



Architecture and CAD for Deep-Submicron FPGAs (The Springer International Series in Engineering and Computer Science)

By Vaughn Betz, Jonathan Rose, Alexander Marquardt

[Download now](#)

[Read Online](#) 

Architecture and CAD for Deep-Submicron FPGAs (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt

Since their introduction in 1984, Field-Programmable Gate Arrays (FPGAs) have become one of the most popular implementation media for digital circuits and have grown into a \$2 billion per year industry. As process geometries have shrunk into the deep-submicron region, the logic capacity of FPGAs has greatly increased, making FPGAs a viable implementation alternative for larger and larger designs. To make the best use of these new deep-submicron processes, one must re-design one's FPGAs and Computer- Aided Design (CAD) tools.

Architecture and CAD for Deep-Submicron FPGAs addresses several key issues in the design of high-performance FPGA architectures and CAD tools, with particular emphasis on issues that are important for FPGAs implemented in deep-submicron processes.

Three factors combine to determine the performance of an FPGA: the quality of the CAD tools used to map circuits into the FPGA, the quality of the FPGA architecture, and the electrical (i.e. transistor-level) design of the FPGA.

Architecture and CAD for Deep-Submicron FPGAs examines all three of these issues in concert.

In order to investigate the quality of different FPGA architectures, one needs CAD tools capable of automatically implementing circuits in each FPGA architecture of interest. Once a circuit has been implemented in an FPGA architecture, one next needs accurate area and delay models to evaluate the quality (speed achieved, area required) of the circuit implementation in the FPGA architecture under test. This book therefore has three major foci: the development of a high-quality and highly *flexible* CAD infrastructure, the creation of accurate area and delay models for FPGAs, and the study of several important FPGA architectural issues.

Architecture and CAD for Deep-Submicron FPGAs is an essential reference for researchers, professionals and students interested in FPGAs.

 [Download](#) **Architecture and CAD for Deep-Submicron FPGAS (The ...pdf**

 [Read Online](#) **Architecture and CAD for Deep-Submicron FPGAS (T ...pdf**

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science)

By Vaughn Betz, Jonathan Rose, Alexander Marquardt

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt

Since their introduction in 1984, Field-Programmable Gate Arrays (FPGAs) have become one of the most popular implementation media for digital circuits and have grown into a \$2 billion per year industry. As process geometries have shrunk into the deep-submicron region, the logic capacity of FPGAs has greatly increased, making FPGAs a viable implementation alternative for larger and larger designs. To make the best use of these new deep-submicron processes, one must re-design one's FPGAs and Computer- Aided Design (CAD) tools.

Architecture and CAD for Deep-Submicron FPGAs addresses several key issues in the design of high-performance FPGA architectures and CAD tools, with particular emphasis on issues that are important for FPGAs implemented in deep-submicron processes.

Three factors combine to determine the performance of an FPGA: the quality of the CAD tools used to map circuits into the FPGA, the quality of the FPGA architecture, and the electrical (i.e. transistor-level) design of the FPGA. *Architecture and CAD for Deep-Submicron FPGAs* examines all three of these issues in concert. In order to investigate the quality of different FPGA architectures, one needs CAD tools capable of automatically implementing circuits in each FPGA architecture of interest. Once a circuit has been implemented in an FPGA architecture, one next needs accurate area and delay models to evaluate the quality (speed achieved, area required) of the circuit implementation in the FPGA architecture under test. This book therefore has three major foci: the development of a high-quality and highly *flexible* CAD infrastructure, the creation of accurate area and delay models for FPGAs, and the study of several important FPGA architectural issues.

Architecture and CAD for Deep-Submicron FPGAs is an essential reference for researchers, professionals and students interested in FPGAs.

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt **Bibliography**

- Rank: #3526506 in Books
- Brand: Vaughn Betz
- Published on: 1999-03-31
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x .69" w x 6.14" l, 1.08 pounds
- Binding: Hardcover
- 247 pages

 [Download](#) Architecture and CAD for Deep-Submicron FPGAS (The ...pdf

 [Read Online](#) Architecture and CAD for Deep-Submicron FPGAS (T ...pdf

Download and Read Free Online Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt

Editorial Review

Users Review

From reader reviews:

Ross Jackson:

Have you spare time for just a day? What do you do when you have more or little spare time? Yeah, you can choose the suitable activity with regard to spend your time. Any person spent all their spare time to take a go walking, shopping, or went to typically the Mall. How about open as well as read a book entitled Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science)? Maybe it is to become best activity for you. You already know beside you can spend your time with the favorite's book, you can cleverer than before. Do you agree with their opinion or you have additional opinion?

Kate Sutton:

Spent a free time to be fun activity to complete! A lot of people spent their spare time with their family, or their own friends. Usually they accomplishing activity like watching television, about to beach, or picnic inside the park. They actually doing same task every week. Do you feel it? Do you want to something different to fill your personal free time/ holiday? May be reading a book might be option to fill your cost-free time/ holiday. The first thing you ask may be what kinds of book that you should read. If you want to try look for book, may be the publication untitled Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) can be fine book to read. May be it could be best activity to you.

Adam McGrath:

Reading can called thoughts hangout, why? Because if you are reading a book particularly book entitled Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) your brain will drift away trough every dimension, wandering in each and every aspect that maybe not known for but surely will end up your mind friends. Imaging each word written in a e-book then become one form conclusion and explanation which maybe you never get before. The Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) giving you yet another experience more than blown away your brain but also giving you useful details for your better life on this era. So now let us show you the relaxing pattern at this point is your body and mind will be pleased when you are finished studying it, like winning a. Do you want to try this extraordinary investing spare time activity?

John Yates:

Are you kind of hectic person, only have 10 or maybe 15 minute in your moment to upgrading your mind ability or thinking skill perhaps analytical thinking? Then you are having problem with the book compared to can satisfy your short space of time to read it because this all time you only find guide that need more time to be learn. *Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science)* can be your answer since it can be read by a person who have those short free time problems.

Download and Read Online *Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science)* By Vaughn Betz, Jonathan Rose, Alexander Marquardt #3XMZB7R91EP

Read Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt for online ebook

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt books to read online.

Online Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt ebook PDF download

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt Doc

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt Mobipocket

Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt EPub

3XMZB7R91EP: Architecture and CAD for Deep-Submicron FPGAS (The Springer International Series in Engineering and Computer Science) By Vaughn Betz, Jonathan Rose, Alexander Marquardt