



# Camera Pi

## An interview with David Hunt

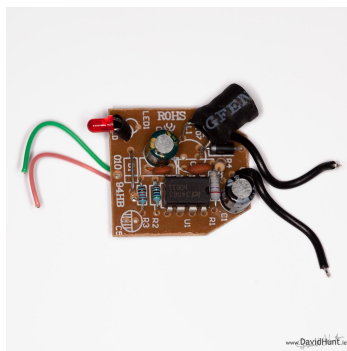
Take a look at the photo to the left and you will see a perfectly normal camera that has been given some extra functionality by the inclusion of a Raspberry Pi in the grip. This is Camera Pi.

Q: When you saw the Raspberry Pi did you immediately think that it was ideal, or did you order one for other projects and then consider the camera grip?

Embedding a Raspberry Pi inside a camera grip was a bit of a Eureka moment. I had looked at the Beagleboard and similar over the last couple of years but the price point was too high each time. The Pi is a perfect combination of price to power ratio, size and features. I saw an announcement on Engadget and decided to get one.

Now, with Camera Pi, I can automatically download photos wirelessly from the camera and preview on an iPad, and remotely issue commands over SSH using gphoto2 to take photos.

Q: How did you discover that the DC-DC circuitry inside an iPhone charger was what you needed to connect the battery?



Someone on the Raspberry Pi Forums mentioned this, and by chance I had a broken iPhone charger in the recycling box. Originally I connected 5V from AA batteries to the DC-DC converter

but only got 4V out. I then had the idea to use a 7.2V Canon camera battery and got 5.08V, perfect for powering the Pi. I then connected it to the Pi, and it booted up fine. Both Ethernet and USB were working. I got very excited at this!

I cut the original battery enclosure from the grip in half and used that to mount the battery. This was then located in a cut-out in the grip to the right of the Pi, although it does push on the GPIO a bit. I covered the pins with shrink wrap to ensure they did not touch.



www.DavidHunt.ie

Q: How do you compare your solution to the Eye-Fi SD card ([www.eyefi.com](http://www.eyefi.com))?

I have an Eye-Fi card but as my Canon 5D uses Compact Flash an adaptor is needed. I only had limited success with it. I'm not blaming Eye-Fi as they do state this on their website, but it did mean I had to look for an alternative wireless solution to transfer photos. The Pi also gives me a lot of additional functionality by enabling direct control of the camera.

Q: Did you follow a plan for this project from the outset or use a more organic approach adding functionality as you went?

It is definitely an organic project, although I do have a firm idea of what I want to achieve. When I saw the Pi I thought it has lots of possibilities with the hardware ports on board. I had watched "The Mountain" by TSO Photography ([www.tsophotography.tumblr.com](http://www.tsophotography.tumblr.com)) and it was inspiring stuff: his camera was connected to a stepper motor and could slowly pan as it took images. This kind of control is a killer feature and it is one of several possible directions Camera Pi may go in as the GPIO possibilities are endless.

Q: In your blog you detail having issues with gphoto2. How did you resolve this problem?

When I first connected the camera via USB gphoto2 would lock up after each image giving an error. I parked the project for a