Technical Drawing & Component Specifications

V2.0

Dec 2025

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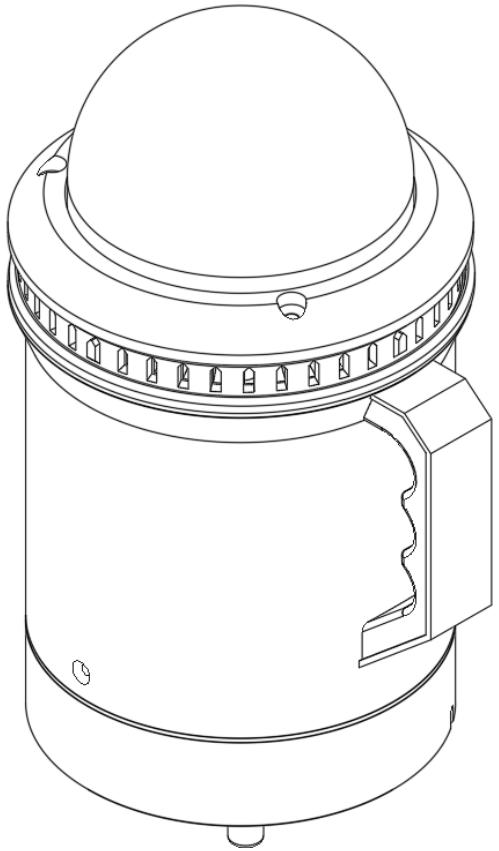

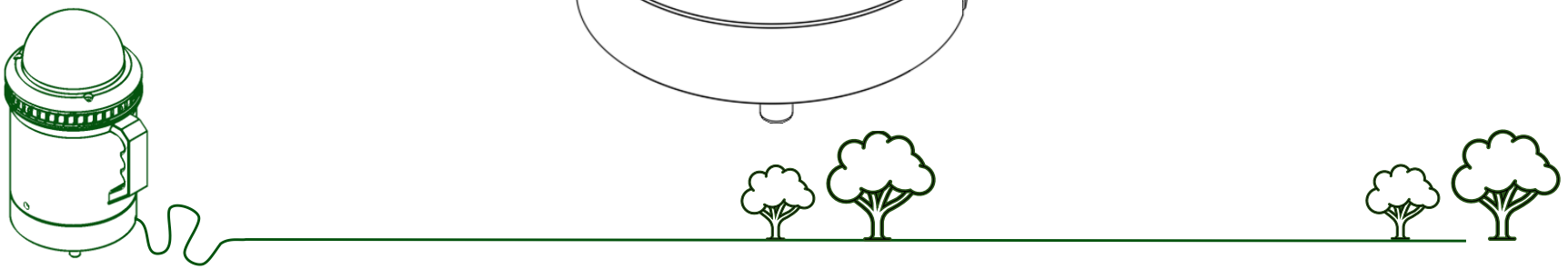

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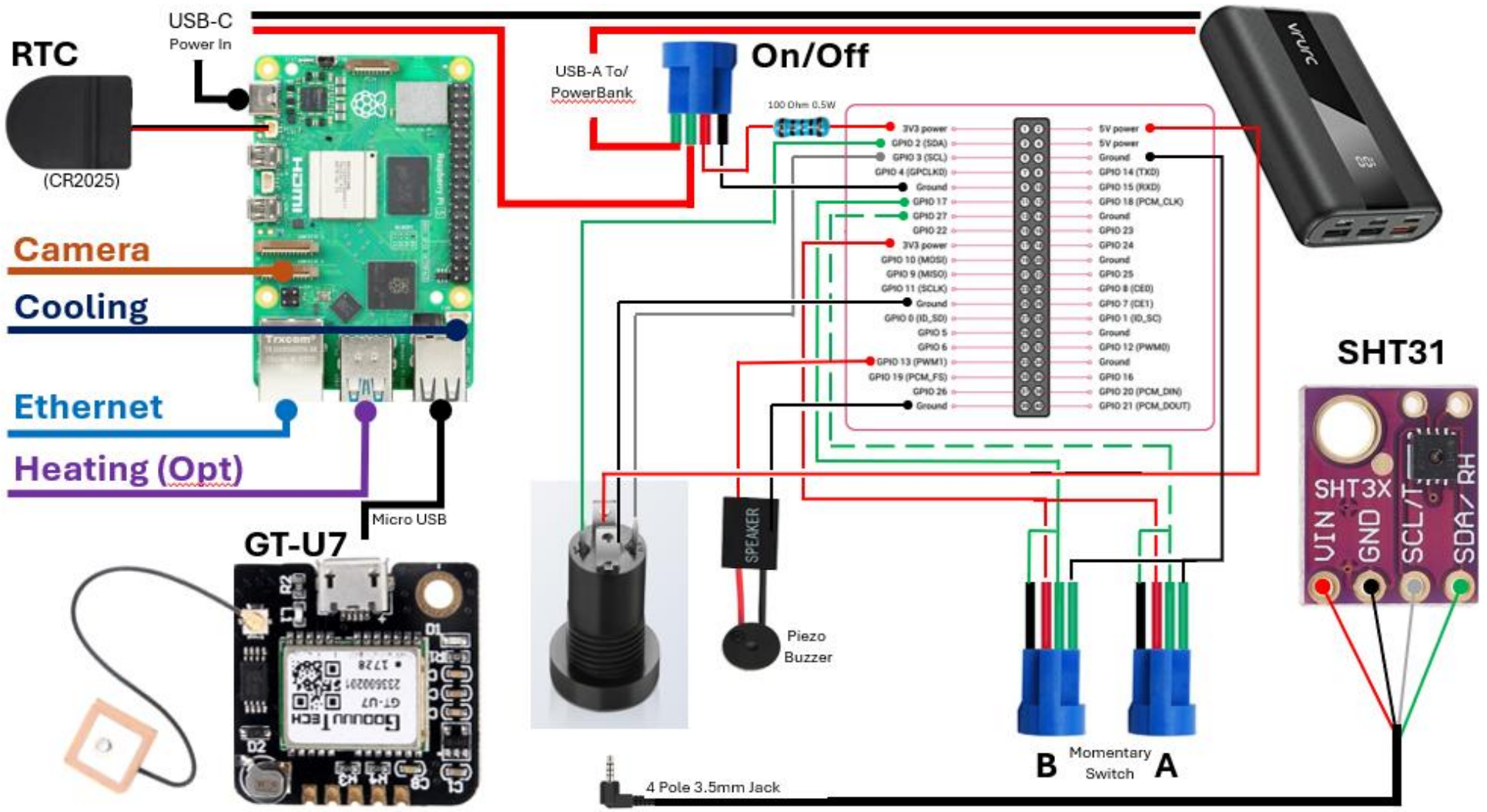

