# NeWave® Portals Provide Accuracy Needed for Dock Door Asset Tracking

Item level RFID tracking applications are continuing to expand including the capability to track assets through the supply chain. Manufacturers and distributors are now able to identify the movement of assemblies and parts that move to another facility better than ever. Many manufacturers also use returnable containers to transfer parts between facilities and vendors but need to be able to track their location. RFID technology can enable significantly better utilization of these containers.

## Primary Drivers

- Increased visibility to assets leaving and returning from a facility
- Reduce container losses
- Improving productivity by avoiding visual inspections and time consuming follow-ups
- System accuracy , avoidance of extraneous tag reads
- Durability and low on-going maintenance

## How can NeWave help?

NeWave's unique Wave® antennas emit a patented five beam cylindrical RF illumination pattern providing superior data accuracy over traditional patch antennas that radiate one beam in a single direction. For dock door applications, NeWave has worked with leading System Integrators like Smart Label Solutions(SLS) to develop specific portals for dock doors. NeWave uniquely embeds two Wave antennas in a composite material that can be enclosed in any one of a variety of structures to form a portal that best fit the facility's needs. Because the Wave antenna can be embedded in the portal it stays precisely in alignment even in a rugged environment and forms the first "Plug and Play" portal thus much simpler to install. Wave embedded antenna portals provide controlled reads with a desired narrow illumination path of approximately 100°. This becomes ideal for any exit and entrance application since there may be tags in close proximity that are not passing through the exit or entry and these tags will not be read. Patch Antenna Portals cannot make any of these claims.

# Case Study

## Overview

Johnson Controls(JCI), an American multinational conglomerate producing automotive parts such as batteries and electronics and HVAC equipment for buildings, was looking to improve its visibility into the millions of returnable containers used by the company's Automotive Experience division. [1]

## Their Problem

Johnson Controls was challenged by loss or slow movement of the containers that carry components from its multiple plants to its distribution centers, and then transport finished products to customers. The containers and racks, which come in varying sizes and are composed of metal or plastic, range in value from $3 to $1,500 apiece. While there are 508 unique types of containers, most, are black and look like many of the other models. Tracking what is on hand at each facility at any given time had required visual inspections and multiple phone calls and if some seemed to be missing, Johnson Controls had to order new containers as replacements. Sometimes, the company purchased cardboard containers to replace the missing plastic or metal versions if goods had to be shipped by a certain date and no containers were available.[1] To rectify this problem, the company needed to evaluate and move to new technologies to increase visibility of their assets and containers.

## The Solution

Johnson Controls launched a cloud-based RFID solution provided by Smart Label Solution (SLS) enabling JCI to track hundreds of thousands of reusable containers. The solution employs software from Surgere, SLS reader portals with NeWave Sensor Solutions' Wave antennas, Zebra handheld readers and a combination of Avery Dennison and Metalcraft RFID tags[1]. The SLS portals with the Wave antennas were a critical part of the program, these NeWave antennas provided a high degree of read accuracy and simple installation which gave JCI the confidence to expand.

## Conclusion

The company recouped its investment in RFID soon after tagging 876,000 reusable containers used to transport car seats and their components, and installing SLS' smartPORTALs with NeWave embedded antennas at 600 dock doors within 37 facilities.[1] SLS also confirmed that when they previously used a patch antenna portal they could only install 4 to 5 dock doors a day, with the embedded Wave portal they are now installing up to 20 doors a day; while still getting much improved accuracy and minimal extraneous tag reads.

[1] "RFID Prevents Johnson Controls Containers from Being Lost', RFID Journal,
May 17,2016 http://www.rfidjournal.com/articles/view?14500/