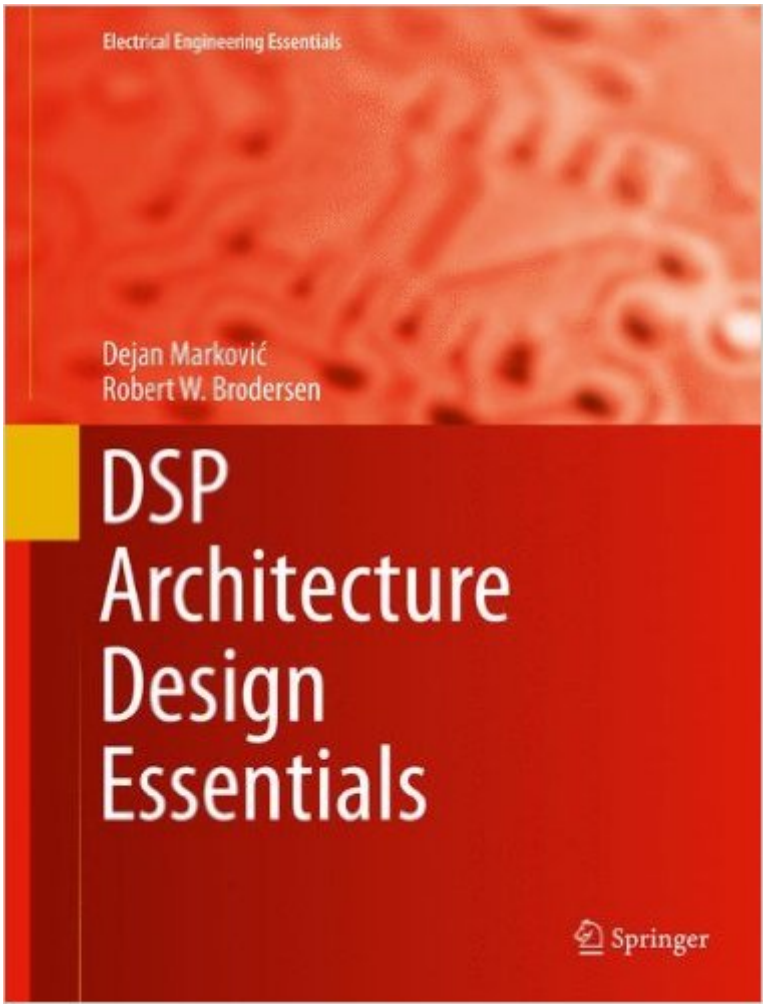
DSP Architecture Design Essentials (Electrical Engineering Essentials)



Synopsis

In DSP Architecture Design Essentials, authors Dejan MarkoviÄ‡ and Robert W. Brodersen cover a key subject for the successful realization of DSP algorithms for communications, multimedia, and healthcare applications. The book addresses the need for DSP architecture design that maps advanced DSP algorithms to hardware in the most power- and area-efficient way.The key feature of this text is a design methodology based on a high-level design model that leads to hardware implementation with minimum power and area. The methodology includes algorithm-level considerations such as automated word-length reduction and intrinsic data properties that can be leveraged to reduce hardware complexity. From a high-level data-flow graph model, an architecture exploration methodology based on linear programming is used to create an array of architectural solutions tailored to the underlying hardware technology.The book is supplemented with online material: bibliography, design examples, CAD tutorials and custom software.

Book Information

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