

## The next interface: Electrical fields, MGC3130, and your hand (w/ Video)

November 14 2012, by Nancy Owano

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(Phys.org)—Microchip Technology has been working in the "non-contact user interface" space, which is translating into gesture control over your next computing device. The company is using electrical fields to sense hand movements. They have announced a controller that transmits an electrical signal and calculates the three-coordinate position

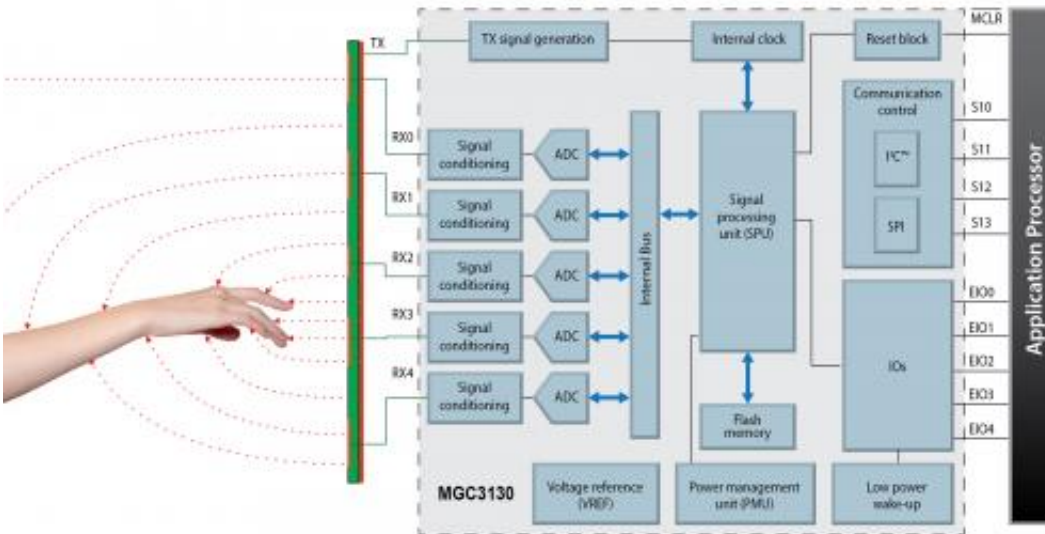
of a hand based on the disturbances to the field the hand creates. Chandler, Arizona, based Microchip Technology, in looking at electrical fields to sense hand movements, issued this week's announcement of "the world's first electrical field based 3-D gesture controller, the MGC3130." The new controller offers low-power, hand position tracking with gesture recognition. Its two promoted advantages are low cost and low power.

According to the company, the MGC3130 can enable 3-D gesture recognition with [power consumption](#) as low as 150 microwatts in its active sensing state.

MGC3130's design and configurable power modes represent the lowest power consumption of any 3-D sensing technology, says Microchip's creators, and up to 90 percent lower than camera-based gesture systems.

Microchip Technology is aiming its technology toward a range of devices; an easy vision of how it would translate into end use would be hand gesture recognition for smartphones and notebooks. The company said its chip will offer interaction with both mobile devices and consumer electronics. Its list of potential devices, for example, includes [electronic readers](#), remote controls and game controllers.

## MGC3130 3D Gesture Controller



The company is offering a development kit. A gesture library was constructed using algorithms that learned from how different people make the same movements, to be applied toward device functions such as .point, click, zoom, or scroll. Ten gestures were programmed into the device with recognition based on Markov models. According to the company, "the chip provides developers the flexibility to utilize pre-filtered electrode signals for additional functionality in their applications."

Gesture-recognition technology is familiar to those using game consoles, but the concept of gesture recognition could now become more mainstream with users of desktops, laptops, or smartphones, making use of [gesture-control](#) hovering motions. Microchip Technology said that it

is already working with product manufacturers to implement user-input controls.

The MGC3130 will cost \$2.26 each in high volumes and volume production is expected in April 2013.

**More information:** [www.microchip.com/wwwproducts/...px?dDocName=en560048](http://www.microchip.com/wwwproducts/...px?dDocName=en560048)

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