

Streaming Multi Port SDRAM User Manual Micotronix

Maximum PC is the magazine that every computer fanatic, PC gamer or content creator must read. Each and every issue is packed with punishing product reviews, insightful and innovative how-to stories and the illuminating technical articles that enthusiasts crave.

High-Performance Computing using FPGA covers the area of high performance reconfigurable computing (HPRC). This book provides an overview of architectures, tools and applications for High-Performance Reconfigurable Computing (HPRC). FPGAs offer very high I/O bandwidth and fine-grained, custom and flexible parallelism and with the ever-increasing computational needs coupled with the frequency/power wall, the increasing maturity and capabilities of FPGAs, and the advent of multicore processors which has caused the acceptance of parallel computational models. The Part on architectures will introduce different FPGA-based HPC platforms: attached co-processor HPRC architectures such as the CHREC's Novo-G and EPCC's Maxwell systems; tightly coupled HPRC architectures, e.g. the Convey hybrid-core computer; reconfigurably networked HPRC architectures, e.g. the QPACE system, and standalone HPRC architectures such as EPFL's CONFETTI system. The Part on Tools will focus on high-level programming approaches for HPRC, with chapters on C-to-Gate tools (such as Impulse-C, AutoESL, Handel-C, MORA-C++); Graphical tools (MATLAB-Simulink, NI LabVIEW); Domain-specific languages, languages for heterogeneous computing (for example OpenCL, Microsoft's Kiwi and Alchemy projects). The part on Applications will present case from several application domains where HPRC has been used successfully, such as Bioinformatics and Computational Biology; Financial Computing; Stencil computations; Information retrieval; Lattice QCD; Astrophysics simulations; Weather and climate modeling.

This book constitutes the refereed proceedings of the 7th International Conference on High-Performance Computing and Networking, HPCN Europe 1999, held in Amsterdam, The Netherlands in April 1999. The 115 revised full papers presented were carefully selected from a total of close to 200 conference submissions as well as from submissions for various topical workshops. Also included are 40 selected poster presentations. The conference papers are organized in three tracks: end-user applications of HPCN, computational science, and computer science; additionally there are six sections corresponding to topical workshops.

This book provides a full and comprehensive coverage of video and television technology including the latest developments in display equipment, HDTV and DVD. Starting with TV fundamentals, the bulk of the book covers the many new technologies that are bringing growth to the TV and video market, such as plasma and LCD, DLP (digital light processing), DVD, Blu ray technology, Digital television, High Definition television (HDTV) and video projection systems. For each technology, a full explanation is provided of its operation and practical application, supported by over 300 diagrams including schematic diagrams of commercially available consumer equipment. Where relevant, testing and fault finding procedures are outlined together with typical fault symptoms supported by photographs. The new edition has a number of useful appendices on microcomputer/microcontroller systems, test instruments, serial buses (I2C and RS 232), teletext and error correction techniques. The book is intended for students of electronics and practicing engineers. In particular, it will be useful for students on vocational courses and service engineers as well as enthusiasts. * The definitive guide to the new technologies transforming the world of television: HDTV, Digital TV, DVD recorders, hard disk recorders, wide-screen CRT, flat screen technologies and others * A practical approach, including troubleshooting and servicing information * Covers UK, European and North American systems

Advances in Computing, Communication, Automation and Biomedical Technology aims to bring together leading academic, scientists, researchers, industry representatives, postdoctoral fellows and research scholars around the world to share their knowledge and research expertise, to advance in the areas of Computing, Communication, Electrical, Civil, Mechanical and Biomedical Systems as well as to create a prospective collaboration and networking on various areas. It also provides a premier interdisciplinary platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered, and solutions adopted in the fields of innovation.

This book offers an in-depth study of the design and challenges addressed by a high-level synthesis tool targeting a specific class of cryptographic kernels, i.e. symmetric key cryptography. With the aid of detailed case studies, it also discusses optimization strategies that cannot be automatically undertaken by CRYKET (Cryptographic kernels toolkit). The dynamic nature of cryptography, where newer cryptographic functions and attacks frequently surface, means that such a tool can help cryptographers expedite the very large scale integration (VLSI) design cycle by rapidly exploring various design alternatives before reaching an optimal design option. Features include flexibility in cryptographic processors to support emerging cryptanalytic schemes; area-efficient multinational designs supporting various cryptographic functions; and design scalability on modern graphics processing units (GPUs). These case studies serve as a guide to cryptographers exploring the design of efficient cryptographic implementations.

