Choose Your Sessions

ARM 9 | ARM - Cortex | AVR | maXTouch | QTouch | RF | Sensors | Solid State Lighting | Design Tools | 3rd Party

No Interest / Primary / Alternate

Build Your Graphical Application with Linux OpenEmbedded on the SAM9X35-EK

Hands-on

Gain a deeper understanding of the Linux OpenEmbedded meta distribution. Create a graphical application based on Linux.

Duration: 4 hours (ARM SAM9 SWD B HO - 108)

Level: Intermediate

How to Boot Linux Faster on Atmel eMPUs

Hands-on

With its ease of customization and stability, Linux is increasingly successful in embedded systems. But a standard Linux system doesn't boot very fast. In this session, we'll explore and also implement several techniques to improve Linux boot time on Atmel embedded microprocessor units (eMPUs). You'll see how to analyze and profile a Linux boot, and we'll experiment different optimizations to reduce boot time significantly.

Duration: 4 hours (ARM SAM9 SWD I P - 205)

Level: Intermediate

Linux in Embedded Industrial Applications

Hands-on

Get hands-on instruction on getting Linux up and running in an embedded application using a real-world example: an industrial gateway.

Duration: 4 hours (ARM SAM9 SOL I HO - 211)

Level: Intermediate

Overview: Atmel Cortex-A and ARM926 MCU Products

Lecture

Get an introduction to Atmel ARM Cortex-A and ARM926 core-based microcontrollers. In this session, you'll learn about device architecture and benefits, and see how you can successfully design your application with our our strong ecosystem.

Duration: 1 hour (TOOL ST6 ARM9 B P - 133)

Level: Beginner

Porting Android Beyond Mobile Applications with Atmel eMPUs

Hands-on

Learn how to create, debug and deploy a C or Java native application to an Android OS system

Duration: 4 hours (ARM SAM9 SWD B HO - 107)

Level: Beginner

Real-Time Embedded Linux on Atmel eMPUs

Lecture

Learn about available solutions which can be used to reduce the latency of Linux systems and to satisfy "soft" real-time to "hard" real-time constraints on Atmel embedded microprocessor units (eMPUs).

Duration: 1 hour (ARM SAM9 SWTT I P - 206)

Level: Advanced

Secure Programming and Secure Boot Mechanisms Using Encryption and Authentication on the Atmel SAM9CN12

Lecture

Understand how to program and deploy a customer-secured application using the Atmel SAM9CN12 embedded microprocessor unit (eMPU).

Duration: 1 hour (ARM SAM9 SOL B P - 109)

Level: Intermediate

Session Totals

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Choose Your Sessions

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No Interest / Primary / Alternate

Accelerated Development with Atmel Cortex-M4 Core-Based Flash MCUs, ASF and Atmel Studio 6

Hands-on

Learn how to develop, debug and deploy an application using the latest Atmel Studio and the Atmel Software Framework, which now also support Atmel ARM processor-based products. Discover the new Atmel SAM4S Xplained board based on the very first Atmel Cortex-M4 core-based Flash microcontroller (MCU).

Duration: 4 hours (ARM SAM4 SWD B HO -105)

Level: Beginner

No Interest / Primary / Alternate

Build a Low-Power Passive Infrared Camera Using the Cortex-M4 Core-Based SAM4S-WPIR-RD Reference Design Kit

Hands-on

Discover the new Atmel SAM4S-WPIRD-RD reference design and its ZigBee wireless demo. Learn how to develop from scratch a complete passive infrared (PIR) camera application.

Duration: 4 hours (ARM SAM4 SOL B HO -106)

Level: Beginner

No Interest / Primary / Alternate

Create Your First Application Based on Atmel Cortex-M Flash MCUs

Lecture

Get a how-to guide for efficiently developing your first Atmel ARM Cortex-M processor-based Flash microcontroller application.

Duration: 1 hour (ARM SAM3/4 SOL B P - 134)

Level: Intermediate

No Interest / Primary / Alternate

Designing Low-Power Applications Using Atmel Cortex-M Flash MCUs

Lecture

Learn how you can reduce your overall system power consumption using Atmel design guidelines and low-power Atmel ARM Cortex-M processor-based Flash microcontrollers.

