EIU
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FUELLING INDUSTRIAL GROWTH

FEATURES

PLUS

REGULARS

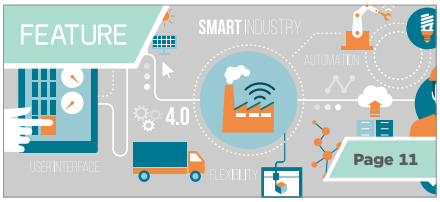
In this issue...

Industry is changing – and electronic systems are driving that change. Our May issue examines how through articles entitled: Enabling trusted industrial automation; Making factories smarter, more productive through predictive maintenance; Considering using 1U PSUs in industrial environments?; and Shaping the future of IIo T networks. Our industry news round-up reports on: ON Semis plans to buy Quantenna; Kyocera/Vicor's power-on-package solutions; Infineon expansion at its HF facility in Linz; and developments in injection-moulded structural electronics.

Plus, of course, regulars: Dev Kit Pick, Tech Tips and the latest, most innovative NPIs now in stock at Mouser. Now read on...

ON Semi to buy Quantenna * Kyocera/ Vicor to collaborate on power-on-package solutions * Infineon expands HF facility in Linz * Injection moulded structural electronics

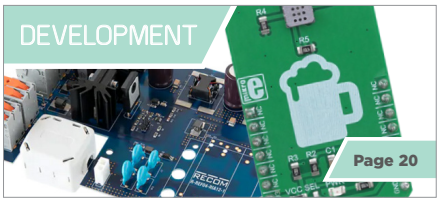
FORTE BOM tool proven to save time; improve accuracy * New customer service centre in Poland * ODU connectors added globally * Mouser named Hall of Fame sponsor at FIRST® Championship



Enabling trusted industrial automation

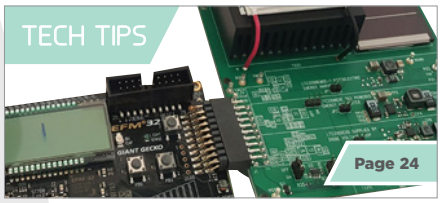
Considering using 1U PSUs in industrial environments?

Making factories smarter, more productive through predictive maintenance

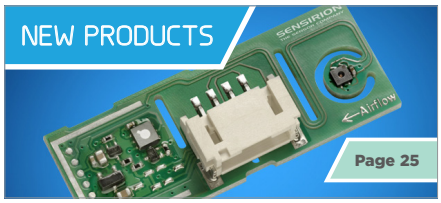


Mark Patrick spotlights development tools from NXP, Microchip, MikroE, EPCOS/TDK and Recom

Shaping the future of IIoT networks



Mouser's Maurizio di Paolo Emilio finds a go-to solution for energy harvesting



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HARTING and HIROSE promote infrastructure for Single-Pair Ethernet

When it comes to device integration, cables are often overlooked, but using better cables can support improved system development. HIROSE Electric and the HARTING Technology Group have entered into an agreement to jointly develop and market a connection technology system for Single Pair Ethernet (SPE).

"The joint development in the area of Single Pair Ethernet continues and consolidates the successful technology partnership of both companies," says HIROSE President Kazunori Ishii. The duo's partnership was announced in the autumn of 2016 when HIROSE and HARTING jointly launched the ix Industrial® interface on the market. "The ix Industrial® mating face has notched up great success in the interim and is a popular interface for numerous users in their miniaturised applications for four-pair Ethernet," explained HARTING CEO Philip Harting.

The technology partnership is pursuing systematic expansion of the technology to create an end-to-end infrastructure, with a practicable portfolio of connectors, sockets, cables, and cable sets on the component side. "In addition to establishing a uniform mating face, the standardization of all aspects is actively being pursued and is seen as the basis for a comprehensive SPE ecosystem," says Ralf Klein, Managing Director HARTING Electronics.

www.hirose.com, www.harting.com

ROHM names John Turner as Country Manager for UK and Nordics

ROHM Semiconductor recently appointed John Turner as the Country Manager for UK and Nordics, including Denmark, Finland, Norway and Sweden. In his new position, John will be mainly responsible for the strategic development and successful implementation of the company's products in the automotive and industrial markets.

