Arrow Wisconsin Technology Expo – Technical Seminar Descriptions*

Tuesday, October 28th, 2025
8:30am to 2:20pm
(Revision 2025-08-30)

8:30am to 9:20am – Session #1

Infineon Presents:
Title: **Optimizing System Performance with Solid State Relays: Overcoming the Limitations of Mechanical Relays**
Abstract: Mechanical relays have long been a staple in many applications, but their inherent drawbacks - including audible noise, increasing resistance over time, and the risk of welding shut - can compromise system reliability and efficiency. In this training session, we'll explore how Infineon's advanced driver and power component solutions can help you design and implement reliable, low-power loss, and protected solid state relay circuits for a wide range of DC and AC voltage systems.

Molex Presents:
Title: **Empowering Connectivity: Molex RF's Total Solution with Expert Design Collaboration**
Abstract: Molex delivers a complete RF solution portfolio, from connectors to custom cable assemblies, offering seamless integration and high-quality components. Our global engineering teams collaborate closely with customers to optimize designs and solve complex challenges. This personalized support ensures reliable, innovative, and efficient RF solutions tailored to unique applications.

What you'll learn about:

- Comprehensive range of RF products and custom assemblies
- Personalized design assistance to enhance performance and reliability

Collaborative approach for end-to-end RF system development and integration

NXP Presents:
Title: **Why NXP + Zephyr: A Strategic Advantage for Scalable Embedded Development**
Abstract: Zephyr RTOS is rapidly becoming the go-to open-source platform for embedded innovation—and NXP is leading the charge. As a founding member and platinum supporter of the Zephyr Project, NXP is deeply invested in shaping its future. This seminar will explore why choosing NXP and Zephyr together offers unmatched advantages for developers building connected, intelligent systems.
We'll cover:

- Leadership in Zephyr: How NXP's upstream contributions and technical leadership are driving key features like Bluetooth Classic, Audio, and Wi-Fi.
- Broad Platform Support: Full upstream support for NXP's i.MX RT and MCX families, with i.MX applications processors on the horizon.
- Integrated Tools Ecosystem: Seamless Zephyr development with NXP's EdgeVerse suite—VS Code extensions, configuration tools, FreeMASTER, GUI Guider, eIQ ML tools, and more.
- Strategic Enablement: How NXP's Zephyr strategy supports faster time-to-market, long-term scalability, and robust security.

Whether you're evaluating RTOS options or scaling your Zephyr-based product line, this session will show how NXP's deep integration and ecosystem support can accelerate your success.

Qualcomm Presents:
Title: **Qualcomm AI/ML Moving to the Edge is getting easier.**
Abstract: Today, more intelligence is moving to end devices. Building on the smartphone foundation and the scale of mobile, Qualcomm envisions making AI ubiquitous expanding beyond mobile and powering other end devices, machines, vehicles, and things. We are inventing, developing, and commercializing power-efficient on-device AI, edge cloud AI, Wi-Fi, BT/BLE, and 5G to make this a reality. We will discuss the HW and SW that help developers speed up the deployment process.

TDK Presents:
Title: **Optimizing FPGA, ASIC, MCU/MPU, and SoC Power Designs with TDK's µPOL Power Modules**
Abstract: Designing efficient, scalable power solutions for FPGAs, ASICs, MCUs/MPUs, and SoCs require innovation in both size and performance. In this session, we will explore how TDK's ultraminiature, chip-embedded power modules enable streamlined DC-DC conversion from 3A to 200A, with options for SmartVID compatibility. Attendees will gain insight into schematic best practices, view the applicable simulation models using QSPICE and SIMPLIS models, and discuss how TDK's evaluation tools can speed development. Live simulation demos and hardware examples will illustrate how to bring high-efficiency FPGA designs to life quickly and effectively.

