

POWER ELECTRONICS FEATURE

Alistair Davidson of the Consortium for Battery Innovation on the State of Energy Storage

While there is still a lot of demand for better energy storage in the consumer spaces in portable electronics, the lion's share of the pressure is now coming from the automotive and robotics verticals, where the margin for error when the power runs out is nonexistent. This demand for better batteries in electric vehicles, robotics, and industrial systems is driving a great deal of the development effort today.

The Consortium for Battery Innovation, previously known as ALABC, has been carrying out research into lead batteries for a quarter of a century. We reached out to Alistair Davidson of the Consortium for more insight on current trends in battery technology.

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AUTOMOTIVE POWER ELECTRONICS FEATURE

EV Infrastructure SIGs Work to Create an Industry

Beyond the primary issue of whether or not cars of the future will be fossil fueled, electric, or hybrid, and the related issue of energy storage and battery densities, is the question of infrastructure and standards. Industry special-

interest groups have risen to address these various issues.

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EMBEDDED SECURITY BLOG

SigmaDots Covers All Three Levels When Securing Industrial IoT Systems

OEMs often tout their "system approach" to design. In theory, this means that they look at the end application, and then design each aspect of the system to meet the needs of that application. Security is no different. The OEM must ensure that there are no holes in the security chain.

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EMBEDDED COMPUTING NEWS

NXP Debuts i.MX Applications Processor with Neural Processing Unit for Advanced Machine Learning

The i.MX 8M Plus integrates an NPU that delivers 2.3 TOPS with a quad-core Arm Cortex-A53 subsystem running at up to 2 GHz, an independent real-time subsystem with an 800 MHz Cortex-M7, a 800 MHz audio DSP for voice and natural language processing, dual camera image signal processors, and a 3D GPU.

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IoT NETWORKING NEWS

STMicro's STM32 SoC Empowers LoRa-based Smart Devices

The STM32WLE5 is available in a 5mm x 5mm UFBGA73 package, and is fully integrated into the STM32 ecosystem, including STM32Cube software support, with a LoRaWAN stack certified for all regions in source-code format.

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AUTOMOTIVE NETWORKING NEWS

KDPOF Demos First 25 Gbps Automotive-grade Optical Network

KDPOF, a supplier for gigabit transceivers over POF (Plastic Optical Fiber), will demonstrate an automotive-grade optical transmission system with 25 gigabits per second at the Automotive Ethernet Congress from February 12 to 13, 2020 in Munich, Germany.

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EMBEDDED SENSING NEWS

ams Launches Ultra-Sensitive NIR Image Sensor Promising Power Savings in Mobile 3D Optical Sensing Systems

The CGSS130 enables 3D optical sensing applications such as face recognition, payment authentication and more to operate at lower power than alternative implementations. According to the company, this means that battery-powered devices can run longer between charges, a key differentiator for OEMs, while supporting more sophisticated sensor functions.

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AUTOMOTIVE TEST & MEASUREMENT NEWS

R&S? Oscilloscopes and Marvell's Multiport Multi-Gigabit Automotive

Ethernet Switch Address Wideband Test

Enabling the implementation of a domain/zonal controller network architecture, the IEEE 802.3-compliant 88Q6113 is an 11-port Ethernet switch that supports RGMII/MII/RMII, SGMII, XFI Multi-Speed SerDes (1/2.5/5/10 Gbps), and PCIe Gen 3.0.

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WEBCAST

Dealing with Legacy in Industrial IoT

Sponsored by: **Innodisk, SuperMicro, DFI**

Date: **January 16, 11:00 a.m. ET**

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IoT HARDWARE NEWS

Bridgetek Releases Display Units to Support its PanL Smart Building Technology

The PanL70Plus unit, which is part of the Bridgetek PanL Room Manager solution, has a central feature set and a 7-inch format display that are identical to the PanL70, but is slightly bigger overall (measuring 232mm x 125mm x 26.4mm). The reason for this being, it can house a 13.56MHz RFID reader (for identification/access purposes), as well as an LED matrix status indicator.

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DEVELOPMENT TOOLS & OPERATING SYSTEMS FEATURE

Inside the Black Box

Most software is obtained as a binary executable. The program may run and does what it does, but the user has no knowledge of its inner workings and has no opportunity to modify its functionality.

And all of this is fine.

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