



**THE DATASHEET OF
ATMXT1664S1-CUR**





Touchscreens Up to 17.3" →

Windows 8 Certified →

Gyroscope

Light Sensor

Magnetometer

Accelerometer



Integrated Sensor Hub Functionality →



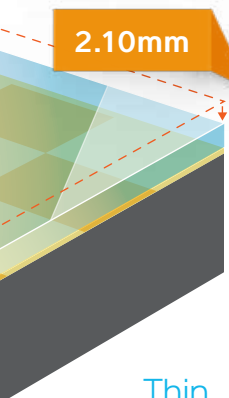
Atmel maXTouch® S Series Touchscreen Controllers

Create What You've Always Imagined



Are You Ready to Design a New Breed of Mobile Products?

Have you imagined creating mobile products delivering the perfect touch user experience—only to be stifled by technology limitations? Meet Atmel's **maXTouch[®] S Series** devices, the newest in our capacitive touchscreen controller family.



2.10mm

0.88mm

58% thinner touch sensor stacks

Thin, Unshielded Sensors

From smartphones to notebooks and Ultrabooks,[™] you can integrate shieldless touch-on-lens and on-cell sensors into your designs with Atmel's thinner sensors, which combat display noise up to 3.5V.



Active Stylus Support

Provide support for thin passive stylus and Atmel's **maXStylus[™]** active stylus solution for smartphones, tablets, notebooks and Ultrabooks.

Precise Touch Processing

Deliver more precise finger tracking, higher touch fidelity and more sophisticated rejection of unintended touches in your mobile products through enhanced touch processing algorithms.

Faster Time to Market

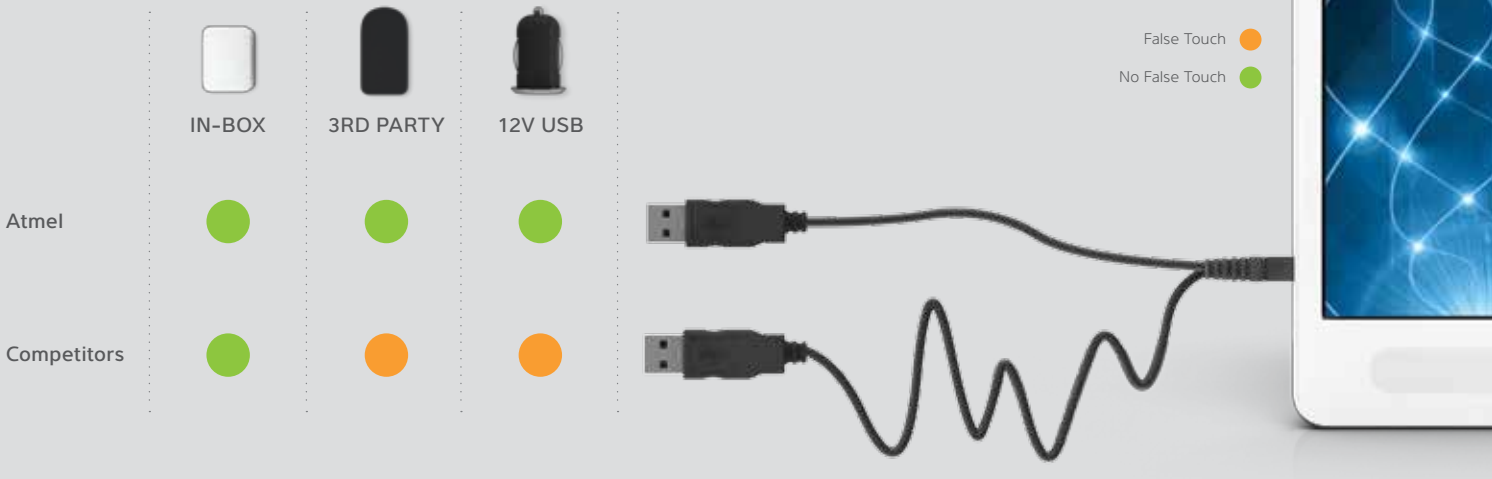
Save design time because you won't need to do any firmware development to accommodate a specific display, charger or stackup.

Atmel maXTouch S Series

Touchscreen Controllers

Combat Charger Noise

Get high responsiveness and linearity while combating extreme charger noise as harsh as 240Vpp with Atmel® **maXCharger™ Technology**. Your customers will be able to use any charger with their device, without any touch performance impact.



Accelerated Performance

Critical digital signal processing (DSP) functions are implemented in optimized hardware blocks in the devices rather than in firmware. This hardware acceleration lets you take advantage of touch performance enhancements while still delivering devices with lower power and increased battery life.

The combination of our thinner sensors and maXCharger Technology results in superior responsiveness and accuracy—without compromise to speed, jitter or power consumption, even in noisy conditions.

Delivering Accurate, Real-Time, Motion-Related Data

The newest members of the maXTouch family are integrated with maXFusion™ sensor hub technology, which delivers accurate, real-time, motion-related data to enhance applications such as gaming, navigation and virtual reality. maXFusion technology fuses sensor inputs from accelerometers, gyroscopes and magnetometers, processing location, orientation, direction and inclination data in real time to visibly improve all motion applications.

maXFusion technology is also available in a standalone microcontroller (MCU), the Atmel mXF0100. The mXF0100 is a complete Windows 8-certified sensor



hub solution based on an Atmel AVR® device. With great flexibility in sensor support, you'll be able to tap into our sensor partner ecosystem and use the device with the industry's most popular sensors.

Atmel's devices with maXFusion technology deliver a 3X performance improvement vs. existing architectures, where sensors are managed by the applications processor. What's more, you get up to 50 percent lower power compared to competitive offerings.



From Smartphones to Tablets and Beyond

The maXTouch S Series includes these devices:

mXT3432S

Fast, responsive touch performance for notebooks and Ultrabooks with touchscreens up to 17.3" and designed for Windows® 8, Android® and Linux operating systems

Atmel maXTouch S Series

Touchscreen Controllers

mXT1664S/mXF1664S

A single chip for high-performance, 10" and above tablets, with support for Windows 8, and touchscreen-based products up to 17" diagonal running other operating systems. The mXF1664S offers sensor hub functionality for tablets, notebooks and Ultrabooks up to 13," as well as for convertible laptops.

mXT1188S/mXF1188S

The mXT1188S delivers optimized performance for Windows 8 and Android tablets from 7" to 10." The mXF1188S provides sensor hub functionality to similar touch-based mobile devices.

mXT540S

The mXT540S delivers high performance for Windows 8- and Android-based smartphones, superphones and tablets up to 7."

mXT336S

The highest performance controller for the next generation of superphones from 4.3" to 5.5"

mXT224S

Uncompromised performance for Android 4.0 Ice Cream Sandwich and Windows Phone 8 smartphones from 3.5" to 4.3

mXT112S

Highest performance for devices such as smartphones, game consoles, digital still cameras and global positioning systems (GPS) with screen sizes up to 3.5"

From Imagination to Reality

Intelligent touch processing algorithms. Unparalleled noise suppression. High responsiveness. Pinpoint precision. Now you have the touchscreen controller technology you need to create what you've always imagined. Ready to get started? Get more details at www.atmel.com/maXTouchS.



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maXTouch Design, Development and Support Services

Atmel has a successful track record of designing and developing microcontrollers and touch-based technologies. maXTouch S Series devices are among the newest devices in this portfolio. To support your design effort, we also provide technical support and R&D consultancy in the area of touch technologies, as well as custom design and development of touch controllers to meet your unique requirements.

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