TE Connectivity Presents:
Title: **Selecting optimal pressure and temperature sensors for smart industrial and medical applications**
Abstract: As artificial Intelligence, machine learning and smart systems become more widespread, sensors are needed to measure real world input. Engineers are faced with the daunting task of selecting the right sensor to optimally measure these inputs. There often exist several technologies available to measure the inputs. These technologies have strengths which make them optimal for some applications and less for others.

This presentation will (a) explore the various technologies available for measuring two most widespread sensing need -pressure and temperature, (b) show a methodology to help guide engineers select a sensor that meets mechanical and environmental constraints, measures inputs with accuracy consistent with the application's requirements, and meets budget, (c) explore combination sensors which can measure multiple inputs for a more efficient solution.

9:30am to 10:20am – Session #2

Critical Link Presents:
Title: **Critical Link SOMs: Leveraging Asymmetric Multiprocessing (AMP) and AI at the Edge to Achieve Scalable Embedded Systems**
Abstract: This seminar will include a technical discussion and demonstration of implementing AI at the edge and present alternative techniques for employing Asymmetric Multiprocessing (AMP) on multi-core embedded systems. We will explore the benefits, challenges, and implementations for both AI at the edge and AMP using Altera, Qualcomm, and TI-based system-on-modules.

Ezurio Presents:
Title: **Choosing the Right SoM for Your Application: A Practical Guide**
Abstract: Selecting the right System-on-Module (SoM) and connectivity solution is critical for delivering reliable, efficient, and future-ready embedded systems.
Join Ezurio for an in-depth technical session that equips you with the knowledge to confidently evaluate MPU platforms and wireless technologies tailored to your specific needs.

We'll explore how to:

- Assess processor and connectivity options based on key criteria like performance, power efficiency, and GPU capabilities.
- Align hardware choices with demanding industrial and medical application requirements.
- Future-proof your design with flexible, lifecycle-managed hardware and software ecosystems.
- Identify project software, security, and technical support needs to reduce risk, accelerate development, and ensure faster time-to-market.

onsemi Presents:
Title: **Get the test results before you sample, with onsemi's Elite Power Simulator Tool!**
Abstract: Novel Power Device Simulation Reduces Development Time. Elite Power Simulator enables power electronic engineers to accelerate time to market. The Elite Power Simulator now includes Power Trench Si FETs, EliteSiC FETs; CJFETs; Silicon Carbide (SiC) Cascode JFETs for various target end applications.

Panasonic Presents:
Title: **Electronic Components are seemingly boring, until your failed design has customers roaring**
Abstract: An introduction to differentiated electronic components that meet the needs of demanding design requirements in evolving industries. Elevated temperatures up to +175°C. Protection from corrosive sulfurization. Vibration exposure of 30G's or more. High voltage loads/switching in limited space. Overcome these challenges and

more by joining our technical component seminar, featuring development trends, design ideas, and general application block diagrams. Don't resist the fun!

STMicroelectronics Presents:
Title: **Visual Studio Coding for MCUs**
Abstract: Participate in this hands-on technical session to learn how to leverage STM32 Visual Studio Code extension to develop and program provided development boards. The VS Code extension enables developers to define an embedded workflow perfectly tailored to their tasks. From CMake project generation and IO/peripheral mapping to firmware development and programming/debugging, STM32's Visual Studio Code extension empowers you to bring your projects to life! Laptop / Notebook PC required if interested in following along using NUCLEO-C031C6 Development board provided.

Vishay Presents:
Title: **AC-DC Power Supplies Practical Design Considerations**
Abstract: An efficient and reliable power supply is crucial for any electronic system, directly impacting its performance and lifespan.

Beyond topology selection, designing a stable and efficient power system demands attention to numerous practical considerations. All these important consideration elements in the design process may be driven by factors such as component selection for reliability and overall efficiency, power & environmental demands, size and weight constraints, and safety regulations.

Join us as we expand the conversation on key design areas with AC-DC Power Conversion including Safety & EMC compliance, Energy Efficiency & Reliability.

