# Avnet Technology Showcase


AVNET®
Reach Further™

Don't miss the Avnet Technology Showcase! This unique Showcase includes 17 interactive industry leading supplier booths and 14 supplier led classes. Learn about a wide span of technology featuring Power Management, FPGAs, Microcontrollers, Wireless Technology, Automotive Networking and more.

## AGENDA

| Time | Description | Location |
|---|---|---|
| 8:00am – 5:00pm | **Registration** | Main Hall |
| 8:45am – 9:00am | **Opening Remarks** | Main Hall |
| 9:00am – 9:50am | **ON Semiconductor:** USB Type-C and PD Design Challenges and System Solutions | Room 1 |
| | **NXP:** S32K Security for Automotive Edge Nodes | Room 2 |
| 9:00am – 11:50am | **ST Microelectronics:** (Deep Dive) Easily Integrate Sensors into your new IoT products | Room 3 |
| 10:00am - 10:50 am | **Broadcom:** High-Accuracy Current and Voltage Sensing Designs for Automotive/Industrial Applications Using Optically Isolated Sigma-Delta Modulators. | Room 1 |
| | **Microchip:** Crypto and Authentication Primer | Room 2 |
| 11:00am – 11:50am | **ISSI:** Flexibility of Matrix LED drivers for Medical, Industrial, and Automotive applications | Room 1 |
| | **Laird:** Designing for Success: Practical Advice on Certification Testing for Wireless Products | Room 2 |
| 11:50am – 1:00pm | **Lunch** | Main Hall |
| 1:00pm – 1:50pm | **TE Connectivity:** In-depth technical review of temperature sensing technologies, sensor selection criteria & applications | Room 1 |
| | **Digi:** Compliance Design for Cellular-Enabled Products | Room 2 |
| 1:00pm –2:50pm | **Xilinx:** Meeting the Demands of time critical design projects with Cost Optimized All Programmable ICs and SOMs from Xilinx and Avnet | Room 3 |
| 2:00pm – 2:50pm | **Infineon:** Intelligent sensors using 24GHz radar technology | Room 1 |
| | **Taiyo Yuden:** Bluetooth 5.0 | Room 2 |
| 3:00pm – 3:50pm | **Intersil:** Mapping Out a Full Power System in 60 Seconds or Less! | Room 1 |
| | **Silicon Labs:** Faster Time-to-Market using Multiprotocol Bluetooth & Wireless/SubGHz network | Room 2 |
| | **Avnet:** Avnet Services | Room 3 |
| 4:00pm – 5:00pm | **Closing Remarks,  Happy Hour & Raffle** | Main Hall |

## EVENT DETAILS

**May 23rd**
The Pinnacle Center
3330 Highland Drive
Hudsonville MI 49426

**REGISTER NOW »**

## SPONSORS



## CHARITY

As part of our continued commitment to serving the community, Avnet will be partnering with Detroit Cristo Rey School on the Avnet Technology Showcase. We are asking all attendees to donate school supplies or make a monetary donation to Cristo Rey. Avnet Cares will match the funds raised during the Avnet Technology Showcase.

