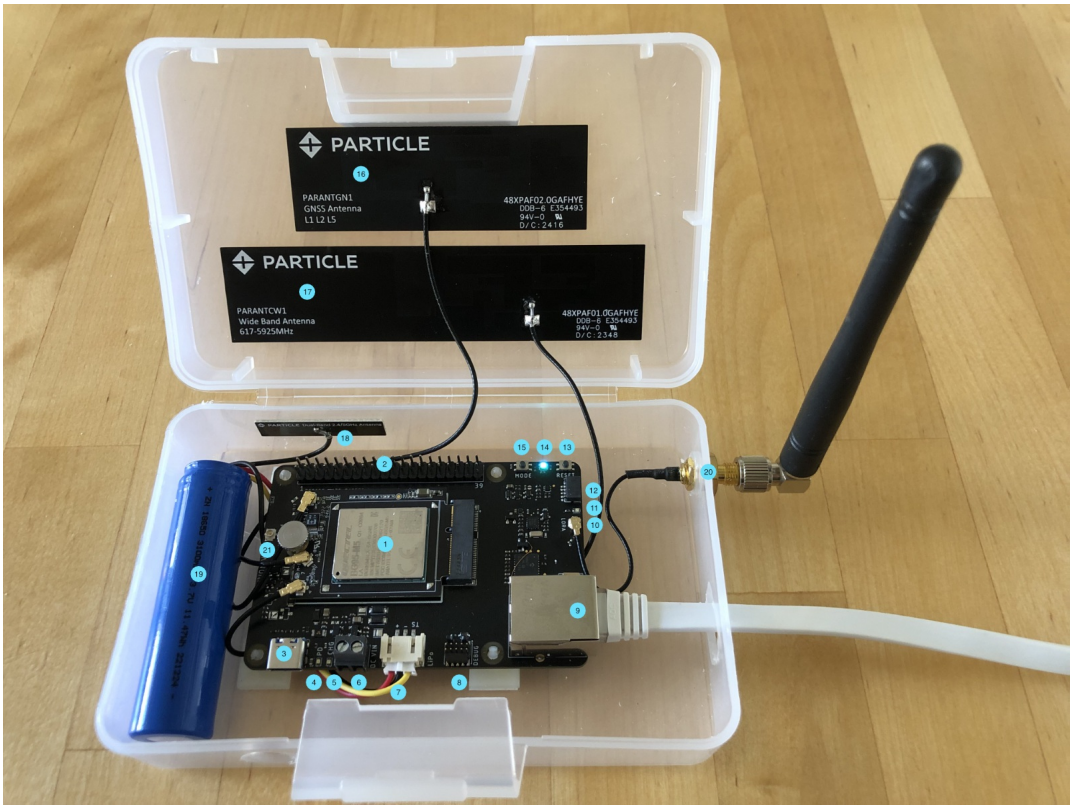
Features



Label	Feature
1	M-SoM
2	Expansion connector
3	USB-C
4	USB Power LED ("PD")
5	Charge LED ("CHG")
6	VIN (6-12 VDC)
7	LiPo battery connector (3-pin)
8	SWD/JTAG debugging connector
9	Ethernet RJ-45 connector
10	LoRaWAN antenna
11	LoRaWAN status LED
12	QWIIC (3.3V I2C) connector
13	RESET button
14	RGB status LED
15	MODE button

Engineering samples

The Muon engineering samples comes in a plastic case with the following items:



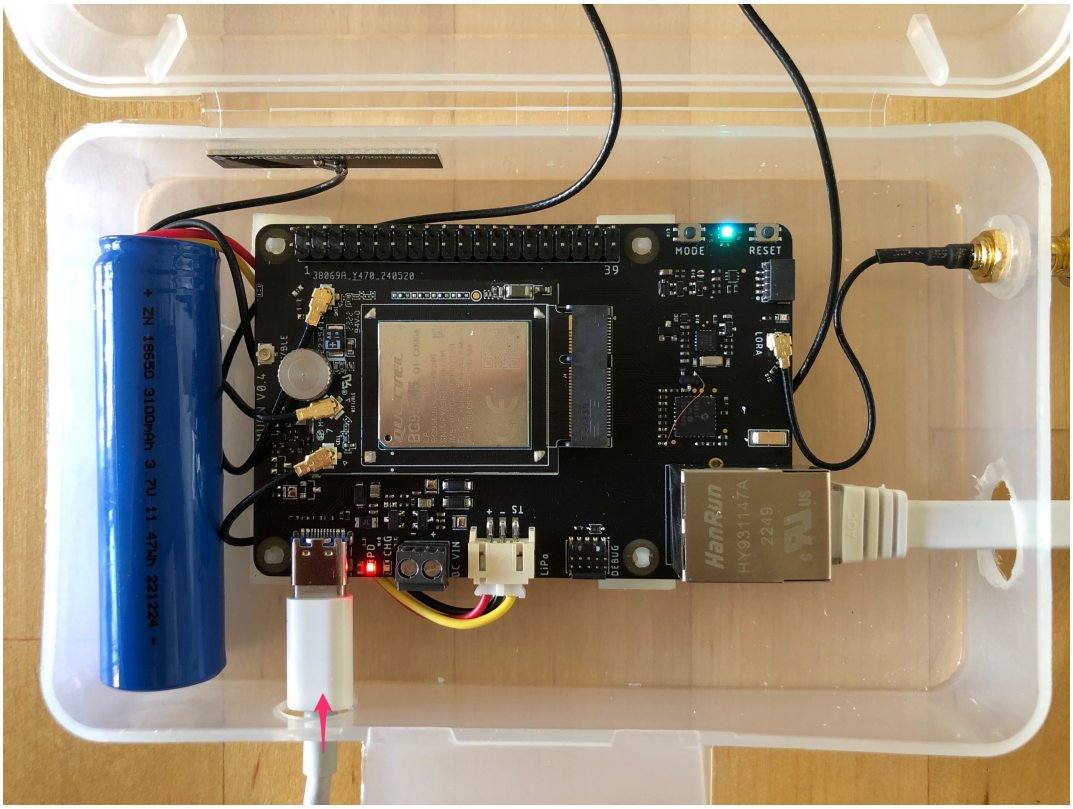
Label	Feature
16	GNSS antenna
17	Cellular antenna
18	Wi-Fi/BLE antenna
19	LiPo battery with temperature sensor
20	LoRa antenna connector (SMA)
21	Muon Wi-Fi/BLE connector (preview only, do not use!)

