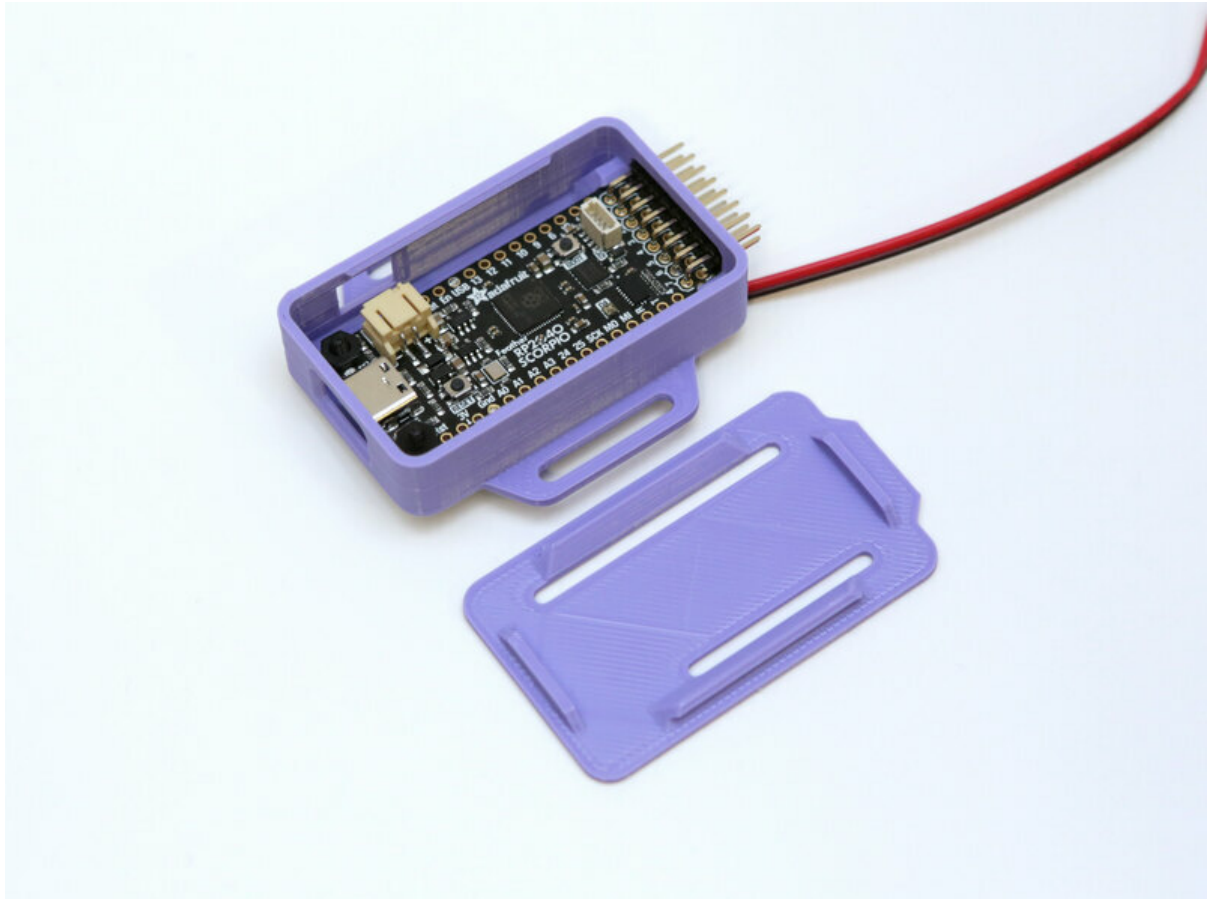




Feather Scorpio Snap Fit Case

Created by Ruiz Brothers



<https://learn.adafruit.com/feather-scorpio-snap-fit-case>

Last updated on 2024-06-03 03:45:36 PM EDT

Table of Contents

Overview	3
<ul style="list-style-type: none">• 3D Printed Enclosure• Parts	
CAD Files	4
<ul style="list-style-type: none">• CAD Assembly• CAD Parts List• Build Volume• Design Source Files	
Assembly	6
<ul style="list-style-type: none">• Choose Headers• Installing Headers• Install Feather RP2040 Scorpio• Align Mounting Holes• Install Screws• Secure Feather• Top Cover• Installed Cover• USB Cable	

Overview



3D Printed Enclosure

Make a snap fit case for the Feather RP2040 Scorpio! It features openings for the USB, battery and 2x8 header.

