1.	Record Nr.	UNINA9910131027603321
	Autore	Rushton Andrew
	Titolo	VHDL for logic synthesis [[electronic resource] /] / Andrew Rushton
	Pubbl/distr/stampa	Chichester, West Sussex, U.K., : Wiley, 2011
	ISBN	1-119-99573-6 0-470-97797-3 1-283-37389-0 9786613373892 0-470-97792-2 1-119-99585-X
	Edizione	[3rd ed.]
	Descrizione fisica	1 online resource (486 p.)
	Classificazione	COM059000
	Disciplina	621.39/5
	Soggetti	VHDL (Computer hardware description language) Logic design - Data processing Computer-aided design
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	VHDL FOR LOGIC SYNTHESIS; Contents; Preface; List of Figures; List of Tables; 1 Introduction; 1.1 The VHDL Design Cycle; 1.2 The Origins of VHDL; 1.3 The Standardisation Process; 1.4 Unification of VHDL Standards; 1.5 Portability; 2 Register-Transfer Level Design; 2.1 The RTL Design Stages; 2.2 Example Circuit; 2.3 Identify the Data Operations; 2.4 Determine the Data Precision; 2.5 Choose Resources to Provide; 2.6 Allocate Operations to Resources; 2.7 Design the Controller; 2.8 Design the Reset Mechanism; 2.9 VHDL Description of the RTL Design; 2.10 Synthesis Results; 3 Combinational Logic 3.1 Design Units 3.2 Entities and Architectures; 3.3 Simulation Model; 3.4 Synthesis Templates; 3.5 Signals and Ports; 3.6 Initial Values; 3.7 Simple Signal Assignments; 3.8 Conditional Signal Assignments; 3.9 Selected Signal Assignment; 3.10 Worked Example; 4 Basic Types; 4.1 Synthesisable Types; 4.2 Standard Types; 4.3 Standard Operators; 4.4 Type Bit; 4.5 Type Boolean; 4.6 Integer Types; 4.7 Enumeration Types; 4.8 Multi-Valued Logic Types; 4.9 Records; 4.10 Arrays; 4.11 Aggregates, Strings and Bit-Strings; 4.12 Attributes; 4.13 More on

Sommario/riassunto

Making VHDL a simple and easy-to-use hardware description language Many engineers encountering VHDL (very high speed integrated circuits hardware description language) for the first time can feel overwhelmed by it. This book bridges the gap between the VHDL language and the hardware that results from logic synthesis with clear organisation, progressing from the basics of combinational logic, types, and operators; through special structures such as tristate buses, register banks and memories, to advanced themes such as developing your own packages, writing test benches and using the