Duration: 1 hour (ARM SAM3/4 SOL B P - 135)

Level: Advanced

No Interest / Primary / Alternate

Going Further with Atmel SAM4S Cortex-M4 Core-Based Flash MCUs, ASF and Atmel Studio 6

Hands-on

Learn how to develop, debug and deploy an application using the latest Atmel Studio and the Atmel Software Framework, which now also support Atmel ARM processor-based products. Learn the major features of Atmel SAM4S Cortex-M4 core-based Flash microcontrollers (MCUs).

Duration: 4 hours (ARM SAM4 SWD I HO -204)

Level: Intermediate

No Interest / Primary / Alternate

Introduction to Atmel Cortex-M Flash MCUs

Lecture

Learn about the architecture and design benefits of Atmel ARM Cortex-M processor-based Flash microcontrollers (MCUs). In this session, you'll also gain insight into how you can successfully design your application with our strong ecosystem.

Duration: 1 hour (TOOL ST6 SAM3/4 B P - 132)

Level: Beginner

Session Totals

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No Interest / Primary / Alternate

Design Guidelines to Ensure Proper EMC Performance
Lecture

Electromagnetic interference (EMI) and electromagnetic susceptibility (EMS) are critical parameters in any electronic design. In this session, you'll learn about software and hardware design guidelines that will ensure that your design can comply with EMI and EMS regulations in different markets.

Duration: 1 hour (AVR G SYS A P - 003)

Level: All

Design Techniques to Optimize Analog Performance
Lecture

Analog integration has increased such that you can perform more advanced functions on one device. To maximize analog performance, you must weigh several design considerations. Most Atmel microcontrollers come with high-performance analog modules. In this session, you'll learn about design techniques to optimize the hardware and software designs in a manner that will allow you to extract maximum performance from your analog modules.

Duration: 2 hours (AVR G SYS A P - 002)

Level: All

Designing a Sensor Application with 9 Degrees of Freedom
Hands-on

Because of their lowered cost, sensors are experiencing a rapid increase in usage, including in many consumer goods and toys. Atmel provides software libraries to ease the use of sensors. of consumer goods and toys.In this session, you'll make a complete sensor application with nine degrees of freedom, using complex algorithms and the Atmel AVR UC3 AT32UC3L064 microcontroller, which provides the optimal balance between low power consumption and high computational power.

Duration: 4 hours (AVR S SYS I HO -202)

Level: Intermediate

Designing an Integrated Solution with Atmel Studio 6 and an Atmel AVR XMEGA MCU
Hands-on

Microcontroller (MCU) applications often require the integration of sensors, peripherals and interfaces. In this session, an Atmel Technology Expert will use an Atmel AVR XMEGA MCU to demonstrate how an experienced designer would use the Atmel Studio 6 integrated development environment and Atmel Software Framework to quickly create an application with a light sensor, LCD display and a USB interface to a computer.

Duration: 4 hours (AVR XM SYS I HO - 213)

Level: Intermediate

Designing Applications for System Safety and Reliability Requirements
Lecture

This session covers the IEC60730 Class B safety standard required for white goods in the EU market. The standard deals with system safety and reliability, system selfchecking and self recovery. Other markets, like the US, and other products face similar demands. You'll learn about Atmel software that helps you design a IEC60730 Class B-compliant product, as well as general guidelines for safe and reliable designs.

Duration: 1 hour (AVR G SOL A P - 004)

Level: All

Designing Energy Meters with Class 1 Accuracy Using Atmel AVR XMEGA B Microcontrollers
Lecture

Learn how to design a low-cost, low-power residential revenue meter using the Atmel AVR XMEGA B family of microcontrollers with minimum external components.

Duration: 1 hour (AVR XM SOL B P - 103)

Level: Beginner

Get to Know Atmel AVR XMEGA, the Ultra-Low Power, High-Performance 8-bit AVR Microcontroller
Hands-on

Introduction to the AVR XMEGA family of devices. You'll learn about the architecture of the device, including the core and the advanced I/O structures. This hands-on session will include elementary usage of I/O modules and code debugging using Atmel Studio 6 integrated development environment.

