

EE Times | 2011 Content Calendar

JANUARY

Issue Date	Close Date	Features
January 17* <i>(*Distributed at DesignCon 2011)</i>	01/03	<ul style="list-style-type: none"> • Design Feature Signal Integrity/Board Design <i>Usually, timing is everything. But in the world of high-speed signals, it's a combination of timing and quality. An undecipherable signal arriving on time serves no purpose. In the lead-up to DesignCon, the 'go-to' conference for anyone concerned with signal-integrity and board layout, this special feature will look at the many factors that affect signal timing and quality and what tools and techniques are now available to designers to help them meet their design requirements.</i> • Product Focus Scopes, filters, high-speed connectors <i>Speed kills...unless you know what you're doing. We show you the latest products for managing high-speed signals and how you can leverage them to get the job done.</i>
January 31 Special Digital Issue	01/17	<ul style="list-style-type: none"> • Connected Home Special Digital Issue <i>The Connected Home is moving toward using interactive, energy efficient and smart grid enabled appliances. The special issue will feature technologies that will connect home appliances as well as consumer digital products such as 3-D TVs, monitors, Blu-ray players, all in one central home network.</i>

FEBRUARY

Issue Date	Close Date	Features
February 7	01/24	<ul style="list-style-type: none"> • Design Feature Wireless <i>The Mobile World Congress in Barcelona (February 14-17) is always a good reminder to step back, take stock and look at where wireless is going and what are the technological hurdles along the way. This EE Times Design Feature will do just that, but take it a step further by not only identifying some key trends but also by showing designers and engineers how to incorporate new technologies and techniques to overcome those hurdles.</i> • Product Focus RF, converters, mixed signal <i>Multiple radios, GHz speeds, signal conditioning challenges. The design pressures in the wireless world are enormous. Learn how some best-in-class products and their developers are helping designers meet these challenges head on</i>
February 21	02/07	<ul style="list-style-type: none"> • Design Feature Sensing and Measurement

EE Times | 2011 Content Calendar

The degree to which we can interface with and electronically decipher and control our environment depends to a large extent on our ability to sense and measure – with accuracy and precision -- real-world effects. This feature will look at the state of the art in sense and measurement technology, processing and devices, with a view toward enabling designers to develop the next generation of advanced, interactive systems.

- **Product Focus|** Controllers, capacitors, touch screens
The hottest design efforts today are in touch screens and pads. But these seemingly simple user interfaces mask enormous innovation in the areas of precision circuitry, board layout and material choices. The resulting options are many: This Focus section will help designers cut through the noise to make those challenging interface choices easier.

MARCH

Issue Date	Close Date	Features
March 7	02/21	<ul style="list-style-type: none"> • Design Feature Multicore <i>Multicore processors are based upon the principle that adding more cores translates to greater processing efficiency vs. a single core running faster. While that sounds logical, it's not so easy and designers continue to struggle with how to program these devices effectively to really take full advantage of their potential. This feature will look at the latest advances in this area and what tools and techniques are available to developers.</i> • Product Focus Scopes, filters, high-speed connectors <i>Speed kills...unless you know what you're doing. We show you the latest products for managing high-speed signals and how you can leverage them to get the job done.</i>
March 21	03/07	<ul style="list-style-type: none"> • Design Feature Machine-to-Machine communications <i>The human-to-machine interface has always been interesting, but now we're starting to take the 'human' out of the equation. What are the implications of independently networked, Internet-enabled intelligent devices and what are the technologies and processing requirements required to accelerate their development? This feature will break down the signal chain and identify what designers can do to be a part of and accelerate what amounts to being nothing short of a technological revolution.</i> • Product Focus Passives, wireless ICs, memories <i>M2M networks are exploding and the pressure is growing to move data faster and more accurately within them. How are M2M infrastructures and devices evolving and what are the inherent</i>

EE Times | 2011 Content Calendar

design and product -selection challenges?

APRIL

Issue Date	Close Date	Features
April 4	03/21	<ul style="list-style-type: none"> • Design Feature Vehicle Infotainment <i>Automobile manufacturers today face the pressure to cost-effectively reconcile the apparently incompatible development cycles of silicon and steel in greater amounts than ever. The advent of the connected car heralds an era of in-vehicle systems that easily integrate new applications. This feature looks at planning and integrating applications that may not even be available when a vehicle rolls off the assembly line.</i> • Product Focus Sensors/actuators/gyros make for 'smart' systems.
April 18	04/04	<ul style="list-style-type: none"> • Design Feature Surveillance <i>More and more surveillance cameras are popping up all over the place. They are commonplace in government buildings, banks, transportation terminals and in traffic intersections globally. Latest surveillance cameras provide stunning images along with valuable information. This feature looks at what circuits and parts are required for providing massive, flexible parallel processing in small, power-efficient footprints.</i> • Product Focus Imagers/video/audio/sound chips are intelligent.

