OctoCam - Pi Zero W Project Kit

PIM286

A cute, connected, cephalopod camera to stick on your window or sit on your shelf!

The OctoCam kit has everything* you'll need, including a Pi Zero W, a super-small 5MP camera, a fun octopus acrylic mount with four suction cups, and a desk stand. It'll take you around 30 minutes to put it all together (check out our assembly guide for details).

The MagPi said *"with its compact dimensions and fun design, the OctoCam is very appealing"*, in their four star review.

Note that connecting your OctoCam running motionEyeOS to Wi-Fi requires a bit of extra configuration, but we have full details in our tutorial on setting up motionEyeOS.

Kit contents*

- Pi Zero W
- 5MP camera with built-in cable and circuitry
- OctoCam acrylic mount, suction cups, desk stand
- 50cm USB A to micro-B cable
- USB A (female) to micro B (male) adaptor
- Mini to full-size HDMI adaptor
- Male 2x20 pin header
- Sticker sheet
- Comes in a reusable kit box

*Just add your own micro-SD card

OctoCam uses our neat little Pi Zero camera; the most compact way to add a camera to your Pi. It uses the same 5MP sensor as the original Pi camera, so it works out of the box with your Pi, in the same way as the official Pi cameras. The cable and circuitry is all built-in, meaning that connecting it is as simple as plugging in the ribbon cable to the connector on your Pi Zero W.

This kit takes advantage of the built-in wireless LAN and Bluetooth on the Pi Zero W, meaning that there's no longer any need for a USB Wi-Fi dongle.

OctoCam is perfect for setting up a compact CCTV camera in your house, or for recording time lapses. Stick it to your kitchen window and keep an eye on your bird feeder or nesting box. Keep tabs on your cat or dog while you're out of the house, or use it to track the growth of your houseplants!

Software

We love the motionEyeOS software, which makes it simple to set up your OctoCam as a remote camera that you can monitor through any connected web browser. It has all sorts of bells and whistles to trigger photos and videos to be captured when motion is detected, build time lapses, send notifications or tweets, and automatically sync. images to Dropbox or Google Drive.

Notes

Assembled size (not including suction cups or desk stand) of OctoCam is 80x73.5x14mm (HxWxD).

Assembling Octocam

This tutorial will guide you through how to assemble your OctoCam kit. Octocam is the cutest way to set up a tiny motion-activated security camera, a baby monitor, or timelapse rig.

The on-board wireless LAN and Bluetooth on the Pi Zero W mean that it's possible to monitor your OctoCam remotely, or have it send images or animated GIFs to Twitter periodically.

The guide will show you how to attach the camera to your Pi Zero W, assemble the OctoCam camera mount, and how to attach the optional desk stand.

It should less than 30 minutes to assemble everything.

Preparing the OctoCam mount

You should have the following pieces:

- red, etched acrylic OctoCam mount
- clear acrylic desk stand
- 4x clear suckers
- 4x M2.5 white nylon bolts
- 8x M2.5 white nylon nuts
- 4x M2.5 white nylon spacers
- small rubber foot

Let's start by taking the red OctoCam mount, the four bolts and four of the nuts. Push each of the four bolts through the circular holes at the top and bottom of the mount, from the front.

Now, flip the whole thing over and place face down on your desk/table so that the ends of the bolts are sticking upwards and use the four nuts to secure the bolts at the back.

Take the four spacers and slip them onto each of the four bolts. They will space the camera just the right distance away from the Pi Zero W, and the rubber foot (that we'll add later) will prevent too much heat from radiating from the Pi Zero W's CPU to the camera.


Connecting the camera and mounting it

Take your camera and Pi Zero W and place both face up (with the USB connectors on the Pi Zero W facing upwards, and the camera lens also facing upwards) on your desk.

Gently pull the camera connector clip out on either side. It's fairly easy to pull the clip right off, irreparably damaging it in the process, so be really careful.

