



A host of products from Kontron target rugged industrial, medical apps

 Rich Nass

Kontron recently announced a series of products that help put the systems integrator squarely in the rugged industrial environment. First, the ZINC19 rackmount series is specifically aimed at industrial and medical applications. Available in 2U and 4U configurations, the series can be configured with either 6th Generation Intel Core or XEON microprocessors. Optional high-performance graphic cards make demanding graphics and image processing a reality. The series is specifically designed for continuous operation in rough industrial environments and can withstand exposure to extended shock, vibration,? [Continued...](#)



Advertisement

Microcontroller Closes the Graphics Gap

The industry's first MCU to combine a 2D Graphics Processing Unit (GPU) and integrated DDR2 memory delivers groundbreaking graphics with increased colour resolution and display sizes.

The three-layer graphics controller in the 32-bit PIC32MZ DA family drives 24-bit colour Super Extended Graphics Array (SXGA) displays up to 12 inches, whilst expansive storage is provided by up to 32 MB of on-chip DRAM or 128 MB externally addressable DRAM. [To find out more click here](#)

The birth of 30 million digital twins: Transforming the engineering lifecycle and manufacturing feedback loops



Brandon Lewis

The 'digital twin' was first introduced to mainstream technology by General Electric back in 2015, and has been assimilating into Industrial Internet of Things (IIoT) hierarchies ever since. Digital twins are virtual representations of physical products that, when combined with connectivity, enable device makers to interact with their equipment long after it has been deployed in the field. From an engineering perspective, digital twins can be used to monitor the impact of operational or environmental wear and tear on system components, as well? [Continued...](#)



Deception networks: Reducing alert fatigue and increasing security through an alternate reality



Brandon Lewis

The most concerning revelation to come out of the security industry over the past couple of years isn't the Mirai botnet, nor the hacks of Verizon, Yahoo! (before the acquisition), or the Democratic National Committee (DNC), or even the infamous Jeep hack. Instead, it came from security company FireEye's June 2016 Mandiant M-Trends Report, in which it was revealed that the average time between



compromise and detection of a cyberattack is 146 days . While this number is unnerving for enterprises of any kind,? [Continued...](#)

Automotive ECUs: Architecture considerations to implement secure software updates over the air

 Bjoern Steurich, Infineon Technologies; Martin Klimke, Infineon Technologies; Ines Pedersen, Infineon Technologies

With increasing recognition that our cars are evolving into rolling data centers, manufacturers are faced with the challenge of keeping software current. Part of the demand is driven by economics; the rising costs for recall actions make it essential that upgrades become automatic. At the same time, consumers are coming to expect the kinds of automatic upgrades that occur with their computer and mobile devices. An obvious step, therefore, is to use a mobile connection for software over the air (SOTA) updates. It has? [Continued...](#)



Back the the future with the Kontron/S&T merger

 Rich Nass, Embedded Computing Brand Director, and Brandon Lewis, Technology Editor

With shrinking margins in the board and module market, companies are merging to acquire proficiency in areas like software and networking. That's precisely the driver behind the Kontron and S&T Deutschland Holding AG merger announced last month. This week, the Embedded Insiders chat with Kevin Rhoads, General Manager at Kontron Americas to find out more about what S&T and Kontron stand to gain from each other. They learn S&T's software and middleware solutions complement Kontron's hardware offerings, especially as it relates to connecting edge-based? [Continued...](#)



5G Public Private Partnership aims for lofty 5G goals

 Curt Schwaderer

The 5G Public Private Partnership (5G-PPP) is a joint initiative between the European ICT industry and European Commission to rethink the infrastructure and create next-generation of communications networks and services that will provide ubiquitous connectivity and seamless delivery. Their goal is to integrate telecom and IT to a high-capacity, ubiquitous infrastructure that supports fixed and mobile networks. The 5G infrastructure goals include: Faster access , from the Mbps range today with LTE to the Gbps range with 5G Higher wireless area capacity , up? [Continued...](#)



Cross-industry semantic interoperability, part three: The role of a top-level ontology

 Victor Berrios, Zigbee Alliance,  Richard Halter, Global Retail Technology Advisors,  Mark Harrison, Milecastle Media,  Scott Hollenbeck, VeriSign,  Doug Migliori, ControlBEAM,  John Petze, SkyFoundry,  Ron Schuldt, Data-Harmonizing, and  J. Clarke Stevens, Shaw Communications

Part two identified consortia and their approaches to application layer interop. In part three, we discuss the role of a top-level ontology in solving the metadata challenge, and how elements of alternative approaches can improve scalability. This is intended to be a living series that incorporates relevant emerging concepts and reader comments over time. The community's participation is encouraged. ?There are two words for everything.? ? E.V. Lucas What is an ontology? Ontologies, as parts of science, have many faces. Originally, ontology was the? [Continued...](#)



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