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Descrizione fisica	1 online resource (293 p.)
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Soggetti	Millimeter waves Millimeter wave communication systems Gigabit communications - Equipment and supplies Radio - Receivers and reception
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Millimeter Wave Characteristics -- Review of Modulations for Millimeter Wave Communications -- Millimeter Wave Transceivers -- Millimeter Wave Antennas -- Millimeter Wave Mimo -- Advanced Diversity Over Mimo Channels -- Advanced Beam Steering and Beam Forming -- Single-Carrier Frequency Domain Equalization -- Appendix: Simulation Tools.
Sommario/riassunto	Millimeter wave communication systems are poised to play key roles in modern gigabit wireless communication; millimeter wave industrial standards from IEEE, Wireless Gigabit Alliance, European Computer Manufacturers Association, and Wireless High Definition Group are about to emerge. This is the first book to address complete and modern millimeter wave communication systems, covering their key components and explaining the critical issues that influence their performance. The authors, experts in the field of millimeter wave

communications, provide powerful techniques for analyzing real millimeter wave systems, with an emphasis on new transceivers, new antennas, multiple-input multiple-output (MIMO), modulations, beam steering, beam forming, and frequency domain equalization.Covering the whole system from millimeter wave front-end to digital signal processing, the book reviews up-to-date research results and numerous design methods and analysis for an entire high-speed wireless system. Major topics addressed are:. Millimeter wave characteristics. Modulations for millimeter wave communications. Millimeter wave transceivers. Millimeter wave antennas. Millimeter wave MIMO. Advanced diversity over MIMO channels. Beam steering and beam forming. Single-carrier frequency domain equalizationThe authors emphasize the importance and the requirements of high-gain antennas, low-power transceivers, MIMO, modulation, frequency domain equalization, beam steering, and beam forming for gigabit wireless communications. In addition, they discuss new research and patents in transceivers, antennas, MIMO, channel capacity, equalizers, modems, beam steering, and beam forming. The application of these systems is explained in light of different forthcoming wireless standards for V-band and E-band use. Example designs are presented and the analysis of their performance is detailed.Linking academic research with commercial applications, this practical resource gives wireless communication system professionals, millimeter wave professionals, and project managers the insights they need to reduce design and production costs when integrating these systems. This book is also written for graduate students who are interested in becoming familiar with the modern communication system concept at millimeter wave range.