Push the cable of the camera into the connector, just underneath the black clip, and then gently push the clip all the way back in, pushing on either side.
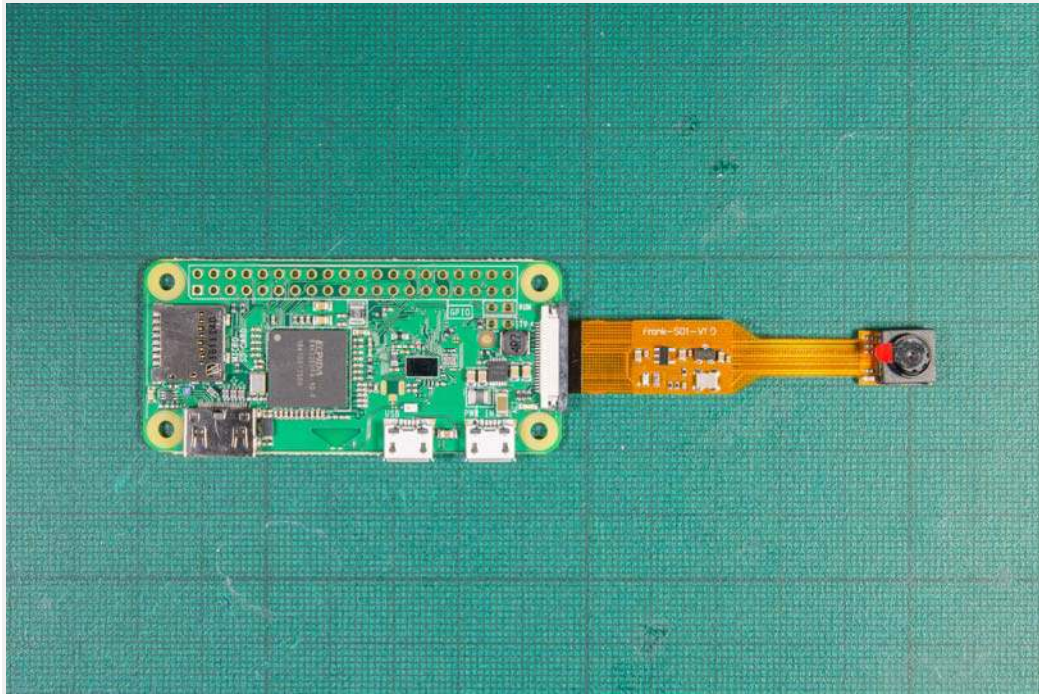
Now flip the Pi Zero W with connected camera over. Peel the paper off the sticky tape on the back of the camera module (just the one on the camera module itself). Take the small rubber foot and stick the non-sticky side of it to the sticky tape on the camera module, so that the sticky side of the rubber foot is exposed. This means that when you mount the camera, the sticky side of the rubber foot will stick to the back of the Pi Zero W, holding it in place.
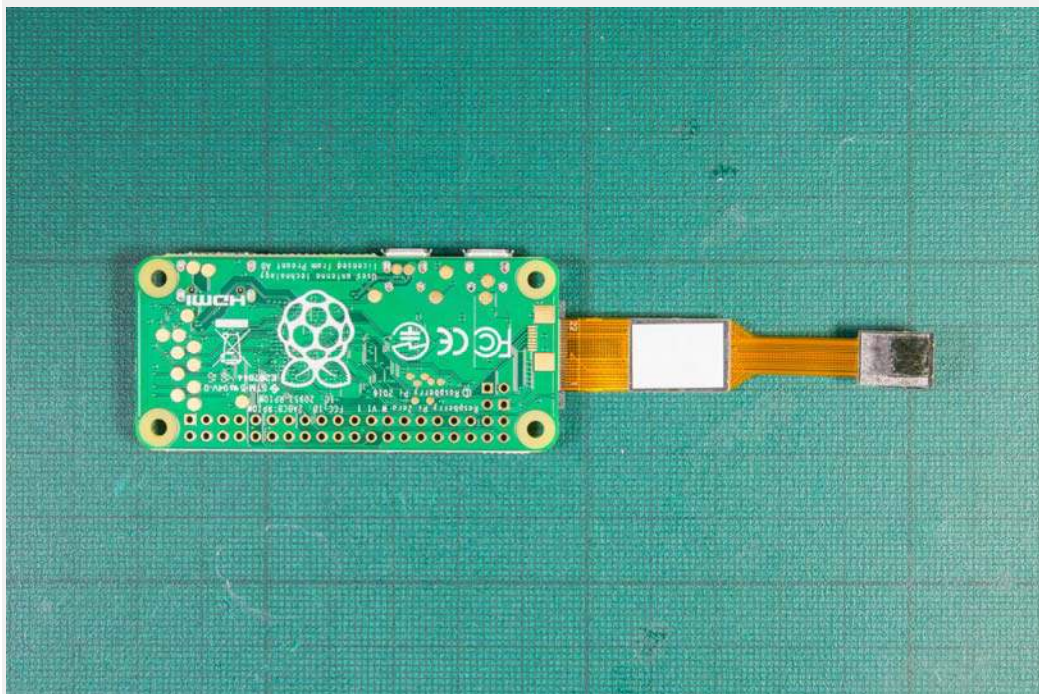
Peel the small piece of plastic film off the camera lens, and then place the camera lens into the large hole on the OctoCam mount, as in the image below.
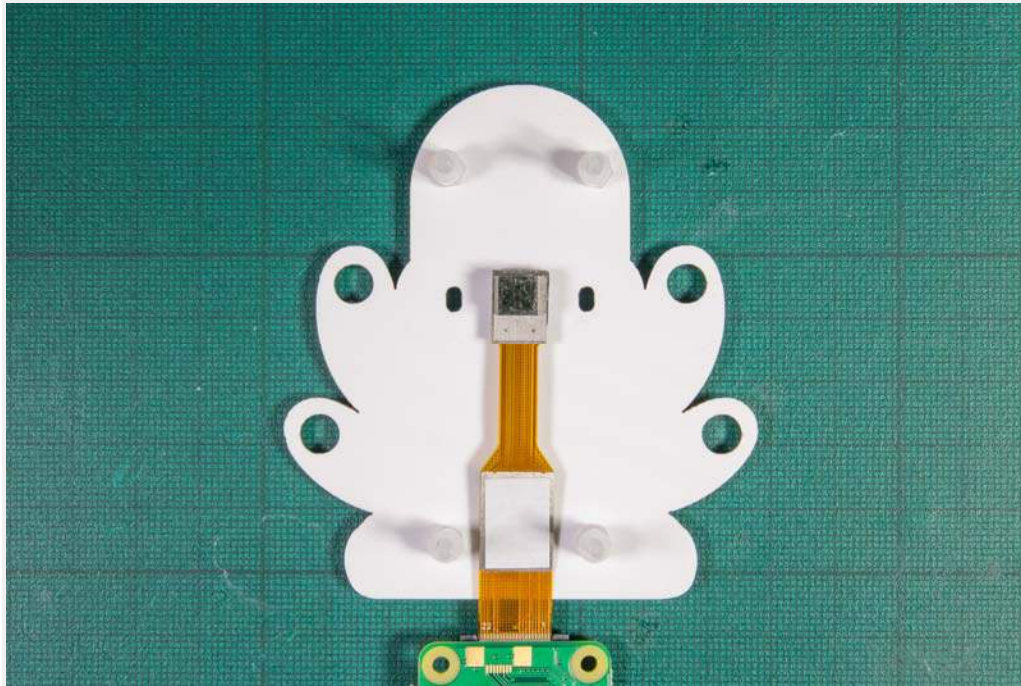
Now, fold the Pi Zero W over carefully, making sure that the camera lens stays located in the hole in the OctoCam mount. Slip the Pi Zero W down onto the bolts and use the remaining four nuts to secure it.

Flip the whole thing right-side-up now, and push the four rubber suckers through the holes in the OctoCam mount. If you're using your OctoCam mounted to a window, then you're done (skip to the bottom for links to the software guides)! If you'd like to use the desk stand, then read on!

Mounting and using the desk stand

The clear piece of acrylic that you'll be left with is the desk stand. It allows you to sit your OctoCam on your desk, or on a shelf, if you wish. The two slots on it hold the stand to your OctoCam using the bottom pair of bolts and nuts.

Loosen up the bottom pair of nuts, and then slot the desk stand onto the bolts/nuts as shown below.

Tighten up the nuts until they grip the stand firmly in place. You can now sit your OctoCam on your table/shelf; your own personal cephalopod security guard!