

**ENGINEERING/TECHNOLOGY**  
**Electrical Engineering/Electronics**

# ELSEVIER

## NEW RELEASE



*More music, more photos, more movies! With this book, engineers will learn to maximize storage in consumer electronics designs!*

## Digital Storage in Consumer Electronics

*The Essential Guide*

**Thomas M. Coughlin**

President, Coughlin Associates, Inc.

### KEY FEATURES:

\*Presents best practices for selecting, integrating, and using storage devices to achieve higher performance, greater reliability and lower cost

\*Teardown photos provide rare visuals of the "guts" of the devices discussed

\*Covers hot topics including flash memory, DVRs, Apple iPods, home networks, and automotive electronics, from basic layouts to standards, advanced features, and exciting growth opportunities

### DESCRIPTION:

Can you imagine life without your cell phone, laptop, digital camera, iPod, BlackBerry, flat-screen TV, or DVD player? The skyrocketing demand for devices that provide simple, immediate access to large amounts of content is driving required digital storage capacity to unprecedented levels.

Designing digital storage into consumer electronics is crucial to the performance and cost of these devices. However, as our requirements for digital content storage grow, so does the formidable difficulty of implementing design solutions that are rugged, long-lasting, power-miserly, secure, network-accessible and can still fit in the palm of your hand!

This book provides the background necessary to understand common digital storage devices and media. It helps readers decide which methods of storage work best for which kinds of devices, and then teaches designers how to successfully integrate them into consumer products.

### RELATED TITLES:

Clark, Designing Storage Area Networks: A Practical Reference 2e (Pearson 3/03) ISBN: 0321136500. 592 pages \$54.99. Bookscan: 3845.

Mallick: Mobile and Wireless Design Essentials(Wiley, 2003) ISBN: 0471214191 480 pages. \$45.00. Bookscan; 1357

Zheng/Ni: Smart Phone and Next Generation Mobile Computing (MK, 2005) ISBN: 0120885603. 350 pages. \$46.95. Units Sold: 1219.

**ISBN 13:** 978-0-7506-8465-1

**ISBN 10:** 0-7506-8465-8

**PUB DATE:** March 2008

**LIST PRICE:** \$59.95

**DISCOUNT:** Agency

**FORMAT:** Paperback

Approx. 100 illustrations

**PAGES:** c. 360

**TRIM SIZE:** 7 1/2 X 9 1/4 in

**AUDIENCE:** Consumer electronics engineers, technicians, and managers, embedded engineers, system engineers, product designers & developers, network engineers and managers, programmers, marketing and sales personnel, and providers of content to electronic device end users

### SHELVING CLASSIFICATIONS:

TECHNOLOGY / Engineering / Electrical, TECHNOLOGY / Electronics / Microelectronics, TECHNOLOGY / Electronics / Digital

**BISAC CODES:** TEC009030; TEC008070; TEC008060

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## NEW RELEASE



*A complete starter kit for the engineer that wants to master the Texas Instruments' very popular MSP430 microcontroller!*

## MSP430 Microcontroller Basics

**John H. Davies**

Glasgow University, UK

### KEY FEATURES:

- \*Texas Instruments has shipped over 100 million MSP430 chips!
- \*Official support from Texas Instruments (TI), this will be listed as a TI recommended book!
- \*A CD-ROM containing a development kit to help the engineer and hobbyist program the MSP430

### DESCRIPTION:

*MSP430 Microcontroller Basics* combines a tutorial approach with a description of the CPU and main peripherals. It uses the C programming language from the start but programs are also developed in assembly language to show how a program interacts with the hardware. To demonstrate the special features of the MSP430 full coverage is given to the instruction set, sigma-delta analog-digital converters and timers. Finally, the book gives an introduction to the MSP430, which extends the architecture to address more memory and which provides a bridge to the ARM 7 processor.