Tabs allow the case to be secured to a number of different surfaces. A slot in the bottom of the case allows for wires to pass through. The top cover features openings for the 12 and 16 header pins.

Parts



[Adafruit Feather RP2040 SCORPIO - 8 Channel NeoPixel Driver](https://www.adafruit.com/product/5650)

If there is one thing Adafruit is known for, its mega-blinky-fun-rainbow-LEDs. We just love sticking NeoPixels anywhere and...

<https://www.adafruit.com/product/5650>



Black Nylon Machine Screw and Stand-off Set – M2.5 Thread

Totalling 380 pieces, this M2.5 Screw Set is a must-have for your workstation. You'll have enough screws, nuts, and hex standoffs to fuel your maker...

<https://www.adafruit.com/product/3299>

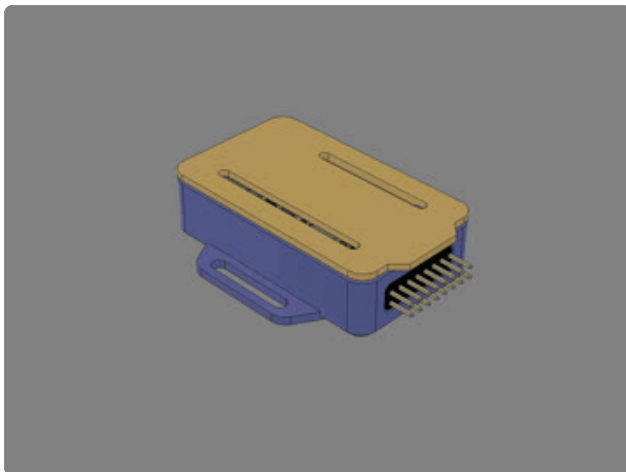


Pink and Purple Woven USB A to USB C Cable - 1 meter long

This cable is not only super-fashionable, with a woven pink and purple Blinka-like pattern, it's also made for USB C for our modernized breakout boards, Feathers, and...

<https://www.adafruit.com/product/5153>

CAD Files



CAD Assembly

The Feather is secured to the case using two M2.5 x 10mm screws and hex nuts. The top cover snap features onto the case.



CAD Parts List

STL files for 3D printing are oriented to print "as-is" on FDM style machines. Parts are designed to 3D print without any support material with PLA filament. Original design source may be downloaded using the links below:

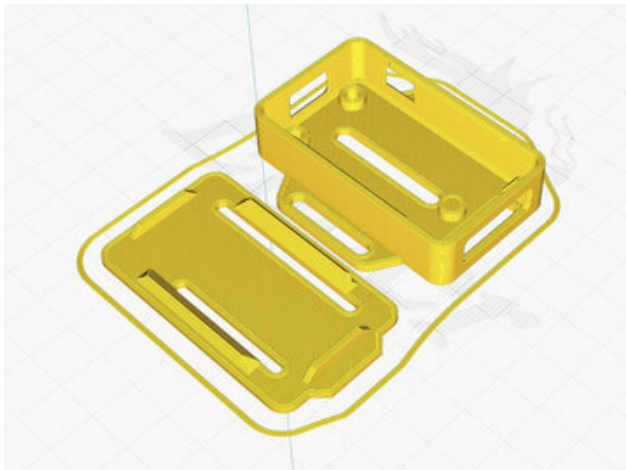
scorpio-case.stl
scorpio-cover.stl

Download CAD source

<https://adafru.it/18pf>

Download STLs.zip

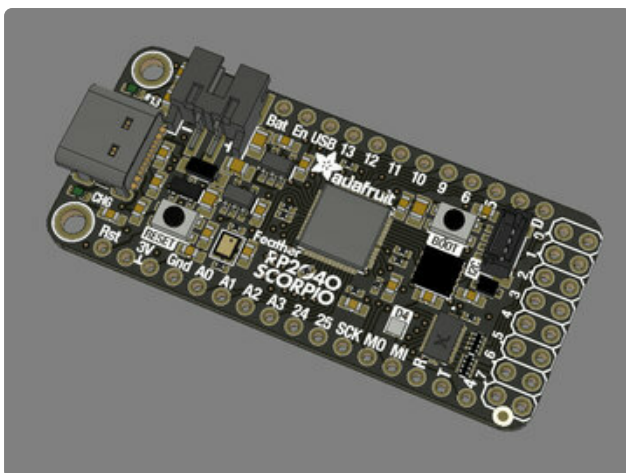
<https://adafru.it/18pA>



Build Volume

The parts require a 3D printer with a minimum build volume.