MAY

Issue Date	Close Date	Features
May 2* <i>(*Distributed at ESC Silicon Valley 2011)</i>	04/18	<ul style="list-style-type: none"> • Design Feature Safety-critical systems <i>Among safety-critical system designs medical applications have a diverse set of requirements for many different kinds of devices that vary in size and complexity. Modern complex and reliable medical devices to meet a higher standard than, for instance, consumer devices. This feature looks at design options to make sure medical devices do not skip a beat and will do no harm</i>

EE Times | 2011 Content Calendar

		<ul style="list-style-type: none"> • Product Focus A/D and D/A converters mix and match data I/O needs.
May 16	05/02	<ul style="list-style-type: none"> • Design Feature Secure Energy <i>Energy providers and governments are looking to the smart grid for its networking and automation to secure the electrical system. The smart grid provides better monitoring and control of power consumption yet brings along the threat of security breaches and attacks. This feature looks at security designs that play a critical role in managing energy</i> • Product Focus Power management ICs become intelligent sentries • Special Report Distributors serve latest chips and components at annual Electronic Distribution Show
May 25 Special Digital Issue	05/10	<ul style="list-style-type: none"> • Automotive Intelligence <i>In 2009, the global market for automotive electronics systems totalled \$125 billion-a 15 percent drop from 2008. In 2010, the market is believed to have more than recovered the ground lost during the Great Recession, rising 18 percent, to \$147 billion. More electronics-rich vehicles will take to the road in established automotive markets in 2011. This special digital edition will explore the infotainment systems and supporting infrastructure that will drive demand for smarter vehicles.</i>
JUNE		
Issue Date	Close Date	Features
June 6	05/23	<ul style="list-style-type: none"> • Design Feature Mobile 3-D <i>Media such as photographs and television in 2-D provides each eye the same information. Any possible 3-D impression comes from visual clues in the image, such as perspective. 3-D displays provide a distinct image into each eye and the viewer's brain takes over, processing each image in the same, natural way in which it processes the images it receives from the three-dimensional world. This feature looks at the challenges of bringing 3-D to small scale mobile devices.</i> • Product Focus: Microprocessors and DSPs are powerful data manipulators.

EE Times | 2011 Content Calendar

June 20	06/06	<ul style="list-style-type: none"> • Design Feature Scalable Architectures <i>Video streams in various formats over the Internet demands continuously increasing bandwidth. Ethernet has evolved with the promise of ten times the bandwidth at two-and-half times the cost of the previous speed. Market trends require development of systems that support both 40G Ethernet as well as 100G Ethernet with different cost/performance dynamics within the same system. This feature describes design for scalability as a norm.</i> • Product Focus: Network chips and boards take streaming seriously.
JULY		
Issue Date	Close Date	Features
July 18	07/04	<ul style="list-style-type: none"> • Design Feature Near Field Communication <i>Near Field Communication technology is designed to make life easier for consumers. NFC enables simpler transactions, easier digital content exchange and intuitive connectivity with electronic devices. Our feature will look at the design challenges for NFC -- for applications ranging from access control, consumer electronics, to healthcare, information collection/exchange and electronic payments.</i> • Product Focus: FPGAs; Power Management ICs
July 27 Special Digital Issue	07/13	<ul style="list-style-type: none"> • Robotics <i>Microbots can be useful in applications such as looking for survivors in collapsed buildings after an earthquake, or crawling through the digestive tract. What microbots lack in computational power, they provide in large numbers, such as being used as "swarms of microbos". MEMS, sensors and power harvesting are enablers for microbots. The special digital issue on Microbots/Robotics will look at the design and development challenges of microbots as well as the industrial, military and consumes robotics applications that can be expected in 2012.</i>
AUGUST		
Issue Date	Close Date	Features
Aug 15	08/01	<ul style="list-style-type: none"> • Design Feature Robust Tablets <i>What's on users' wish lists for a rugged tablet? Beyond reliability, tough tablets often demand wireless network connectivity such as wireless USB and integrated ZigBee with simplified data transfer</i>

EE Times | 2011 Content Calendar

schemes. Our feature focuses on challenges and requirements designers need to make a durable tablet.