10:30am to 11:20am – Session #3

Alif Semiconductor Presents:
Title: **Solving actual problems with EdgeAI**
Abstract: Alif Semiconductor's Ensemble family improves Edge-AI performance and power efficiency by 2 orders of magnitude over any MCU in the market. Join this training to learn more about the use cases unlocked by this technology, as well as the latest features enabled by the BLE 5.3+ capable Balletto family.

Altera Presents:
Title: **Altera FPGAs: DSP processing doesn't need to be one size fits all, join us to learn how you can tailor Altera's Agilex 3 & 5 devices unique DSP capabilities to fit your specific needs**
Abstract: - We will be reviewing Altera's Agilex 3 & 5 DSP capabilities and DSP Builder tools

- Altera's Agilex 3/5 Family DSP Blocks have been infused with AI across the entire device, every DSP block can be configured to run in tensor mode for incredibly efficient AI processing at the edge!

- Complex multiplication (a+bi)*(c+di) supported in 16b mode in every DSP block, with additional support for lower-precision modes are supported (FP16, FP12)

- We will show how Altera's DSP Builder tool also creates incredibly efficient RTL for algorithms

- We will be demoing FIR filtering using new Agilex 5 DSP FIR tensor mode IP along with a Marine Radar solution using the Altera Agilex 5 dev kit.

Diodes Presents:
Title: **Power Management Solutions for Industrial and Automotive Applications**
Abstract: This technical session will explore power management techniques specifically tailored for industrial and automotive environments. We will delve into the critical aspects of energy efficiency, thermal management, EMI performance, and area efficiency. Techniques for power sequencing, scalability and modularity will also be discussed. The presentation will conclude with examples of real-world applications and the tangible benefits of implementing advanced power management solutions in both industrial machinery and next-generation vehicles.

Littelfuse Presents:
Title: **Breaking the Limits: Power Semiconductors That Drive Smarter, Safer, and More Efficient Designs**
Abstract: In a world where power density, efficiency, and reliability are non-negotiable, Littelfuse is redefining what's possible with power semiconductors. This session dives into the cutting-edge technologies behind our latest MOSFETs, IGBTs, and SiC solutions—engineered to meet the demands of modern power electronics across automotive, industrial, and energy applications.

NIC Components Presents:
Title: **Passive Component Best Practices and Selection Guidance by Performance, Size, and Cost**
Abstract: NIC Components (NIC), a market leader in high-performance passive components, offers an extensive product portfolio that includes antennas, capacitors, magnetics, resistors, and circuit protection devices—engineered to meet the demands of cutting-edge industries.
As technology and design evolve across current and emerging markets, the critical factors of performance, reliability, and environmental sustainability take center stage. This underscores the importance of selecting the right electronic passive components, such as capacitors, to achieve optimal results.
Join us for an engaging presentation where we will explore essential design considerations for applications in Artificial Intelligence/Machine Learning, Electrification/Battery Systems/Energy Storage, Motion/Motor Control, and Radio/RF/Wireless systems.
With a dedicated focus on NIC's capacitor line - including aluminum electrolytic capacitors, ceramic capacitors, and film capacitors - we will cover:

- Component selection: How to choose one technology over another.
- Component Derating and Design Guidelines: Best practices for ensuring reliability.
- Environmental Factors: Operating temperature ranges, lifetime, and reliability considerations.
- Failure Modes: Understanding how environmental factors impact component longevity and strategies to mitigate these risks.
- Applying these principles to power inductors, resistors, and antennas for a complete passive solution.

By the end of the presentation, you will gain a comprehensive understanding of how your choices in passive components can influence key factors such as supply chain efficiency, material optimization, performance, and component size.