Revisions:

19-12-25 Revised Harnesses to limit Current Draw & Loader on GPIO

Raspberry Pi5

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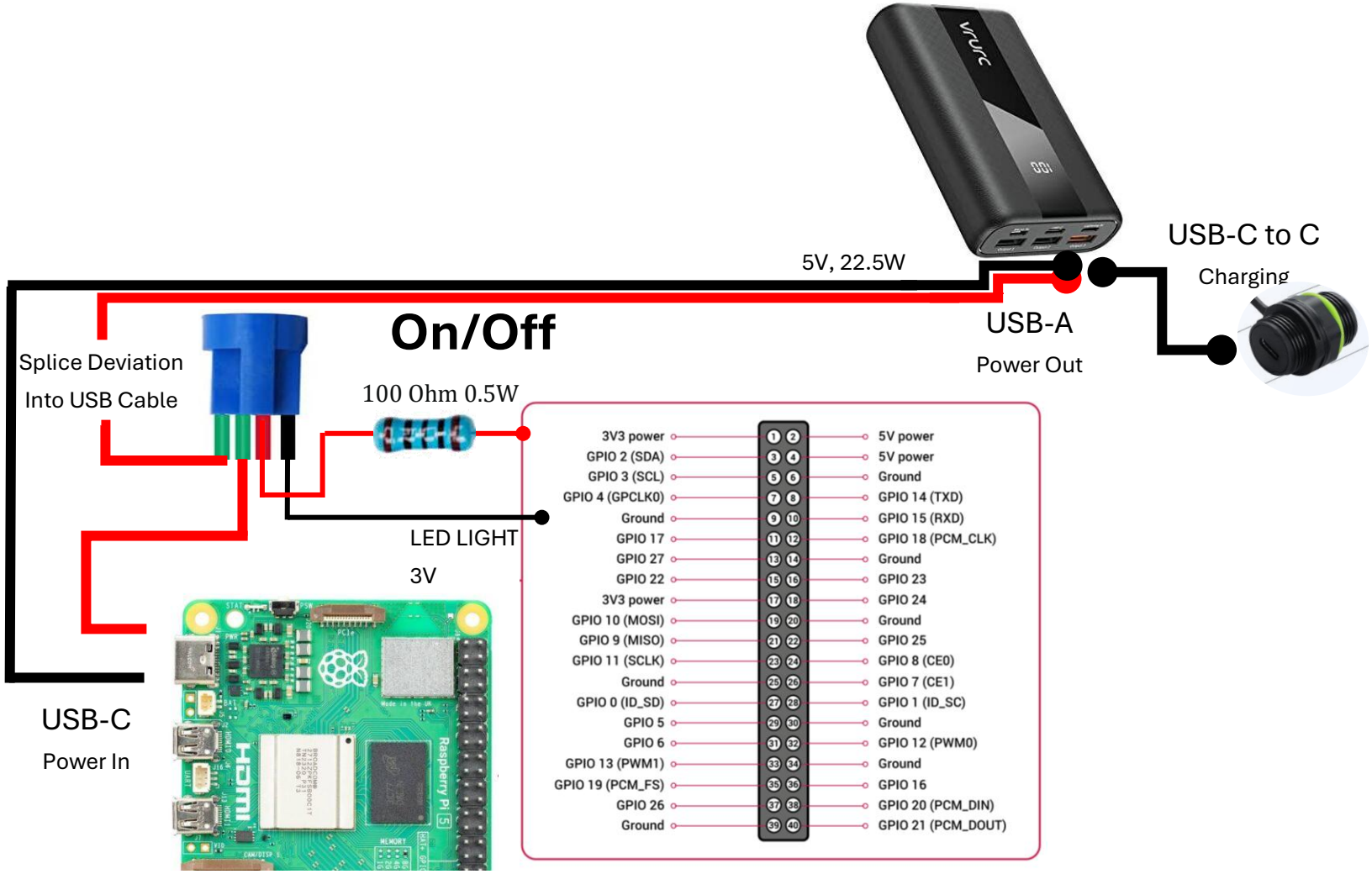

Revisions:

19-12-25 Add External Resistor to limit Current Draw from GPIO

Power Harness

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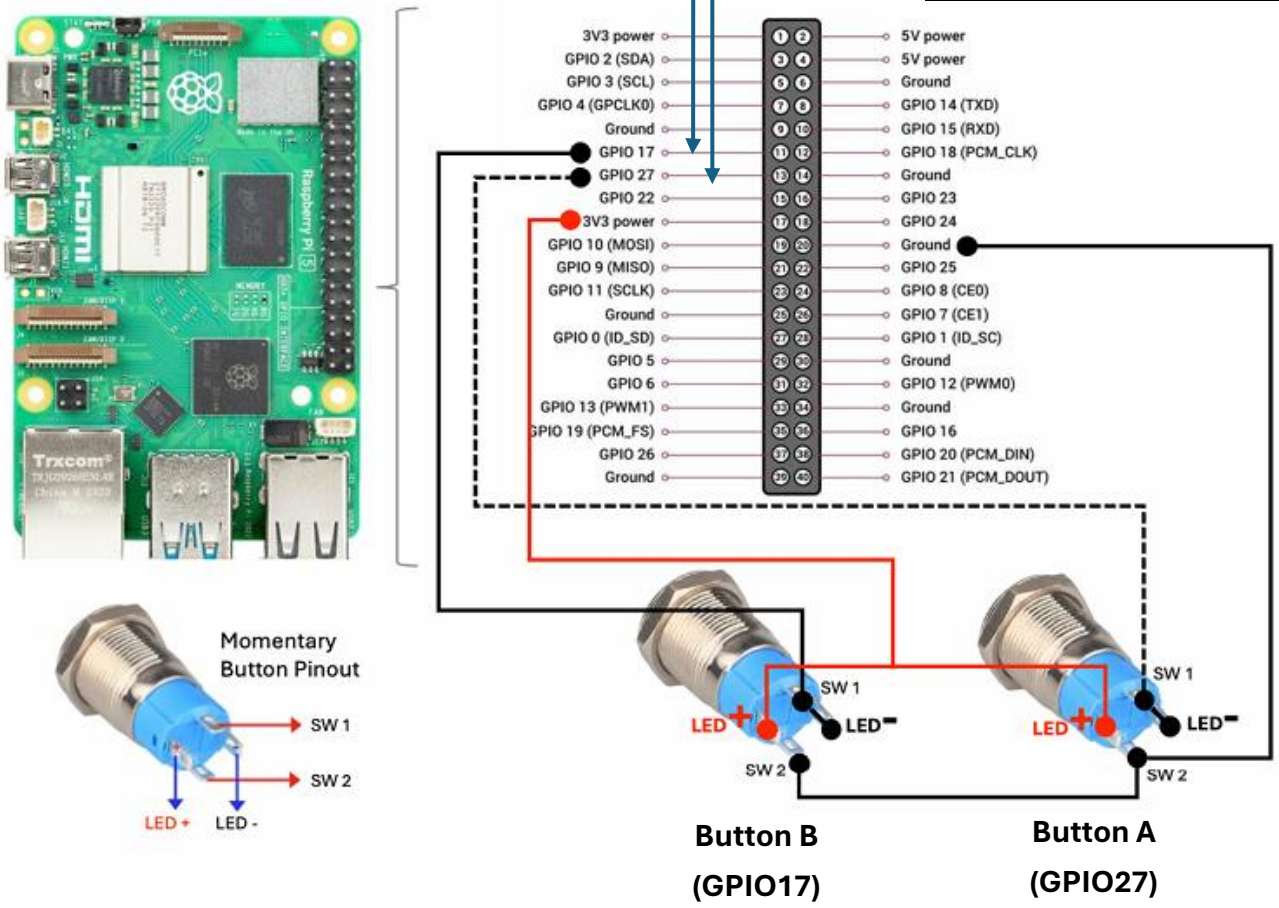
Schematics:

Internal Pull-up Resistors Enabled

```
button_a = Button(27, pull_up=True)  # Button A - Use pull-up mode
button_b = Button(17, pull_up=True)  # Button B - Use pull-up mode
```



Thanks to @Aemideus_392744 9

Revisions:

19-12-25 Changed Harness to align to GPIO 3.3V Limits

Button Harness

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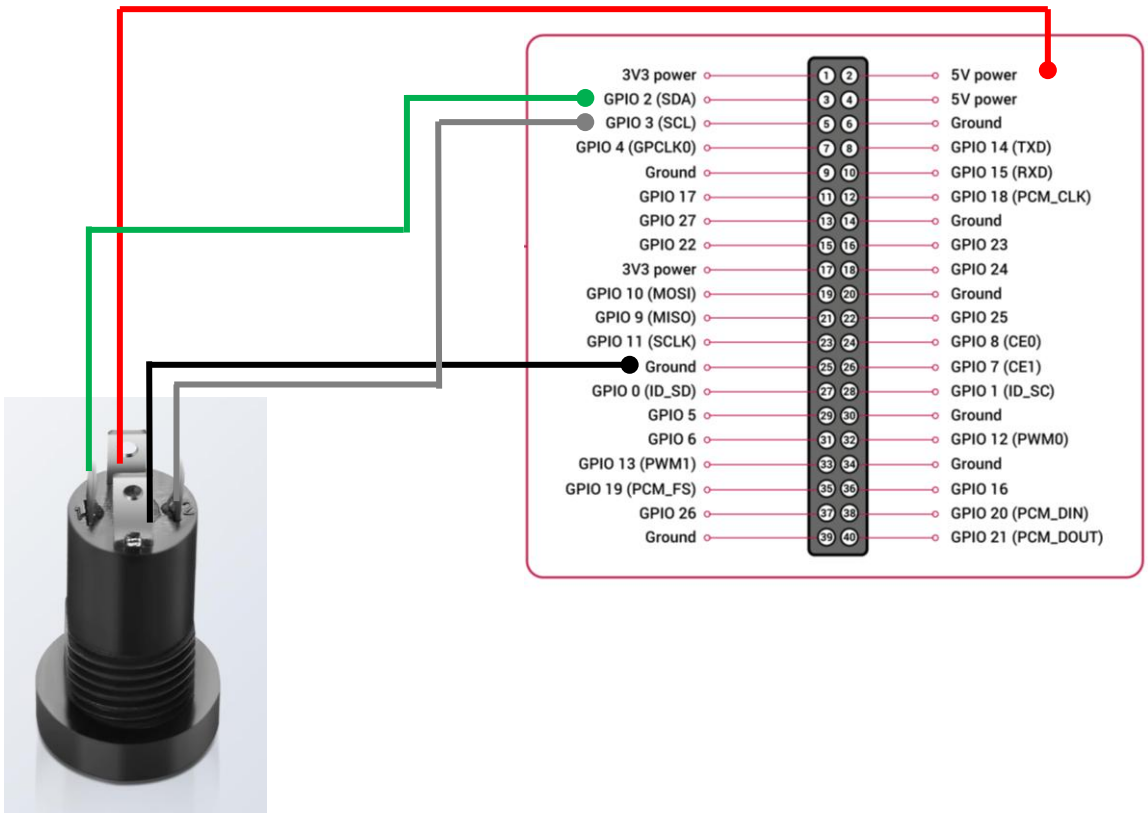
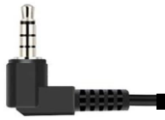