Duration: 4 hours (AVR XM HWTT B HO - 102)

Level: Beginner

Get to Know Atmel megaAVR, the Developer's Favorite 8-bit Microcontroller
Hands-on

Introduction to the megaAVR family of devices. You'll learn about the architecture of the device, including the core and the I/O structures. This hands-on session will include elementary usage of I/O modules and code debugging using Atmel® Studio 6 integrated development environment.

Duration: 4 hours (AVR M HWTT B HO - 101)

Level: Beginner

Integrating USB Seamlessly into Your Design
Hands-on

Virtually all embedded devices need to communicate, and USB has become a default connectivity standard. This session will allow you to understand the different USB modes, and teach you how to easily integrate USB into your design.

Duration: 4 hours (AVR X HWD I HO - 214)

Level: Intermediate

Minimizing Power Consumption in Embedded Applications
Lecture

Not only is the Atmel AVR microcontroller a low-power device, it also has a lot of built-in features to balance performance and power consumption. This session will cover general tips and tricks to minimize power consumption in embedded applications, as well as specific techniques to utilize features specific to the AVR microcontroller.

Duration: 2 hours (AVR G HWTT A P - 001)

Level: All

Planning and Optimizing Your C Code for Embedded Systems
Lecture

Have you encountered the need to reduce memory size or increase performance in your microcontroller applications? In this session, you'll learn the inner workings of your C compiler and how to use it to develop more efficient code.

Duration: 2 hours (AVR X SWD I P - 212)

Level: Intermediate

Sensor Applications for Developers with Tight Deadlines
Hands-on

Because of their lowered cost, sensors are experincing a rapid increase in usage, including in many consumer goods and toys. Atmel provides software libraries to ease the use of sensors. In this session, you'll design a freefall sensor application using microelectromechanical systems (MEMS) accelerometers and the Atmel Software Framework. The hardware used also supports gyroscopes and compasses. Since the application programming interfaces (APIs) for all the sensors are uniform, the knowledge that you'll gain from this session will make it easy for you to change sensor types or vendors.

Duration: 4 hours (AVR G SYS I HO- 201)

Level: Intermediate

Unleashing System Performance
Hands-on

High-end microcontrollers typically have very powerful sets of I/O modules that allow you to develop complex applications with minimum CPU load. In this session, we will show you how to use the high-performance peripherals of the Atmel AVR XMEGA such as direct memory access (DMA), event system and the multi-level interrupt controller together with I/O modules like timers/counters, analog-to-digital converter (ADC), digital-to-analog converter (DAC) and USB.

Duration: 4 hours (AVR XM HWD AD HO-301)

Level: Advanced

Session Totals

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No Interest | Primary | Alternate

Level: Intermediate

Measuring Capacitive Touch Sensing Performance

Lecture

In this class, you'll learn about the metrics used to quantify touchscreen performance, and how they interplay against each other. Topics covered will include signal-to-noise ratio, report rate, first touch latency, jitter, accuracy, linearity and power consumption.

Duration: 1 hour (TOUCH MAX HWTT G I - 220)

No Interest | **Primary** | Alternate

Level: Beginner

Principles of Capacitive Touch Sensing

Lecture

In this class, you'll be introduced to the fundamental theory behind capacitive touch sensing. Get a better understanding of the components of a capacitive touchscreen system of capacitive sensing methods (self and mutual), understand single touch vs. multi-touch capabilities and the touchscreen supply chain.

Duration: 1 hour (TOUCH MAX HWTT G B - 138)

No Interest | Primary | **Alternate**

Level: Advanced

Pushing Touchscreen Design Boundaries

Lecture

In this class, you'll learn about cutting-edge touchscreen sensor stackups that enable thinner products with more vivid displays. You'll also gain a better understanding of the system challenges associated with implementing such products. Other topics covered include: advanced touchscreen sensor construction, how mechanical and electrical considerations impact touchscreen performance , and methods of overcoming these issues.

Duration: 1 hour (TOUCH MAX HWTT G AD - 305)

Session Totals

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No Interest / Primary / Alternate

Advanced Touch Design

Lecture

Take this session to learn about advanced aspects of touch design. We'll cover board layout, materials, design considerations and more.