### RELATED TITLES:

Di Jasio: *Programming a 16-bit Microcontroller in C* (Newnes, 3/2007) ISBN: 9780750682923. 400 pages. UNITS SOLD: 1600

Predko: *123 PIC Microcontroller Experiments for the Evil Genius* (McGraw Hill, 2005) ISBN: 9780071451420. 384 pages. \$24.95 Bookscan: 5524

Smith: *PIC in Practice, 2e* (Newnes, 1/06) ISBN: 9780750668262. 304 pages. \$29.95 Units Sold: 1289

ISBN 13: 978-0-7506-8276-3

ISBN 10: 0-7506-8276-0

PUB DATE: March 2008

LIST PRICE: \$39.95

DISCOUNT: Agency

FORMAT: Paperback

Approx. 100 illustrations

PAGES: c. 425

TRIM SIZE: 7 1/2 X 9 1/4 in

AUDIENCE: Professional embedded systems engineers, hobbyists and engineering undergraduates.

### SHELVING CLASSIFICATIONS:

TECHNOLOGY / Electronics / Microelectronics, TECHNOLOGY / Engineering / Electrical

BISAC CODES: TEC008070; TEC009030

MARKETING: \*Promote to EDN and Circuit Celler readers

\*Feature at ESC Silicon Valley, ESC East

\*Email: feature in monthly emails, July & August

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# ELSEVIER

## NEW RELEASE



*The book to help engineers design and implement electronic systems of the future*

## Digital Systems Design with FPGAs and CPLDs

**Ian Grout**

University of Limerick, Ireland

### KEY FEATURES:

\*Case studies that provide a walkthrough of the design process, highlighting the trade-offs involved

\*Discussion of real-world issues such as choice of device, pin-out, power supply, power supply decoupling, signal integrity--for embedding FPGAs within a PCB-based design

\*Includes advice for building FPGAs and CPLDs from the ground up

### DESCRIPTION:

Hardware configured devices--known as programmable logic devices--are increasingly being used to develop fast, reprogrammable electronic systems as they are reusable and have greater power to process computationally hungry mathematical operations than microprocessor-based systems. This book explains how to design and develop digital electronic systems using programmable logic devices (PLDs). The book features numerous case study designs using a variety of Field Programmable Gate Array (FPGA) and Complex Programmable Logic Devices (CPLDs), for a range of applications from control and instrumentation to semiconductor automatic test equipment. This book is ideal for electronics systems engineers in industry looking for concrete advice on developing a digital system using a FPGA or CPLD as its core and for electronic and computer engineering students taking a practical or Lab-based course on digital systems using PLDs.

### RELATED TITLES:

Maxfield: *The Design Warrior's Guide to FPGAs* (April 2004) ISBN:9780750676045. 542 pages \$50.95. Units Sold: 6,669

Noergaard: *Embedded Systems Architecture* (Feb 2005) ISBN:9780750677929. 656 pages \$72.95. Units Sold: 3,945.

Zeidman: *Designing with FPGAs and CPLDs* (CMP Books, Sep 2002) ISBN: 9781578201129. 220 pages \$46.95 Bookscan: 921.

ISBN 13: 978-0-7506-8397-5

ISBN 10: 0-7506-8397-X

PUB DATE: March 2008

LIST PRICE: \$69.95

DISCOUNT: Agency

FORMAT: Paperback

PAGES: c. 495

TRIM SIZE: 7 1/2 X 9 1/4 in

**AUDIENCE:** Electrical and electronic engineering and computer engineering undergraduates and masters students taking a course or lab course in digital systems/digital architectures. Professional electronic engineers using PLDs to build digital systems

**SHELVING CLASSIFICATIONS:** TECHNOLOGY / Engineering / Electrical

**BISAC CODES:** TEC009030

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## NEW RELEASE



*The only project book devoted to the PIC 18 series - packed with hands-on tried and tested projects for engineers, hobbyists and students.*

## Advanced PIC Microcontroller Projects in C

*From USB to ZIGBEE with the PIC 18F Series*

**Dogan Ibrahim**

Traffic Control Systems Unit, South Bank University, Near East University, UK

*"There is certainly a need for this book. C is a popular choice and it has a hard core of devotees. It is likely to continue to have a significant share in the market for PIC development languages for the foreseeable future" - Mike Tooley, self-employed lecturer and consultant*