SHT31



4 Pole 3.5mm Jack

Revisions:

19-12-25 Changed to 5V ot free 2nd 3.3V Pin for Button LED

SHT31 Harness

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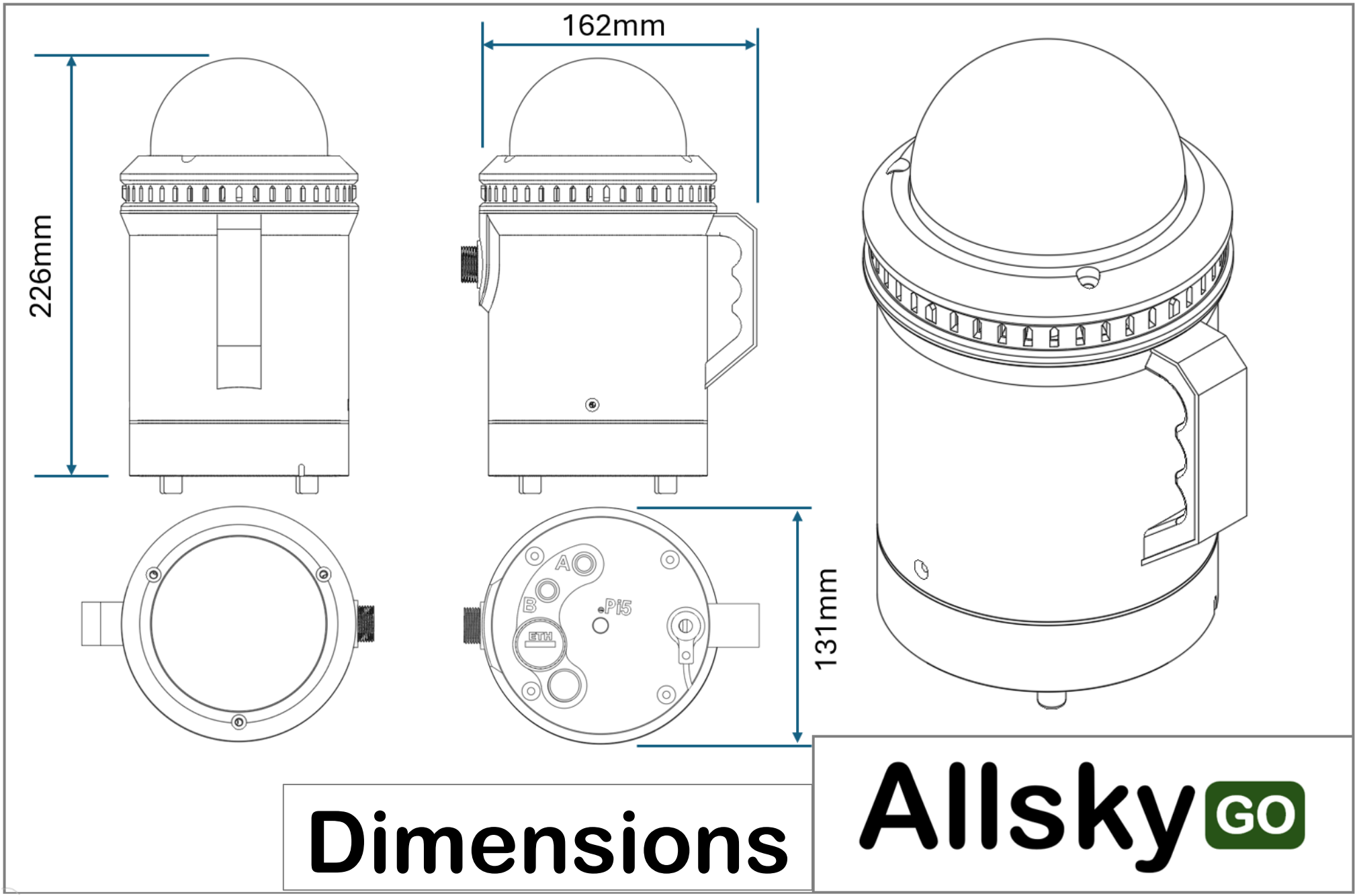
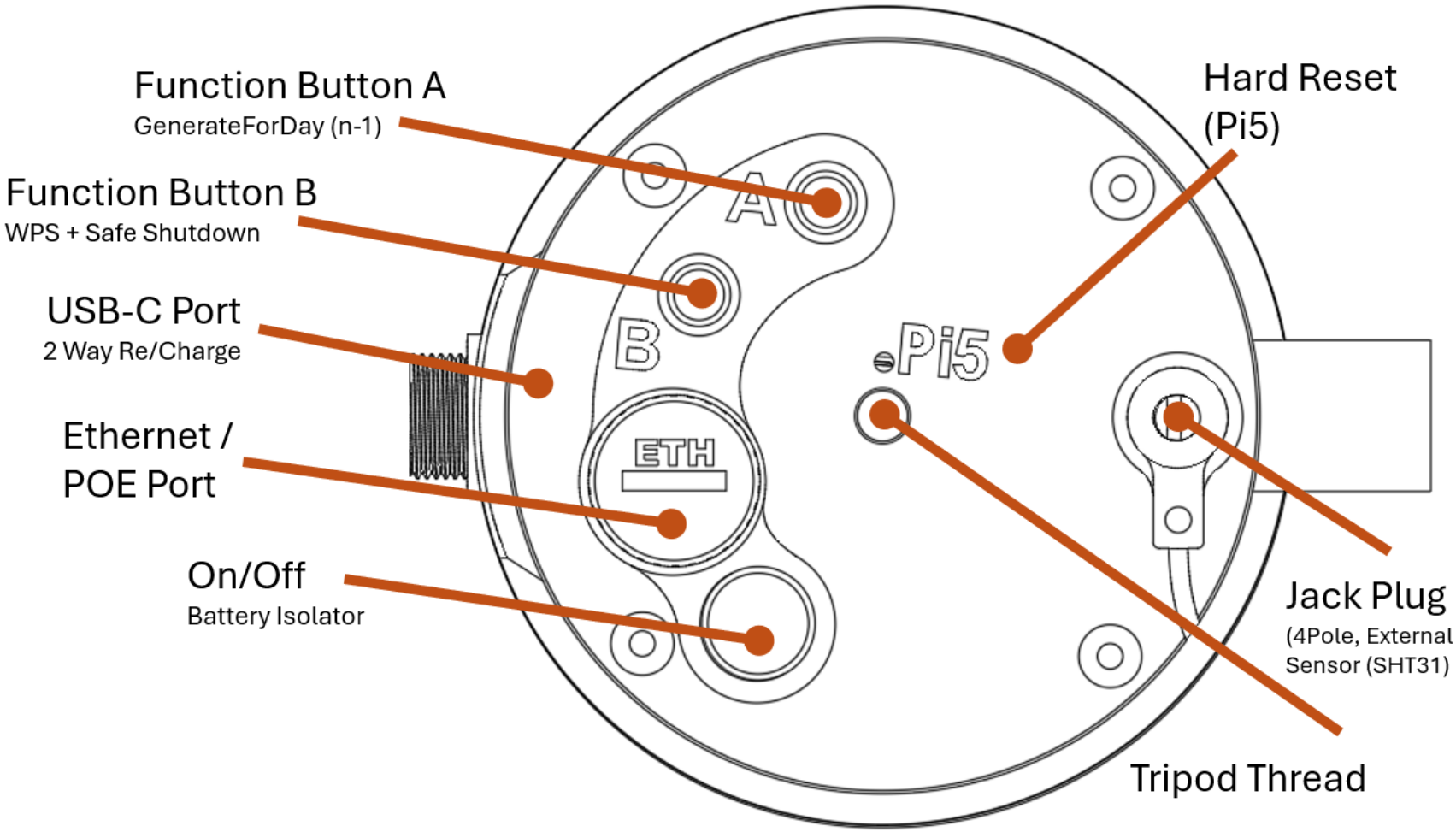
Dimensions



