1. Record Nr. UNINA9910465181203321 Autore Rogers John W. M. Titolo Radio Frequency System Architecture and Design Pubbl/distr/stampa Norwood:,: Artech House,, 2013 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2013] **ISBN** 1-60807-538-9 Descrizione fisica 1 online resource (315 p.) Collana Artech House microwave library Altri autori (Persone) PlettCalvin Marslandlan Disciplina 621.384 Soggetti Radio - Receivers and reception - Design and construction Wireless communication systems - Design and construction Radio - Mathematics Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Radio Frequency System Architecture and Design; Contents; Preface; Chapter 1 Introduction to RF Systems Design; 1.1 Introduction; 1.2 What is a Radio and Why Do We Need One?; 1.3 The Radio Spectrum; 1.4 A Communication Device: 1.5 Baseband Signal Processing Versus RFIC Design; 1.6 Overview; References; Chapter 2 An Introduction to Communication Systems; 2.1 A Simple Digital Communication System; 2.2 Basic Modulation Schemes; 2.2.1 Amplitude Shift Keying (ASK); 2.2.2 Phase Shift Keying (PSK); 2.2.3 Frequency Shift Keying (FSK); 2.2.4 Quadrature Amplitude Modulation (QAM); 2.3 Signal Models. 2.3.1 Complex Lowpass Equivalent Signal Representation 2.3.2 Signal Space Diagrams; 2.4 System Model; 2.4.1 Symbol Map; 2.4.2 Pulse-Shaping Filter; 2.4.3 Modulator; 2.4.4 Additive White Gaussian Noise (AWGN) Channel Model; 2.4.5 Demodulator; 2.4.6 Receive Filter; 2.4.7 Signal Sampling; 2.4.8 Decision Device; 2.5 Probability of Error Analy. Sommario/riassunto Communication devices such as smart phones, GPS systems, and Bluetooth, are now part of our daily lives more than ever before. As our communication equipment becomes more sophisticated, so do the radios and other hardware required to enable that technology.

Common radio architectures are required to make this technology work

seamlessly. This resource describes practical aspects of radio frequency communications systems design, bridging the gap between system-level design considerations and circuit-level design specifications. Industry experts not only provide detailed calculations and theory to determine block level specifications, but also discuss basic theory and operational concepts. This resource also includes extensive, up-to-date application examples.