Atmel® is making it easy for you to learn about the latest technologies and capabilities that will bring your design ideas to reality. Join us at one of the Atmel Tech on Tour stops, get hands-on training and learn about:

**Touch based user interface design with the Atmel SAMD21 Peripheral Touch Controller**

This day of hands-on technical training is based on the Atmel SAM D21, an evolution of the industry’s first microcontroller with robust, high-performance, easy-to-use capacitive touch support. The SAM D21 represents a paradigm shift for capacitive touch sensing in terms of noise tolerance, power consumption, touch quality, and application integration. This is enabled through the on-chip hardware Peripheral Touch Controller (PTC), complemented with this new generation of touch support in the Atmel Studio 6 development Ecosystem.

Understand the significantly simplified process of building and integrating a touch based user interface. Interrupt-driven, non-blocking acquisition code uses only 5% of CPU resources, while scanning 10 channels at 50ms scan rate. Become familiar with this Atmel Software Framework (ASF) compatible Atmel QTouch® Library and QTouch Composer, giving you the ability to mix and match buttons, sliders and wheels, based on capacitive touch technologies.

In addition, learn how to easily configure the noise filtering and sensitivity of your user interface, based on specific application based considerations, using the QTouch Analyzer, using live trace logging of capacitive sensing signals.


Questions? Contact events@atmel.com

**EMEA**

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<th>Location</th>
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<td>Istanbul, Turkey</td>
<td>Thurs., May 29</td>
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<tr>
<td>Wiesbaden-Niedernhausen, Germany</td>
<td>Tues., June 3</td>
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<td>Stuttgart, Germany</td>
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<td>Moscow, Russia</td>
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<td>Utrecht, Netherlands</td>
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<td>Birmingham, UK</td>
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### Agenda

<table>
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<tr>
<th>Time</th>
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| 8:30 am – 9:00 am | **REGISTRATION**  
Assistance with installing software will be provided. |
| 9:00 am – 10:30 am | **PRESENTATION**  
- Atmel product and technology roadmap update  
- Introduction to Atmel Touch Technology, basic concepts of the Atmel SAM D21 PTC module |
| 10:30 am – 10:45 am | **BREAK** |
| 10:45 am – 11:00 am | **INTRODUCTION**  
Atmel QTouch Composer and QTouch Analyzer |
| 11:00 am – 12:30 pm | **HANDS-ON: TOUCH DESIGN PARAMETERS**  
This touch technology hands-on introduces the topics and design variables as they are encountered in the design process  
- Atmel QTouch Composer to create QTouch Project source, header files and Touch Library  
- Used to configure MCU pins and PTC to receive touch from the QT1 Xplained Pro  
- QTouch analyzer provides graphical representation of reach time touch data |
| 12:30 pm – 1:30 pm | **LUNCH** |
| 1:30 pm – 2:00 pm | **PRESENTATION**  
Noise immunity basics and the features in PTC module and QTouch Library to improve susceptibility of a touch application to noise and interference |
| 2:00 pm – 3:00 pm | **HANDS-ON: ATMEL QTOUCH CONDUCTED NOISE IMMUNITY**  
Learn how to improve application robustness against noise. Interferences will be simulated by an external source |
| 3:00 pm – 3:15 pm | **BREAK** |
| 3:15 pm – 4:30 pm | **HANDS-ON: TOUCH APPLICATION**  
- Demonstrating high application performance of the Atmel SAM D21 while maintaining a responsive touch user interface  
- Application utilizes key features of the SAM D21, namely USB, DMA and advanced timer-counters |
| 4:30 pm – 5:00 pm | **WRAP-UP, QUESTIONS, AND ANSWERS** |

**Atmel Corporation**  
1600 Technology Drive, San Jose, CA 95110 USA  
T: (+1) (408) 441-0311  
F: (+1) (408) 436-4200  
www.atmel.com

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