

The easiest way to implement touch functionality



Buttons, Sliders & Wheels

Atmel provides a broad range of fixed functional devices to support capacitive touch buttons, sliders and wheels in your applications. If you prefer to embed capacitive touch functionality into your general-purpose AVR[®] microcontroller application, please take a closer look at [QTouch Library](#) and [QTouch Suite](#).



Low Power, Low Cost and High Precision

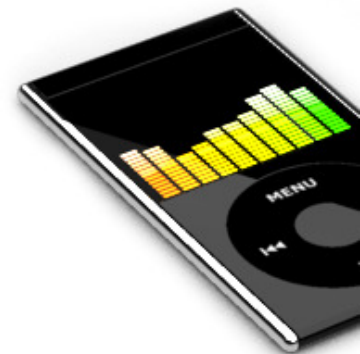
Atmel's capacitive touch controllers for buttons, sliders and wheels support panels up to 50mm thick, and sense touch even with a gloved hand. Their excellent signal-to-noise ratios deliver unequalled precision for touch operations. Atmel's touch ICs also provide superb low power characteristics—a critical requirement for today's handheld and mobile devices.

Advanced Touch Sensing Technologies

Atmel's solutions for buttons, sliders and wheels are based on two types of patented capacitive touch acquisition methods, QTouch[®] and QMatrix[™].

QTouch detects touches by measuring the charge flow at a given point. The QTouch method is robust and reliable, and makes it easy to wire touch keys. This method is ideal for applications where a small number of keys are required with simple shapes. Learn more about the [QTouch method](#).

QMatrix detects touch using a scanned passive matrix of electrode sets. A single QMatrix based device can drive a large number of keys, enabling a very low cost-per-key to be achieved. Learn more about the [QMatrix method](#).



Powerful Enabling IP

A range of patented Atmel technologies—embedded software and other IP—make it easy to implement Atmel's Touch controllers for specific applications:

- Atmel QSlide[®] uses algorithms to determine touch position independent of signal strength accurate and reliable touch detection for linear controls
- Atmel QWheel[®] processes signals to 7-bits of absolute position for excellent touch sensing rotary control