

MYO armband to muscle into computer control (w/ video)



MYO armbands

(Phys.org) —"Wave goodbye to camera-based gesture control." That is the confident directive coming from a one-year-old Waterloo, Ontario, startup called Thalmic Labs. The company is prepared to ship its next batch of wearable-computing armbands for device controls early next year. The \$149 armbands called MYO do not require cameras in order to track hand or arm movements. The armbands can wirelessly control and interact with computers and other digital consumer products by recognizing the electric impulses in users' muscles.

The MYO is worn around the forearm; its purpose is to control computers, phones, and other devices, sending the data via Bluetooth. Windows and Mac operating systems are supported and APIs will be available for iOS and Android.

Bluetooth 4.0 Low Energy (BLE) is used for the MYO to communicate with the paired devices. (Bluetooth version 4.0 is the most recent version of Bluetooth wireless technology. It includes a low-energy feature promoted as good news for developers and manufacturers of Bluetooth devices and applications—enabling markets for devices that are low-cost and operate with low-power wireless connectivity.)

The MYO specs include on-board, rechargeable lithium-ion batteries and an ARM processor. Also part of the mix are the company's proprietary muscle-activity sensors and a six-axis inertial measurement unit.

A user's gestures and movements are actually detected in two ways: muscle activity and motion sensing. The Thalmic team says that when sensing the muscle movements of the user, the MYO can detect changes down to each individual finger. Also, when tracking arm and hand positions, the MYO picks up subtle movements and rotations in all directions.

Right now, as indicated in their newly released video of the company, Thalmic Labs hopes for greater things for MYO via a developer community. They expect an official developer program to be up and running in the next few months. They pride themselves in groundbreaking technology, as a team with

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specialties from electrical engineering to embedded system design. Nonetheless, they are looking to developers for innovative ideas in applications.

"We work day and night," said one team member, and their steadfastness is fed by a notion that the MYO could revolutionize the way people interact with technology. Thalmic Labs said they are accepting pre-orders for the second shipment of MYOs shipping early 2014.

More information: getmyo.com/

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