Artificial Intelligence

Get Started with AI Inferencing at the Edge

Inferencing is a process that starts with deep learning, both of which are components of artificial intelligence (AI). While the process is fairly compute-intensive, the hardware and software that's now becoming available at the Edge has the ability to handle these calculating. This webinar will look at inferencing and what's required to tackle this issue at the Edge.

AI Demystified: Keys to developing a useful real-world AI

AI and machine learning are always thrown around in conversations about IoT and the key to extracting value and KPIs for a given system. But AI is a complicated topic that requires significant expertise to implement – or does it? Join us as experts in AI drill down on gathering requirements for an AI system, picking the right AI environment, and implementing a productive AI system.

Automotive

ADAS, AI, and Advancing the Autonomous Vehicle

ADAS, AI, and autonomous vehicles are lumped together, for good reason; they all feed off one another. Can one advance without the other? Probably, but not nearly as seamlessly. This webinar will look at each of these elements separately, but then dive in on how they need to operate cohesively.

Embedded

Access High-Performance Computing on Open Source Maker Boards

Maker boards have come a long way in a very short time. They are now at the point where they can handle most applications, and can even be used in production designs. This webinar will look at what's available in the market, and how and where they should be used.

Dev Boards Abound. Pick the Right One

Embedded design is complicated; there's no getting around that. Any edge that an engineer can gain is welcome. One step function in the course of a design comes from the slew of available development boards. There are so many available for an engineer to choose from. So how to decide which best put you on the correct path? This webinar will look at some of the more popular boards as well as the associated development environments and software that support them.

Webcast Titles & Abstracts

Embedded Blockchain: What You Need to Know

You've likely heard the term "embedded blockchain." Do you know what it is and understand it? Should you? If you're worried about your system being hacked, then the answer is yes. This webinar will serve as a primer to explain what the technology is all about and how it can be used to secure your embedded system.

From Silicon to Software, Open Source Embedded is Back

Open-source software is not new. Linux, an open-source operating system, is in its third decace, and the tools and other code also offer similar birthdays. What is now starting to become mainstream is open-source hardware, with the RISC-V instruction set serving as a model This webinar will look at what developers need to know about both open-source hardware and software in the near future and how it will impact their designs.

How Efficient is Enough for Your System?

When you inquire about power efficiency of a circuit, the answer is typically "it depends." What exactly is efficiency all about and how does it relate to your design? Unfortunately, it depends. This webinar will look at the various scenarios and what options are available to developers.

Latest on Chipset Security Features and Software Implementations

For those engineers developing embedded and IoT systems, the pervasive thought is security must be built in from the ground-up. This starts with the chipset and associated software that utilizes the chipset features to implement a highly secure device. Join us a chipset and software experts discuss the latest trends and techniques involving chipset features and software implementations that provide high security environments.

No matter how good your design is, if it's not secure, it's worthless

No matter how good your design is, if it's not secure, it's worthless. Security needn't be a huge hurdle, but it does need to be considered from Day 1 of the design. That tact can make the process seamless, and also provide a simple upgrade path as new techniques become available. This webinar will show what options/techniques are available and which is best suited for your design.

Panel Discussion: Will RISC-V be a Boom or Bust?

We've seen it before – open source transformed the software industry across all industries and market segments. The maker community has also created an "open compute platform" environment where makers and industry alike can build and program boards at low cost. RISC-V is an emerging initiative that brings open source to CPU architecture with an open source instruction set. Proponents believe this is the start of a boom where RISC-V can enable tailored product development, increased security & customization to obfuscate their designs, and accelerate innovation by applying the group "mind share" mentality of open source to processors. Skeptics argue RISC-V actually increases vulnerabilities, risk of design errors within processors, and could lead to a fragmentation in the market that inhibits innovation. Will RISC-V be a boom or bust? Join us as our experts discuss RISC-V and it's benefits, drawbacks, and future with the embedded and IoT industry.