### KEY FEATURES:

- \*The only project book on the PIC 18 series using this popular programming language
- \*Features 20 complete, tried and test projects, including the hot area of wireless and sensor networks
- \*Includes a CD-ROM of all the programs, hex listings, diagrams, data sheets and tables for the reader to use

### DESCRIPTION:

This book is ideal for the engineer, technician, hobbyist and student who have knowledge of the basic principles of PIC microcontrollers and want to develop more advanced applications using the 18F series. The architecture of the PIC 18FXXX series as well as typical oscillator, reset, memory, and input-output circuits is completely detailed. After giving an introduction to programming in C, the book describes the project development cycle in full, giving details of the process of editing, compilation, error handling, programming and the use of specific development tools. The bulk of the book gives full details of tried and tested hands-on projects, such as the 12C BUS, USB BUS, CAN BUS, SPI BUS and real-time operating systems.

### RELATED TITLES:

Predko, 123 PIC Microcontroller Experiments for the Evil Genius (Mcgraw Hill, 2005) 384 pages. \$24.95. BOOKSCAN: 5493

Di Jasio: Programming 16-bit Microcontrollers in C (Newnes, 3/07) ISBN: 9780750682923 400 pages. \$49.95. UNITS SOLD: 1600

Smith: PIC in Practice 2e, (Newnes, 1/06) 304pp, \$29.95, ISBN: 0750668261 UNITS SOLD: 1289

ISBN 13: 978-0-7506-8611-2

PUB DATE: March 2008

LIST PRICE: \$39.95

DISCOUNT: Agency

FORMAT: Paperback w/ CDROM

Approx. 120 illustrations

PAGES: c. 350

TRIM SIZE: 7 1/2 X 9 1/4 in

**AUDIENCE:** Embedded systems engineers working in industry, technicians, electronic hobbyists, undergraduate and graduate students developing embedded systems projects.

### SHELVING CLASSIFICATIONS:

TECHNOLOGY / Electronics / General, TECHNOLOGY / Electronics / Microelectronics

**BISAC CODES:** TEC008000; TEC008070

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## NEW RELEASE



*Explore the design and deployment of smart antenna and adaptive array systems with Dr. Kasapi, an author who deals with these issues every day!*

## Smart Antennas and Adaptive Arrays

*Multi-Antenna Techniques for Wireless Communications*

**Athos Kasapi**

Fellow, ArrayComm, Inc.

### KEY FEATURES:

- \*Covers smart antennas for both narrowband and wideband communications systems
- \*Discusses direction-finding/locating applications of adaptive arrays
- \*Provides complete coverage of multiple-antenna and multiple-array systems

### DESCRIPTION:

Both smart antennas and adaptive arrays allow the coverage area of a telecommunications system to be automatically "adjusted" for more efficient use of frequency space and transmitter power. This allows more users to share the same frequency range without interference to each other and improves the efficiency of the system or network. The increased crowding of the RF/wireless spectrum is rapidly making a solid working knowledge of smart antennas and adaptive arrays—like the knowledge conveyed by this book—mandatory for communications engineers.

### RELATED TITLES:

OLEXA: Implementing 802.1, 802.16, and 802.20 Wireless Networks (Newnes, 2004) 256pp \$49.95/£39.99 ISBN: 0750678089

BENSKY: Short-Range Wireless Communication (Newnes, 2003) 354pp \$59.95/£39.99 ISBN: 0750677821

DOWLA: Handbook of RF & Wireless Technologies (Newnes, 2003) 720pp \$89.95/£59.99 ISBN: 0750676957

ISBN 13: 978-0-7506-7809-4

ISBN 10: 0-7506-7809-7

PUB DATE: late March 2008

LIST PRICE: \$69.95

DISCOUNT: Agency

FORMAT: Paperback

PAGES: c. 424

TRIM SIZE: 7 1/2 X 9 1/4 in

AUDIENCE: RF/wireless design and applications engineers. Electronics engineering students.

