



## SOLDIER OF THE FUTURE

The WC2 arm unit is proprietary property and the product of SpecOps Systems, Inc.

### iKey Designs Custom, Rugged Keyboard for SpecOps Systems' Wearable Computer

#### the**overview**

SpecOps Systems, Inc. designs ruggedized, miniaturized, waterproof, wearable computers which provide enhanced situational awareness of the battle space or working arena. The company contacted iKey after a military customer requested that their WC2 wearable computer feature an integrated keyboard with text-mode keys, a pointing device and LED backlighting that fit well within the WC2 design. Several models of the WC2 wearable computer with the KYB-170-OEM are now undergoing field tests in locations throughout the world.

#### the**challenge**

SpecOps Systems was tasked with building a wearable computer system that could withstand the rugged conditions that exist in remote military applications. The company, founded in 2004 in Merced, California, worked with off-shelf-components and NASA technology to develop the WC2 computer, a system that performs like an extremely powerful desktop computer, but is designed to be worn and carried by an individual during live action on the field for extended periods of time.

In 2009, when a customer requested an integrated keyboard for the WC2, SpecOps Systems did a search on Google and found iKey.

“We saw that iKey had experience with the military and that they had a unit similar to what we wanted,” said Caroline Tucker, Executive Vice President of Sales and Business Development for SpecOps Systems. At the time, iKey had just announced the release of the AK-39, a wearable keyboard designed for use in mobile applications.

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## thechallenge cont.

"The thing that impressed us the most about iKey was that we told them what we needed, and quickly had a conference call to discuss the details," Tucker said. "Literally, within 24 hours, we had a prototype drawing. It was this focus on the customer that led us to go with iKey rather than any other vendor - we knew we had found a vendor who embraced our requirements."

## thesolution

iKey continued to work with SpecOps Systems after the initial prototype drawing to fine-tune the design and develop a keyboard that would fit their requirements. Within seven weeks after the initial phone call, SpecOps Systems was presented with a working prototype, including the keypad, PCB and firmware. The initial prototype was delivered as "production ready" within the required timeframe, without a need for engineering changes.

Several features were built into the KYB-170-OEM keyboard, which measures only 2.55" x 2.75" x 0.22" (w-h-d):

- ◆ A 17-key keypad with characters that are accessed through numeric keypad texting functionality, pressing the key sequentially until the desired character is produced (just like texting on a cellular phone).
- ◆ An integrated micro Force Sensing Resistor (FSR) pointing device.
- ◆ Backlit keys that can be manufactured with any available color of LED light, including night vision compatible lighting, for easy use in dark or dimly lit environments.
- ◆ The keyboard meets NEMA 4X specifications when properly installed; it is resistant to dirt, dust, liquid and other ingress.
- ◆ The keypad and the pointing device are a USB combo interface.
- ◆ The keyboard is designed to meet MIL-STD-461E requirements.

## theresults

The KYB-170-OEM is now integrated into several WC2 computer systems.

"iKey was great to work with," Tucker said. "They really seemed to care about getting the product right for our customer, and they understood our time constraints."

## thebackground

**About SpecOps Systems, Inc.** SpecOps Systems, Inc. designs ruggedized, miniaturized, waterproof, wearable computers which provide enhanced situational awareness of the battle space or working arena. The company was founded in 2004 in Merced, California. The company's WC2 computer was designed using off-the-shelf components and NASA technology. For more information on the WC2 computer, contact Caroline Tucker at (818) 800-4113, or visit [www.specopsystems.net](http://www.specopsystems.net).

**About iKey, LTD** Since 1989, iKey has been a pioneer in designing, manufacturing and selling rugged keyboards and pointing devices. Sealed keyboard solutions from iKey include medical keyboards, industrial keyboards, kiosk keyboards, public safety keyboards and military keyboards. iKey is located in Austin, Texas. For more information, visit [www.ikey.com](http://www.ikey.com).