Duration: 2 hours (TOUCH QT SYS AD P - 304)

Level: Advanced

Atmel QTouch Technology and Sensing Algorithms (Demo)

Lecture / Demo

Get an overview of a 3x sensing algorithm and sensor layout suggestions based on these algorithms. Learn about Atmel QTouch Composer, and see a demo of the Atmel QT600 development kit, based on Atmel QTouch technology.

Duration: 2 hours (TOUCH QT DEV B P - 130)

Level: Intermediate

Examining Conducted Immunity

Lecture / Demo

Define the most common types of conducted immunity, understand where it is most commonly seen, and discover the simplest fixes. Learn about next-step solutions.

Duration: 1 hour (TOUCH QT HWTT I P - 217)

Level: Intermediate

Home Appliance Design

Hands-on

Come to this session for an overview of home appliance certifications. You'll learn how failure mode and effects analysis (FMEA) along with Atmel hardware and software adders can help you pass the certifications. Get hands-on experience with the EVK1481A.

Duration: 2 hours (TOUCH QT DEV B HO - 131)

Level: Beginner

Introduction to Atmel QTouch Technology (Hands-on Session)

Hands-on

Get hands-on training on basic sensing algorithms and sensor design using the Atmel QT600 development kit, based on Atmel QTouch® technology.

Duration: 2 hours (TOUCH QT SYS B HO - 122)

Level: Beginner

Introduction to ATtiny828 MCU with Optimized Touch Sensing

Hands-on

Get an introduction to PTC and the Atmel tinyAVR ATtiny828 device, plus hands-on experience using the ATtiny828 evaluation kit.

Duration: 2 hours (TOUCH TINY DEV I HO - 216)

Level: Beginner

Low-Power Touch Button Design

Hands-on

In the first half of this session, you'll use a low pin count touch-enabled MCU to make a capactitive touch keypad. The software for the touch functionality will be generated by Atmel QTouch Composer and, as part of the development, we'll look into potential pitfalls in touch designs. In the second half, you'll use the touch controller from Part 1 as a dedicated subsystem together with a host microcontroller (MCU), where we'll run the main application.

Duration: 4 hours (TOUCH AVR SYS I HO - 203)

Level: Intermediate

Low-Power Touch Design

Hands-on

This session comes in two parts. In the first half,you'll use a low pin count touch-enabled microcontroller (MCU) to make a capactitive touch keypad. The software for the touch functionality will be generated by Atmel QTouch Composer. As part of the development process, we'll look into potential touch design pitfalls. In the second half, you'll use the touch controller from Part One as a dedicated subsystem together with a host MCU, where we'll run the main application.

Duration: 4 hours (TOUCH AVR SYS I HO - 215)

Level: Advanced

Understanding Haptics and Proximity Sensing

Hands-on

Get an overview on haptics, followed by hands-on experience with the EVK1085A. The rest of the session will focus on short and long-range proximity sensing: how it works, the advantages of using Atmel QTouchADC and hands-on experience with the EVK2120A.

Duration: 2 hours (TOUCH QT DEV I HO - 218)

Level: Intermediate

Session Totals

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No Interest / Primary / Alternate

Antenna Designs for Two-Way Radios — Lecture

In this class, you'll learn how to design robust and reliable RF products with Atmel's world-leading 802.15.4 products. The class will include RF layout, antenna designs, antenna matching techniques and design for manufacturing, test and regulatory procedures.

Duration: 2 hours (RF X HWD B P - 115)

Level: Beginner

Designing an Efficient Battery Management System — Lecture

This workshop provides you with a technical overview of the measurement and monitoring requirements for multi-cell lithium ion battery management systems found in automotive and industrial applications such as electric vehicles, e-bikes, or uninterruptible power supplies. You'll also see a demonstration of the Atmel ATA6870-DK evaluation kit.

Duration: 2 hours (BAT X SOL B P -113)

Level: Beginner

Designing Wireless Sensor Networks — Hands-on

Learn the basic concepts of the IEEE 802.15.4 standard and how to use this protocol to transport data within a simple wireless sensor network. In this session, you'll also see how the standardized procedures can support different sensor network application requirements. In a hands-on segment, you'll develop a small sensor network application using the Atmel single-chip wireless solution based on the AVR microcontroller, Atmel's highly configurable IEEE 802.15.4 media access control (MAC) and its low-layer application programming interfaces (APIs). To demonstrate methods of gathering sensor data, we'll explain the use of AVR peripheral interfaces including the analog-to-digital converter (ADC). From this session, you'll gain the knowledge needed to develop your own wireless sensor network applications based on Atmel's RF system-on-a-chip (SoC) family and the IEEE 802.15.4 standard.

