



3D Printed Pi Camera Case and Tripod

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<https://learn.adafruit.com/3d-printed-pi-camera-case-and-tripod>

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Overview



This is a simple project for making an 3D printed case and tripod for the Raspberry Pi camera board. It's great for photography and monitoring projects that need a basic stand. For example, you could use this to make a monitoring setup for an OctoPrint connected 3D printer.

You'll need a few machine screws and other camera bits to assemble this project along with the 3D printed parts and Raspberry Pi camera module.



We have most of the parts to make this project. See the full parts list below.

Parts

- [Raspberry Pi Camera Board \(http://adafru.it/1367\)](http://adafru.it/1367)
- [Flex Cable for Pi Camera \(http://adafru.it/2087\)](http://adafru.it/2087)

- [1/4" D-Ring \(http://adafru.it/2629\)](http://adafru.it/2629)
- [Camera / Tripod 3/8" to 1/4" adapter screw \(http://adafru.it/2392\)](http://adafru.it/2392)
- [Swivel Head Pan Tilt Adapter \(http://adafru.it/2464\)](http://adafru.it/2464)

Tools & Supplies

- [3D Printer \(\)](#)
- [Filament \(http://adafru.it/2080\)](http://adafru.it/2080)
- 4x #2-56 machine screw
- 1x M3 machine screw
- 3x #4-40 3/8 machine screw + nuts
- Lens for Mobile Phone

3D Printing



Materials and settings

The parts can be printed in PLA, ABS or any other hard plastic. The tripod-foot.stl part works best if printed in rubber filament. The parts are oriented in the center of the bed and ready to print "as is". Support material are not necessary for any of the parts.

tripod-leg.stl	Legs for tripod	text
tripod-foot.stl	Rubber feet for bottom of tripod legs	text

tripod-base.stl	Base part for tripod d-ring screw	text
picam-front.stl	Front case for Raspberry Pi camera board	text
picam-back.stl	Back case for Raspberry Pi camera board	text
picam-adapter.stl	Adapter for 3/8" to 1/4" camera screw	text

[Download Design Files](#)

Don't have access to a 3D Printer?

You can send the STL design files to a local maker on 3DHubs to get your parts printed and shipped to you! Check out your local listing

[3D Hubs](#)

Assembly



To start, we can attach the base connector to the enclosure using an M3 screw and then install the camera tripod adapter to the inside of the base connector.



We can then insert the flex cable from the pi camera through the opening of the enclosure part and pull it all the way through.



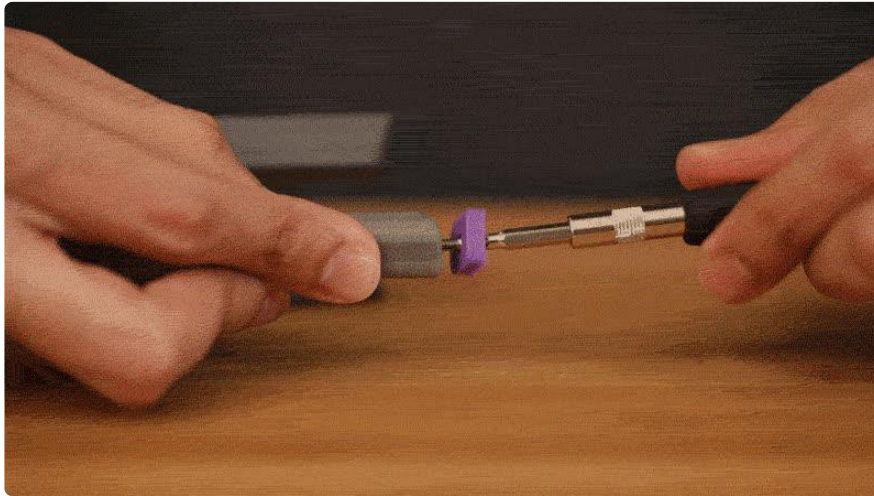
You'll want to lay the camera board over the standoffs and hold it in place while fastening 4 machine screws into the of the back of the case.



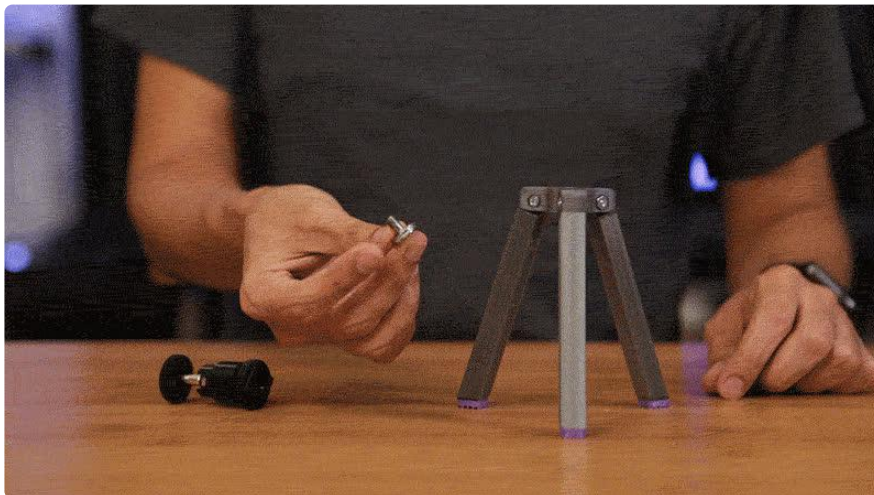
We can use a camera lens that are commonly used for mobile phones by sticking the included o-ring to the front of the case which is pretty nice because it uses a magnet making it easy to swap out different lenses.



To assemble the tripod, we'll insert a hex nut and then insert a tripod leg into the slots near the bottom. While holding the hex nut in place, We can insert and fasten a machine screw into the hole on the side.



For grippy feet, we used ninjaflex filament. We can simply insert another screw here and fasten it to the bottom of the tripod leg.



Next up we can insert the D-ring with the ¼ inch screw through the bottom of the tripod base and then install the swivel-head adapter by tightening it onto the tripod connector.



Lastly, we can attach the raspberry pi camera to the swivel-head adapter by screwing it on tightly.



And now we have a super simple yet really useful tripod for the Raspberry Pi camera.