



Homebrew Wifi/ Bluetooth GPS accessory for AUX bus case 2



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updated 22. 5. 2021 | published 22. 5. 2021

Summary

Case for the project at <https://www.cloudynights.com/topic/743750-homebrew-wifiblueetooth-accessory-for-aux-bus/>.



3.54 hrs



3 pcs



0.20 mm



0.40 mm



PLA



38 g



Prusa MK2/S

[Learning](#) > [Physics & Astronomy](#)

Tags: [telescope](#) [esp32](#) [celestron](#) [skyfi](#)

This is a case for a Wifi & GPS device meant for Celestron telescope mounts at have available AUX ports. It combines the features of a few commercially available dongles into one device. The full project discussion can be found at <https://www.cloudynights.com/topic/743750-homebrew-wifiblueetooth-accessory-for-aux-bus/>. The user coollick designed a PCB for mounting the electronics. This case design uses that PCB (tested with version 1.0). The ESP32 is connected to the coollick PCB with headers. (I suppose I could have made it all thinner without the headers, but that would have made securing the ESP32 difficult.)

The ESP32 is secured to the case with M2.5x4mm screws. You can then attach the coollick PCB via headers. The BN-180 GPS module slips into a thinned, top pocket. 3 microswitches slot into the sides to control the different WiFi features. I used a “mxuteuk micro miniature slide switch” SPDT, SS-12F15-G5, found at amazon.

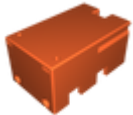
Two different lids are provided, depending on the horizontal mount hole spacing of the 0.96" SSD1306 OLED. I have a SPI one at ~24.75mm and I2C one at ~23.25mm. You can use M2x4mm screws to secure the display to the lid (or hot glue I suppose).

The lid hinges into the base and is secured with two M4x8mm bolts and nuts (in captive pockets). On the backside, there is another set of M4x8mm for future mounting options as well as slides on the sides for potential clamps.

Designed in FreeCAD.

Printed fine for me at 0.2mm.

Model files



esp-32-wifi-casebottom003.stl



esp-32-wifi-casetopoled_2325.stl



esp-32-wifi-casetopoled_2475.stl

Print files



esp-32-wifi-casetopoled_2475_02mm_pla.gcode

🌀 PLA 📏 0.40 mm 📐 0.20 mm ⌚ 1.00 hrs ⚖️ 10 g 🖨️ Prusa MK2/S



esp-32-wifi-casetopoled_2325_02mm_pla.gcode

🌀 PLA 📏 0.40 mm 📐 0.20 mm ⌚ 1.00 hrs ⚖️ 10 g 🖨️ Prusa MK2/S



esp32-wifi-casebottom003_02mm_pla.gcode

🌀 PLA 📏 0.40 mm 📐 0.20 mm ⌚ 2.54 hrs ⚖️ 28 g 🖨️ Prusa MK2/S

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