



September 10, 2025

Sinclair Community College  
Downtown Conference Center  
12 W Fourth Street, Dayton, OH 45402-1460

Complimentary underground garage parking available at **Parking Lot C**

### Technical Classes Offered

	Room A	Room B	Room C	Room D	
8:30 - 9:15	Alif Semiconductor	Nuvoton	Molex	ST Micro #1	T R A D E S H O W
9:25 - 10:10	TE Connectivity	NXP #1	Panasonic	IEI	
10:50 - 11:35	Vishay	Vantron Technology	NXP #2	Microchip	
11:35 - 1:15	Tradeshow Lunch				
1:15 - 2:00	ST Micro #2	Silicon Expert	TDK	Honeywell	
2:40 - 3:25	Intel	Infineon #1	Littelfuse	ams OSRAM	
3:35 - 4:20	altera	Silicon Labs	Infineon #2	Critical Link	
4:20 - 4:40	DOOR PRIZE DRAWINGS				

Additional Manufacturers and Representatives in Attendance at the Tradeshow Include:

Advantech, Amphenol-FCI, Bourns, Catalyst-Unity, CC Electro Sales, D-M Associates, Electro-Reps, Electronic Salesmasters, Ezurio, JF Kilfoil, Kingbright, Knowles, KOA Speer, Kyocera AVX, LiteON, Micro Crystal, Millennium, OmniON Power, ON Semi, PUI Audio, R.O. Whitesell, Rathsburg Associates, Tempest Tech Sales, TMC, UCC, Victory Sales

Register: <https://forms.office.com/r/P6BVcnkqCB>

### Driving Directions:

<https://github.com/ArrowElectronicsExpos/ArrowTechnologyExpo/blob/main/docs/Dayton/Driving%20Directions%20Dayton.pdf?raw=true>

**Alif Semi: Solving actual problems with EdgeAI**

Alif Semiconductor's Ensemble family improves Edge-AI performance and power efficiency by two 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: Leading a New Era in AI with Altera FPGAs**

Join our AI engineering specialist to learn about Altera's AI software flow from trained model to the FPGA, the Agilex™ family's hardware acceleration, and an Altera's FPGA AI Suite demo showing changing performance parameters to meet design needs. AI workloads are becoming more complex and demanding, so choosing the right hardware for AI acceleration is critical. Learn how Altera's AI solutions empower you to deploy powerful and flexible AI solutions for industrial, medical, test and measurement, aerospace, defense, and broadcast applications achieving low latency, energy efficiency, and agility needed for continuous innovation. The Agilex™ 3, 5, and 7 provide high-performance and AI-infused fabric with DSP blocks, memory hierarchies, and broad I/O support allowing customization of designs and the construction of AI networks from the ground up to achieve optimal performance.

**ams OSRAM: "Sensing in a Whole New Light"**

ams OSRAM, a global leader in intelligent emitting and sensing technologies, is pleased to present an engaging session showcasing a diverse range of advanced sensor solutions.

The session will feature an in-depth exploration of ams OSRAM's magnetic and inductive position sensors, specifically designed for robotic and industrial motor drive applications. This will be followed by a live demonstration of the AS5600 magnetic position sensor, highlighting its capabilities and practical applications. We will showcase an impedance/capacitive sensor, which supports innovative applications such as human-machine interaction, automated driving with "hands-on-wheel" detection, and fluid level sensing.

The session will also delve into spectral sensors, demonstrating the latest advancements in ams OSRAM's spectral sensor technology. These sensors are tailored for applications ranging from indoor farming to visual inspection systems, emphasizing their versatility and performance.

We look forward to your participation in this informative and interactive session!

**Critical Link: Leveraging Asymmetric Multiprocessing (AMP) and AI at the Edge to Achieve Scalable Embedded Systems**

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.

**Honeywell: Pressure & 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 in applications including dialysis equipment, blood analyzers, centrifuging and oxygen-nitrogen gas distribution, HVAC devices, data storage, process controls, industrial machinery, pumps, and robotics.

**IEI: AI and PC's Continue to Accelerate and Change How we Interact with Technology**

Discover how AI is transforming industries and daily life, alongside the benefits of modular computing platforms like COM Express and SMARC. Learn why migrating from DDR4 to DDR5 is crucial, explore the advantages of industrial PCs over commercial systems, and debate the future of resistive touch screens. This session equips you with insights to navigate the evolving tech landscape.