Silicon Labs Presents:
Title: **Enable Accurate Distance Estimation Using Channel Sounding**
Abstract: Explore the latest advancements in Bluetooth 6.0, with a special focus on Channel Sounding. Channel Sounding is a new standardized, interoperable, and secure method for distance measurement that is set to revolutionize a variety of applications. This session will also feature a comparative analysis of Channel Sounding with other ranging methods.

12:30pm to 1:20pm – Session #4

Adam-Tech Presents:
Title: **Adam Tech - Solving Design Challenges with Custom Connectivity**
Abstract: Join Adam Tech at Arrow University to explore our latest interconnect solutions. Showcasing connectors, cable assemblies, and custom offerings for EV, AI, industrial, energy, medical, and consumer devices. Learn how our integrated manufacturing and global support accelerate development and deliver tailored quality solutions.

Fair-Rite Products Presents:
Title: **Material Characteristics for Power and Inductive Applications**
Abstract: This presentation explores the material characteristics of ferrites that are essential for their effective utilization in power and inductive applications. As core materials in transformers, inductors, and other magnetic devices, ferrites play a pivotal role in determining the efficiency, size, and performance of modern electronics. We will delve into the properties such as saturation flux density (B), initial permeability (μi), Curie temperature (Tc), core losses, and determining the material needed based on the intended applications frequency.

iEi Technology USA Presents:
Title: **Unleashing the Power of Edge Intelligence with iEi's Industrial Computing Solutions**

Abstract: Join iEi at Arrow Technology Expo – Wisconsin for an exciting exploration of edge intelligence! With over 28+ years of experience in design & manufacturing to industrial-grade computing hardware, iEi is your trusted partner in navigating the ever-evolving technologies.

The edge computing market has been on a remarkable trajectory, driven by the rapid expansion of 5G networks and the relentless pursuit of digital transformation. We will delve deep into various vertical markets: Networking, Healthcare, Automation, Gaming, Retail, and Transportation.

Don't miss this opportunity! Join iEi at Arrow Technology Expo – Wisconsin and discover how our innovative computing solutions can unlock success for your projects. Let's shape the future together.

Microchip Presents:
Title: **Configurable Logic Blocks - Harnessing the Power of Programmable Logic in PIC® Microcontrollers**
Abstract: Enhance your applications by integrating complex logic designs using the Configurable Logic Block (CLB) on PIC® microcontrollers. You will explore the CLB architecture, including Look-Up Tables (LUTs), interconnections, sequential logic, storage elements, and clocking. Additionally, you will learn to use the CLB Logic configuration tool, including schematic capture, library elements, and circuit hierarchy.

Multi-Tech Presents:
Title: **Introducing Next-Gen SocketModem®: The Future of Embedded Cellular Connectivity**
Abstract: Join us for a product innovation seminar introducing MultiTech's next-generation, embedded cellular connectivity platform engineered to meet long-term connectivity demands and support seamless technology evolution. Designed to address the critical challenges of cellular-enabled IoT solutions, it simplifies integration, enhances scalability, and accelerates time to market.

In this session, we'll explore the market positioning and showcase its standout features, including Fail-Safe FOTA and Auto-Connect Technology. Whether you're building solutions for smart infrastructure, industrial IoT, or transportation and logistics, the next-generation SocketModem® delivers the scalable, secure, and reliable connectivity your applications demand.

Phoenix Contact Presents:
Title: **Connectivity challenges for high voltage DC power systems**
Abstract: The integration of high-voltage DC (HVDC) power systems in applications such as microgrids and data centers presents a promising pathway toward improved energy efficiency, reduced conversion losses, and enhanced compatibility with renewable energy sources. However, the adoption of high DC power also introduces a range of technical, operational, and safety challenges. Safety risks, particularly from DC arc faults, require advanced protection systems. This seminar explores this risk in depth and discusses emerging solutions for high voltage DC connectors.