This book constitutes the refereed proceedings of the 9th Pacific Rim Conference on Multimedia, PCM 2008, held in Tainan, Taiwan, in December 2008. The 79 revised full papers and 39 revised poster presented were carefully reviewed and selected from 210 submissions. The papers are organized in topical sections on next generation video coding techniques, audio processing and classification, interactive multimedia systems, advances in H.264/AVC, multimedia networking techniques, advanced image processing techniques, video analysis and its applications, image detection and classification, visual and spatial analyses, multimedia human computer interfaces, multimedia security and DRM, advanced image and video processing, multimedia database and retrieval, multimedia management and authoring, multimedia personalization, multimedia for e-learning, multimedia networking techniques, multimedia systems and applications, advanced multimedia techniques, as well as multimedia processing and analyses.

Singapore's leading tech magazine gives its readers the power to decide with its informative articles and in-depth reviews. This book is the proceedings volume of the 10th International Conference on Field Programmable Logic and its Applications (FPL), held August 27-30, 2000 in Villach, Austria, which covered areas like reconfigurable logic (RL), reconfigurable computing (RC), and its applications, and all other aspects. Its subtitle "The Roadmap to Reconfigurable Computing" reminds us, that we are currently witnessing the runaway of a breakthrough. The annual FPL series is the eldest international conference in the world covering configware and all its aspects. It was founded 1991 at Oxford University (UK) and is 2 years older than its two most important competitors usually taking place at Monterey and Napa. FPL has been held at Oxford, Vienna, Prague, Darmstadt, London, Tallinn, and Glasgow (also see: <http://www.fpl.uni-kl.de/FPL/>). The New Case for Reconfigurable Platforms: Converging Media. Indicated by palmtops, smart mobile phones, many other portables, and consumer electronics, media such as voice, sound, video, TV, wireless, cable, telephone, and Internet continue to converge. This creates new opportunities and even necessities for reconfigurable platform usage. The new converged media require high volume, flexible, multi purpose, multi standard, low power products adaptable to support evolving standards, emerging new standards, field upgrades, bug fixes, and, to meet the needs of a growing number of different kinds of services offered to zillions of individual subscribers preferring different media mixes.

PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying decisions and get more from technology.

The proliferation of powerful but cheap devices, together with the availability of a plethora of wireless technologies, has pushed for the spread of the Wireless Internet of Things (WIoT), which is typically much more heterogeneous, dynamic, and general-purpose if compared with the traditional IoT. The WIoT is characterized by the dynamic interaction of traditional infrastructure-side devices, e.g., sensors and actuators, provided by municipalities in Smart City infrastructures, and other portable and more opportunistic ones, such as mobile smartphones, opportunistically integrated to dynamically extend and enhance the WIoT environment. A key enabler of this vision is the advancement of software and middleware technologies in various mobile-related sectors, ranging from the effective synergic management of wireless communications to mobility/adaptivity support in operating systems and differentiated integration and management of devices with heterogeneous capabilities in middleware, from horizontal support to crowdsourcing in different application domains to dynamic offloading to cloud resources, only to mention a few. The book presents state-of-the-art contributions in the articulated WIoT area by providing novel insights about the development and adoption of middleware solutions to enable the WIoT vision in a wide spectrum of heterogeneous scenarios, ranging from industrial environments to educational devices. The presented solutions provide readers with differentiated point of views, by demonstrating how the WIoT vision can be applied to several aspects of our daily life in a pervasive manner.

As Internet traffic grows and demands for quality of service become stringent, researchers and engineers can turn to this go-to guide for tested and proven solutions. This text presents the latest developments in high performance switches and routers, coupled with step-by-step design guidance and more than 550 figures and examples to enable readers to grasp all the theories and algorithms used for design and implementation.