With more than 25 years of experience in the industry, amongst various positions in marketing and sales, John worked as Senior Product Manager for Optoelectronics for Siemens Semiconductor (now Infineon and Osram), as UK Distribution Sales Manager for Motorola (now ON Semiconductor), and in the past few years as South and Northwest European Sales Manager for Diodes Inc.

"I am very happy to have John Turner join our team as Country Manager and help us develop our business in the UK and the Nordic countries," said Christian André, President ROHM Semiconductor Europe. "His experience in originating successful and profitable sales strategies will enables us to further grow in these markets."

www.rohm.com/eu

Bridgetek joins Zerynth & Riverdi in IoT tech partnership

When it comes to electronic products, displays are a major user I/O interface, and can impact both the perception and performance of the device. Working to leverage its advanced graphics controller ICs in the Internet of Things (IoT) sector, Bridgetek has entered a three-way collaborative partnership with IoT developer Zerynth and display solutions provider Riverdi. The cooperative effort will create and implement next-generation smart building systems and Industry 4.0 ready factory automation equipment.

The partnership will provide a compelling hardware/software offering, based on Bridgetek's BT81x series devices with Embedded Video Engine (EVE) technology, along with Riverdi's touch-enabled display modules, and Zerynth's IoT programming platform and its supporting libraries. EVE's object-oriented architecture enables sophisticated Human-Machine Interfaces (HMIs) to be constructed using minimal microcontroller and memory capacity, thus saving board real estate and curbing power consumption demands.

Zerynth's Python-based programming platform keeps software engineering overheads down and is optimized specifically for resource-constrained IoT applications. This will enable the numerous Riverdi-supplied Wi-Fi/Bluetooth-compliant EVE HMI units within an IoT monitoring or control system to connect up to the cloud network, and thereby utilize various cloud services.

www.zerynth.com, www.riverdi.com, brtchip.com

C&K appoints M&A expert Ted Arnstein SVP of commercial development

C&K has appointed Mergers and Acquisitions (M&A) expert Ted Arnstein as Senior Vice President (SVP) of Commercial Development, a newly-created role to support the accelerated growth of the business, reporting directly to the Chief Executive Officer, John Boucher. The new hire follows Scott Smith being named as the company's first Chief Revenue Officer earlier this year.

C&K continues to broaden its product portfolio and customer base in new and existing markets including automotive, medical, industrial, aerospace, high-end consumer, and the Internet of Things (IoT). As SVP of Commercial Development, Mr. Arnstein will play a pivotal role in steering the company's growth strategy, long-range planning, and key acquisition initiatives.

Mr. Arnstein has more than 20 years of international M&A experience across a wide range of commercial management roles, including as head of corporate development for Sensata Technologies, one of the largest providers of mission-critical sensor solutions to the global transportation, industrial and aerospace markets, and a similar position at NXP Semiconductors, a global manufacturer of mixed-signal integrated circuits headquartered in the Netherlands.

"I'm delighted to welcome Ted to our commercial leadership team," said John Boucher, CEO of C&K. "His successful track record in scaling up major companies means he is ideally placed to implement our business development strategy to increase C&K's presence worldwide. I'm sure he'll play a key part in the ongoing success of our business."

"It's an exciting time for C&K given the impressive growth trajectory which has already been achieved, and the ambitious targets for future expansion. With its global workforce, competitive manufacturing and high-quality product portfolio, I'm very much looking forward to joining the company's dynamic management team and making a major contribution to scale the business," said Mr. Arnstein.

www.ckswitches.com

Infineon expands HF development site in Linz

There have been several disruptive technologies impacting the embedded electronics space, from topologies to materials. A lot of these developments have created pressure to create high-frequency power electronic systems, and those systems require next-generation components to populate them. Addressing this need, Infineon has strengthened its research and development efforts in the field of high-frequency components, by giving the Infineon Austria holding company DICE (Danube Integrated Circuit Engineering) in Linz a new home.

By the summer of 2020, a new building will house 400 employees, adding 220 new jobs to the current workforce. The development centre's current focus is on 77GHz radar chips for driver assistance systems. Components for mobile telephony and navigation applications are another key area of the company's business.

