



## **Digital Systems Design and Prototyping**

**Using Field Programmable Logic  
and Hardware Description  
Languages  
Second Edition**

by

**Zoran Salcic**

*The University of Auckland, New  
Zealand*

**Asim Smailagic**

*Carnegie Mellon University, Pittsburgh,  
PA, USA*

*Digital Systems Design and Prototyping:  
Using Field Programmable Logic and  
Hardware Description Languages,  
Second Edition* covers the subject of  
digital systems design using two  
important technologies: field-  
programmable logic devices (FPLDs)  
and hardware description languages

(HDLs). These two technologies are combined to aid in the design, prototyping, and implementation of a whole range of digital systems from very simple ones replacing traditional glue logic to very complex ones customized as the applications require.

Three HDLs are presented: VHDL and Verilog, the widely used standard languages, and the proprietary Altera HDL (AHDL). The chapters on these languages serve as tutorials and comparisons are made that show the strengths and weaknesses of each language.

A large number of examples are used in the description of each language providing insight for the design and implementation of FPLDs.

The CD-ROM included with the book contains the Altera® MAX+PLUS® II development environment which is ready to compile and simulate all examples. With the addition of the Altera UP-1 prototyping board, all examples can be tested and verified in a real FPLD.

*Digital Systems Design and Prototyping: Using Field Programmable Logic and Hardware Description Languages, Second Edition* is designed as an advanced level textbook as well as a reference for the professional engineer.

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