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Titolo	GALILEO Positioning Technology // edited by Jari Nurmi, Elena Simona Lohan, Stephan Sand, Heikki Hurskainen
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ISBN	94-007-1830-6
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (406 p.)
Collana	Signals and Communication Technology, , 1860-4862
Disciplina	623.893
Soggetti	Microwaves Optical engineering Electronic circuits Energy Microwaves, RF and Optical Engineering Electronic Circuits and Devices Energy, general
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 at the end of each references.
Nota di contenuto	Part 1: Introductory Notions -- Introduction -- Overview of Galileo Systems -- Galileo Signals -- Part 2: Receiver, the core Galileo Positioning Technology -- Advanced RF Front-End Design Issues -- Advanced acquisition and tracking algorithms -- Baseband hardware implementations for Galileo receiver -- PVT Computation Issues in Mixed Galileo/GPS Reception -- Hybridization with Localization Information from Wireless Communications Systems -- Putting It All Together: TUTGNSS Receiver Platform -- Fully software Implementations for GALILEO Receiver.
Sommario/riassunto	This book covers multi-band Galileo receivers (especially E1-E5 bands of Galileo) and addresses all receiver building blocks, from the antenna and front end, through details of the baseband receiver processing blocks, up to the navigation processing, including the Galileo message structure and Position, Velocity, Time (PVT) computation. Moreover, hybridization solutions with communications systems for improved localization are discussed and an open-source GNSS receiver platform (available for download) developed at Tampere University of

Technology (TUT) is addressed in detail. • Takes a holistic approach to GALILEO and related systems, such as EGNOS and hybrid solutions on mobile phones; • Provides an invaluable reference to Binary Offset Carrier modulations and related families, which are some of the trademarks of GALILEO; • Includes a detailed survey of GALILEO receiver research in Europe and existing software-defined radio (SDR) GALILEO receiver implementations; • Addresses the multiple challenges in acquisition and tracking of GALILEO signals, including multipaths, ambiguities, and low carrier-to-noise ratios; • Offers insight into the design of a Software Defined GALILEO receiver; • Enables readers to have a full image of the processing steps involved in a GALILEO receiver.