Functions



Functions

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Components

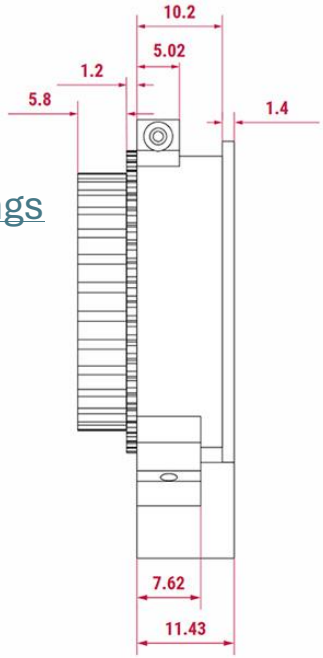
CS-Mount Lens

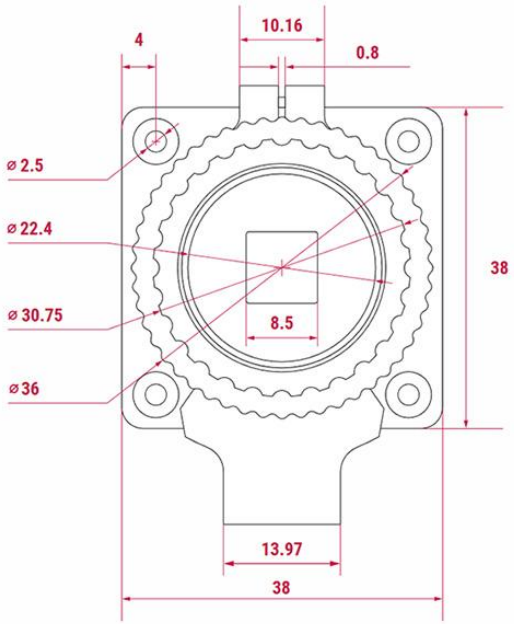
Characteristic 2.5 or 2.8mm for 150-170deg FOV AliExpress

