



How Rentex Used RFID to Streamline Rental Asset Management

One of the largest wholesale audio and video rental companies in USA was spending thousands of hours on manual processes each month before implementing RFID with Vizinex, part of HID Global. In 2020, Rentex CTO Marcus DeLuco resolved to find a way to streamline the company's operations. The company — which rents out pro-level audio/visual, production, and computer equipment to all industry levels from hotels to film and television production — relied on warehouse processes that were largely effective but inefficient. This included functions like assembling rental kits with the correct items, processing returns and performing maintenance. Auditing the methods used for data collection revealed a manual, time-consuming process that involved a combination of scanning conventional barcodes and manually transferring data. The process, according to DeLuco, “took a lot of human interaction to get gear checked in and gear checked out.” And that made it susceptible to human error.

Each step was extremely labor intensive. For example, if employees wanted to add an item to a kit or process a return, they had to:

1. Manually find it in the warehouse.
2. Visually confirm it was the piece ordered.
3. Scan the barcode or write down the serial number by hand.

Rentex owns hundreds of thousands of items spread across its 10 facilities. Since each item could take minutes to process, the hours added up fast. This drove up operating costs and slowed delivery of equipment to customers. If DeLuco was going to streamline operations, he would need a technology solution that could identify rental assets both accurately and rapidly (within seconds).



FINDING THE RIGHT PARTNERS

While researching the paths to improvement, DeLuco found an integrated solution from Rental Tracker, an experienced software provider specializing in the rental asset space, and Vizinex, part of HID Global — an RFID tag manufacturer with a line of tags well suited for tagging the type of assets deployed by rental companies in the entertainment space. RFID (radio frequency identification) technology uses radio waves to automate the tracking

of assets. This lets users rapidly collect high-quality data about a given asset and track its location in the workflow. For rental companies, RFID provides an automated way to identify and locate rental assets within seconds, including equipment inside road cases and stacked on warehouse racks. After seeing positive results from an internal test of RFID, Rentex partnered with HID Global and the software provider Rental Tracker to implement a system that could automate and improve the efficiency of their rental processes.

UNDERSTANDING RFID NEEDS

Deploying RFID requires three components:

- A tag that gets mounted on an asset
- A reader that pings the tag and relays information
- Specialized software that receives data from the reader and presents it in a way that enables workers and managers to make better decisions

Rental Tracker provided their RTPro tracking software and recommended the readers that are most suitable to the needs of the rental industry. To perform well, an RFID tag needs to be compatible with the material it's mounted on. Rentex has a diverse range of assets to tag including cameras, projectors, audio, cables and lighting. This comprises a very broad spectrum of material types, but ultimately, only three types of HID Global tags would be needed to tag virtually their entire portfolio of assets. "Inventory control of tags is tough," said DeLuco. "You have to know how many of each tag you need and how they match up with the assets' materials."



DESIGNING THE SOLUTION

To ensure each asset had exactly the right tag, HID Global used multiple tag designs. Most assets were tagged with heavy-duty tags purpose-built for the rental industry. The tags are all very durable and could withstand the kind of rough handling and extreme conditions rental assets typically face. Rentex tested this by placing a tag on a metal plate and hitting it with a ball-peen hammer. It withstood three crushing blows of significant force before the tag stopped transmitting. These forces were significantly higher than anything the tags would encounter during normal use. For assets where it wasn't clear if the materials were metal or plastic, HID Global provided their Sentry Duo tag that is compatible with any surface. A particularly troublesome asset to track — cable assemblies — were tagged with HID Global's Sentry Cable tags, that are specifically optimized to work on insulated metal like cables. The tags were held in place with HID Global's tag holders that include a rope holder feature to aid in coiling the cables for storage and handling.



"For asset rental companies, success depends on two factors: Kit accuracy and how quickly you can get gear to your customers. With thousands of assets leaving a facility every day, having a system that can provide efficiencies at scale is crucial. With RFID, we could streamline our business processes and enjoy more efficiency and accuracy than ever before"

Marcus DeLuco
CTO of Rentex Audio Visual &
Computer Rentals





GETTING RESULTS

In December 2020, Rentex deployed their new RFID system to all 10 of their locations. The process of tagging and inventorying 200,000 assets across the country took time. But once the rollout was finished, Rentex saw an immediate impact to their operations.

Working with RFID, Rentex reduced process times to a small fraction of the prior durations.

In one case, they were able to reduce a

2.5 hour, two-person process to a 15-minute, one-person process — a 95% reduction in time and labor costs. In another case, Rentex replaced a 22-minute check-in process with one that took 10 seconds — a staggering 99.24% reduction. It has become clear that the efficiencies gained from such dramatic reductions in time and labor costs have a significant financial return. In addition to the immediate improvement in the speed and accuracy of warehouse operations, DeLuco and the Rentex team are happy to have eliminated many manual tasks and performing other tasks more efficiently, like scanning the contents of a box or container with several tagged items inside without the need to open it. By automating with RFID, they can refocus on tasks that provide customer satisfaction and prioritize higher level, strategic objectives. With more timely and accurate data about asset utilization, Rentex can also improve its asset management workflow.

Having successfully deployed RFID, Rentex plans to explore more ways to use it in their business. “With two years of high volume usage now, we are still very pleased with our implementation of RFID. It has been so effective, that we have outlined a long term development path to further leverage the capabilities of RFID, and stay at the leading edge of the technology. RFID is not without its challenges, but as we work with it, the gains far outweigh the bumps in the road. We see continued benefits on a daily basis as we refine our processes all the way down to physical inventory having completion timelines reduced by weeks.” said DeLuco. “The systems capabilities have even reverberated out to our customers, who have started to ask us how we did it, and what kind of advantages we are experiencing.”



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