Webcast Titles & Abstracts

Python and Other High-Level, Object-Oriented Languages in Embedded

In today's world, fewer and fewer developers are skilled in traditional embedded programming languages like C and C++. More and more are learning object-oriented languages like Python. These high level and scripting languages are simpler to master, easier to modify, and promote code reuse on scales not found in procedural embedded languages. They are also slower, less precise, and interpreted rather than compiled, making them much less effective for resource-constrained embedded and IoT systems development. However, embedded operating system, software, and silicon companies are embracing the transition to the object-oriented programming paradigm, offering frameworks, agents, and open-source tools that help object-oriented developers access the deterministic embedded space, and vice-versa. If you're a Python or other high-level programmer, be sure to tune in as our experts reveal how you can access whole new classes of devices. If you're an embedded developer, join us to learn ways you can take advantage of the world's fastest growing programming paradigm.

Time-sensitive Networks Deliver Determinism to Industrial Sensor Analytics

Sensor analytics based on distributed processing provides industrial engineers the opportunity to extract actionable intelligence from operational technology systems without having to rely on a cloud or data center connection. However, the size, power consumption, and cost of processing solutions capable of executing suitable analytics functions often preclude them from being used on embedded sensor nodes themselves. As a result, sensor analytics processing is typical performed on platforms higher up in IoT hierarchies, which can introduce latencies that are unacceptable for decision making in real-time control systems.

The IEEE 802.1 Time-Sensitive Networking (TSN) standard delivers a deterministic Ethernet-based technology for industrial sensor networks, enabling industrial network engineers to offload sensor processing to gateways or on-premise servers without sacrificing response times. What's more, Ethernet economies of scale can be leveraged to minimize deployment costs. Join networking, processor, and software professionals as they reveal the possibilities of deterministic networking for sensor data analytics in industrial control applications.

Voice Recognition: Who's Listening?

Voice recognition has advanced greatly since it was first introduced. Can it be improved? Sure. How do you get there, and which pieces should be handled in hardware verses software? And how do you operate a voice-controlled system on a battery? These are just some of the issues that'll be discussed on this webinar.

IoT

Combine Machine Learning with IoT

Machine learning is the latest buzzword. What does it actually mean, particularly in an IoT system? And once you have that knowledge, how do you implement it? The CPU vendors think they have the answers, and in many cases, they're right. At least they offer a potential starting point. In this webinar, you'll hear from both the hardware and software vendors that feel they can jump-start your IoT design through machine learning.

AI | Automotive | Embedded | IoT | Machine Learning | Medical | Security | Wireless

Webcast Titles & Abstracts

Dealing with Legacy in Industrial IoT

IoT systems tend to be thought of as a "clean slate" environment where historical systems have no bearing. This couldn't be further from the truth when considering Industrial IoT. IIoT must be an extension of the existing industrial systems in order to enable a new business model without disrupting the existing products and services. Join us as industrial IoT experts discuss considerations and examples of how Industrial IoT systems embrace legacy equipment and provide cost effective evolution without disrupting existing business models.

Get Ready for AIoT & Digital Transformation

IoT, or the Artificial Intelligence of Things is already upon us. How (or will) it affects your design? If it's got any connection to the Edge (sensors, etc.), it'll have a connection. It may be deeply embedded, and not your problem, but it may be something that you are required to implement. Learn what this means and how it'll change moving forward in this webinar.

Introducing Cloud-Native for the Embedded IoT

The Cloud providers are making it easier and easier to operate within their environments. Is Cloud-native something you should be exploring for your design? Unfortunately, it depends. Check out this webinar to understand whether this technology is right for you, and whether it's something you can implement without having an advanced degree.

IoT and Interoperability

Interoperability has always been a critical part of any system. The same is true with IoT. As IoT matures, the architecture, component functions, and interfaces are becoming clearer. Is the IoT world ready for more standards-based interoperability? Are IoT component providers working together in any way to ensure plug-and-play operation? Are standards starting to emerge? Join us as IoT experts discuss the importance of interoperability, resources, and actions being taken to drive interoperability in IoT.