**Infineon Class 1: Infineon Technologies - GaN vs Silicon vs SiC – How to select the best technology for Hard Switching Applications**

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**Infineon Class 2: Hands On Workshop - AI Machine Learning with Infineon's PSoC™ 6 Artificial Intelligence Evaluation Kit**

With the use of the PSoC™ 6 Artificial Intelligence Evaluation Kit (CY8CKIT-062S2-AI), we will walk through the creation of a AI Machine Learning (ML) model. The model will be used to detect the presence of an emergency vehicle siren by being trained with a large pool of both positive and negative audio data. With the Deepcraft Studio software, participants will train and test the model and then deploy the model on the Sense kit.

**PREREQUISITE:** *Customers must bring their own Windows laptop and have the ModusToolbox™, and DEEPCRAFT software installed prior to the class. The PSoC™ 6 Artificial Intelligence Evaluation Kit (CY8CKIT-062S2-AI) will be provided for participants to take home after the class.*

**Intel: Leveraging Intel CoreUltra, Ark Graphics Accelerators and OpenVino for Workload Optimized, Cost Dffective AI Inference Deployments**

Leveraging Intel Core Ultra processors and Intel Arc Graphics Accelerators for high-performance AI inference workloads. As AI integration becomes increasingly pervasive, optimizing inference performance is critical for real-time responsiveness and efficient resource utilization in a cost-effective manner. Participants will explore: 1) The architectural advantages of Intel Core Ultra, including its integrated blend of CPU, GPU and NPU, and how it synergizes with the dedicated AI capabilities of Intel Arc Graphics. 2) The OpenVino development process, including how it offers flexibility while easing time-to-market and development complexity for embedded AI enabled applications.

**Littelfuse: Making Sense of Sensing: A Guide to Magnetic and Thermal Sensor Technologies**

This presentation explores the key technologies, performance characteristics, and application domains of Littelfuse's magnetic and temperature sensors. Magnetic sensors—including reed switches, Hall Effect, and TMR digital sensors—enable precise, non-contact detection for position, proximity, and motion applications in industries such as appliances, industrial automation, and security. In parallel, Littelfuse temperature sensors—including thermistors, and RTDs—deliver accurate thermal monitoring across HVAC, medical, and automotive systems. Together, these sensor families support engineers in building smarter, safer, and more efficient electronic systems through reliable sensing solutions tailored for demanding environments.



**Microchip: Digital Signal Controllers**

This class introduces Microchip's dsPIC33A core, a high performance-to-cost ratio DSC offering 200MHz operation, advanced 32-bit math with double-precision FPU, integrated analog, security, and functional safety features. The dsPIC33a's powerful architecture, advanced analog peripherals, and efficient memory options make it ideal for cost- and space-constrained applications. This course will also cover migration considerations, development tools, and resources for rapid application development.

**Molex: High-Power Solutions**

From state-of-the-art data centers to smart factories, safe and reliable power is crucial for enabling efficient operations. Because high power solutions form the backbone of many modern power distribution networks, Molex recognizes that flexible dependability is imperative. That's why we give customers a versatile range of high-performance busbar, connector, and cable assembly solutions. Please join us to learn more.

**NXP Class 1: Exploring Key Technologies in Industrial Automation**

Design Challenges, Solutions, and Innovations

Industrial automation relies on a combination of critical technologies, including networking, motor control, safety, security, and graphical interfaces, to enhance efficiency, reliability, and scalability. However, designing robust automation systems comes with challenges such as ensuring real time performance, secure data communication, system interoperability, and safety compliance.

This 45-minute lecture provides an educational overview of these core technologies, examining the fundamental design challenges and industry proven solutions. The session will also explore how modern embedded solutions, including NXP's industrial-grade processors and controllers, address these challenges to enable secure, efficient, and scalable automation systems. Attendees will gain a deeper understanding of key considerations in industrial system design and insights into the latest technological advancements shaping the future of industrial automation.

