November 13, 2012

Microchip's New GestIC® Technology Enables Mobile-Friendly 3D Gesture Interfaces

MGC3130 is World's First E-Field-Based 3D Gesture Controller; Includes Library of Gestures and Precise Hand Position Tracking

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, analog and Flash-IP solutions, today announced its patented **GestIC®** technology, which enables the next dimension in intuitive, gesture-based, non-contact user interfaces for a broad range of end products. The configurable MGC3130 is the world's first electrical-field (E-field)-based **3D gesture controller**, offering low-power, precise, fast and robust hand position tracking with free-space gesture recognition.

Watch a short video demonstration: http://www.microchip.com/get/U913 (Photo: Business Wire)

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http://www.microchip.com/get/U913

View a brief presentation: **http://www.microchip.com/get/NW48**

With power consumption as low as 150 microwatts in its active sensing state, the MGC3130 enables always-on 3D gesture recognition—even for battery-powered products where power budgets are extremely tight. In fact, the MGC3130's low-power design and variety of configurable power modes provide the lowest power consumption of any 3D sensing technology—up to 90% lower than camera-based gesture systems.

GestIC technology achieves the exceptionally high gesture-recognition rates required by today's consumer products through its on-chip library—called the Colibri Suite—of intuitive and natural human gestures. The Colibri Suite combines a stochastic Hidden Markov model and x/y/z hand-position vectors to provide designers with a reliable set of recognized 3D hand and finger gestures that can be easily employed in their products. Examples include Wake-Up on Approach, Position Tracking, Flick Gestures, Circle Gestures and Symbol Gestures to perform functions such as on/off, open application, point, click, zoom, scroll, free-space mouseover and many others. Designers can use this library to get to market quickly and reduce development risks, by simply matching their system commands to Microchip's extensive set of predetermined and proven gestures. Additionally, the chip provides developers the flexibility to utilize pre-filtered electrode signals for additional functionality in their applications.

GestIC technology utilizes thin sensing electrodes made of any conductive material, such as Printed Circuit Board (PCB) traces or a touch sensor's Indium Tin Oxide (ITO) coating, to

enable invisible integration behind the device's housing. This allows for visually appealing industrial designs at very low total system costs. Additionally, the technology provides 100% surface coverage, eliminating "angle of view" blind spots found in other technologies. With a detection range of up to 15 cm, the MGC3130 is the ideal technology for products designed to be used in close proximity for direct user-to-device interaction. With its range of configurable, smart features, the MGC3130 uniquely enables the next breakthrough in human-machine-interface design across various industries. Microchip is already working with input-device and other product manufacturers to implement exciting and efficient user-input controls. Example applications include keyboards that take advantage of the advanced interface capabilities in the new Windows® 8 operating system, using hovering motions and free-space gesture controls, instead of reaching over to touch a screen.

The MGC3130 provides a sophisticated, precise and robust 3D gesture-interface and hand-position tracking solution, with features such as:

- 150 DPI, mouse-like resolution, and a 200 Hz sampling rate to sense even the fastest hand and finger motions
- Super-low-noise analog front end for high-accuracy interpretation of electrode sensor inputs
- Configurable Auto Wake-Up on Approach at 150 microwatts current consumption, enabling always-on gesture sensing in power-constrained mobile applications
- Automated self calibration, for continued high accuracy over a product's lifetime
- 32-bit digital signal processing, for real-time processing of x/y/z positional data and the Colibri Suite gesture library
- Integrated Flash memory for the easy upgrading of deployed products, in the field
- 70-130 kHz E-field with frequency hopping to eliminate RF interference, and resistant to ambient light and sound interference

Development Support

Microchip's **Sabrewing MGC3130 Single Zone Evaluation Kit** (part # DM160217), also announced today, is available now for $169 via any Microchip sales representative. It enables development with the MGC3130 by providing a selectable electrode size of 5" or 7". The kit comes with the AUREA Graphical User Interface—also available via a free download at **http://www.microchip.com/get/DST9**—which allows designers to easily match their system commands to Microchip's Colibri Suite. The Colibri Suite is an extensive library of proven and natural 3D gestures for hands and fingers that is pre-programmed into the MGC3130.

Pricing & Availability

Samples of Microchip's **MGC3130, featuring GestIC technology**, are also available today in a 5x5 mm 28-pin QFN package. Volume production is expected in April 2013, at $2.26 each in high volumes. For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at **http://www.microchip.com/get/S238**.

Resources

High-res Images Available Through Flickr or Editorial Contact (feel free to publish):

- Photo: **http://www.microchip.com/get/1NP4**
- Block Diagram: **http://www.microchip.com/get/KSRT**
- Tool: **http://www.microchip.com/get/Q87E**

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About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, analog and Flash-IP solutions, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **http://www.microchip.com/get/N8G5**.

Tags / Keywords: 3D Gesture, Gesture Controller, Gesture Sensing, Gesture Recognition, Gesture Library, Free Space Gesture, mTouch Sensing, 3D Position, IDENT, GestIC

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