### SHELVING CLASSIFICATIONS:

TECHNOLOGY / Engineering / Electrical, TECHNOLOGY / Telecommunications

BISAC CODES: TEC009030; TEC041000

MARKETING: Direct mail campaign to 20,000 members of IEEE Communications; Featured in subject area catalog mailed to end users; Full publicity campaign; Space ads in IEEE Communications and IEEE Networking; Featured at Globecom and Sigcomm conferences.

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**ENGINEERING/TECHNOLOGY**  
**Television & Video**  
**Technology/Communications/**  
**Telecommunications**

# ELSEVIER

## NEW RELEASE



**Focal  
Press®**

### The Service-Oriented Media Enterprise

*SOA, BPM, and Web Services in Professional Media Systems*

#### John Footen

Mr. Footen is currently the Director of Software Systems Engineering at National TeleConsultants, a provider of strategic consulting and design services to the Media & Entertainment industry. He has more than 20 years' experience in the operation, design, and installation of media systems and now leads NTC's consulting, engineering, and project management teams in the areas of media software systems integration, Service Oriented Architectures, and Business Process Management. Mr. Footen has been involved in dozens of projects throughout the Americas, Asia, and EMEA. He is a member of the SMPTE and is a participant on the S22 committee working on the standardization of data exchange between traffic and automation systems.

#### DESCRIPTION:

Service-Oriented Architecture (SOA – a design methodology used to communicate systems and services) and the Business Process Management (BPM - the art of orchestrating these services) are being adopted rapidly by media companies worldwide. Organizations such as news, music and media download services, and even movie studios, are adapting to an SOA-style architecture, but have run into road blocks unique to the media and entertainment industry. These challenges include: incorporating real-time data, moving large amounts of data at one time, non-linearity and flexibility for workflow, and unique metrics and data gathering.

This book: Service-Oriented Media Enterprise takes the challenges and presents solutions to media technology professionals. By addressing both the IT and the Media sides, it helps individuals improve current enterprise technologies and operations.

#### RELATED TITLES:

Service-Oriented Architecture (SOA): A Planning and Implementation Guide for Business and Technology  
Hardcover, 384 pages, Wiley  
April 28, 2006, ISBN: 0471768944, \$59.95  
Bokscan RTD: 1,137

Service-Oriented Architecture (SOA) Compass: Business Value, Planning, and Enterprise Roadmap  
Hardcover, 272 pages, IBM Press  
October 25, 2005, ISBN: 0131870025, \$44.95  
Bookscan RTD: 1,870

ISBN 13: 978-0-240-80977-9

ISBN 10: 0-240-80977-7

PUB DATE: March 2008

LIST PRICE: \$59.95

DISCOUNT: Agency

FORMAT: Paperback

Illustrated

PAGES: c. 500

TRIM SIZE:

AUDIENCE: Broadcast Engineers, System Designers, Software Architects, and Media Executives.

SHELVING CLASSIFICATIONS: TECHNOLOGY / Television & Video, TECHNOLOGY / Telecommunications

BISAC CODES: TEC043000; TEC041000

MARKETING: Space ads in Broadcast Engineering (NAB issue). Featured at NAB Las Vegas (100,000 attendees). Broadcasting brochure mailed to 30k professionals (March).

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## NEW RELEASE



**Focal  
Press®**

*A complete field guide for the radio engineer converting a radio station to HD Radio.*

## HD Radio Implementation

*The Field Guide for Facility Conversion*

**Thomas R. Ray**

### KEY FEATURES:

\*Published in conjunction with the Society of Broadcast Engineers with more than 100 local chapters, 5,000 national members, monthly local meetings, and nationally sponsored seminars

\*HD Radio implementation is growing 50% every year

\*Author Tom Ray has been involved in several successful station conversions and uses firsthand experience as well as case studies

### DESCRIPTION:

HD Radio is the FCC-approved standard for high-definition digital radio. Since its official approval in 2005, stations around the world have started converting their analog stations to also contain a digital signal. So far, 1,216 stations have converted, and there is currently a 50% yearly conversion growth trend. This growth is driven by radio audience market share depletion from podcasting and satellite radio. HD Radio is the only way stations can compete commercially.

