



## ZEBRA CASE STUDY

### DoD supplier takes integrated approach to satisfy UID and RFID labeling needs



#### Challenge

Gyrocam Systems, LLC is the industry leader in ground and airborne surveillance solutions for law enforcement and homeland security, and the only FAA-certified provider of fully integrated and installed systems. The U.S. military makes extensive use of Gyrocam's systems, which can read a license plate number from thousands of feet away, or detect an improvised explosive device (IED) from a surveillance vehicle at a safe distance. As a result, Gyrocam's solutions provide commanders and their forces with the flexibility to complete missions safely and successfully. Because Gyrocam's high-performance, leading-edge products are essential to many military operations, the U.S. Department of Defense included Gyrocam Systems in both its Unique Identification (UID) and radio frequency identification (RFID) programs.

Gyrocam Systems had no previous experience with bar coding or RFID, causing the company to investigate, specify and install two completely different labeling systems to comply with MIL-STD-129 and -130, while it was also working to fulfill major new DoD contracts.

#### Solution

Gyrocam teamed with Zebra Technologies, A2B Tracking Solutions and epcSolutions to help the U.S. military see even more clearly—with UID and RFID labeling systems that create visibility for shipments, products and components.

Gyrocam first had to meet the UID requirement, which calls for suppliers to apply a permanent Data Matrix two-dimensional bar code on parts and components. The bar code is encoded according to UID marking standards and provides unique, lifetime identification for maintenance management, asset tracking and other applications. Producing symbols that will remain readable through the item's life cycle is often a challenge.

Six separate UID marks are needed for each product Gyrocam supplies the DoD—five components are individually identified, plus the finished product. Fortunately for Gyrocam, all the items can be identified with a durable synthetic label, so the company does not have to use more expensive and time consuming direct part marking (DPM) methods.

To comply quickly, Gyrocam outsourced its UID label production to A2B Tracking Solutions, a leading specialist in the UID field. A2B Tracking Solutions can manage all aspects of UID labeling, including designing the bar code, choosing the marking method, and providing software to gather information needed from enterprise systems to produce the label and meet the UID program data reporting requirements.

"After the third order it was clear there was an ongoing UID need. We explained to Gyrocam that it would be more cost-effective for them to put their own system in place," says Brad Smith of A2B Tracking Solutions. "Gyrocam Systems was a perfect candidate for in-house UID printing because they could use a durable polyester thermal-transfer label material on their items."

After carefully evaluating the materials that require a UID mark and their usage conditions, A2B Tracking Solutions recommended Zebra® Z-Ultimate® label material and 105SL™ thermal-transfer printer. Z-Ultimate is polyester media that includes a permanent adhesive and protective facestock that makes it suitable for lifetime identification in indoor and outdoor environments. Labels as small as 1.25-by-0.25- inches are available, but Gyrocam uses 1-by-3-inch labels because there is plenty of room on its components and products to carry the UID symbol.



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The all-metal 105SL printer is rugged enough for use in the factory and precise enough to print compact, high-quality Data Matrix 2-D bar codes that UID marking requires. The 105SL is fully compatible with wired or wireless networks and has many features to provide maximum performance, reliability and uptime.

A2B's UID Comply!™ software drives the label generation process and also manages electronic data submission to the DoD. Using a PC next to the bar code label printer, Gyrocam workers follow simple on-screen prompts to enter basic information about the order. The UID Comply! software then automatically performs database lookups, creates records that associate components with the finished product, calculates the UID symbol data and directs printing of a properly formatted UID bar code. The software also extracts and formats the information needed to report to the DoD and can automatically make the submission.



Zebra's 105SL and R110Xi printers

On the other side of the PC sits a Zebra R110Xi™ printer/encoder, which Gyrocam uses to produce the RFID smart labels required on its shipping containers. The PC runs RFIDTagManager™ for DoD software that epcSolutions developed to automate RFID labeling operations. To meet DoD reporting requirements, A2B and epcSolutions collaborated on a solution that integrates UID Comply! with RFIDTagManager to allow UID and RFID data to be included in a single submission to the DoD.

“The R110Xi could have been used to produce UID and RFID labels, but ultimately that wouldn't have been efficient,” explains Smith. “Workers would have had to swap and load media every time they changed over from printing UID to RFID smart labels. That's not best for productivity. If they'd forget to change media, there would be waste from having to reproduce the labels printed on the wrong media. Overall it was most cost effective to have separate printers that were optimized for each type of labeling.”

Gyrocam applies the “child” format of UID labels to components during production. Sometimes the company has to wait for a component to arrive from a supplier before it can complete assembly of a finished product. In these situations it may apply UID labels to the other components ahead of time so it can complete final assembly as soon as the final component arrives. The “parent” UID label is then applied to the finished product, which are packed six per container, for shipment to the DoD.

At this point, the integrated software collects UID data to produce a MIL-STD-129-compliant RFID shipping label. The software applications submit UID data to the DoD's IUID Registry, and RFID information to the DoD's Wide Area Workflow (WAWF) tracking system.

“The thing that stands out most about this implementation is how quickly Gyrocam's users picked up on it,” says Smith. “They were up, running and producing UID and RFID labels within an hour of the training session, and haven't had problems since.”

## Results

“The system runs very smoothly,” says John Hudson, UID and RFID compliance manager at Gyrocam Systems. “Working with A2B and epcSolutions, and the reliability from the Zebra printers, we were able to meet our DoD compliance requirements ahead of schedule and have a system in place very quickly.”

It now takes Gyrocam Systems less time to prepare DoD orders itself than it did when UID labeling was outsourced, because the software automates the time-consuming process of gathering the order and production information to generate the needed labels and reports.

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“We got our orders to be UID and RFID compliant at about the same time,” says Hudson. “Our biggest concerns were ‘Can we get the program offices what they want?’ ‘What is the quickest way to comply?’ and ‘What is the most cost-effective way to do it?’ A2B and epcSolutions helped us answer these questions very quickly. The software, training and Zebra printers they provided led us to meet our commitments very effectively.”

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#14263L (4/07)



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PM-022228

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GSA#: GS-35F-0268N