1. Record Nr. UNINA9910523899603321

Autore	Mohamed Khaled Salah
Titolo	Bluetooth 5.0 Modem Design for IoT Devices / / by Khaled Salah Mohamed
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783030886264 9783030886257
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (120 pages) : illustrations
Collana	Engineering Series
Disciplina	004.62
Soggetti	Electronic circuits Telecommunication Electronic Circuits and Systems Communications Engineering, Networks Microwaves, RF Engineering and Optical Communications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction to Bluetooth -- GFSK Modem Design -- DPSK Modem Design -- Verification of the Bluetooth modem -- Conclusions.
Sommario/riassunto	This book provides an introduction to Bluetooth technology, with a specific focus on developing a hardware architecture for its modem. The major concepts and techniques involved in Bluetooth technology are discussed, with special emphasis on hardware mapping. The book starts simply to allow the reader to master quickly the basic concepts, before addressing the advanced features. This book differs from existing content in that it presents Bluetooth Transceiver architecture suitable for implementation in an FPGA for IoT Devices. It will examine several digital algorithms for modulation and demodulation of Bluetooth signals, locking on the carrier phase, and synchronizing the symbol. Many of these previously analog designs have been translated to the digital domain. Presents Bluetooth Transceiver architecture suitable for implementation in an FPGA; Includes comparative study between different architectures; Discusses the tradeoff between cost and performance when a Bluetooth transceiver is designed using non-

data aided techniques for clock and timing recovery.