**NXP Class 2: Empowering Industrial Automation with Advanced Analog: Precision Signal Management, Safe Power, Secure Interfaces**

As industrial systems evolve toward higher levels of automation, systems become increasingly digital, while the analog portion has largely stayed the same while being no less critical to ensure precision, safety, and security. This session explores how NXP's advanced analog portfolio enables robust signal acquisition, reliable power delivery, and secure communication in modern automation systems.

Attendees will gain insights into:

- Analog Signal Management: Precision sensing with NXP's Analog Front ends.
- Safety Power Management: Safety-enabled power delivery for industrial systems.
- Secure Communication Interfaces: Secure communications with NXP's industrial networking portfolio.

**Nuvoton: Smart Home Audio Products**

Unlock the Power of Clear Communication and Reliable Alerts. In today's competitive home security and alarm market, audio quality and reliability are critical to user experience and safety. Nuvoton's industry leading ChipCorder and Audio SoC solutions empower your designs with: Crystal Clear Voice Prompts and Alerts; Integrated, Cost-Effective Design; Ultra-Low Power Consumption; Robust and Reliable Performance; Flexible Storage and Playback Options.

**Panasonic: Electronic Components are Seemingly Boring, Until Your Failed Design has Customers Roaring**

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!

**Silicon Expert: Redefining the Future of Engineering & Supply Chains**

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.

**Silicon Labs: Enable Accurate Distance Estimation Using Channel Sounding**

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.

**ST Micro Class 1: Enhancing Embedded Security with STSAFE Secure Elements**

This seminar provides an in-depth exploration of the STSAFE embedded secure element, a cutting-edge solution designed to fortify device security in increasingly connected environments. Attendees will gain a comprehensive understanding of how STSAFE addresses critical security challenges such as anti-cloning protection and robust cryptographic key generation, essential for establishing secure communications in IoT and embedded systems.

By the end of this seminar, attendees will be equipped with actionable insights on leveraging STSAFE secure elements to build resilient, compliant, and secure embedded systems that meet the evolving demands of cybersecurity standards and regulations.

**ST Micro Class 2: Give Your Product an Edge: Empowering MCUs with AI**

Explore the transformative potential of integrating AI into STMicroelectronics' general-purpose microcontrollers. Discover how AI-driven advancements can improve many solutions in a simple, fast, and cost-effective way. Predictive maintenance, IoT products, smart buildings, asset tracking, people counting and more. Learn how these applications can become smarter by making data meaningful with machine learning.

**TDK: EMC Filtration and Power Quality Systems**

TDK offers advanced solutions in EMC Filtration and Power Quality Systems designed to ensure the safe, reliable, and efficient operation of electronic devices and power networks. TDK's EMC filters effectively suppress electromagnetic interference (EMI), helping customers meet global compliance standards and protect sensitive equipment from disruptions. The company's Power Quality Systems products address issues such as Power Factor, Harmonics, Voltage Fluctuations, and Transients, improving overall energy efficiency and system stability. Leveraging decades of expertise in materials science and electronic component design, TDK delivers a comprehensive portfolio that supports a wide range of industrial, commercial, and consumer applications, enabling customers to achieve optimal performance and regulatory compliance.

**TE: TE Connectivity Sensing Technologies for Industrial, Medical & IoT Applications**

Theory of design and application information for various temperature, pressure, position and vibration sensing technologies used in industrial, medical, and IoT/Condition Monitoring applications.

**Vantron Technology: Wi-Fi HaLow; the Future of Long-Range Connectivity is Here**

Join our session on Wi-Fi HaLow (IEEE 802.11ah) and discover how Vantron Technology is revolutionizing long-range WiFi solutions. Learn how to integrate Wi-Fi HaLow into your applications for enhanced connectivity. This session will feature live demos of commercial off-the-shelf HaLow-based systems, including modules, access points, and cameras. Experience the benefits of Wi-Fi HaLow technology.

**Vishay: Current Protection to Safeguard Your Electrical Systems**

Vishay Non-Linear: a leader in inrush current limiters and sensing thermistors. Vishay Ametherm provides the highest rating NTC with UL and CSA approvals and the highest voltage rating PTC (up to 2000 volts). Vishay Ametherm thermistors support inrush circuit protection and temperature sensing solutions in automotive, industrial, medical, aerospace, and defense applications.