

1. Record Nr.	UNINA9910438045803321
Autore	Grayver Eugene
Titolo	Implementing software defined radio // Eugene Grayver
Pubbl/distr/stampa	New York, : Springer, 2012
ISBN	1-283-62184-3 9786613934291 1-4419-9332-0
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (271 p.)
Disciplina	621.384
Soggetti	Software radio Telecommunication
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	What Is a Radio? -- What Is a Software Defined Radio? -- Why SDR? -- Disadvantages of SDR -- Signal Processing Devices -- Signal Processing Architectures -- SDR Standardization -- Software-centric SDR Platforms -- Radio Frequency Front End Architectures -- State-of-the-Art SDR Components -- Development Tools and Flows -- Conclusion.
Sommario/riassunto	Software Defined Radio makes wireless communications easier, more efficient, and more reliable. This book bridges the gap between academic research and practical implementation. When beginning a project, practicing engineers, technical managers, and graduate students can save countless hours by considering the concepts presented in these pages. The author covers the myriad options and trade-offs available when selecting an appropriate hardware architecture. As demonstrated here, the choice between hardware- and software-centric architecture can mean the difference between meeting an aggressive schedule and bogging down in endless design iterations. Because of the author's experience overseeing dozens of failed and successful developments, he is able to present many real-life examples. Some of the key concepts covered are: Choosing the right architecture for the market – laboratory, military, or commercial Hardware platforms – FPGAs, GPPs, specialized and hybrid devices

Standardization efforts to ensure interoperability and portability State-of-the-art components for radio frequency, mixed-signal, and baseband processing The text requires only minimal knowledge of wireless communications; whenever possible, qualitative arguments are used instead of equations. An appendix provides a quick overview of wireless communications and introduces most of the concepts the readers will need to take advantage of the material. An essential introduction to SDR, this book is sure to be an invaluable addition to any technical bookshelf.
