

## Interconnect Technology and Design for Gigascale Integration



Filesize: 5.63 MB

### ***Reviews***

*It is really an incredible publication that we have possibly study. Of course, it really is engage in, continue to an interesting and amazing literature. You are going to like how the writer compose this publication.*

***(Bailey Lehner)***

## INTERCONNECT TECHNOLOGY AND DESIGN FOR GIGASCALE INTEGRATION



Book Condition: New. Publisher/Verlag: Springer, Berlin | This book is jointly authored by leading academic and industry researchers. The material is unique in that it spans IC interconnect topics ranging from IBM's revolutionary copper process to an in-depth exploration into interconnect-aware computer architectures. | 1. Interconnect Opportunities for GSI.- 1.1 Introduction.- 1.2 The Interconnect Problem.- 1.3 Reverse Scaling.- 1.4 System-on-Chip.- 1.5 Three-Dimensional Integration.- 1.6 Input/Output Interconnect Enhancements.- 1.7 Photonic Interconnects.- 1.8 Conclusions.- 2. Copper BEOL Interconnects for Silicon CMOS Logic Technology.- 2.1 Introduction.- 2.2 BEOL Evolution.- 2.3 The Case for Copper.- 2.4 Electroplating of Cu.- 2.5 Reliability of Cu Interconnects.- 2.6 Processing of Cu Interconnects.- 2.7 Summary.- 3. Interconnect Parasitic Extraction of Resistance, Capacitance, and Inductance.- 3.1 Introduction.- 3.2 Electromagnetic Formulation.- 3.3 Resistance Extraction.- 3.4 Capacitance Extraction.- 3.5 Inductance Extraction.- 3.6 Summary.- 4. Distributed RC and RLC Transient Models.- 4.1 Introduction.- 4.2 Distributed RC Models.- 4.3 Distributed RLC Models.- 4.4 Non-Ideal Return Paths.- 4.5 Summary.- 5. Power, Clock, and Global Signal Distribution.- 5.1 Introduction.- 5.2 Global Signal Interconnect Modeling.- 5.3 Global Clock Distribution Modeling.- 5.4 Global Power Distribution Modeling.- 5.5 An Integrated Architecture for Global Interconnects.- 5.6 Conclusions.- 6. Stochastic Multilevel Interconnect Modeling and Optimization.- 6.1 Introduction.- 6.2 Wire-Length Distribution Model.- 6.3 Net Model Approximation.- 6.4 Comparisons with Actual Data.- 6.5 Critical Path Model.- 6.6 Dynamic Power Dissipation Model.- 6.7 Optimal n-Tier Multilevel Interconnect Architectures.- 6.8 Summary.- 7. Interconnect-Centric Computer Architectures.- 7.1 Introduction and Motivation.- 7.2 Interconnect-Aware Architectures.- 7.3 Interconnect Demand Models.- 7.4 Related Work.- 7.5 GENESYS Organization and Models.- 7.6 Heterogeneous Architecture Models.- 7.7 System Design Analysis.- 7.8 Wire Demands and their Relation to Architecture.- 7.9 Conclusion.- 8. Chip-to-Module Interconnect.- 8.1 Introduction.- 8.2 Packaging and Chip-to-Module Trends.- 8.3 Microvia Printed Wiring Board Technologies.- 8.4 Chip-to-Module Interconnections for GSI.- 9. 3-D ICs DSM Interconnect Performance Modeling and Analysis.- 9.1 Introduction.-...



[Read Interconnect Technology and Design for Gigascale Integration Online](#)



[Download PDF Interconnect Technology and Design for Gigascale Integration](#)

## See Also



### **Would It Kill You to Stop Doing That?**

Book Condition: New. Publisher/Verlag: Little, Brown Book Group | A Modern Guide to Manners | A laugh-out-loud guide to modern manners by acclaimed humorist, author, and Vanity Fair columnist Henry Alford. | A few years...

[Save PDF »](#)



### **Stories of Addy and Anna: Japanese-English Edition (Paperback)**

Mohd Shahrin Bin Daud, United States, 2015. Paperback. Book Condition: New. Siti Haziqah Samsul (illustrator). 244 x 170 mm. Language: Japanese . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This book is bilingual (Japanese-English) edition....

[Save PDF »](#)



### **Stories of Addy and Anna: Second Edition (Paperback)**

Mohd Shahrin Bin Daud, United States, 2015. Paperback. Book Condition: New. Siti Haziqah Samsul (illustrator). 244 x 170 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Delightful, Colorful and Fun Learning Book...

[Save PDF »](#)



### **Stories of Addy and Anna: Chinese-English Edition (Paperback)**

Mohd Shahrin Bin Daud, United States, 2015. Paperback. Book Condition: New. Siti Haziqah Samsul (illustrator). 244 x 170 mm. Language: Chinese . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This book is bilingual (Japanese-English) edition....

[Save PDF »](#)



### **Halloween Stories: Spooky Short Stories for Kids (Paperback)**

Createspace, United States, 2015. Paperback. Book Condition: New. 279 x 216 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Spooky Halloween Ghost Stories for Kids!This book is not just any book, but...

[Save PDF »](#)

**Grandpa Spanielson's Chicken Pox Stories: Story #1: The Octopus (I Can Read Book 2)**

HarperCollins, 2005. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: Foreword by Raph Koster. Introduction. I. EXECUTIVE CONSIDERATIONS. 1. The Market. Do We Enter the Market? Basic Considerations. How

[Download ePub »](#)

**Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 6: Gran s New Blue Shoes (Hardback)**

Oxford University Press, United Kingdom, 2011. Hardback. Book Condition: New. 172 x 142 mm. Language: English . Brand New Book. Read With Biff, Chip and Kipper is the UK s best-selling home reading series. It

[Download ePub »](#)

**Read Write Inc. Phonics: Blue Set 6 Non-Fiction 1 Save the Whale (Paperback)**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. 185 x 72 mm. Language: N/A. Brand New Book. These decodable non-fiction books provide structured practice for children learning to read. Each set of books

[Download ePub »](#)

**Read Write Inc. Phonics: Grey Set 7 Non-Fiction 5 a Place in Space: The Moon (Paperback)**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. 197 x 88 mm. Language: N/A. Brand New Book. These decodable non-fiction books provide structured practice for children learning to read. Each set of books

[Download ePub »](#)

**Read Write Inc. Phonics: Blue Set 6 Storybook 7 Jade s Party (Paperback)**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. Tim Archbold (illustrator). 201 x 146 mm. Language: N/A. Brand New Book. These engaging Storybooks provide structured practice for children learning to read the Read

[Download ePub »](#)