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## CLASS TOPICS

| Vendor | Topic | Abstract |
|---|---|---|
| Avnet | Avnet Services | Join us for a 30 minute tour of Avnet's Services and Global Capabilities. Understanding Avnet's unique services will create a competitive advantage for your product development and life cycle!<br><br>Topics include: 1. Supply Chain Services and Analytics, 2. Flash Programming & Cryptography, 3. Technical Training for non-technical professional, 4. Life Cycle extension services, 5. Avnet Objectivity in Design Chain, 6. Avnet Light Speed Laboratory.<br><br>This class will benefit anyone looking to maximize their understanding of Avnet Value in order to maximizing Engineering & Purchasing Department ROI. |
| Broadcom | High-Accuracy Current & Voltage Sensing Designs for Automotive/Industrial Applications Using Optically Isolated Sigma-Delta Modulators. | This technical seminar will present design techniques for isolated currents/voltages sensing in a wide range of applications including motor-drives, power-inverters, battery management systems and charging stations. The seminar will cover design techniques and issues including digital and analog interfaces, digital decimation techniques, shunt selection for applications >400A, and applications requiring high voltage (>7500) isolation. |
| Digi | Compliance Design for Cellular-Enabled Products | Digi Wireless Design Services will share some of our extensive experience covering key areas of compliance design along with a discussion of the hardware and firmware aspects impacting the overall product design. This session explores what your product design team needs to know about compliance design and certification for IoT cellular applications. We'll discuss the pros and cons between using a modem modules or a fully certified cellular modems such as the Digi Cellular XBee to aid you in your make vs buy decision. |
| Infineon | Intelligent sensors using 24GHz radar technology | Infineon will introduce 24GHz Radar technology as an intelligent sensor alternative to traditional sensors such as passive infrared (PIR) sensors. Overcome the challenges of position detection, motion detection, and speed of movement for applications such as lighting, security, blind spot detection, object avoidance, and home automation. |
| Intersil | Mapping Out a Full Power System in 60 Seconds or Less! | Finding the right power management solution for customers designing with FPGAs, MCUs or DSPs is now much easier with tools from Intersil! The new PowerCompas™ Milti-Load Configurator web tool helps users quickly identify parts that match their specific requirements, set up multiple rails, perform high-level system analysis, and generate custom reference design files. With over 200 ready-to-go templates, just input the design specifications and design a power system with both analog and digital options. This course will provide step-by-step instruction on how to use the tool and examples of how to make your own design. |
| ISSI | Flexibility of Matrix LED drivers for Medical, Industrial, and Automotive applications | How to partition a Matrix LED driver to perform multiple lighting functions such as driving 7-segment displays as well as icon illumination. |
| Laird/LSR | Designing for Success: Practical Advice on Certification Testing for Wireless Products | Presented by LSR, a Laird Business featuring extensive EMC Testing & Certification services, this training will provide straight-forward explanations of the critical steps, expected costs, and pitfalls to watch out for when navigating the world of EMC certification testing for products incorporating an RF module. Real-world scenarios will be used to explain how to leverage full or limited modular certification. In addition, LSR will take an opportunity to provide an industry update on current regulatory changes for wireless standards including the EU's Radio Equipment Directive (RED) and Industry Canada's RSS-247. |
| Microchip | Crypto and Authentication Primer | Come learn about the fundamentals of cryptography for embedded systems. No math will be discussed, and no prior knowledge of cryptography is expected. We will introduce industry standard terminology and create the basic understanding of the application and use cases for cryptography in embedded systems. Both symmetric and asymmetric cryptography will be discussed. At the end of the class attendees will know how embedded cryptography works. |
| NXP | S32K Security for Automotive Edge Nodes | With a number of vehicles being connected to the internet, the need to have a secure environment inside the vehicle is increasing. This session will present secure use cases for edge node microcontrollers in the vehicle and how the S32K can achieve them. Topics including what is security, NXP's automotive security approach, and S32K CSEc. |
| ON Semiconductor | USB Type-C and PD Design Challenges and System Solutions | This course will cover the design challenges of USB Type-C and PD technology, and introduce complete system solutions for USB type-C and PD applications including travel adaptors, high power AC adaptors, interface solutions, as well as industry leading USB SuperSpeed solutions. You'll also be able to interact with a range of USB Type-C and PD evaluation boards in a plug-and-play demo while learning to quickly setup and configure USB solutions using our new GUI. |
| Silicon Labs | Faster Time-to-Market using Multiprotocol Bluetooth & Wireless/SubGHz network | Wirelessly connected devices is growing at exponential rate. It is expected that there will be over 50 billion connected sensing nodes by 2020 with wireless connections leading as the dominate form of connectivity. With the variety of different wireless standards being used in today's solutions such as Bluetooth and Mesh Standards (Zigbee, Thread and Proprietary), many of the end node applications will require connecting to multiple standards at the same time. This class will educate the engineers on solutions available to enable faster development of these multiprotocol solutions with software solutions and a single SoC. Additionally, IoT endpoint development boards will also be provided during the class. |
| ST Microelectronics | Low Voltage Integrated Smart Power Drivers and Application | Sensors are a key components in our connected world. The seminar will discuss the latest advances in MEMS sensor technologies a give an overview of the newest MEMS sensor products including accelerometers, magnetometers, gyroscopes, pressure sensors and MEMS microphones.<br><br>This seminar will show you how to simplify the integration of sensors, low-energy Bluetooth Smart connectivity, a low-power microcontroller and sensor fusion libraries into your next IoT design using the SensorTile development kit (STEVAL-STLKT01V1). The tiny SensorTile is a 13.5 x 13.5 mm turnkey sensor board, containing a MEMS accelerometer, gyroscope, magnetometer, pressure sensor, a MEMS microphone and the BlueNRG-MS Bluetooth Smart network processor. With the on-board low-power STM32L4 microcontroller, it can be used as a sensing and connectivity hub for developing products such as wearables, gaming accessories, and smart-home or Internet-of-Things (IoT) devices. |
| Taiyo Yuden | Bluetooth 5.0 | A look at the key features of Bluetooth 5.0 and Taiyo Yuden's Bluetooth low energy modules |
| TE Connectivity | In-depth technical review of temperature sensing technologies, sensor selection criteria and applications | An overview of TE's expansive range of temperature sensor families (NTC thermistors, thermocouples, RTDs, digital, etc.) will be provided. Each temperature sensing technology will be reviewed in detail, including theory of operation and methods for selecting the appropriate temperature sensing technology for specific applications. Additionally, application examples in the Medical, Industrial, Mil / Aero and other markets will be provided. The last part of the presentation will address sensor trends and development resources. |
| Xilinx | Meeting the Demands of time critical design projects with Cost Optimized All Programmable ICs and SOMs from Xilinx and Avnet. | This presentation will center on Xilinx's Cost Optimized All Programmable SOCs and FGPAs. The topics will include Xilinx's recently announced ZYNQ single processor family variants as well as an introduction to Xilinx's new Spartan 7 product line. These product families are ideal for applications requiring very high performance coupled with low cost and low power budgets. The system architecture of these parts will be examined as well as a discussion of the full featured free Vivado tools available for development of these next generation parts.<br><br>To help companies realize faster time to market while hitting their price/performance targets Avnet's ZED Xilinx SOMs will be introduced. These SOMs allow design teams to quickly transition from design to production while hitting cost targets that would be difficult to obtain in chip down designs. |