New System Joins RFID and EAS

Topics/Verticals: Security and Access Control, Retail

Electronic article surveillance (EAS) provider Checkpoint Systems will offer an item-tagging system for clothing retailers that combines EAS and RFID technologies.

By Jonathan Collins

June 2, 2004—Electronic article surveillance (EAS) system specialist provider Checkpoint Systems has developed Apparel-Track, an item-tagging system for clothing retailers that combines EAS and RFID technologies in tags, readers, point-of-sale equipment and software.

"The great thing about RF EAS is that it works very well together with RFID," says Steve Coffey, RFID European business development manager at Checkpoint.

Steve Coffey

Checkpoint, which is based in Thorofare, N.J., says its Apparel-Track EAS/RFID system was developed over the course of two years and tested with two European retail customers. In addition, the technology is being deployed in the Metro Group's Extra Future Store, in Rheinberg, Germany.

Checkpoint's Apparel-Track system combines EAS transponders operating at 8.2 MHz and RFID transponders at 13.56 MHz. The RFID transponders use Philips ICO chips, which, Checkpoint says, offer an RFID read range of up to 1.2 meters. The EAS transponders can be read at a distance of up to 1.8 meters.

That greater range of the EAS technology, says Checkpoint, means that the EAS aspects of the system can be used for security in deployments where the reader gates, which contain Checkpoint's Gemini RFID/EAS antennas, have to be set farther apart than the RFID readers can manage. The ability to read both EAS and RFID information enables not only EAS alerts whenever tags and the items to which they are attached leave the store, but the RFID-provided identification of the item itself.

That can be valuable information to combine, says Coffey. "There are additional costs to retailers when items are stolen that include not knowing what has been lost and therefore not being able to replenish the stock," he says.

Checkpoint's specially designed Apparel-Track tags have the same 800mm-diameter circular hard-plastic shell used for the company's existing EAS tags. Like the shell on the EAS tags, the Apparel-Track's shell includes a sharp pin, protruding from its center, that is pushed through a garment and secured with a fastener on the other side. According to the company, the addition of RFID to an EAS tag doubles the cost of the tag, but the tag can be reused because it is removed from the garment at the point of sale.

By combining RFID tagging with EAS tags, Checkpoint believes it is providing retailers with an

affordable way to deploy item-level tagging on high-value items by leveraging the same EAS technology that will still be used on lower-cost items.

Adding RFID can also strengthen the capabilities of an EAS system, says Checkpoint. To combat a form of in-store theft known as "sweethearting," where EAS tags are removed by cashiers without receiving payment, the Checkpoint Apparel-Track system includes a new point-of-sale (POS) reader. The Apparel-Track system will allow the tag to be removed only after the point-of-sale (POS) reader confirms that the item's tag matches the item that has been purchased.

The company says the new tag has a fastening mechanism that's far stronger than the one used on existing EAS tags, so that it cannot be forced open with a strong magnet, as existing tags can be. Instead, the EAS/RFID tag requires a new RFID tag detacher that connects to a point-of-sale terminal over a serial cable connection to enable the tags to be removed. As the tag is detached from an item, the item's ID number is erased from the tag's memory and the tag is ready to be used again.

According to Checkpoint, while its new Apparel-Track EAS/RFID tags, POS reader and tag detacher are available now, the Gemini RFID/EAS readers and antennas used for the gates are still in beta trials. Even so, the entire system, including the readers, is already being deployed in the Extra Future Store, where the Metro Group, the world's fifth-largest retailer and Germany's largest, tests new retailing technologies under real conditions. So far, Checkpoint has deployed 26 pairs of Gemini readers in the Extra Future Store, and 26 POS terminals are ready to be installed.

Checkpoint has also installed its RFID Application Server software to manage the EAS/RFID system in the Extra Future Store. The Apparel-Track tags will be added to items on the premises of the store, not at the item's manufacturing site. As each item's bar-coded tag is scanned with a handheld scanner, the software will ensure that the attached EAS/RFID tag is associated with that specific item.

Checkpoint also says that its Check-Net global data management service that currently produces and delivers retailer-ordered bar-coded tags to item manufacturing sites around the world will also allow its customers to order EAS/RFID tags. The network links Checkpoint customers to 29 print shops around the world, and 10 of print shops, mainly in the Far East, will now support the new EAS/RFID tags.

Having the EAS/RFID tags attached to items at the place of manufacture can greatly cut the cost of applying the tags by making use of cheaper foreign labor, but once EAS/RFID readers are deployed throughout the supply chain, it can enable the entire supply chain to use the tags to prevent shrinkage, according to Checkpoint.

The company adds that the tags collected at the point of sale can be shipped back to garment manufacturers for reuse. Checkpoint can manage the return of those tags to the manufacturing sites, where they will be reattached to items, or retailers can use their own internal shipping.

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