

EMBEDDED WORLD 2019

As the industry gets ready for this year's show, New Electronics delivers a sneak preview

Last year Embedded World saw more than 1,000 exhibitors present the latest in embedded systems. Once again, the Nuremberg exhibition will open its doors (26-28th February), covering topics such as security for electronic systems, distributed intelligence, the IoT, e-mobility, and energy efficiency.

New for 2019 is the start-up area (Hall 3A), dedicated to showcasing small, young companies.

Adesto Hall 4A – stand 124

Live demonstrations include the company's SmartServer IoT edge server platform. Designed to connect legacy industrial devices to the IoT and the cloud, it enables users to make use of analytics solutions such as the IBM Watson IoT Platform.

Analog Devices Hall 4A – Stand 641

ADI's booth will place special emphasis on emerging and rapidly-developing technologies, such as machine learning and artificial intelligence (AI), as they are applied to and deployed in the embedded space. A number of product demonstrations will be on show to present how exactly these technologies have been utilised.

Arm Hall 4 – stand 140

Arm's demonstrations will include machine learning on the edge; Arm Pelion Connectivity Management; simplified algorithm development with high-end signal processing on Cortex-M; and testing for functional safety with qualified FuSa building blocks, to name a few.

Arm will also partake in the conference sessions, discussing the cloud, software development, and security, among other topics across the three days.

Avnet Integrated Hall 2 – stand 238

Avnet Integrated will be highlighting its latest embedded Computer-on-Module solutions, including the Intel Pentium processor N4200 platform, plus the recently launched MSC C6B-CFLH COM Express Type 6 module family and MSC SM2S-IMX8 SMARC 2.0 module. There will also be live demonstrations of a range of displays, which will include real customer solutions. A particular highlight will be the SimplePlus solution.

Examples of how the AI-at-the-edge Meta-Sensing product SmartEdge Agile can be used in IoT industrial applications in conjunction with Microsoft Azure to build and create artificial intelligence models will also be demonstrated.

Cadence Hall 4 – stand 116

Cadence will showcase its latest Tensilica DSPs and design tools for automotive applications. Demos will focus on ADAS, infotainment, functional safety, ECU/automotive Ethernet design, and FPGA-based prototyping. This will include its safety verification solution for automotive SoCs using fault injection and simulation in accordance with the latest ISO 26262 edition 2 standard.



Failure Detection e-AI Solution for Motor-Equipped Home Appliances Using Renesas RX66T Motor Control MCU



Conrad Hall 3 – stand 145

The omnichannel supplier intends to present its operational and technical expertise in sourcing B2B product ranges. This will include a focus on the areas of 3D printing, single-board computers, high-quality measurement and power supplies, and soldering technology; as well as new and practical service offerings to embedded systems designers.

Express Logic Hall 4A – stand 122

Visit Express Logic to view its X-Ware IoT Platform cloud connectivity and IoT network connectivity demos.

Developers can leverage the ThreadX RTOS powered platform's size, performance, safety and security to incorporate best-of-class IoT connectivity into embedded systems. The X-Ware IoT Platform's Secure Connectivity add-on is designed to offer secure cloud connectivity. It is 100% created in-house, meaning it is professionally supported and includes no open-source code.



Hyperstone Hall 1 – stand 301

Hyperstone will be unveiling its X1 SATA NAND flash controller designed to provide users with high reliability and the lowest power consumption for industrial solid state drives, M.2, U.2, CFast and embedded flash drives. With its hyMap sub-page-based flash translation layer, the X1 is said to achieve unparalleled random write performance, minimal write amplification and high endurance without external DRAM.

Also featuring on the stand will be Hyperstone's portfolio of NAND flash controllers and associated technologies, which include the hySMART Health Monitoring solution. A live-to-view demo will give visitors a visual insight into the behind the scenes behaviour of a 3D NAND storage solution by displaying live bit errors as they occur during read activity of an SSD.

ON Semiconductor Hall 4A – stand 260

ON Semi's main focus will be battery-less solutions for the IoT. At the core of this is its ultra-low power technology, enabling battery-free wireless solutions that are powered purely by energy harvested from motion, heat, light and even stray RF.

Visitors can also learn about the cloud-connected development environment, Strata Developer Studio that provides an always-up-to-date resource for discovering and working with ON Semi's evaluation and development boards.

Renesas Electronics Hall 1 – stand 310

Among the technology on the Renesas booth will be the Failure Detection e-AI Solution for motor-equipped home appliances that incorporates the Renesas RX66T 32-bit MCU.

This solution with embedded AI (e-AI) enables failure detection of home appliances due to motor abnormality. Property data showing the motor's current or rotation rate status can

be used directly for abnormality detection, making it possible to implement both motor control and e-AI-based abnormality detection with a single MCU.

Rutronik Hall 3 – stand 159

Rutronik will be presenting a number of connected sensor nodes, gateways, and customer-specific display adjustment solutions on its stand. Visitors can expect to see demos on a sensor-to-cloud concept with Rutronik's partners Telit and Tianma, OLED displays from Raystar, an Intel server application example, and antenna technologies from Rutronik's Wireless division.

Silicon Labs Hall 4A – stand 128

The latest Wireless Gecko connectivity solutions will feature at Silicon Lab's booth. Hands-on demos will highlight Bluetooth mesh and Bluetooth 5 solutions, device-to-cloud connectivity with low-power Wi-Fi, Zigbee home automation and control, and next-generation Z-Wave 700 smart home solutions.

Silicon Labs' experts will also host a selection of conference sessions during the three days. Topics range from AI sensors, supercharging Bluetooth Low Energy beacons, and secure IoT.

Tektronix Hall 4- stand 160

New for this year is Tektronix's power rail probes, TPR1000 and TPR4000 with 1 mv accuracy. Designed specifically for minimising noise on power rail measurement, these new probes enable clean, ultra-low noise measurement insight, with up to 60V offset. Combined with a 5 Series MSO or the 6 Series MSO oscilloscope (another particular highlight at the stand), a more accurate picture of ripple measurements is possible.

**Toshiba Memory Group Hall 3A – stand 424**

The industry's first Universal Flash Storage (UFS) Ver. 3.0 embedded flash memory devices will be unveiled at Toshiba's stand. While two new solid state drives (SSDs) will be demonstrated to those visiting the booth.

The UFS flash memory is already sampling and will be available in three capacities: 128GB, 256GB and 512GB. With rapid read/write performance and low power consumption, the new devices are intended for applications such as mobile devices, smartphones, tablets, and augmented/virtual reality systems. The devices integrate 96-layer BiCS FLASH 3D flash memory and a controller in a JEDEC-standard 11.5 x 13mm package. The controller performs error correction, wear levelling, logical-to-physical address translation, and bad-block management for simplified system development.

Xilinx 3A – stand 235

Xilinx will show how its silicon, IP and tools are enabling adaptable, intelligent, industry leading systems. It will also demonstrate how its latest solutions are addressing key and complex design challenges in the next generation of machine learning/artificial intelligent (AI) autonomous systems, the Industrial Internet of Things (IIoT), ADAS, and cloud technologies.

Moreover, making its debut appearance at Xilinx's booth is the Alveo product family, designed to meet the constantly changing needs of the modern Data Centre.



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