The book provides a comprehensive description and implementation methodology for the Philips/NXP Aethereal/aelite Network-on-Chip (NoC). The presentation offers a systems perspective, starting from the system requirements and deriving and describing the resulting hardware architectures, embedded software, and accompanying design flow. Readers get an in depth view of the interconnect requirements, not centered only on performance and scalability, but also the multi-faceted, application-driven requirements, in particular composability and predictability. The book shows how these qualitative requirements are implemented in a state-of-the-art on-chip interconnect, and presents the realistic, quantitative costs.

This book originated from a workshop held at the DATE 2005 conference, namely Designing Complex SOCs. State-of-the-art in issues related to System-on-Chip (SoC) design by leading experts in the fields, it covers IP development, verification, integration, chip implementation, testing and software. It contains valuable academic and industrial examples for those involved with the design of complex SOCs.

The first Computer Architecture text to recognize that computers are now predominantly used in a networking environment, fully updated to include new technologies and with an all new chapter on Distributed Computing.

Mind your business with this updated edition of the bestselling online business how-to guide Have a computer, an Internet connection, and a dream? Then, you're already on your way to starting your very own online business. This fun and friendly guide can help you turn your big idea into big bucks whether you're expanding your real-world storefront online or creating your own virtual startup. Starting an Online Business For Dummies, 7th Edition will show you how to identify a market need, choose a web hosting service, implement security and privacy measures, open up shop, and start promoting to the world. Covers the latest trends and techniques for online discoverability - from social media marketing to search engine rankings, online couponing to optimization for mobile devices, and beyond Highlights business issues that are of particular concern to online entrepreneurs Walks you through the best practices of successful online businesses, including customer service, marketing, analytics, and website optimization tools Provides advice on choosing an e-commerce platform, protecting your domain name, securing trademarks, working with vendors and distributors, and keeping your customer's personal data safe There's no time like now to start a new endeavor and no guide like Starting an Online Business For Dummies, 7th Edition to get your online business going.

This 2-volume set constitutes the proceedings of the 7th International Conference on e-Learning, e-Education, and Online Training, eLEOT 2021, held in Xinxiang, China, in June 2021. The 104 full papers presented were carefully reviewed and selected from 218 submissions. The papers are structured into two subject areas: New Trends of Teaching: Evaluation, Reform and Practice, and Intelligent Learning and Education. They focus on most recent and innovative trends and new technologies of online education which grows quickly and becomes the educational trend today. The theme of eLEOT 2021 was "The Educational Revolution: Opportunities and Challenges brought by COVID-19".

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

This volume contains the post-proceedings of the 9th Doctoral Workshop on Mathematical and Engineering Methods in Computer Science, MEMICS 2014, held in Tel?, Czech Republic, in October 2014. The 13 thoroughly revised papers were carefully selected

out of 28 submissions and are presented together with 4 invited papers. The topics covered by the papers include: algorithms, logic, and games; high performance computing; computer aided analysis, verification, and testing; hardware design and diagnostics; computer graphics and image processing; and artificial intelligence and natural language processing.

Advances in Multimedia Information Processing - PCM 2008 9th Pacific Rim Conference on Multimedia, Tainan, Taiwan, December 9-13, 2008, Proceedings Springer Science & Business Media

This book discusses the design and performance analysis of SDRAM controllers that cater to both real-time and best-effort applications, i.e. mixed-time-criticality memory controllers. The authors describe the state of the art, and then focus on an architecture template for reconfigurable memory controllers that addresses effectively the quickly evolving set of SDRAM standards, in terms of worst-case timing and power analysis, as well as implementation. A prototype implementation of the controller in SystemC and synthesizable VHDL for an FPGA development board are used as a proof of concept of the architecture template.

Dynamic System Reconfiguration in Heterogeneous Platforms defines the MORPHEUS platform that can join the performance density advantage of reconfigurable technologies and the easy control capabilities of general purpose processors. It consists of a System-on-Chip made of a scalable system infrastructure hosting heterogeneous reconfigurable accelerators, providing dynamic reconfiguration capabilities and data-stream management capabilities.

A widely read and authoritative book for hardware and software designers. This innovative book exposes the characteristics of performance-optimal single- and multi-level cache hierarchies by approaching the cache design process through the novel perspective of minimizing execution time.

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