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Titolo	Data acquisition systems : from fundamentals to applied design / / Maurizio Di Paolo Emilio
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Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (xvii, 135 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	621.39/9
Soggetti	Automatic data collection systems Process control - Data processing Circuits electrònics Estructures de dades (Informàtica) Processament de dades Llibres electrònics
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- The Data Acquisition Systems: Hardware -- Communication Bus -- Design of Data Acquisition Systems -- Software for Data Acquisition Systems -- Smart Data Acquisition Systems.
Sommario/riassunto	This book describes the fundamentals of data acquisition systems, how they enable users to sample signals that measure real physical conditions and convert the resulting samples into digital, numeric values that can be analyzed by a computer. The author takes a problem-solving approach to data acquisition, providing the tools engineers need to use the concepts introduced. Coverage includes sensors that convert physical parameters to electrical signals, signal conditioning circuitry to convert sensor signals into a form that can be converted to digital values and analog-to-digital converters, which convert conditioned sensor signals to digital values. Readers will benefit from the hands-on approach, culminating with data acquisition projects, including hardware and software needed to build data acquisition systems. · Describes fundamentals of data acquisition in an accessible manner; · Takes a problem-solving approach to the topic, offering a hands-on guide for practicing engineers; · Addresses new

data acquisition techniques for design in order to implement the concepts described in advanced electronics; · Includes real data acquisition projects, describing hardware and software needed to build data acquisition systems.