HQ Camera Mount

Mark: Raspberry Reichelt

CS-Mount_HQ_Camera_Mechanical_Drawings

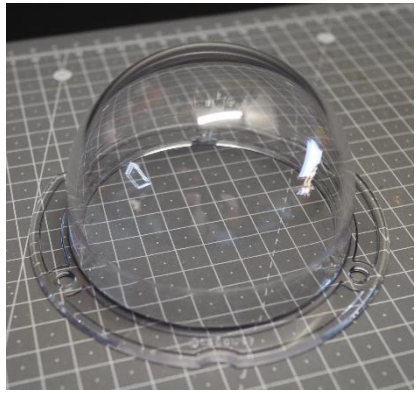


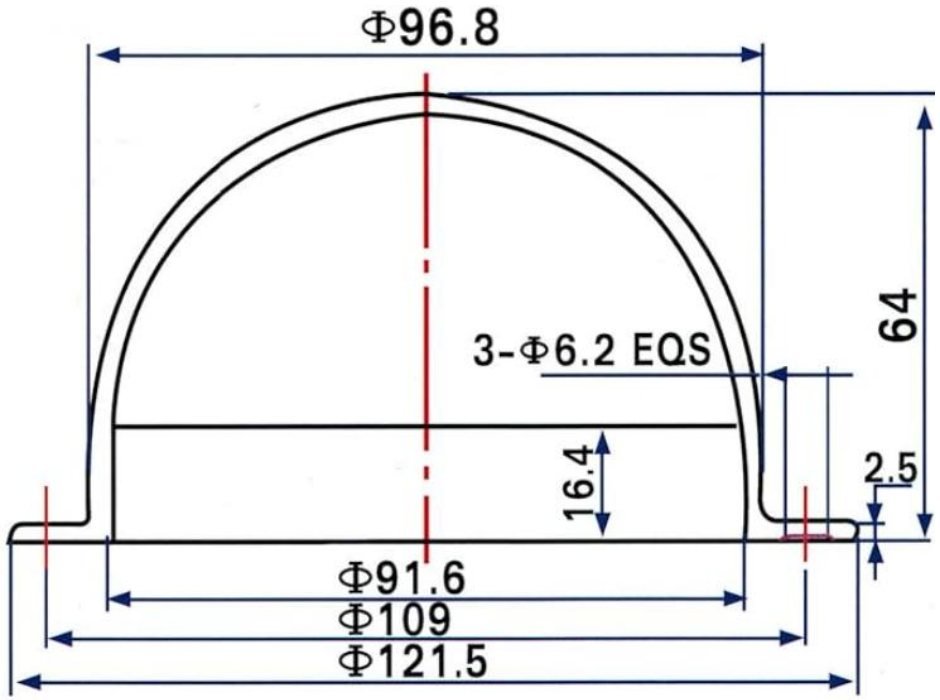


Acrylic Dome

Brand: JMC Amazon

Characteristic 3.5Inc Dome





Power Bank

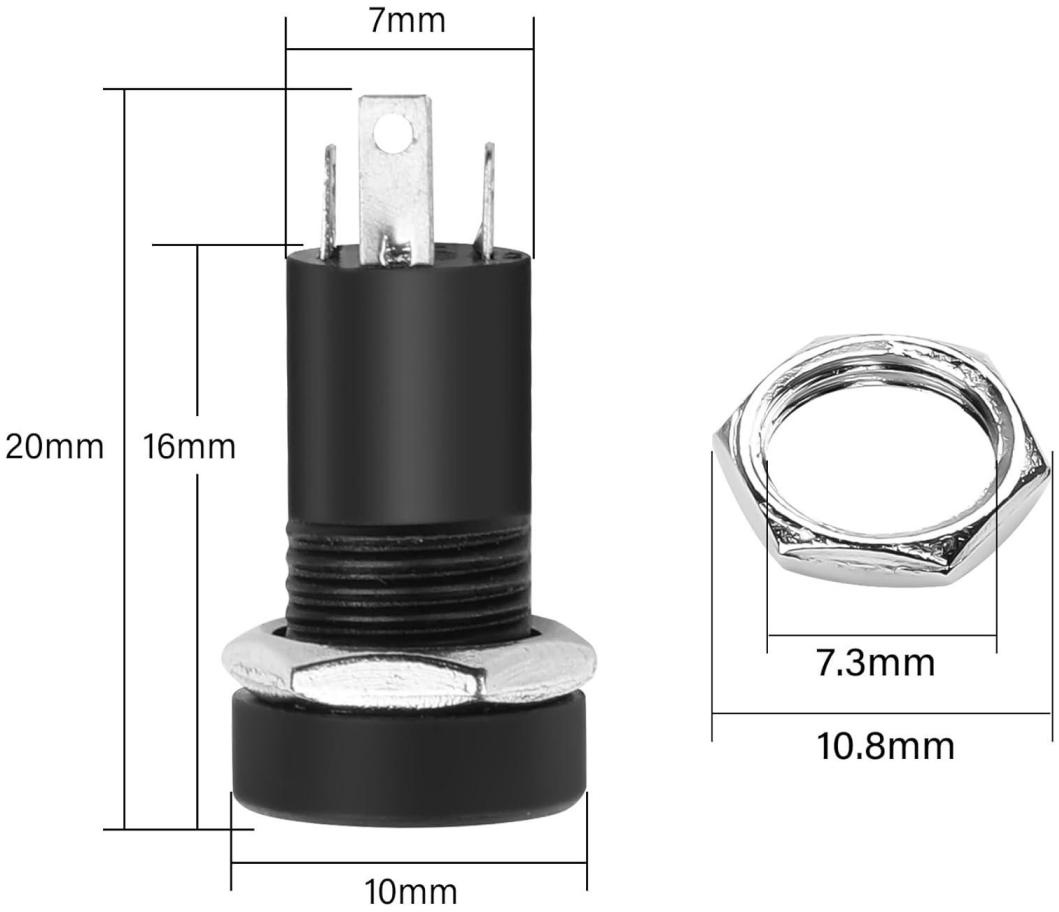
Make: Vrurc Amazon (VRURC Mini Power bank)

Characteristic: 20.000mah

Jack plug (female)

Distributor: PNGKNYOCN - Amazon

Characteristic: 4 Pole – Requires 4 Pole Jack Plug



Power Switch (3-9v)