1:30pm to 2:20pm – Session #5

Honeywell Sensing Presents:
Title: Pressure Sensors & NPI
Abstract: Pressure and Liquid Flow Sensors for Medical, Industrial and Aerospace applications. Pressure and flow sensors are crucial components in various critical systems across industries, from aerospace to healthcare. Their ability to provide accurate and reliable measurements of pressure changes makes them indispensable in ensuring the safety and functionality of critical requirements. You will find our components performing in potential applications including dialysis equipment, blood analysis, centrifuging and oxygen and nitrogen gas distribution, HVAC devices, data storage, process controls, industrial machinery, pumps, and robotics.

MCC Semiconductor Presents:
Title: **TVS selection guidelines**
Abstract: Selecting an appropriate Transient Voltage Suppressor (TVS) diode is essential for safeguarding electronic circuits against voltage transients. This guide focuses on the methodology for choosing TVS devices based on application-specific peak of current. It details how to calculate peak pulse power using parameters such as transient duration, pulse shape (typically 8/20), and clamping behavior.

Nuvoton Presents:

Title: **Designing for Efficiency: Leveraging Low Power Features of Nuvoton M2L31 for Power-Sensitive Applications**

Abstract: As the demand for battery-powered and energy-efficient devices continues to grow, developers are increasingly seeking microcontrollers that balance performance with ultra-low power operation. This session explores how Nuvoton's M2L31 Series—based on the Arm® Cortex®-M23 core—enables highly optimized, power-sensitive product designs. Attendees will gain insight into the M2L31's rich suite of low power modes, autonomous power domains, low power peripherals, the Power-Down Wake-Up Controller (PDWC) and power saving Resistive RAM technology. Real-world use cases will illustrate how to take full advantage of these features to extend battery life, reduce energy consumption, and achieve robust performance in IoT, wearable, and industrial sensing applications.

Rohm Semiconductor Presents:

Title: **SiC Devices and Analog Solutions for High Power System Design**

Abstract: Today's high voltage power electronics systems increasingly demand superior efficiency, fast switching speed, high reliability and compact package solutions. A variety of SiC power devices and module technologies have been developed to achieve those goals, including ROHM's 4th and 5th Generation SiC MOSFETs, high-performance discrete packages, as well as power modules supporting latest design trends from compact form factors, enhanced thermal performance, to high current ratings and ease-of-assembly.

To maximize the potential of these advanced power devices, ROHM also offers advanced isolated gate drivers and peripherals such as high-voltage and current sensing amplifiers to ensure robust, efficient, and reliable switching under demanding operating conditions. This presentation explores how to choose these components and use them effectively.

SiliconExpert Presents:

Title: **Redefining the Future of Engineering & Supply Chains**

Abstract: The next era of engineering isn't just about solving design challenges. It's about redefining how efficient work gets done across the organization. Agentic AI is starting to reshape workflows including autonomously optimizing component selection, predicting supply chain risks before they arise, and dynamically adapting to real-time constraints. In this session, SiliconExpert unveils how Agentic AI can accelerate design cycles, streamline procurement strategies, and enable seamless collaboration between engineering and sourcing teams. Discover how these innovations are eliminating bottlenecks, reducing engineering change requests, and ensuring engineers spend more time innovating and problem solving. Join us to explore the game-changing role of Agentic AI in engineering efficiency and gain a competitive edge in the evolving landscape of product development.

Vantron Technology Presents:

Title: **Wi-Fi HaLow The Future of Long-Range Connectivity is Here!**

Abstract: Join us for an in-depth session on Wi-Fi HaLow (IEEE 802.11ah) and discover how Vantron Technology is revolutionizing long-range Wi-Fi solutions. Learn how to integrate Wi-Fi HaLow into your applications for enhanced connectivity. This session will feature live demonstrations of existing commercial off-the-shelf (COTS) HaLow-based systems, including modules, HaLow access points, and cameras. Experience firsthand the capabilities and benefits of Wi-Fi HaLow technology.

* Subject to change without notice