

# Emergency Medical Services (EMS) Inventory Management using RFID



JADAK Case Study

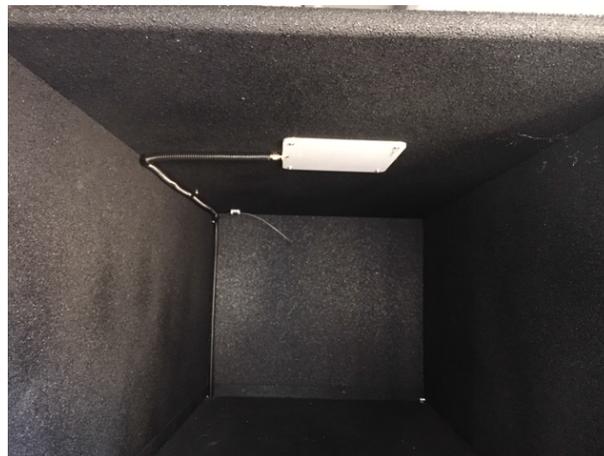
## Challenge:

Silent Partner Technologies (SPT), an RFID system developer specializing in asset and inventory management, reached out to JADAK to provide integrated RFID readers. SPT was designing an RFID system for Emergency Medical Services, as well as fire and other first responder providers, to manage their inventory. SPT designed a system called IntelliView, placing RFID readers and antennas inside vehicles to create “smart” vehicles, rooms, and/or shelves (SmartShelves). RFID tags are then placed directly on equipment or medical supplies, which are then stored on a shelf, vehicle or in a bag/pelican case. This enables emergency medical providers to quickly identify what supplies are available and their exact location, simplifying replenishment and drastically improving the ability to find and pull items based on recalls or expiration.

## Solution:

JADAK provided SPT with its ThingMagic Mercury6 (M6) RAIN Ultra High Frequency (UHF) RFID module, which is able to continuously read a large volume of tags within an area. The M6 is utilized in SPT’s customers’ smart rooms, shelves, racks, and portal applications. As emergency providers pull supplies and inventory for use, SPT’s system is able to automatically update the information, so that inventory can be quickly and accurately replenished. JADAK provided SPT with its micro-module for use inside the SPT IntelliVan application.

“We’ve been working with JADAK for over six years and have found the hardware and products are easy to use and integrate within our systems,” said Ted Kostis, President of SPT. JADAK’s product versatility and breadth of line provided SPT with a single source for all of its reader needs.



### Results: Bonita Springs

Bonita Springs Fire Control and Rescue District uses SPT's IntelliView solution. Bonita Springs has six different locations, each with an abundance of medical equipment and each station with its own medical supply room. Prior to utilizing the IntelliView solution, Bonita Springs conducted its inventory manually, resulting in missed items, expiration dates and costly mistakes. Once Bonita Springs installed the IntelliView RFID system, items were counted and tracked continuously through the use of RFID tags. The readers and antennae, installed in their medical supply rooms, monitor quantities and expiration dates, and send alerts when quantities are low or supplies are expired. As a result, Bonita Springs is able to monitor their inventory daily via their website, which resulted in 30% purchasing savings in the first year alone. And this does not factor in the additional significant savings achieved in personnel hours.

### Results: South Metro

South Metro Fire Rescue Authority, Colorado, also uses SPT's IntelliView solution. South Metro operates 17 EMS stations, with inventory warehoused at its headquarters. Prior to the SPT solution, supplies were counted and expiration dates were verified manually, requiring significant hours and resulting in a high degree of error. The IntelliView system at South Metro used active and passive RFID technology to track both serialized items (such as narcotics) and non-serialized assets and supplies. The RFID technology converted supply racks into smart shelves that identified tagged items. The racks were retrofitted with antennas and a Mercury 6 fixed reader from JADAK. Items were identified using tags. IntelliView's cloud-based software included middleware to manage tag reads and an inventory management application. When a tagged item is removed from the smart shelf, it is automatically detected and inventory is updated in real time. The software also tracks when products will expire and features a scheduling calendar to monitor when items need to be recalibrated. Following the project's completion, ambulances left stations with the correct equipment and fresh medicine, and overhead was reduced by 50%. As a result of implementation of IntelliView, South Metro achieved a return on its investment within the first 18 months by cutting its inventory in half. And it reduced its labor costs by an estimated 400%.



## Results: Equipment Management Service and Repair

Equipment Management Service and Repair, a company that services and repairs healthcare and medical services equipment, also utilized SPT's solution to identify emergency medical items requiring maintenance or inspection, and to ensure emergency responders do not leave expensive equipment behind when out on calls. In the emergency services sector, tracking equipment is more complicated than at fixed locations, because items are mobile. SPT's solution not only saved Equipment Management money, but it also saved critical time during these life-saving situations.

### **Benefits:**

Many emergency service providers are government funded and are required to provide periodic audits of equipment and inventory. An asset and inventory RFID system provides an automated way to meet these requirements.

With automated inventory management, less personnel hours are required, resulting in an average 40% gain in efficiency.

RFID tracking can drastically reduce in-stock inventory through more accurate monitoring and ordering of quantities and less waste of expired medical supplies. Many EMS organizations have seen inventory carrying costs cut by 30-50%.

Safety increases with the use of RFID asset and inventory management. Lot numbers and recalls, as well as service scheduling can be addressed quickly and efficiently.

For more information on how RFID can be implemented in your emergency medical application, contact us at [info@jadaktech.com](mailto:info@jadaktech.com) or call us at 315.701.0678.