Embedded COMPUTING DESIGN
October E-Letter
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Qualcomm?s acquisition of NXP and the cost of doing business

Brandon Lewis, Technology Editor

Those of us in the media, at least, started hearing rumors of NXP being acquired almost as soon as they completed the purchase of Freescale late last year.

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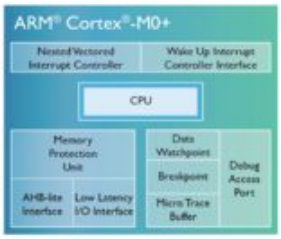

Security and the Cortex-M MPU

Ralph Moore, Micro Digital

As embedded systems are drawn more into the IoT, security in the form of protection of critical resources is becoming increasingly important. Effective protection can only be achieved via hardware means.

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RTOS in the IoT: Combating complexity with control

Johan Kraft, Percepio

In the near future, almost everything will be connected to the Internet ?? at least, that?s the vision for the Internet of Things. This vision belies the complexity behind it, because most of the communication will take place between the ?things? in the IoT rather than people. That?s relevant because people are really rather [...]

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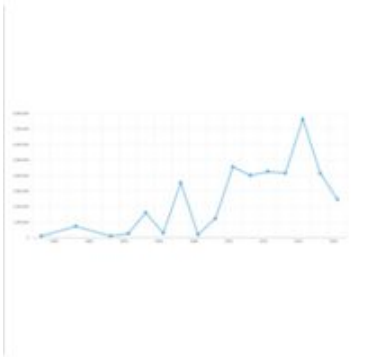

Can government-funded innovation solve the cyber security threat?

Robby Schlesinger, InterKn

A massive distributed denial-of-service (DDoS) attack on Dyn, a domain name system (DNS) that essentially acts as an online phone operator, took out huge swaths of the Internet. Millions of people across the US reported difficulty or inability to access some of the most trafficked websites in the country.

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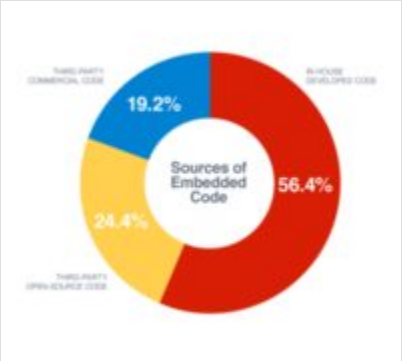

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Edward Snowden and data security for the Internet of Things

Brandon Lewis, Technology Editor

A projector fired up in a moderately sized conference room at The Boulders Resort in Carefree, AZ, and from it appeared the image of a young man dressed in all black wearing rimless glasses. A day or two?s worth of stubble suggested fatigue although he was very much alert, and a green screen backdrop gave off occasional distortion whenever he gestured abruptly.

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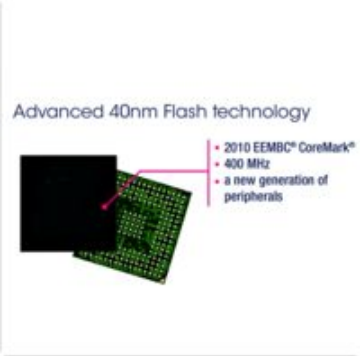

40-nm Cortex-M7 MCU ups performance/density levels

Rich Nass, Embedded Computing Brand Director

There?s a new addition to the STM32 portfolio of products. And, according to the folks at STMicroelectronics, it?s a major addition. The high-density STM32H7 series of microcontrollers (MCUs) embeds up to 1 Mbyte of SRAM, up to 2 Mbytes of dual-bank flash memory. The family is aimed at ?smart? devices that can take advantage of [...]

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National Instruments: A changing of the guard

Rich Nass, Embedded Computing Brand Director

Dr. James Truchard, better known as Dr. T, has been at the helm of National Instruments since the company?s formation in 1976. It?s grown from a startup to over $1 billion with more than 7000 employees. But there?s a big change afoot. How big a change that is is yet to be seen. Dr. T [...]

