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FEATURE

Designing Smart Home and Wearables IoT Applications

JAYA KATHURIA AND MEENAKSHI SUNDARAM, CYPRESS

Watches are no longer just for telling time. Smart watches have turned our wrists into smart phone holsters by enabling text messaging, phone calls, and health monitoring. A wearable is a wireless device ?almost always? worn by the user.

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FEATURE

8 sensor protocols for your next IoT project

SREEDEVI VAMANAN, EMBITEL

The central component of an IoT ecosystem is connectivity, or specifically communication. IoT has made connection and communication between remote and dispersed entities (devices, sensor nodes, gateway units, cloud servers) possible.

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FEATURE

Real-Time Location Systems Enhances Internet of Things for Better Location Services

KHUSRO KHAN, XPODENCE RESEARCH

Real-Time Location Systems (RTLS) is a combination of hardware, software and service components, which are used for the real-time monitoring, tracking and management of equipment, patients and staff personnel.

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NEWS

PsiKick Provides Patented Batteryless IoT Sensor Technology to Steam Traps

LAURA DOLAN, TECHNOLOGY EDITOR

The only abundance seen lately in the electronic components market is the quantity of calendar pages marking how long the supply shortage has lasted.

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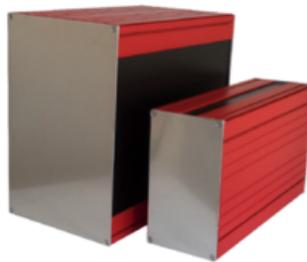


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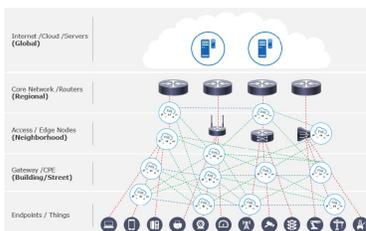
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Extreme Engineering Solutions (X-ES)

Extreme Engineering Solutions? XPand6215 is an Intel? Xeon? D-1500 Processor-Based Rugged Small Form Factor (SFF) COTS System with Xilinx Kintex? Ultrascale? FPGA

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FEATURE

Low-latency, distributed database architectures are critical for emerging fog applications

ROB SCHAUBLE, REDIS LABS

Internet of Things (IoT) solutions present a unique challenge for any database. There?s increasingly large and fast data coming from a very broad spectrum of IoT devices, coupled with critical latency requirements.

NEWS

STMicroelectronics and Biricha Digital Power Offer Workshop for Digital Power Supplies Implementation on STM32 MCUs

LAURA DOLAN, TECHNOLOGY EDITOR

STMicroelectronics has joined forces with Biricha Digital Power to develop a workshop for power-supply engineers on how to quickly move to a digital implementation and why it's imperative for the continuing development of low-cost, high-performance microcontrollers (MCUs) and new design possibilities.

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FEATURE

The Ongoing Challenges of Mobile VR/AR/MR

LIRAN BAR, DIRECTOR, CEVA, IMAGING & VISION DSP CORE PRODUCT LINE

Last year, I shared my views on some of the challenges the mobile VR industry was facing. I felt that while the hype was high, delivery on what was promised was nowhere near expectations. Many of the systems I saw were still tethered to a PC or needed a heavy battery in a head-mounted display (HMD).



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FEATURE**IoT Connectivity: Choosing a Black-Box, White-Box, or Gray-Box Approach**

JOSH PEDERSON, ECD CONTRIBUTOR

Internet of Things (IoT) developers have a choice of approaches for creating connectivity to IoT clouds, each with different advantages and trade-offs. How can you tell which option is the best one?

[Read More +](#)**PODCAST****Five Minutes with?Brian Faith, CEO, QuickLogic**

RICH NASS

Machine learning at the node is starting to become a reality, thanks to the availability of adequate processing capability. Moving this technology from the cloud to the edge, a term that's sometimes used synonymously with the node, provides a big leap in being able to process elements in near-real-time. This idea was the basis of the discussion I had with Brian Faith, President and CEO of Quicklogic in this week's Five Minutes with?discussion.

[Read More +](#)**NEWS****SiFive Welcomes Hex Five Security?s MultiZone to its Software Ecosystem**

LAURA DOLAN, TECHNOLOGY EDITOR

SiFive added Hex Five Security?s MultiZone Security to its growing SiFive Software Ecosystem. SiFive will incorporate MultiZone Security into its Freedom SDK through the partnership for easy implementation by SiFive customers seeking a Trusted Execution Environment.

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THE IMPACTS OF FILE SYSTEM FRAGMENTATION ON AUTOMOTIVE STORAGE PERFORMANCE

TUXERA Make it work.



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The Impacts of File System Fragmentation on Automotive Storage Performance

Tuxera

It's important for car makers and Tier-1 suppliers to choose their file system implementations wisely. File systems impact read and write performance of the storage, the integrity of the data stored, flash endurance or the lifetime of the memory hardware, and data and storage interoperability.

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Key Considerations for Powertrain HIL Test

NATIONAL INSTRUMENTS

Safety, availability, and cost considerations can make performing thorough tests of embedded control devices using the complete system impractical. Hardware-in-the-loop (HIL) simulation is a real-time test technique used to test these devices more efficiently.

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Testing Strategies for IoT

ROHDE & SCHWARZ

The Internet of Things is providing exciting opportunities to enhance products for consumer, industrial, medical and others. This paper discusses these unlicensed wireless connections and the special testing required to meet government regulations for IoT devices.

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From enabled to proactive: the evolution of home automation

AVNET

Just how smart can a smart home get? Tomorrow's home is a true brainiac, making decisions for you before you even think to tell it to. A hundred years ago, a smart home was one with the first electric home machinery. Fast forward to the 1980s and smart homes were samples of "cybertecture" (cyberspace's influence on architecture), according to the National Association of Home Builders.

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Introduction to V2X

RHODE & SCHWARZ

Engineers and scientists are seeking processes and technologies to enhance the traffic flow and safety through sophisticated traffic management. Technological progress in the automotive industry towards automated driving and development of advanced driver-assistance systems are propelling a fully digital transportation system.

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Fast Track to Proof Your Sensor Concept in 30 Days

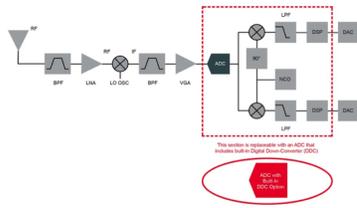
ADVANTECH, CORP.

In the age of IoT transformation, emerging architecture and technology spider webs through multiple arenas of IoT infrastructure. All these devices need communication



bridges to pass raw data through the network to reach central servers for processing. And how well a sensor is designed forms the backbone on how well the data is captured and communicated.

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An ADC for the digital world

MICROCHIP TECHNOLOGY, INC.

Today's digital radio architectures rely heavily upon advanced digital signal processing technology, such as Digital Down-Conversion (DDC) for In-phase and Quadrature (I/Q) signal detection and digital decimation filtering for improving Signal-to-Noise Ratio (SNR).

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Why Binary Scanning Is Critical For Securing Your Software Supply Chain

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