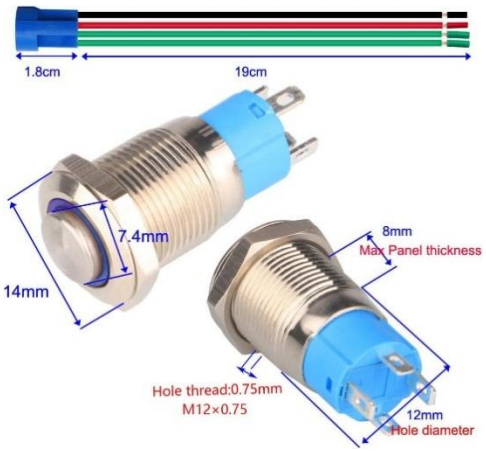
Distributor: Gebildet Amazon

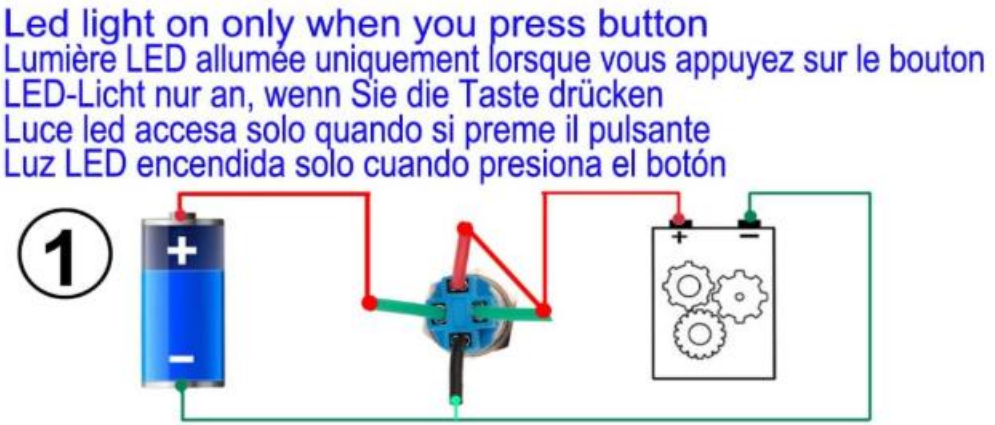
Characteristic: 16mm Thread

Momentary Switch (3-9v)

Distributor: Gebildet Amazon

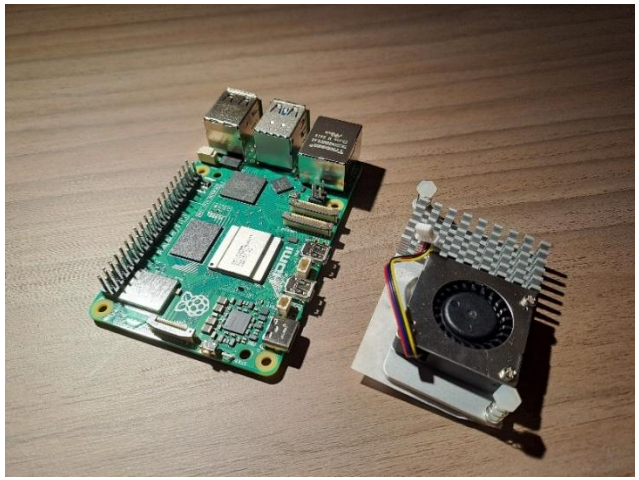
Characteristic: 12mm Thread

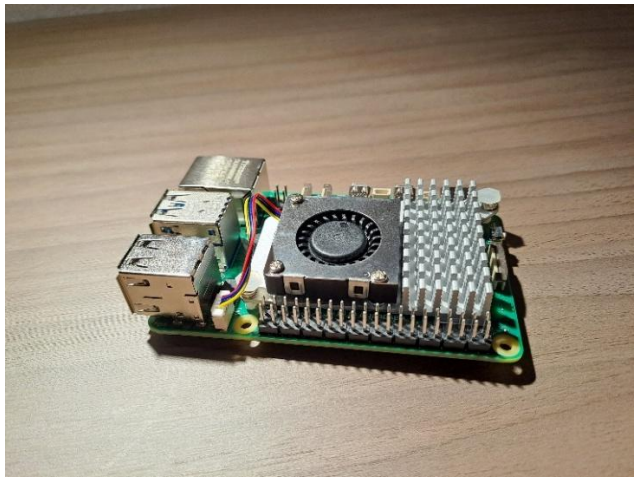


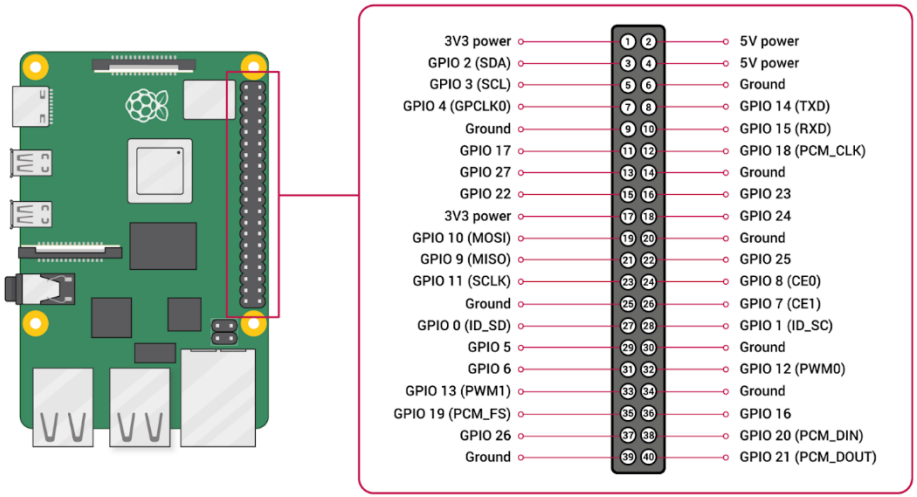


Raspberry Pi5 & Active Cooling Module

[Reichelt (DE)]







https://datasheets.raspberrypi.com/rpi4/raspberry-pi-4-mechanical-drawing.pdf

Waterproof USB-C Pass-thru (only the core section required)