- **Product Focus:** Memory/Mixed-signal; Analog ICs

SEPTEMBER

Issue Date	Close Date	Feature
Sept 12* <i>(*Distributed at ESC Boston 2011)</i>	08/29	<ul style="list-style-type: none"> • Design Feature In-Vehicle Communications <i>Using voice commands, a driver can browse news, data and information made available to a vehicle, or select a music channel streamed to a vehicle. Voice access to information requires designers to combine state-of-the-art proprietary algorithms with advanced technologies for speech analysis. What processing power and wireless connections are required for in-vehicle communications? Our feature looks at both design options and challenges.</i> • Product focus Processors/Optoelectronic components
September 14 Special Digital Edition	8/30	<ul style="list-style-type: none"> • Military Aerospace <i>The formal military campaigns being waged overseas and the continuing global terrorist threat are driving increased research development, procurement and deployment of military aircraft and space avionics systems. Global command, control, communications and intelligence solutions are the hallmarks of such systems and will be the focus of this special digital issue.</i>
Sept 26	09/12	<ul style="list-style-type: none"> • Design Feature Medical Device Interfaces <i>Companies and global consortia are developing ultra-miniature RF microsystems for wireless body area networks (BANs). The current design focus is primarily aimed at wearable and implanted devices for health care, biomedical, wellness and lifestyle applications. What devices and chips does a system designer need, and what trade-offs will be faced in designing a reliable BANs?</i> • Product focus Microwave ICs; Sensors

OCTOBER

Issue Date	Close Date	Features
October 10	9/26	<ul style="list-style-type: none"> • Design Feature Medical Electronics Architectures <i>Medical equipment manufacturers are rapidly designing in connectivity capabilities that will mirror enterprise cloud computing and introduce more efficient ways to provide healthcare services. However, designing connected medical devices brings design challenges, complexities, and risk. The Design Feature will look at</i>

EE Times | 2011 Content Calendar

the latest technological advances in multicore and embedded virtualization while also meeting strict business and regulatory requirements.

October 24

10/10

- **Product Focus|** LEDs, LED drivers
- **Design Feature|** Automotive ECU challenges
Safety critical functions are increasingly carried out by programmable electronic systems rather than mechanical components in automotive electronics. It is hard to predict all potential failure modes or to test all possible behavior. The challenge for system engineers is to architect electronic control units in a way that dangerous failures are prevented or controlled when they occur. The Design Feature explores dual-core controller technology for safety critical applications.
- **Product Focus|** Imagers/video/audio/sound chips are intelligent.

NOVEMBER

Issue Date

Close Date

Features

November 7

10/24

- **Design Feature|** Reliable Wireless Architectures
Wireless sensor networks for space missions needs reliable wireless sensors. Adapting wireless technology for space missions translates to reliable wireless architectures in many commercial and industrial applications on Earth and be applied in other multiple fields of applications where reliability is paramount. The design feature looks at the tradeoffs of various topologies for wireless mesh networks that can take a few pointers from reliable space communications.
- **Product Focus|** Hi-rel ICs and components

November 9 | Special Digital Edition

10/25

- **Medical**
The economic stimulus package and various legislative proposals have included funding for “comparative effectiveness” research, which involves testing medical devices, among others, to evaluate the value they deliver for the money spent on them. In this climate, it is incumbent on medical electronics developers to field systems that provide optimal cost/performance. Our digital issue will investigate the attendant challenges and opportunities.

EE Times | 2011 Content Calendar

November 21	11/07	<ul style="list-style-type: none"> • Design Feature Smart Energy Topologies <i>The evolution of energy-harvesting-based systems from today's niche products to their widespread use in building automation, security systems, embedded controls, agriculture, infrastructure monitoring, asset management and medical monitoring systems is inevitable. The design feature will take a look at harvest energy engineering with off-the-shelf ultra-low-power, wireless microcontrollers and transmitting data using power management techniques.</i> • Product Focus Mixed-signal ICs, Power Management ICs
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DECEMBER

Issue Date	Close Date	Features
December 12	11/28	<ul style="list-style-type: none"> • Design Feature Mobile Devices Architectures <i>MEMS have been integrated in portable devices for cost and performance advantages. The design feature will look beyond MEMS use in screen rotation, power saving, motion detection, navigation and gaming. Instead it will cover more advanced applications, such as augmented reality location-based services, pedestrian dead-reckoning being developed for today's mobile consumer devices.</i> • Product Focus Memories, Microprocessors