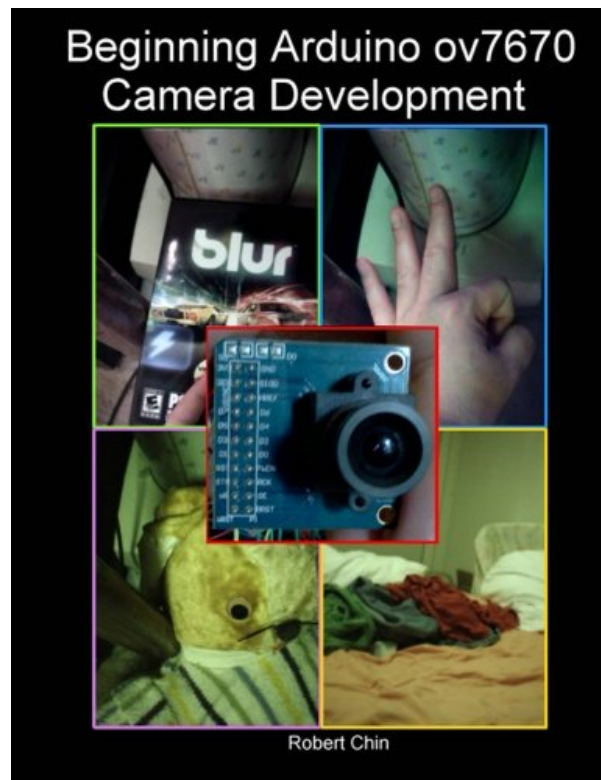


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Robert Chin

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About the Author

Robert Chin has a Bachelor of Science degree in computer engineering and is experienced in Arduino camera development, C/C++, Unreal Script, Java, DirectX, OpenGL, and OpenGL ES 2.0. He has written 3d games for the Windows, and Android platforms. He is the author of "Beginning Android 3d Game Development", and "Beginning IOS 3d Unreal Games Development" both published by Apress and was the technical reviewer for "UDK Game Development" published by Course Technology CENGAGE Learning.

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This book is a great investment for those interested in developing camera related projects for the Arduino. These camera applications can involve security, surveillance, photography, toys, robots, and drones. Specifically, this book covers the Omnivision ov7670 digital camera and its use with the Arduino microcontroller. This book takes an interactive hands on approach and shows the reader in a step by step guide how to use the ov7670 with the Arduino and an SD card reader/writer to take photos, save them to an SD card, and then to convert them to an easily viewable format. This book will save you many hours or even weeks of frustration in trying to get this camera to work correctly. This book also gives you the basic background on the Arduino and digital cameras in general so that you will be able to develop camera projects for cameras other than the ov7670.

Who this book is for:

1. Beginners to the Arduino interested in developing custom Arduino camera related projects that are suitable for photography, surveillance, security applications or for use with drones and robots.
2. High school and university students needing a quick start guide to using a low cost digital camera in their school projects.

Key Selling Points:

1. Provides an interactive "hands on example" based beginner's quick start guide to using the extremely popular Omnivision ov7670 camera with the Arduino including using the undocumented features and incorrectly documented features that are necessary to get the camera to operate correctly.
2. Provides a good starting point for Arduino based camera applications as diverse as image processing, photography, surveillance, and home security with professional quality reusable code for the reader to use in his or her own projects.
3. Covers the FIFO version of the ov7670 which is the preferred camera version for most camera projects.

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About the Author

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Best Arduino Camera Book Reference

By Robin T. Wernick

This is exactly the kind of information needed to manage the engineering complexity of connecting a highly controllable camera to your Arduino card and be successful in taking pictures. This book opens up the world of inexpensive digital video recording to the average experimenter. Be warned, the book is full of technical detail and circuit requirements in order for this combination of devices to work. So be prepared for a tour de force in getting the first prototype to work on your bench. The author does a top notch job of delivering the right information to the experimenter to manage this complex subject.

The book covers the pinouts and features of this particular camera(SD memory included). It covers the nature of the camera's conversion of visual light into digital data and the effects of contrast selection and internal filter use. There are a number of background pdf files to support the subject listed on the internet and an extensive appendix to support experimental variations that the reader would like to explore.

There are a few issues that are not discussed in the book that the reader should know about. First, the specific camera model discussed in the book is not generally available and the OV7670 FIFO model must be specifically ordered. Otherwise, you may get the wrong device to work with the book's information even if the pinout is the same. I found 13 different cameras not of this type on the first two pages of Amazon using a search for "Arduino camera". The second issue is pin connectivity. The camera module has 18 pins and an Arduino UNO only has 10 digital and a few power pins for use. So, an UNO or Leonardo will not work for all possible combinations. A Mega or DUE should be intended in the mind of the experimenter. The third issue is performance. The UNO and Leonardo have a 16 MHz clock which is too slow for camera use unless the camera has the integrated FIFO buffer. Even so, these small Arduinos have very little memory and the program size from the book can overwhelm the limited memory available. That is why I am doing all of my Arduino camera prototyping on a DUE. And extra cycles will be needed to interact remotely with an Arduino camera device which once again supports the need for the 85 MHz clock of the DUE. Good experimenting.

0 of 0 people found the following review helpful.

Very good practical book

By Vedran

Very good practical book, saved me a lot of time. If anyone needs microcontroller + camera project I highly recommend this book.

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