HC1 HEADSET COMPUTER
A POWERFUL NEW PRODUCTIVITY TOOL FOR MRO

WORK SMARTER AND SAFER IN THE EXTREME AND ROUTINE

Photo Credit, Ikanos Consulting

Maintaining complex, expensive assets is your business; inside the four walls and out. And in a challenging economic environment, every penny and resource counts. Doing more with less has become the new status quo. The right technology investments now will help drive greater efficiencies, improve performance and provide truly hands-free mobility that will allow your maintenance, repair and operations (MRO) to thrive. New solutions have the power to transform how your mobile and field service technicians work.

THE CHALLENGE

Technicians need to reference "big screen" applications and complex schematics at the point of work yet keep their hands free to make repairs, install equipment or complete inspections.

Hands-free mobility is a critical requirement for service technicians. Their productivity depends on it. So does their safety. In industries like nuclear energy, technicians need to make inspections and/or equipment repairs quickly to minimize their risks and exposure to hazardous materials. The downside? The urgency to work quickly can lead to costly errors or mistakes.

More often than not, field technicians need to verify the location of underground equipment, or reference detailed blueprints of machine parts while on the job. To do that usually requires stopping a task and leaving the area in order to access this data on a tablet or laptop before going back to work. Repeated work stoppage costs valuable time and interrupts workflow.

Imagine if you could empower technical and field service personnel to work differently; more efficiently. Leverage a hands-free mobile solution that provides instant access to business critical documents, take photos or video and connect with remote experts in environments where using a laptop or handheld device is impractical or impossible. How would that capability transform how your business works?

THE SOLUTION

An innovative, completely hands-free wearable computing solution delivers operations critical data on demand.

We call it the HC1 Mobile Headset Computer, and it will change how mobile field technicians work. View critical or graphic-rich data, quickly act and collaborate with remote team members to speed troubleshooting with a simple verbal command or turn of the head to move a visual on-screen pointer to execute the application. No hands, laptop or fixed mobile workstation required.

USE THE HC1 TO:

- Access manuals, diagrams, or schematics by voice or head gesturing
- Send real-time video or images to remote experts
- Complete inspection reports and document work by voice
- View on-site training videos and 3D simulation
- Use augmented reality to overlay instructions

The HC1 leads a new class of rugged, hands-free wearable mobile computing devices. It features an adjustable optical micro- display enabling a view equivalent to a 15-inch laptop screen. With full voice, audio and PC networking capabilities, it will allow your business to achieve entirely new levels of mobile field worker productivity. What it doesn't do? Require hands to operate or block a user's vision or hearing. With it, technicians will work more efficiently and safely – whether they're in a tight space, in a remote location or working high above the ground. Errors, downtime and workflow interruptions are minimized and safety improved because focus on the task at hand remains steady.

What Sets the HC1 Apart? Everything

Leveraging our mobile computing expertise, the HC1 fundamentally transforms the wireless hands-free mobile communications technology category. Connected over Wi-Fi or paired with a WAN mobile computer via Bluetooth, the HC1 forms a rugged, industrial grade solution for technical service and field workers who require remote access to existing wireless and network infrastructure. It delivers:

POWERFUL PERFORMANCE
Designed with an OMAP3 Dual -Core Processor, the HC1 offers fast and reliable performance.
- Microsoft Windows CE 6.0 Professional
- WLAN (802.11 b/g), Bluetooth 2.1 with EDR, and USB connectivity
- Full color, SVGA, Transmissive TFT (800 x 600) micro- display; full virtual 15-inch monitor positioned below your line of sight. User configurable for left or right eye dominance
- Advanced speech recognition software with noise cancelling supporting up to 6 languages
- Integrated 9-axis head-tracking technology with a digital compass
- 3D graphics accelerator

RESPONDS TO A VOICE COMMAND OR TILT OF THE HEAD TO EXECUTE APPLICATIONS
The HC1 has advanced speech recognition and natural language software that supports six languages for responsive application command and control. Dual bi-directional noise-cancelling

microphones and near-ear loudspeaker — which can be replaced with noise-isolating ear buds — keep communications loud and clear. The headset's powerful accelerometer and digital compass deliver smooth gesture control and accurate direction and position orientation for smooth navigation through applications.

STYLISH ERGONOMICS
The weight and balance of the HC1 are optimized for hours of comfortable use. By design you can configure the micro-display and near-ear loudspeaker depending on your needs. Adjustable straps provide a custom fit and removable comfort pads can be cleaned or replaced, allowing one device to be used by multiple workers.

POWERFUL ON ITS OWN, OR WHEN CONNECTED TO A WIDER NETWORK
When connected via local Wi-Fi or a Bluetooth connection to a Motorola MC75A, MC65, ES400, smartphone, or mobile hotspot, the HC1 allows the push and pull of data between the headset computer and remote networks. The headset form factor gives workers the hands-free convenience to handle multiple tasks, while quickly accessing the correct information, improving work efficiency and productivity.

MULTIPLE DATA ENTRY OPTIONS
The HC1 supports a variety of encrypted Bluetooth-enabled data entry options, making it a dynamic, highly customizable tool. Data can be input via Bluetooth ring

or hand-held scanners — specifically Motorola's RS507 ring imager, CS3070 key fob or DS3578 hand-held imager — or through the use of a virtual on-screen keyboard as part of the OS Image.