Duration: 4 hours (RF MRF SOL B HO - 114)

Level: Beginner

Designing Your Own ZigBee Network — Hands-on

ZigBee is becoming the dominant network protocol in smart energy, smart lighting and wireless networks. Take this class to learn about Atmel BitCloud, our full-featured ZigBee PRO stack, and design your own ZigBee network.

Duration: 2 hours (RF X SWD B HO - 116)

Level: Beginner

Developing Active RFID Solutions — Lecture

This workshop will explore the Atmel technology which enables bi-directional wireless communication using a 125KHz magnetic field downlink path and a 434MHz radio frequency uplink path. You'll also learn about typical applications that benefit from this technology, and see a demonstration of the Atmel ATAK6286-EK3 active RFID evaluation kit.

Duration: 2 hours (RF X SOL B P -112)

Level: Beginner

How to Measure Distance Down to 2/10" in Distributed Wireless Systems with a Single-Chip RF Receiver — Hands-on

Wireless clouds that rely on low-power wireless network technology will change our daily lives. At the core of this technology is a significant number of connected nodes, including many battery-operated devices. You must know the location of each device within an installation, so you can collect distributed sensor information and establish control via coordinated responses from this network of devices. Reliable radio-based distance measurements can be a key differentiator in these systems. In this session, you'll learn about Atmel's novel theoretical and practical approach for measuring distances in distributed wireless systems. You'll also get some hands-on experience via demonstrations.

Duration: 4 hours (RF X SOL A HO - 006)

Level: All

Lighting Control with ZigBee Light Link — Hands-on

As light sources connect to networks, the new ZigBee Light Link stack is the protocol of choice for the world's leading manufacturers. Join this class to learn about Atmel's ZigBee Light Link solution, and see how easy you can control your lights!

Duration: 2 hours (RF X SWD B HO - 117)

Level: Beginner

Selecting the Right Product for Your Next Wireless Design — Lecture

Get an introduction to Atmel's RF products, especially 802.15.4-based solutions including ZigBee, 6LoWPAN and WiFi. We'll start the discussion with an Atmel wireless roadmap that covers standards of various countries and types of networks. You'll leave the class with a "wireless bible" and guidelines that will help you with your next wireless design.

Duration: 2 hours (RF G G B P - 118)

Level: Beginner

Selecting the Right Wireless Solution for your Application — Hands-on

More and more embedded systems rely on wireless connectivity. The variety of target applications range from simple unsecured, point-to-point connections up to complex multi-hop networks with strong security requirements. The session will provide you with an understanding on how easy it is to extend embedded systems with Atmel wireless technology and how it can be tailored to the individual needs of the different target applications.

Duration: 2 hours (RF X X A HO - 005)

Level: All

Simple Wireless Applications — Hands-on

Learn how you can enable wireless connectivity with minimal effort using ready-made drivers for worldwide 2.4GHz transceivers. In this hands-on session, you'll make a point-to-point and point-to-multipoint application.

Duration: 4 hours (RF AVR SOL I HO - 208)

Level: Intermediate

Understanding the Benefits of IPv6 — Lecture

IPv6 has been mandated by the US government, and is already widely used in wireless sensor networks. Due to the depletion of all existing IPv4 addresses, even wider adoption of IPv6 is imminent. This session will help you get prepared for integrating IPv6 into your design.

Duration: 2 hours (RF ARM SWD B P - 120)

Level: Beginner

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No Interest | Primary | **Alternate**

Level: Intermediate

Motion Sensing for Hand held Devices

Hands-on

Sensors are becoming ubiquitous in handheld devices including mobile phones, TV remote controls and game controllers. Extracting optimal performance from the device often requires multiple sensors and complex sensor fusion algorithms to fully utilize the rapid data stream and turn it into useful information for determining orientation, movement and gestures. This workshop will introduce the various types of inertial sensors and highlight their capabilities and deficiencies so that you can make an informed selection. We will also discuss the requirements for the sensor fusion algorithms, which will help you select the most suitable microcontroller. Finally, we will demonstrate a working system using the Atmel Sensors Xplained development environment and take a look at the coding used in its implementation.