The Linz site develops solutions for important future markets, as Peter Schiefer, President of the Automotive Division of the Infineon Group, explained: "Infineon is shaping the future of mobility and communication. Microelectronics accounts for the majority of all innovations in the car and in the smartphone. The further development of advanced driver assistance systems, smartphones, tablets and navigation devices is a powerful driver of growth for Infineon. The semiconductor solutions for all of this are developed in Linz among other locations."

Infineon's Linz development centre launched the world's first 77GHz radar chip to use Silicon-Germanium (Si-Ge) technology in 2009, implemented in distance-warning and automatic emergency-braking systems. The aim is to develop this safety technology further, as radar sensors will be part of the standard equipment of every new car in the future, and among other things, required for autonomous driving.

www.infineon.com

MagnaChip announces multiple partnerships to collaborate on OLED apps

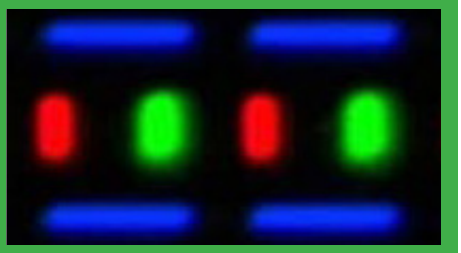
MagnaChip Semiconductor has announced an initiative to partner with companies in the development of next-generation display features of smartphones and other mobile or handheld consumer electronic devices. Each of these companies will develop and standardize innovative human-interface solutions based upon smart touch, stylus and fingerprint technologies suitable for MagnaChip's OLED Display-Driver Integrated Circuits (DDIC).

One of the partnerships involve MagnaChip Semiconductor and Melfas, a provider of touch-controller ICs and capacitive touchscreen/touchkey modules, will develop advanced OLED display capabilities for the automotive and consumer electronics sectors. Industry forecasters expect the segment to show a CAGR of 187% between 2018 and 2022.

MagnaChip and Melfas will initially address opportunities in consumer electronics and going forward, will work closely together to develop solutions for OLED displays in automotive. "Automotive display is an attractive market segment, and this partnership with Melfas will provide opportunities to develop feature-rich and cost-effective products," said YJ Kim, Chief Executive Officer of MagnaChip.

In another collaborative effort, MagnaChip and ELAN Microelectronics, a developer of Smart Human Machine Interface (HMI) applications, including capacitive touchscreen controllers, capacitive trackpads, and fingerprint sensors, will work to expand the capabilities of OLED displays for a wide variety of next-generation consumer, communication, computing, industrial, and automotive displays.

Customer demand for stylus input on screens continues to grow, and MagnaChip will collaborate to bring ELAN's stylus technologies to both rigid and flexible OLED Displays.



Currently, ELAN supports pen protocols defined by Microsoft, Wacom, and Huawei, and has enabled stylus features on smartphones, tablets, and Notebook PCs for Out-Cell, On-Cell and In-Cell LCDs.

"By working with MagnaChip we believe we can develop optimized OLED display solutions that can become de-facto industry standards," said I. H. Yeh, Chairman and CEO of ELAN Microelectronics. "OLED displays across multiple product sectors have shown impressive growth in recent years and we believe integrating our advanced fingerprint and touch IC technology with OLED DDIC technology will create compelling benefits for consumer and industrial product manufacturers.

It is my honor that MagnaChip, the largest independent supplier of OLED DDIC, and ELAN, the leader in stylus touch controllers, can collaborate to bring advanced stylus features to the world of OLED."

"By working with industry leaders such as ELAN, our goal is to create combined hardware offerings that provide industry leading product features and benefits for our customers," said YJ Kim, CEO of MagnaChip Semiconductor. "By collaborating with other industry leaders as part of our broader industry initiative, we believe MagnaChip can help accelerate product innovation, shorten time to market, and provide compelling OLED display solutions to the consumer, communications, computing, industrial and automotive markets."

www.emc.com.tw, www.melfas.com, www.magnachip.com

BÖ-LA and TactoTek join forces for Injection Moulded Structural Electronics

The pressure to develop solutions for next-generation Cloud-enabled products is touching every area of electronic design, from passive components to electronic topologies. Higher integration of circuitry in advanced packaging can shrink devices while providing useful form factors.

