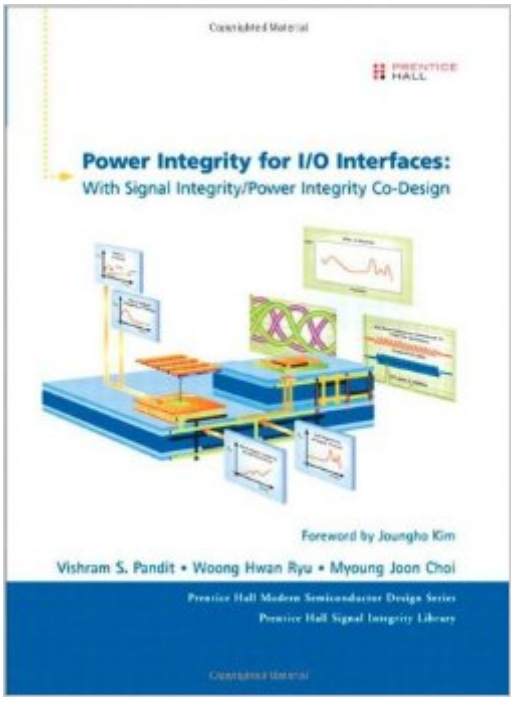
Power Integrity For I/O Interfaces: With Signal Integrity/ Power Integrity Co-Design (Prentice Hall Modern Semiconductor Design)



Synopsis

Foreword by Joungho Kim Â The Hands-On Guide to Power Integrity in Advanced Applications, from Three Industry Experts Â In this book, three industry experts introduce state-of-the-art power integrity design techniques for todayâ ™s most advanced digital systems, with real-life, system-level examples. They introduce a powerful approach to unifying power and signal integrity design that can identify signal impediments earlier, reducing cost and improving reliability. Â After introducing high-speed, single-ended and differential I/O interfaces, the authors describe on-chip, package, and PCB power distribution networks (PDNs) and signal networks, carefully reviewing their interactions. Next, they walk through end-to-end PDN and signal network design in frequency domain, addressing crucial parameters such as self and transfer impedance. They thoroughly address modeling and characterization of on-chip components of PDNs and signal networks, evaluation of power-to-signal coupling coefficients, analysis of Simultaneous Switching Output (SSO) noise, and many other topics. Â Coverage includes â ¢ The exponentially growing challenge of I/O power integrity in high-speed digital systems â ¢ PDN noise analysis and its timing impact for single-ended and differential interfaces â ¢ Concurrent design and co-simulation techniques for evaluating all power integrity effects on signal integrity â ¢ Time domain gauges for designing and optimizing components and systems â ¢ Power/signal integrity interaction mechanisms, including power noise coupling onto signal trace and noise amplification through signal resonance â ¢ Performance impact due to Inter Symbol Interference (ISI), crosstalk, and SSO noise, as well as their interactions â ¢ Validation techniques, including low impedance VNA measurements, power noise measurements, and characterization of power-to-signal coupling effects Â Power Integrity for I/O Interfaces will be an indispensable resource for everyone concerned with power integrity in cutting-edge digital designs, including system design and hardware engineers, signal and power integrity engineers, graduate students, and researchers.

Book Information

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Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (2 customer reviews)

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Customer Reviews

It’s actually an awesome technical book... very detailed and specific book to describe power/signal integrity co-design for I/O interfaces... covered from theory to application...

Good product

Power Integrity for I/O Interfaces: With Signal Integrity/ Power Integrity Co-Design (Prentice Hall Modern Semiconductor Design) Prentice hall literature (common core edition) (teachers edition grade 6) (Prentice Hall and Texas Instruments Digital Signal Processing Series) Fundamentals of Network Analysis and Synthesis (Prentice-Hall electrical engineering series. Solid state physical electronics series. Prentice-Hall networks series) Fault-Tolerance and Reliability Techniques for High-Density Random-Access Memories (Prentice Hall Modern Semiconductor Design Series) Multidimensional Digital Signal Processing (Prentice-Hall Signal Processing Series) Discrete-Time Signal Processing (3rd Edition) (Prentice-Hall Signal Processing Series) Signal Processing Algorithms in Fortran and C (Prentice-Hall Signal Processing Series) Digital filters (Prentice-Hall signal processing series) Signal and Power Integrity - Simplified (2nd Edition) Power Systems Analysis (Prentice-Hall Series in Electrical and Computer Engineering) Signal Integrity Issues and Printed Circuit Board Design SOA Design Patterns (The Prentice Hall Service Technology Series from Thomas Erl) Compiler Design in C (Prentice-Hall software series) Database Processing: Fundamentals, Design, and Implementation (14th Edition) (Prentice-Hall Adult Education) Analysis, Synthesis and Design of Chemical Processes (4th Edition) (Prentice Hall International Series in the Physical and Chemical Engineering Sciences) 4th (fourth) Edition by Turton, Richard, Bailie, Richard, Whiting, Wallace B., Shaei [2012] Bayesian Signal Processing: Classical, Modern and Particle Filtering Methods (Adaptive and Cognitive Dynamic Systems: Signal Processing, Learning, Communications and Control) System on Chip Interfaces for Low Power Design Modern Tkinter for Busy Python Developers: Quickly learn to create great looking user interfaces for Windows, Mac and Linux using Python’s standard GUI toolkit Signal Integrity - Simplified Big Data Fundamentals:

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