Be sure to connect the Wi-Fi/BLE antenna to the M-SoM itself, not the U.FL connector on the Muon (21). Future versions of the Muon will not have this connector on the base board.

You may find it easier to attach the antenna connectors before putting the Muon in the case.

Device setup

To set up your Muon preview device, connect a USB-C cable from connector 3 to your computer, then proceed to setup.particle.io to complete the setup of your device.



USB-C cable warning

You must use an actual USB-C port or USB-C power adapter to power the Muon by USB.

A USB-A to USB-C cable will not power the Muon or charge the battery

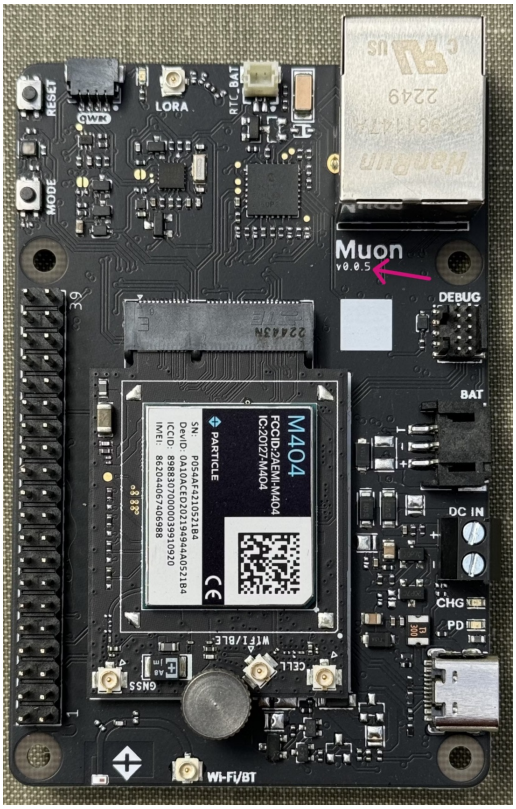
The reason is that the Muon uses USB-C PD to change the USB port voltage to 9V and request enough current to power the Muon.

When using a USB-2 or USB-3 port with USB-A to USB-C adapter cable, the USB port voltage cannot be changed and the port will not be able to power the Muon.

Also beware of some wall adapters that have a USB-C cable, but do not support USB-C PD. Some of these are advertised as Raspberry Pi power adapters, which only support 5V and cannot be used to power the Muon.

Errata (v0.5)

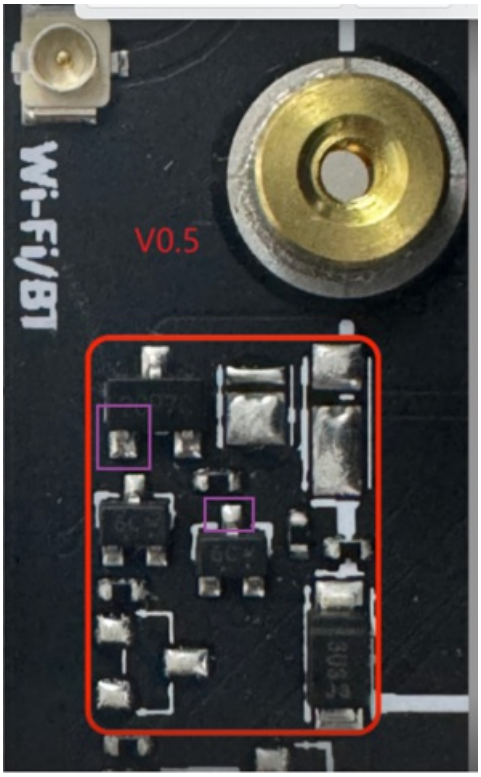
This errata applies to version 0.5 of the Muon. The version can be found here:



We would like to inform you about a potential issue with the beta samples of the Muon board, specifically those labeled v0.5. There have been instances where the power module on these boards may become affected if a specific area is touched while the board is powered on. This could cause the unit to stop working.

DETAILS & IMPACT - ERRATA (V0.5)

- **Affected Units:** Beta samples of the Muon board labeled v0.5.
- **Issue:** When using the DC screw terminals to power the board, making the connections with live wires may disrupt the power module, causing it to become non-functional. Touching a particular area of the board while it is powered on may cause this issue as well.



In some cases, there may be a very small amount of smoke as the PMIC is overloaded.

PREVENTIVE MEASURES - ERRATA (V0.5)

To avoid any problems:

- When using the DC screw terminals, make the wire connections before turning on your DC power source.
- Ensure that you do not touch the area highlighted in red in the picture below while the board is powered on.
  - If you want to take extra precautions, applying conformal coating to the area can provide additional protection.

We appreciate your attention to this matter and are here to assist with any questions or concerns you may have. A solution is implemented for the next version.