Distributor: PNGKNYOCN Amazon

Characteristic: 19mm Thread

Ethernet Port Pass-Thru

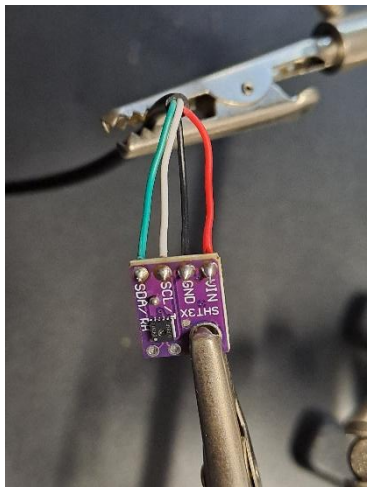
Distributor: Greluma Amazon

Characteristic: 24mm Diameter

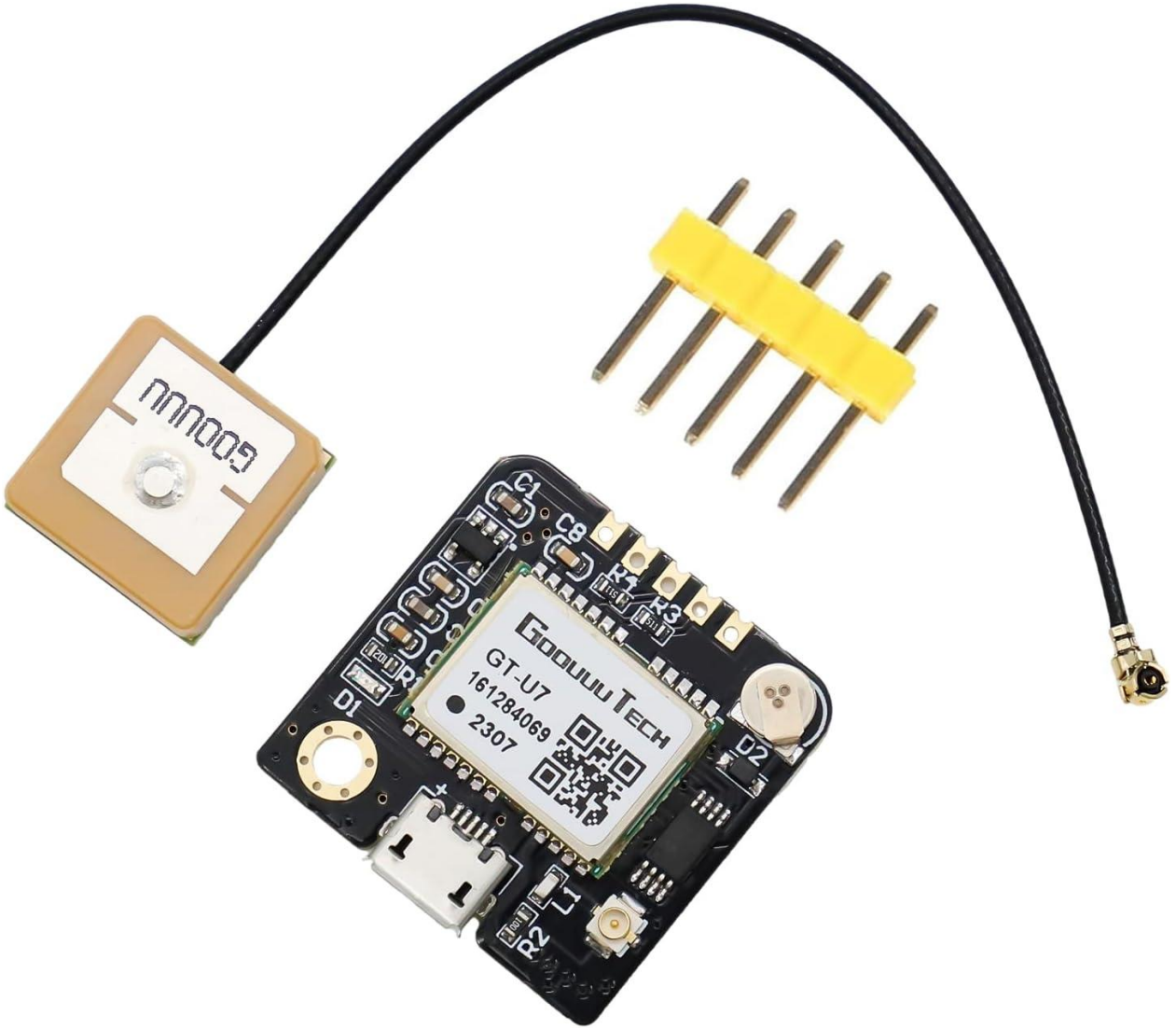
SHT31 Humidity and Temperature Sensor

Different Options exist depending on your circumstance. Sensors with 4 poles can be wired to the Jack Plug and programmed for Raspberry.

Amazon



GT-U7 GPS Modulo



¼-20 Tripod Threaded Inserts

Mark: Ruthex Amazon

Characteristic: 7.9-8mm hole – two lengths available (both compatible)

M3 Threaded Inserts

Characteristic: 3.9-4.0mm width

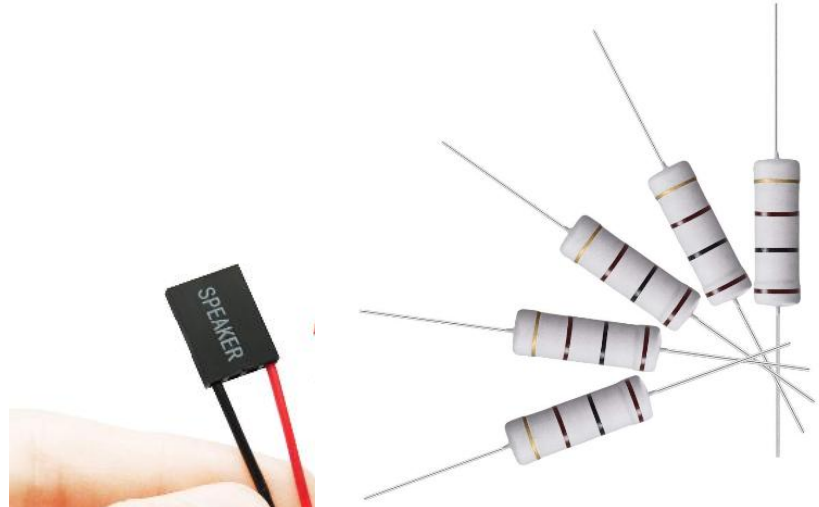
Mark: Ruthex Amazon

Metal Oxide Film Resistors

Distributor: PATIKIL Amazon

Characteristic: 100 Ohm 5W

Amazon.it



Piezo Buzzer

Distributor: ICQUANZX Amazon

RTC External Battery

Distributor: ZDE Amazon

Characteristics: Coin Battery CR2025