# Wedge Device Aims to Ease RFID Setup

Created for small and midsize businesses that use bar-code technology to identify assets, personnel or products, the product is designed to provide a low-cost means for migrating to RFID.

By Mary Catherine O'Connor

March 14, 2008—Barcoding Inc., a Baltimore-based provider of auto-identification technologies, says it has developed a product that makes RFID technology more accessible to users, particularly those operating stand-alone, closed-loop auto-ID systems.

The device, known as the CaptureTech RFID Wedge, sits between any EPC Gen 2 RFID interrogator and any computer with a USB port. Its job is to filter RFID tag data and deliver that information to the host computer in a format it understands. This, says Bill Poulsen, a senior RFID engineer at Barcoding Inc., allows the user to continue using back-end software that had previously been utilized to process bar-code data, without having to make any changes to that legacy software.

Veterans of auto-ID technology are familiar with the term "wedge," Poulsen says. "When bar-code scanners were first made," he explains, "they could not put the [bar-code] intelligence straight to a computer. Now, the scanners have multi-decode analyzers built into them, but at first they needed these wedge devices as well, to interface with host computers."

A number of RFID interrogators on the market have USB ports that allow users to connect the readers directly to computers, but to do so, the user must install and run special software on the computer so that it can set the reader's configurations and filter the data it collects. Barcoding Inc.'s wedge, however, does not does require the installation of any software on the computer. Poulsen likens it to a keyboard on a PC.

Similar to how the keyboard transfers keystrokes into logic that the computer's operating system understands, the wedge collects tag data from an RFID interrogator and converts it into a format that the user's legacy software comprehends. But unlike reader-networking devices made by such companies as Reva Systems, Blue Vector or Omnitrol, Barcoding Inc.'s wedge is designed to link only one interrogator to a computer.

Poulsen says his company developed the device to meet the needs of a single customer, but determined that the market for such a device is large. He says it comprises small and midsize businesses that employ bar-code technology in a limited scope for the identification of assets, personnel or products, in a closed-loop system, and do not wish to make large investments to migrate to RFID but still want the ease-of-use and time-saving benefits RFID provides.

The wedge connects to any computer that supports a USB cable interface, whether it uses a Microsoft, Macintosh or Linux operating system. The host identifies the wedge as a human interface device (HID), which is also how it sees a keyboard or other peripheral. According to Barcoding Inc., this means the data the wedge passes on can be entered into "almost any software program, including Microsoft Excel and Word."

On the other end, an Ethernet cable connects the edge to an RFID reader. The deploying company then uses

the host computer to log on to the wedge. Once logged on, the user can configure the wedge to filter the tag data the interrogator collects, based on the user's needs, and to send the filtered data directly to a designated program running on the computer. The CaptureTech wedge also has an input for a sensor that can be used to trigger the reader to generate an interrogation field only in response to a specific event. For example, an optical sensor could trigger the interrogator to operate only when something enters its field.

Several Barcoding Inc. customers are currently testing the wedge in applications that include identifying cars for a valet parking service, as well as using RFID to link rentals cars with rental agreements. All of the companies testing the device are employing RFID in the same ways they have been using bar codes. The CaptureTech RFID Wedge is available now from Barcoding Inc., and retails for $695. Zmark Technologies, a provider of auto-ID products and services, plans to sell the device as well.

RELATED_ARTICLES Freedom Shopping, a provider of RFID-based retail payment solutions geared toward small or closed-loop retail operations, has also announced a wedge product. Freedom Shopping's wedge consists of the company's Freedom-ID RFID database software and hardware, designed for integration into point-of-sale stations. The software is used to encode Electronic Product Codes (EPCs) or other unique ID numbers to tags that retailers place on items, and to associate the tags' unique numbers with the products' stock-keeping unit (SKU) numbers. The hardware consists of an RFID interrogator compliant with the EPC Gen 2 standard, as well as an antenna built into a pad that sits on a sales counter.

To read each item's tag, a clerk places the item on the pad. The Freedom-ID software determines the item's SKU number and transmits it to the retailer's point-of-sale software. The hardware sells for $3,000, including all cables and power cords; a license for the Freedom-ID software costs $2,000 per store. The system can also be extended to a security gate and used to detect theft of RFID-tagged items.