Duration: 2 hours (SEN G SOL I HO - 207)

No Interest | Primary | Alternate

Level: Beginner

What are MEMS SensorsAll About?

Lecture

This one-hour introduction to the Atmel Sensors Xplained development environment introduces the various Atmel AVR XMEGA, Atmel AVR UC3 and Atmel ARM processor-based development platforms and the sensors they support (accelerometer, gyroscopes, compass, light and pressure) . You'll learn about the Atmel Studio integrated development environment (IDE) and the sensor application programming interface (API) that allows rapid development of embedded systems that require sensors. We'll present some typical examples of projects that are available within the tool that utilize sensors, and also show how third-party software libraries can be incorporated into your projects.

Duration: 1 hour (SEN G SYS B P - 111)

Session Totals

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ARM 9 | ARM - Cortex | AVR | maXTouch | QTouch | RF | Sensors | **Solid State Lighting** | Design Tools | 3rd Party

No Interest / Primary / Alternate

Building an LED Lighting System
Hands-on

This session will be ahands-on solid-state lighting lab where you'll learn about:
1. LED color schemes
2. Interfacing LED driver with ZigBee module
3. Interfacing LED driver with an Atmel tinyAVR microcontroller
4. Interfacing LED with an Atmel AVR microcontroller

Duration: 4 hours (SSL AVR SOL B HO -110)

Level: Beginner

Controlling an Atmel LED Driver Via an MCU
Hands-on

In this hands-on lab on solid-state lighting applications, you'll learn about four key areas: 1) LED color schemes; 2) Interfacing a LED driver with a ZigBee module; 3) Interfacing a LED driver with an Atmel tinyAVR microcontroller; and 4) Interfacing a LED with an Atmel AVR microcontroller

Duration: 4 hours (SSL AVR SOL B HO - 129)

Level: Intermediate

Designing Solid-State Lighting Controls with Atmel PLC Solutions
Hands-on

In this hands-on session, you'll be able to mate a ATPL150-based reference design with Atmel's TLF23 to create an intelligent lighting control module.

Duration: 2 hours (SSL LED SOL B HO - 104)

Level: Beginner

How to Implement a LED-Based Luminary
Lecture

In this session, you'll gain insight into the major design considerations for LED-based luminaries, including color rendering index (CRI), power factor correction, efficiency and thermal considerations. You'll also learn about standard drivers vs. microcontroller design approaches.

Duration: 1 hour (SSL X G I - 222)

Level: Intermediate

Understanding the Benefits and Challenges of Solid State Lighting
Lecture

Get a deeper understanding of the current state of solid state lighting. This session includes discussion of light-emitting diode (LED) vs. incandescent, compact fluorescent lamp (CFL), halogen and other lighting technologies, as well as an overview of Atmel's LED lighting portfolio.

Duration: 1 hour (SSL X G B - 138)

Level: Beginner

Session Totals

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No Interest / Primary / Alternate

Advanced Atmel Studio 6 Design
Hands-on

Get a deeper practical understanding of the Atmel® Studio 6 integrated development environment (IDE). You'll get experience with the IDE's advanced features that will help you develop, debug and optimize your source code faster and more efficiently than ever.

Duration: 4 hours (TOOL ST6 DEV A HO - 302)

Level: Advanced

Debug Solutions Using ARM Development Studio 5 (DS5)
Lecture

The ARM DS-5 integrated development environment (IDE) is the toolchain of choice for software developers who want to make the most of ARM application processors and systems-on-a-chip (SoCs). In this class, you'll get to know features such as the best-in-class ARM Compiler, powerful OS-aware debugger, system-wide performance analyzer and real-time system simulator.

Duration: 1 hour (TOOL 3RD SWD B P - 136)

Level: Beginner

Developing User-Friendly Applications with the Arduino IDE
Hands-on

This hands-on class demonstrates basic embedded concepts to help create user-friendly embedded applications using the popular Arduino integrated development environment (IDE). You'll get an overview of the basic software control loop, tips and tricks for a more intuitive end user experience, an overview of the Arduino IDE and hardware, as well as hands-on experience. If you're not yet an embedded expert, this class provides a great way to get up and running developing user-friendly embedded applications quickly.