In one venture to develop next-generation enclosures, BÖ-LA and TactoTek have agreed that BÖ-LA will market and sell Injection Moulded Structural Electronics (IMSE) solutions.

"The vast majority of our IMSE customer cases are for user interfaces that require flawless cosmetics. BÖ-LA's film-insert moulding skill is recognized by leaders in automotive, appliance and electronics markets as consistently meeting the highest standards," said Sini Rytky, TactoTek VP, Product Management. "With their close customer relationships and deep technical knowledge that includes printed electronics, BÖ-LA is in an ideal position to determine the best fit of technologies for each customer project."

According to Dirk Lange, Head of Sales, at BÖ-LA, "We have been actively involved in developing and commercializing techniques for adding electronic functions to cosmetic surfaces, including integrating printed electronics in 3D-formed FIM parts.

With TactoTek's IMSE technology, we can also integrate electronic components within these molded structures which increases integrated functionality and streamlines production for the right designs."

www.tactotek.com, www.boela.de

ON Semiconductor to buy Quantenna

ON Semiconductor is set to acquire Quantenna for around $1B, significantly enhancing ON Semi's connectivity portfolio with the addition of Quantenna's industry leading Wi-Fi technology and software capabilities.

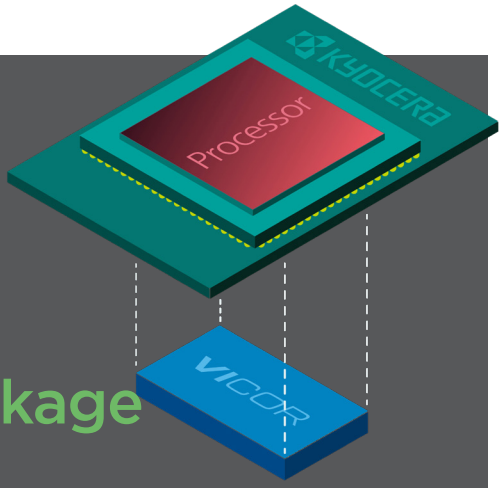
"We are very pleased to welcome Quantenna to ON Semiconductor's team. The acquisition of Quantenna is another step towards strengthening our presence in industrial and automotive markets.

The combination of ON's expertise in highly efficient power management and broad sales and distribution reach, and Quantenna's industry leading Wi-Fi technologies and software expertise creates a formidable platform for addressing fast growing markets for low-power connectivity in industrial and automotive applications," said Keith Jackson, President and Chief Executive Officer of ON Semiconductor.

"I am very excited about the opportunity this acquisition creates for customers, shareholders, and employees of the two companies."

www.onsemi.com/PowerSolutions/newsItem.do?article=4297

Kyocera and Vicor to collaborate on advanced Power-on-Package solutions



Advanced device integration technologies are needed to address the growing needs for system and power density as well as to provide the high level of functionality demanded in the latest generation of smart Cloud-enabled products.

With this in mind, Kyocera and Vicor have announced a collaboration on next-generation Power-on-Package solutions to maximize performance and minimize time-to-market for emerging processor technologies.

As a part of the collaboration, Kyocera will support power and data integration with organic packages, module substrates, and motherboard designs.

Vicor will provide Power-on-Package current multipliers, enabling high density and current delivery.

This collaboration addresses the rapid growth of higher performing processors, fomenting proportionate growth and complexity in high-speed I/Os and high current consumption demands.

Power-on-Package technology enables current multiplication within the processor package, allowing for higher efficiency, density, and bandwidth. They are able to reduce interconnect losses by up to 90%, freeing the processor package pins typically required for high current delivery. This allows them to be reclaimed for expanded I/O functionality, and along with Vertical Power Delivery (VPD) from the bottom of the processor and can virtually eliminate Power Delivery Network (PDN) losses while maximizing I/O capability and design flexibility.

www.kyocera.com, www.vicorpower.com