Antennas for Portable Devices
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DESCRIPTION

Offers a comprehensive and practical reference guide to antenna design and engineering for portable devices

Antennas are often the most bulky components in many portable wireless devices such as mobile phones. Whilst the demand for ever smaller and more powerful wireless devices increases, as does the importance of designing and engineering smaller antennas to fit these devices.

*Antennas for Portable Devices* provides a complete and cutting-edge guide to the design and engineering of small antennas for portable electronic devices such as mobile phone handsets, laptop computers, RFID (radio frequency identification), microwave thermal therapies devices, wearable devices, and UWB (ultra-wideband) based consumer devices.

The book addresses practical engineering issues that antenna professionals have to deal with. It explains the immediate demands for existing systems; discusses the antenna technology for the latest and emerging applications, and gives comprehensive coverage of hot topics in the wireless industry. Issues including design considerations, engineering design, measurement setup and methodology, and practical applications are all covered in depth.

*Antennas for Portable Devices:*

• Covers antennas for all modern portable wireless devices from handsets, RFID tags, laptops, wearable sensors, UWB-based wireless USB dongles and handheld microwave treatment devices
• Explains how to design and engineer applications for miniaturization of antenna technology, utilising practical case studies to provide the reader with an understanding of systems and design skills

• Links the basic antenna theory, with design methodology, and engineering design

• Is amply illustrated with numerous figures and data tables of antenna designs to aid understanding

• Features contributions from industry and research experts in antenna technology and applications

This invaluable resource will provide a comprehensive overview of miniaturizing antenna technology for antenna engineers in industry, and R&D organizations, graduate students, consultants, researchers, RF professionals, technical managers, as well as practitioners working in the area of consumer electronics, RF systems, wireless communications, or bio-medical devices.

🎉 ABOUT THE AUTHOR

Zhi Ning Chen is Lead Scientist, Head for Antenna Lab and Manager for Radio Systems Department, Institute for Infocomm Research, Singapore. Zhi Ning has been working on applied electromagnetics, antennas and RF systems for 20 years. Recently, his major research interests include wave propagation, antennas, and RF design for UWB-(Ultra WideBand) and MIMO- (multiple input, multiple output) based radio systems. He has conducted research work on UWB, including the study of small and broadband antennas for UWB radio systems, measurements on pulsed antennas UWB, assessment of diversity performance of multiple antennas in UWB systems, effects of the human body on the UWB signal propagation, co-design of antennas and RF circuits for UWB transceivers. He has been invited to give talks on UWB antenna design and measurement at several international conferences and workshops, and has organized many international UWB events.

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