60mm (X) x 50mm (Y) x 50mm (Z)



Design Source Files

The project assembly was designed in Fusion 360. This can be downloaded in different formats like STEP, STL and more. Electronic components like Adafruit's boards, displays, connectors and more can be downloaded from the [Adafruit CAD parts GitHub Repo \(https://adafru.it/18hD\)](https://adafru.it/18hD).

Assembly

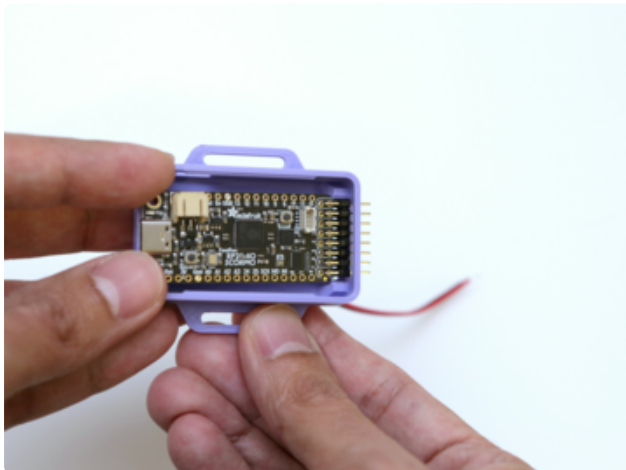
Choose Headers

Decide which headers will be needed for your project. The Feather RP2040 Scorpio ships with the following headers:

- 2x 1x16 male straight headers
- 1x 2x8 male straight headers
- 1x 2x8 male right-angled headers

Installing Headers

The case supports headers installed onto the top side of the Feather RP2040 Scorpio.



Install Feather RP2040 Scorpio

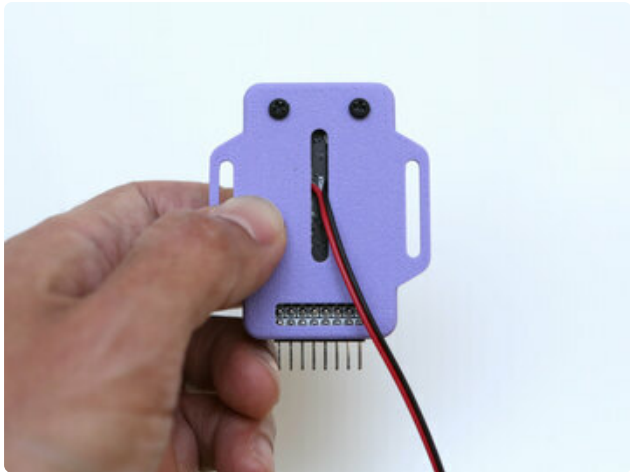
Insert the Feather at an angle so the PCB slides underneath the clips.

External wire can be fed through the bottom slot of the case such as voltage and ground connections.



Align Mounting Holes

Place the PCB down so it fits flush with the built-in standoffs. Adjust the PCB so the mounting holes are lined up.



Install Screws

Insert two M2.5 x 10mm long screws through the bottom of the case.

There's a slot down the middle of the case back that can be used for external wires.



Secure Feather

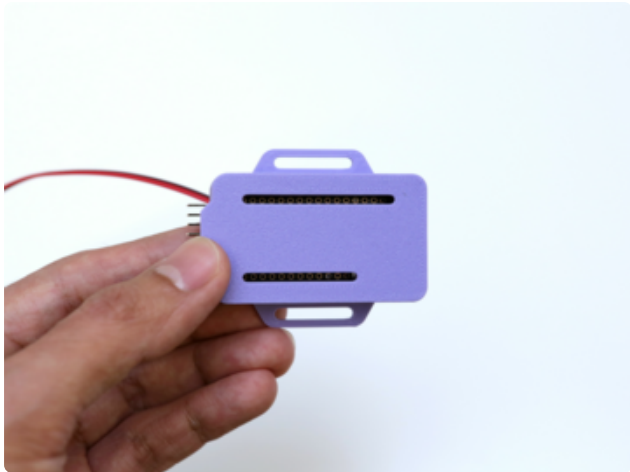
Insert and fasten 2x M2.5 hex nuts onto the threads of the screws.

Make sure the hex nuts do not cover the on-board LEDs on the Feather.



Top Cover

Orient the top cover so the two slots are lined up with the header pins on the Feather.



Installed Cover

Press the two parts together to snap fit them together.



USB Cable

Insert a USB-C data cable to connect and power up the Feather RP2040 Scorpio.