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5 key trends in the global smart factory market

Abhishek Budholiya, Future Market Insights

Smart factories are being touted as the future of manufacturing. Continuous advancement in machine intelligence is expected to bring about a fourth industrial revolution, expected to offer a wide range of benefits, including greater efficiency, flexibility, and safety. The global smart factory market was valued at nearly $52 billion in 2014 and is expected to [...]

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SISTER PUBLICATION ARTICLE

?Snappy? gateway application development with Ubuntu Core

Thibaut Rouffineau, Canonical Ltd.

Many of you have used Ubuntu at some point in your life, maybe to revive an old laptop that could not cope with the latest Windows update, or on your development machine, or, quite likely, if you?ve logged into a backend server. Lately, however, you might have heard of a new Ubuntu called Ubuntu Core [...]

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Assistant vs Alexa: 8 things not discussed (enough)

Todd Mozer, Sensory, Inc.

I watched Sundar and Rick and the team at Google announce all the great new products from Google. I?ve read a few reviews and comparisons with Alexa/Assistant and Echo/Home, but it struck me that there?s quite an overlap in the reports I?m reading and some of the more interesting things aren?t being discussed. Here are [...]

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Understanding the new guidance on MISRA compliance and deviations

Chris Tapp, LDRA Technology *and*
Jay Thomas, LDRA Technology

In civilized societies, rules are developed to protect lives and possessions. Any time exceptions to the rules are granted, the rest of society can find their own safety and security impacted. This holds true for software as well. Standards and guidelines such as MISRA C establish an accepted set of rules that are designed to [...]

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Choosing the best IoT protocol

Lynnette Reese, Mouser

While much of the IoT relies on the traditional embedded development skills, the requirement for always-on connectivity is tasking engineers to make decisions not only for the wireless method, but for the communications protocol, too. As a result, different protocols are trying to establish themselves as the keystone for provisioning data communication from edge nodes [...]

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Realizing the promise of low power cellular IoT

Thomas Embla Bonnerud, Nordic Semiconductor

Long Term Evolution (LTE), the standards-driven technology for high-speed cellular connectivity, is perhaps best known for enabling consumers to stream high-definition video to their mobile devices across most of the world. The technology is often referred to as ?4G? (although strictly speaking, 4G uses an enhanced form of LTE called ?LTE Advanced?). The LTE standard [...]

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AWS, Microchip deliver trust anchor for end-to-end IoT security

Brandon Lewis, Technology Editor

Digital certificates, such as X.509 used by the transport layer security (TLS) protocol, are ingrained in almost every aspect of our digital lives. Whether sending a secure e-mail, checking a bank account balance, or performing any other action that requires an encrypted online connection, these certificates authenticate the identity of parties involved in the electronic exchange of information to prevent, for example, man-in-the-middle attacks whereby a malicious actor impersonates one entity and potentially alters or misrepresents the content being exchanged.

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WHITE PAPER

White Paper: Automotive Resource Kit

Staff, National Instruments

Vehicle engines today are extremely complex because of their many subsystems, each with a controller to manage fuel injection, emissions, engine noise, and more. This complexity makes the job challenging for engineers with short development cycles and pressure to limit costs. Using HIL simulation, you can replicate specific parts of the embedded system and test them in a virtual environment before running real-world diagnostics on the complete system. This resource kit includes technical tutorials for HIL applications. Learn more about HIL test system architectures, selecting HIL test system I/O interfaces, and using fault insertion units for electronic testing.

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Embedded Computing Design
Volume 3, Issue 1 of the Internet of Things E-mag

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QuantumLeaps DIGI ELMA Your Solution Partner

E-cast

SYNOPSIS: A one-hour, live, moderated problem/solution technical webcast.

Using default time zone: America/New_York

New VxWorks Enhancements for the Evolving Demands of the Embedded Device Market

Sponsored by: Wind River

November 3rd
2 pm EDT
Registration: OPEN

For additional *E-casts*, check out the Broadcast Archive.

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