Duration: 4 hours (TOOL 3RD DEV B HO - 119)

Level: Beginner

Extension Gallery Online Marketplace for Application Developers
Lecture

Extension Gallery is the new online marketplace for Atmel microcontroller (MCU) tools and software. Learn how you can distribute and sell your tools, extensions and device software to the 100,000+ designers of Atmel MCU-based applications.

Duration: 1 hour (TOOL ST6 DEV I P - 210)

Level: Intermediate

Fast Booting of an Embedded Linux System
Hands-on

With its ease of customization and its stability, Linux is increasingly successful in embedded systems. But a standard Linux system doesn't boot very fast. In this workshop, you'll explore and implement several techniques to improve boot time. Learn how to analyze and profile a Linux boot. We'll also experiment with different optimizations to reduce boot time significantly.

Duration: 4 hours (TOOL ARM SWD AD HO - 303)

Level: Advanced

Get to Know Atmel Studio 6
Lecture

Atmel Studio 6 is an easy-to-use development platform for Atmel AVR and ARM Cortex-M processor-based microcontrollers. Learn how to get started with Atmel Studio 6 in this session, which will cover the platform's basic functions.

Duration: 1 hour (TOOL ST6 SYS B P -128)

Level: Beginner

Get to Know the AVRFreaks and AT91SAM Communities
Lecture

The AVRFreaks and the AT91SAM communities are popular online forums for people working with, or interested in, Atmel microcontrollers (MCUs). Come to this session to hear what these communitieshave to offer. Learn how you can participate in the discussions, get in touch with other Atmel MCU developers, or even collaborate on projects.

Duration: 1 hour (TOOL 3RD G A P - 008)

Level: All

Linux in Industrial Applications
Hands-on

Get hands-on instruction on configuring and building bootloaders, customizing the Linux kernel and developing and integrating device drivers.

Duration: 2 hours (TOOL ARM SWD B HO - 121)

Level: Beginner

MCU Application Development - Today and the Future
Lecture

Join a discussion about the current state of tools for developing microcontroller- (MCU-) based applications. Discuss which tools you think you'll need to better solve emerging and future development challenges.

Duration: 1 hour (TOOL 3RD G AD P - 302)

Level: Advanced

What's New in Linux 3.x?
Lecture

Get an introduction to the major new features included in the different Linux 3.x distributions.

Duration: 1 hour (TOOL ARM SWD I P - 219)

Level: Beginner

Session Totals

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No Interest / Primary / Alternate

Arduino Design Contest

Hands-on

In just four hours, you'll build an Arduino platform-based system that transports tennis balls through an obstacle course. You will be provided with a selection of baseboards and various Arduino interface boards. With the help of an instructor, you'll build and program the system, and a jury will select the best implementation.

Duration: 4 hours (TOOL 3RD DEV I HO - 209)

Level: Intermediate

No Interest / Primary / Alternate

Improve Your PCB Design Through Intelligent Component Management

Lecture

One of the biggest design challenges today is that while development times for new products need to shrink, the number of electronics components keeps exploding. Learn how making intelligent component management in PCB design allows you to meet these challenges.

Duration: 2 hours (TOOL 3RD TT I - 221)

Level: Intermediate

No Interest / Primary / Alternate

Introduction to Open-Source Licensing

Lecture

Get an introduction to open-source licensing. Learn how these licenses differ and how this may affect your business model and intellectual property.

Duration: 1 hour (3RD G SW B P - 137)

Level: Beginning

No Interest / Primary / Alternate

What is All the Arduino Buzz About?

Lecture

Get an overview of the Arduino platform, which has been broadly embraced as a way to bring creative ideas to life. You'll understand how boards can be programmed and controlled with the Arduino platform and how "shields" expand the platform with useful interfaces. You'll also learn about the Arduino open-source model and how you can become a part of the rapidly growing Arduino community.

Duration: 1 hour (TOOL 3RD DEV A P - 007)

Level: All

Session Totals

Lecture Hours	Alternate Lecture Hours	Workshop Hours	Alternate Workshop Hours
3 of 12	1 of 4	8 of 8	2 of 4

Update Sessions

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