

IEEE Consumer Electronics Magazine

Special Issue

Chipset Architectures and Hardware Design for Consumer Electronics

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The impact of consumer electronics such as mobile phones, digital cameras, digital television, and DVD/MP3 players etc is profound on our society. The central module of these products is a miniature size integrated circuit (IC) which finds wide spectrum applicability from kitchen appliances, to automobiles, to aircrafts or to any embedded systems.

Lot of gaps still needs to be plugged through extensive research in the area of hardware design and chipset architecture of consumer electronic devices. For example, immense scope of development still exists in the hardware design process of Analog/Mixed-Signal System-on-chip used in modern consumer electronics products where the digital chipset are the main computational modules while the analog or mixed-signal components are interfacing circuits, in a typical case. Therefore, proficient design of digital chipset has become the need of the hour as it serves as one of the significant driving factors of efficient system design in this current mobile electronics era.

Articles should be broadly scoped – typically review and tutorial articles are particularly suited to the CE Magazine. Articles presenting industry and societal perspectives on CE hardware design are also welcome. Technical articles may be suitable but these should be of general interest to an engineering audience and of *a broader scope than regular technical papers for archival journals*.

Suitable topics include:

Hardware design or chipset architecture details of mobile devices	Hardware Reliability issues of CE devices	Hardware design or chipset architecture details of set-top boxes (STBs)
Hardware design IPs used in CE devices	Hardware Security and privacy issues for CE devices	Fault Security issues for CE devices
Ownership issues of IP used in CE devices	Physical Design issues of Hardware used CE devices	Energy/Power Optimization of hardware used in CE devices
Reconfigurable System-on-chip design for CE devices	SEU resilient Design of Hardware used in CE devices	MO Optimized Hardware Design of Circuits used in CE devices

Articles related to practical design, testing and evaluations of state-of-art and next-generation technologies of CE devices are particularly welcome. Industrial designs with emphasis on hardware system and chipset architecture with applications in CE devices are also welcome. Further, how to apply the latest chipsets for CE devices as well as explanation of their internal designs and architectures is also welcome for submission. Review and tutorials on all CE related technologies or systems that are relevant to hardware and chip design aspect are also encouraged.

Interested in contributing? Please contact the editor at cesmagazine@ieee.org or asengupt@iiti.ac.in for feedback and to discuss the suitability of your ideas for an article.

Articles should be submitted to: <http://mc.manuscriptcentral.com/cemag>.