IoT Asset Management Tracking Platforms, Sensors and Software

Asset tracking has a variety of use cases and applications across a variety of industry. Key features include geo location analysis for route optimization, asset health reporting, anomaly detection, and predictive maintenance. A comprehensive approach involving support for IoT platforms, control systems, sensors, and connectivity is required for effective asset tracking and management. Join us as thought leaders in IoT asset management discuss challenges and opportunities across the IoT architecture for effective asset management.

IoT Platforms update: What's new in Connectivity, Intelligence, Power, Security

IoT platforms have flourished through the years and as various applications are implemented new techniques and applications stacks are put together to address the challenges faced. Connectivity options have tradeoffs in terms of cost and coverage, Intelligence between the sensor, edge, and cloud balances the need to meet latency and reliability requirements with centralizing processing tasks. Power management is quickly becoming an important consideration at the edge. And security has always been a hot topic among IoT developers. Join us as IoT platforms experts discuss these topics and new techniques and approaches.

Webcast Titles & Abstracts

Wireless Sensor Networks for IoT from LoRa to Cellular Cloud

A number of wireless sensor networks are being trialed in various IoT applications that require low latency and high reliability. There are a number of environmental, range, speed and capacity considerations when exploring these technologies for use in specific IoT applications. Join our experts as they describe the latest in wireless sensor networks and their applications.

The Cheapest, Fastest Ways to RF Test Your IoT Device

RF technology is not always well understood. In fact, it's quite often misunderstood. However, that doesn't take developers off the hook in terms of having to test their RF devices. This webinar will explain the embedded developers who, what, and where they need to know to handle the test portion of a design that contains an RF component.

Time-Series IoT Data: The Journey from Edge to Cloud

Time-Series IoT Data is a fancy way if saying, "be sure your data is getting to the end point at the right time, and in time to make the right decision." When you're dealing with an Edge-to-Cloud IoT system, there are real delays involved. In some cases, those delays are not permitted, so you need to know how to deal with them. And that's what you'll learn in this webinar.

Machine Learning

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Webcast Titles & Abstracts

Medical

Security in Medical/Healthcare Applications

Medical/healthcare applications continue to push the IoT envelope, with more devices connected, full analytics observed, and so on. Hence, security becomes paramount. But where should that security intersect with the design and/or network? Is it at the processor level, the operating-system level, the network level, the cloud level, or all of the above? Those are the key elements of this webinar, namely, how to keep your medical/healthcare device and network secure.

Staying Secure is a Secret of Staying Healthy

Recent hacks have proven that no system is safe. It's of paramount importance to stay ahead of the "black hats," especially as the number of end points rises. This webinar will look at the techniques available to a designer, specifically as it pertains to the medical/healthcare industry.

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Webcast Titles & Abstracts

Wireless

5G Architecture for Intelligent Edge: Considerations & Characteristics

All the mobile operators have rolled out aggressive plans for 5G network deployment, starting with the Radio Access Network and the associated "micro data center" where edge intelligence and IoT systems can be deployed. Later the 5G infrastructure will incorporate "network slicing" – slicing network resources for separate IoT applications similar to how enterprise data centers implement virtualization. There are a number of key design considerations for implementing these micro data centers – how much compute, storage, and memory needs to be there? What kinds of applications will run there? How can I effectively manage the power at these micro data centers? Join us as 5G Micro-data center experts discuss 5G, network slicing, and micro data center deployment, applications rollout, security, and power management will be addressed.

5G Architecture Insights – How 5G Plans to Carry IoT into the Future

5G isn't just another 'G' – it's predominant purpose is to support IoT applications from a speed, capacity, and security standpoint. But what's in the network infrastructure that achieves these goals. Join our 5G expert as he/she provides a 5G architectural overview and looks into the RAN, core, and intelligent Edge components to show how the 5G architecture intends to support IoT into the future.

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