AN INTERACTIVE LINK TO REMOTE EXPERTS
The HC1 Headset Computer provides a cost effective alternative when budget limitations prevent experts from traveling to MRO job sites. When connected to the network and using the optional camera accessory field service workers are provided a wireless, interactive link to remote experts with video and images captured by the HC1 camera being transmitted to an off-site service technician for evaluation and input without interrupting or distracting them from their work.

ACCESSORY INTERFACE AND AVAILABLE OPTIONS
A modular accessory interface for USB connectivity makes the addition of peripherals as simple as snapping them on. For example, the camera can be attached to the accessory interface and then swapped for another peripheral as needed. In addition, the HC1 Headset Computer features a wide assortment of accessories including, a single unit charging module (wall & vehicle), 4-slot battery charger, carrying cases, ear buds, pads and straps that help customize the HC1 to meet specific operational needs.

WHY HANDS-FREE COMPUTING MAKES SENSE FOR MRO

Wearable mobile computers, such as the new HC1 Headset Computer, provide critical data to users without interrupting work flow. Designed to fit comfortably under safety helmets, this new class of mobile device runs completely on voice and gesture commands, keeping a workers hands completely free to complete work tasks. Using simple voice commands or head movements to execute applications, the HC1 displays business critical documents, videos and photos just below a user's line of sight. Maps, grid schematics and work tickets are delivered to the exact location where work is being completed. And inspection reports, work orders and maintenance records can be completed by voice, eliminating paper-based processes or the need for touchscreens interfaces.

A simple turn of the head can reveal every critical detail associated with a current view – parts in a motor, electrical grid or control panel, underground pipe configuration. This improves real-time decision making and safety no matter where work needs to be done. The HC1 head tracking system offers a panoramic, 360-degree viewing experience and supersedes mouse or touch control with gesture-based commands. The omni-directional head tracker provides freedom of movement in any direction, allowing mobile

workers to scroll, pan, zoom, tilt, rotate or freeze documents, images and other relevant data.

With instant access to customized content and business or task-specific applications, wearable solutions reduce MRO inspection and repair times, labor costs, travel expenses for additional support staff and increase the efficiency of one-person operations.

TRANSFORMING HOW WORK GETS DONE

The HC1 offers a transformational user interface (UI) to support hands-free access to data, video and voice. The industry applications for this new category of device are far reaching and virtually limitless.

Photo Credit, Ikanos Consulting

TARGET USERS	HC1 BENEFITS
Utility Repair Technicians	• Designed for use in extreme or challenging environments • Remote expert collaboration via video and voice
Telecommunications Line Workers	• Increase Situational and Contextual Awareness • Voice recognition replaces need for touch screen, pad, keyboard – keeping hands free at high elevations
Construction Managers, Field Architects	• Viewing 3D modeling and enhanced graphics • "Panoramic Views" and Detailed Site Maps
Manufacturing Line Workers and Engineers	• Work flow and Task Completion Verification • Inspection and Prevention Maintenance
Field Service Technicians and Installers	• Remote Expert Access with Real-time Annotation • Inspection Report/Documents – Completed by voice, sent onsite
Industrial Machine and Mobile Heavy Equipment Mechanics	• Trouble Shooting / Remote Machine Repair • Delivers true hands-free computing capabilities for complex jobs

AN INTERACTIVE, COST-EFFECTIVE LINK TO REMOTE EXPERTS

If budget or resource limitations prevent experts from traveling to a MRO job site, the HC1 Headset Computer provides a cost-effective alternative. When connected to the network and using the optional camera accessory, mobile service technicians can transmit pictures or videos in real-time, allowing experts to see what they see and respond immediately without interrupting work flow. Repair technicians can send a video clip of a piece of equipment to obtain on-the-spot guidance from an in-house expert or equipment manufacturer on how to complete a specific task. High-resolution photos provide the rich details necessary to document the condition of equipment, a replacement part, deliveries and more.

On the line or in the warehouse, immediate access to vital information reduces costly downtime and streamlines compliance. And for transportation companies, rapid access to engine layout documents, repair procedures and connection to master mechanics increase the speed and accuracy of repairs. And when used as a training tool for mobile professional repair teams, the HC1 multiplies the value of your expert workforce.
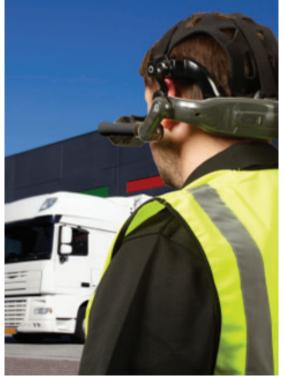
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EMPOWER YOUR WORKFORCE WITH HANDS-FREE MOBILITY

With better information, you get better results. Our products provide the type of real-time data sharing and versatility that empower your workforce and transform your enterprise.

APPLICATION EXAMPLES:

Entervise™ is a voice driven system solution that enables mobile workers in the field to connect in real-time with remote experts located anywhere in the world. Currently deployed with the Motorola headset computer, Entervise enables completely hands-free access to both locally stored information and to real-time collaboration sessions with the experts.

CHECK-KING by teXXmo for Inspection Reporting is speech-controlled mobile data management and collection software. It provides an electronic check list feature allowing for faster, more efficient inspections of airplanes, vehicles, buildings or equipment. CHECK-KING walks you through a personal checklist, queries important data and saves the answers. In addition to mandatory input, you can add notes, drawings, photos, audio recordings, digital signatures and the checking time.

For more information, please visit us on the web at **www.motorolasolutions.com/HC1** or access our global contact directory at **www.motorola.com/enterprisemobility/ contactus**.

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