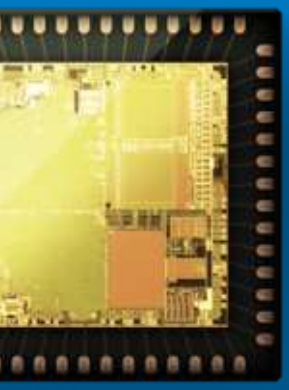
Atmel maXTouch T Series Touchscreen Controllers

Experience Touch Like Never Before

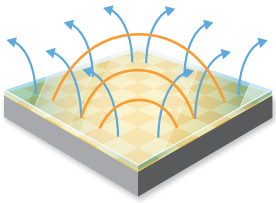
The Next Generation of Mobile Products

Our maXTouch® T Series devices — the newest in our capacitive touchscreen controller family — create what you've always imagined.



Smart, Sleek and Sophisticated

The revolutionary maXTouch T Series represents the next generation in Atmel's industry-leading capacitive touchscreen controllers for the mobile market. It features a range of user interface technologies with cutting-edge performance that creates a best-in-breed platform for consumers.

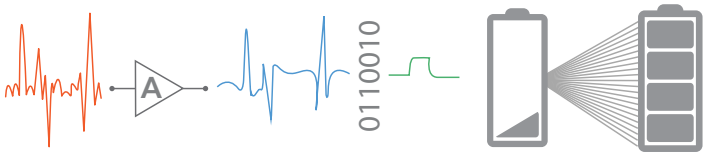


Revolutionary Adaptive-Sensing Architecture

The maXTouch T Series architecture combines the best of mutual and self-capacitance to ensure optimal touch performance with the highest noise immunity and lowest power consumption.

Lowest Power Consumption

Analog and digital filtering efficiently combat any noise source with the lowest power consumption in the industry.



Active Stylus Support

maXTouch T Series controllers support both a thin passive stylus and the Atmel maXStylus® active stylus. maXStylus offers high resolution and an accuracy of ±0.25mm for a precise writing experience. The maXStylus family also provides:

- Advanced gesturing
- Palm rejection
- Pressure-sensing capability with 256 pressure levels to enhance writing and drawing experiences.

Passive Stylus Support

maXTouch T series also supports passive stylus with tips as small as 1.0 mm. This allows users to perform touch operations with any ordinary metallic ball-point pen or pencil.

Glove Touch Support

The T series touch controllers can sense multi-finger glove touches. The T series advanced architecture has superior SNR (signal to noise ratio) that allows sensing with gloves 5-mm thick.

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Moisture and Water Droplet Touch Support

Regardless of the operating environment maXTouch T Series chips are designed for robust operations. Dry or wet, cold or hot, the T series will take on rainy weather and sweaty hands without any compromise in touch performance.

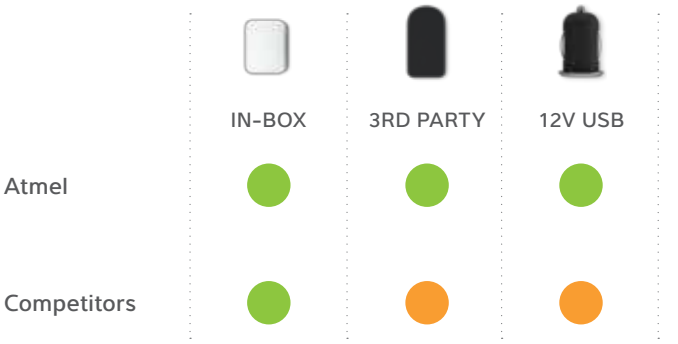
Integrated Capacitive Buttons

You can integrate capacitive buttons without tying-up any X/Y lines from the touch controller. Plus, you can support up to 12 channels of buttons, sliders, and wheels (BSW) through an embedded hardware block, the Peripheral Touch Controller (PTC).

Combat Charger Noise

Your customers can achieve flawless touch performance using any charger. Atmel's maXCharger® Technology, another key maXTouch T Series feature, makes it possible to control charger noise. It helps achive:

- High Responsiveness
- Low Jitter
- No False Touches



Total OS Support

Complete support for all major handset, tablet, and notebook operating systems.

Windows Phone Windows 8

Key Applications

- Smartphones
- Phablets
- Tablets
- Ultrabooks
- Notebooks
- All-In-One PCs
- Digital Still Cameras
- e-Readers
- GPS Systems
- Portable Media Players

Shorter Design Cycle

You won't need to develop any firmware to configure your controller for a particular touch sensor stackup, display, or charger. Our thinner sensors also require no synchronization to the display or dedicated listening channels. This makes maXTouch T Series devices as easy to develop as previous-generation maXTouch devices.

From Smartphones to Tablets and Beyond

The maXTouch T Series includes these devices:

mXT336T / mXT337T / mXT224T

With 224 and 336 nodes, the mXT224T and mXT33xT series of devices bring 1.0 mm passive stylus, up to 5.0 mm thick multi-finger glove, and superior moisture touch performances to mobile devices with 3.5″ touchscreens and above. In addition, optimized for smartphones with 4.3″ to 5″ touchscreens, the mXT337T provides 20mm Hover operation for advanced user interactions.

mXT640T / mXT641T / mXT642T

With 640 nodes, the mXT64xT series of devices are the world's most comprehensive capacitive touchscreen controllers designed for next-generation smartphones. The mXT640T supports screen sizes up to 6.2″ with a 1.0 mm passive stylus, senses up to 5.0 mm thick multi-finger glove touches, and has superior moisture touch performances. It also supports up to 7″ for Windows® 8.x compliant devices, and up to 8″ for Android smartphones, phablets and tablets. It offers one-stop-shopping for your entire smartphone portfolio.

The mXT641T provides 20mm Hover operation for advanced user interactions. And for mobile devices designed with Active Stylus, the mXT642T solves your problems without the need for any stackup changes in the touch panel. Coupled with Atmel's maXStylus technology, the mXT642T supports 1.0mm Active Stylus with 256-level pressure sensing capabilities.

mXT1066T2 / mXT1068T2

With 1,066 nodes, the mXT106xT2 family of devices features the revolutionary Adaptive Sensing Architecture of the maXTouch T-series. It implements adaptive mutual-and self-capacitance sensing and has intelligent support for integrated Active Stylus and Hover functions. It is the premier solution for tablets and Windows 8.x certified screen sizes up to 8.9″.

mXT1664T2 / mXT1664T3 / mXT1666T2 / mXT1666T3

With 1,664 nodes, the mXT166xT2 / T3 family of devices features the revolutionary Adaptive Sensing Architecture of the maXTouch T-series with both mutual-and self-capacitance and intelligent support for integrated Active Stylus and Hover functions. It is the premier solution for tablets and Windows 8.x certified screen sizes up to 12.5″.

mXT2952T2 / mXT2954T2

The mXT295xT2 family of devices is a single-chip touchscreen controller for notebooks and Ultrabooks up to 15.6″ that run Windows 8.x, Android, and Linux operating systems. This device features adaptive sensing of both mutual-and-self-capacitance and supports integrated Active Stylus and Hover functions.

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/microsite/maxtouch-t-series.

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