EMBEDDED NETWORKING FEATURE
A Comprehensive Guide to eSIM and eSIM-Ready Devices
VICTORIA MELNYCHUK, FREELANCE JOURNALIST

Despite all the advantages, new technologies do not always succeed in quickly displacing old ones. This is especially true for SIM cards that have not changed for years despite the advent of new, more compact formats. Now, the new eSIM standard allows you to completely abandon the physical card, replacing it with a virtual one.

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DEVELOPMENT TOOLS FEATURE
Easy Headless Raspberry Pi Setup
JEREMY COOK, CONTRIBUTING EDITOR

As outlined in this Raspberry Pi Connect post, it’s very possible to connect to your Raspberry Pi over a local network, and accomplish a wide range of tasks. In fact, as I’ve become more comfortable with the system, this is by far my preferred control method. While that post gives a good overview of how to get connected to a system once set up, what if you don’t want to deal with initially connecting a monitor, or remembering how to modify X and Y text files, and with what editor?

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Embedded Insiders: Asking Again... Is RISC-V Really for Real Real?

RICH NASS, BRAND DIRECTOR, AND BRANDON LEWIS, EDITOR-IN-CHIEF, EMBEDDED COMPUTING DESIGN

In this edition of the embedded insiders, Brandon and Rich ponder whether RISC-V is taking too long to become a mainstream technology, or if it will even ever be one. Despite being open-source and all of the initial hype, will RISC-V become all that it has so-far been made it out to be? Later, the Insiders are joined by Mark Himelstein, the newly-appointed CTO of RISC-V International.

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DEVELOPMENT KITS FEATURE

Life after Raspberry Pi: Rapid System Prototyping for Professional Engineers

BRANDON LEWIS, EDITOR-IN-CHIEF, EMBEDDED COMPUTING DESIGN

Aside from ease of use, the best thing about rapid prototyping platforms like Arduino and Raspberry Pi is their extremely low cost. Unless you’re a professional engineer. So-called “maker boards” were initially designed for large-scale STEM education environments, and therefore had to be as inexpensive as possible. As a result, they integrate many electronic components that aren’t suitable for commercial deployment. In other words, they’re cheap.

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IoT INDUSTRY FEATURE

New Ways to Build a Business Bedrock for the IoT Age

HAYDN POVEY, CEO, SECURE THINGZ, AND GENERAL MANAGER - EMBEDDED SECURITY SOLUTIONS, IAR SYSTEMS

Things working together are bringing us the next tsunami of innovation. For example, if I have a connected car and the dynamics of the road or cityscape change around me because of a burst water main, that will automatically impact the car’s suggested route. The car being smart on its own doesn’t help much. It is understanding the
context of how these systems are going to work together which will really drive innovation.

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DEV KIT WEEKLY: HARDWARE REVIEW & RAFFLE

Dev Kit Weekly: ADLINK I-Pi Industrial IoT Prototyping Platform
BRANDON LEWIS, EDITOR-IN-CHIEF, EMBEDDED COMPUTING DESIGN

While ?maker? boards like Arduino and Raspberry Pi are great in part because of their ultra-low cost, they are, well, cheap. And that?s not a problem in some contexts, but if you?re a professional engineer trying to prototype a system for an industrial or commercial use case, let?s say, the inexpensive components on those boards don?t provide a sufficient analog to what you?d actually deploy in the field. That?s where the I-Pi comes in.

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IoT DEVELOPMENT KITS NEWS

Avnet Introduces MaaXBoard Mini for Embedded Computing and Smart Edge IoT Applications
TIERA OLIVER, EDITORIAL INTERN, EMBEDDED COMPUTING DESIGN

Global technology solutions provider Avnet is adding the MaaXBoard Mini, a new single-board computer, to its portfolio of hardware designed to accelerate time-to-market and reduce costs for IoT developers. Based on NXP’s i.MX 8M Mini processor, the MaaXBoard Mini is ideal for embedded computing and smart edge IoT applications.

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**AI & MACHINE LEARNING NEWS**

**AAEON Releases the BOXER-8251AI AI Edge Box PC**

PERRY COHEN, TECHNOLOGY EDITOR, EMBEDDED COMPUTING DESIGN

The BOXER-8251AI features a six-core 64-bit ARM processor, 384 CUDA cores, 48 tensor cores, and two NVIDIA engines fore running multiple neural networks in parallel. All in all, these features combined deliver computing performance of up to 21 TOPS.

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**INDUSTRY FEATURE**

**5 People to Follow in Tethics (Tech Ethics)**

MATT MARTING, CEO AND FOUNDER, CLOCKWISE

From deepfakes and repression of dissent to online harassment and facial recognition software, the decisions we make about technology have broad and lasting consequences. It’s important for everyone working in tech to have an understanding of the power and potential, for good and bad, of their work.

Tune In +

**CYBERSECURITY FEATURE**

**Maintain Security From Design To Manufacture Using Secure Contexts**

DAN DEMERS, DIRECTOR, SALES & MARKETING, CONGATEC AMERICAS

Secure contexts are a must in industrial platforms, especially if it’s a ?connected? platform. Those contexts are a way to capture all aspects of the system, and basically all the elements that need to be locked down. It also represents the minimum standards of authentication and confidentiality. A primary goal of secure contexts is to prevent attackers from accessing the APIs of that platform.

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Extreme Engineering Solutions (X-ES)

Extreme Engineering Solutions? XCalibur4630 is an Intel? Xeon? D-1500 Family Processor-Based Conduction- or Air-Cooled 6U VME Single Board Computer (SBC)

ACCES I/O Products, Inc.

mPCIe-DIO Series: PCI Express Mini Cards for Easy and Flexible Digital I/O Expansion

WHITE PAPER

Ensuring the Success of Your RISC-V Product with a Commercial-Grade Software Development Ecosystem

MENTOR

The headlines continue to grow as more companies move their embedded projects to the RISC-V platform. Before you decide to move your next embedded project to RISC-V, know how to get the most out of this innovative ISA.

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WHITE PAPER

How the SMARC? Module 2.1 revision responds to the latest IoT- and AI-driven demands on embedded computing solutions

KONTRON

SMARC? modules are being rapidly adopted in both industrial and non-industrial markets. With the The IoT/IIoT - and increasingly AI - presenting many new possibilities the latest SMARC? 2.1 module revision ensures the standard will remain perfectly in step with the needs of developers and SIs.

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WHITE PAPER
Understanding Key Real-Time Spectrum Analyzer Specifications
ANRITSU

Spectrum analyzers are the fundamental instrument used by RF engineers to measure individual signals across a defined frequency band. They capture and display wanted and unwanted signals, enabling a range of measurements including power, frequency, modulation and distortion.

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WHITE PAPER
2020 Industrial IoT Platforms Buyer’s Guide
LITMUS

This IIoT Platform Buyer’s Guide will explain the challenges and building blocks for a successful solution, essential IIoT platform capabilities, and most importantly how several leading vendors in this space are positioned to help companies embrace Smart Manufacturing for immediate business value.

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WHITE PAPER
Important Electronic Design Considerations for Data Acquisition Systems: Part 1 ? Calibration
NUVATION ENGINEERING

Over the past two decades Nuvation Engineering has developed data acquisition systems for a wide range of devices and market applications. Based on our experience performing hundreds of engineering design projects, our engineers have identified several key considerations that require special attention during the planning, design, and development of data acquisition systems.

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