Currently, the only place individuals can become trained for an HD Radio conversion is Harris (manufacturer): 5-day course for \$995 plus travel/lodging. This book provides the same in-depth hands-on training for a fraction of the cost--an excellent value for any station budgeting a conversion. It covers the installation process, uses examples from real-life implementations, and information not found in manufacturer's manuals.

### RELATED TITLES:

Mastering Digital Television: The Complete Guide to the DTV Conversion  
McGraw-Hill, April 2006, 384 pp., \$79.95, 0071470166  
Bookscan RTD: 34

WiMax Handbook  
Mc-Graw-Hill, May 2005, 288 pp., \$65.00, 0071454012  
Bookscan RTD: 1177

Cisco IP Telephony: Planning, Design, Implementation, Operation, and Optimization  
Cisco Press, Feb 2005, 672 pp., \$75.00, 1587051575  
Bookscan RTD: 2342

ISBN 13: 978-0-240-81002-7

PUB DATE: March 2008

LIST PRICE: \$89.95

DISCOUNT: Agency

FORMAT: Paperback

Approx. 100 illustrations

PAGES: c. 300

TRIM SIZE: 7 1/2 X 9 1/4 in

**AUDIENCE:** Broadcast Engineers and Operations Managers who are charged with implementing HD Radio at their facilities.

**SHELVING CLASSIFICATIONS:**  
TECHNOLOGY / Radio

**BISAC CODES:** TEC034000

**MARKETING:** Space ads in Broadcast Engineering (NAB issue). Featured at NAB Las Vegas (100,000 attendees). Broadcasting brochure mailed to 30k professionals (March).

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## NEW RELEASE



*The authority on digital video and much-acclaimed "bible" of the industry.*

## The Art of Digital Video, 4e

**John Watkinson**

John Watkinson is an international consultant in audio, video and data recording.

*Reviews/Praise for previous editions:*

*"This is a masterly analysis of everything relating to digitally encoding pictures, from conversion of analogue signals into digital code, through to recording, editing and processing." --New Scientist*

### KEY FEATURES:

- \* The rebirth of a time-tested classic
- \* Rewritten and totally re-formatted to include industry updates
- \* Written by a widely acclaimed author and authority in the field

### DESCRIPTION:

The industry "bible" is back and it's better than ever. The Art of Digital Video has served as the ultimate reference guide for those working with digital video for generations. Now this classic has been revised and re-written by international consultant and industry leader John Watkinson to include important technical updates on this ever-evolving topic.

The format has also been improved to include optional sections that provide additional information that you can choose to skip or investigate further, depending on your interests and comfort level with the subject. As the worlds of film, digital imaging, and computing have converged, this book has evolved to remain current and relevant, while still remaining the classic that experts in the field have trusted for years.

### RELATED TITLES:

Whitaker: DTV: The Revolution in Electronic Imaging, 3e (2001, \$99.95, McGraw-Hill Professional, 0071350217)  
Robin/Poulin: Digital Television Fundamentals: Design and Installation of Video and Audio Systems (2000, \$75.00, McGraw-Hill Video Professional, 0070531684)  
Watkinson: The Art of Digital Video, 3e (2000, \$89.95/£62.99, 0-240-51586-2)

ISBN 13: 978-0-240-52005-6

PREVIOUS EDITION ISBN-13/10:  
978-0-240-51586-1  
0240515862

PUB DATE: March 2008

LIST PRICE: \$79.95

DISCOUNT: Agency

FORMAT: Hardback

PAGES: c. 792

TRIM SIZE: 7 7/16 X 9 11/16 in

AUDIENCE: Professionals in video engineering, electrical engineering, broadcast, communications, and computer engineering

### SHELVING CLASSIFICATIONS:

TECHNOLOGY / Television & Video, TECHNOLOGY / Telecommunications

BISAC CODES: TEC043000;  
TEC041000

MARKETING: Space ads in Broadcast Engineering, Videography and NAB Daily Newspaper (April/NAB). Communication brochure to 20,000 subscribers of key magazines (March). Full publicity campaign to garner reviews, interviews and excerpts.

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**ENGINEERING/TECHNOLOGY**  
**All Other Sub-disciplines**