The Zynq Book: Embedded Processing With The Arm Cortex-A9 On The Xilinx Zynq-7000 All Programmable Soc
Synopsis

This book is about the Zynq-7000 All Programmable System on Chip, the family of devices from Xilinx that combines an application-grade ARM Cortex-A9 processor with traditional FPGA logic fabric. Catering for both new and experienced readers, it covers fundamental issues in an accessible way, starting with a clear overview of the device architecture, and an introduction to the design tools and processes for developing a Zynq SoC. Later chapters progress to more advanced topics such as embedded systems development, IP block design and operating systems. Maintaining a ‘real-world’ perspective, the book also compares Zynq with other device alternatives, and considers end-user applications. The Zynq Book is accompanied by a set of practical tutorials hosted on a companion website. These tutorials will guide the reader through first steps with Zynq, following on to a complete, audio-based embedded systems design.

Book Information

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Average Customer Review: 3.7 out of 5 stars | See all reviews (13 customer reviews)
Best Sellers Rank: #352,450 in Books (See Top 100 in Books) #19 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Circuits > Logic #128 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Digital Design #152 in Books > Computers & Technology > Hardware & DIY > Microprocessors & System Design

Customer Reviews

3 Stars = "it’s OK" Cover to cover it is a bit repetitious telling you why the device architecture is so great. It is pure marketing, once in the intro would be bad enough. It is written around the ZED and similar boards. It walks you through the sample projects that come with the boards and the board locked Vivado license. In the process you become more familiar with Vivado if you are transitioning from Xilinx ISE and the top level architecture of the Zynq 7000. All good things but that is the end of the story. You are running on a RTOS in the Zynq with a few hints on the architecture via the opportunity to re-configure the memory or I/O. I was looking for something deeper like details on
how to configure the device with a GBE interface and shared memory from scratch or even a good Hello World exercise. Something like the old Spartan 3 guides.

This book is a mixed bag. It has some useful sections, but too much of it is filled with extraneous material and boilerplate. Do we really need multiple chapters on descriptions of tools like Vivado HLS, or the history of Linux, or superficial explanations of real-time multitasking? Important stuff, like the Zynq boot sequence, is relegated to a final short chapter. Since this book was apparently sponsored by Xilinx, it’s not surprising that much of it reads like a marketing brochure. It would have been much more useful to have a few completely worked out examples, like how to build embedded Linux for Zynq from scratch. To be fair, it does link to some on-line tutorials that are useful. If the target audience is hobbyists without much knowledge of the basics of computing that professionals take for granted, then I suppose there’s a place for this book, but it’s certainly not the definitive practical Zynq reference I was looking for.

The complexity of Xilinx’s ZYNQ SoC device can be overwhelming, being one of the most (THE most?) highly integrated programmable devices available. This book renders the device completely approachable, however. Besides its particular usefulness as an introduction to developing with the ZYNQ family, the book offers an excellent overview of SoC technology in general. This is exactly the book I wish I’d had a year ago when I developed a project using the XC7Z010 device.

I am new to FPGAs and Xilinx software, so I was hoping that it would help me understanding how it all comes together. I purchased it because the Contents at the beginning of the book was very promising. However the actual contents of the book was extremely general - a common sense - and most of it would apply to any other product or company. Unfortunately, it was absolutely useless to me.

This book and a low cost board such as the Zybo will get you going

http://www..com/gp/product/B00IX4038E/ref=s9_simh_gw_p328_d0_i1?pf_rd_m=ATVPDKIK X0DER&pf_rd_s=center-2&pf_rd_r=04PFAMJGJMCGPBTMR69S&pf_rd_t=101&pf_rd_p=1688200 382&pf_rd_i=507846

Nice book that has all the fundamentals of the current Zynq device family from Xilinx. I’m going to use it for future course I’m going to teach.
Good introduction to the Zynq development board, ARM processors, and Xilinx development tools if you’re new to the field and trying to gain some expertise.

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