



NEWAVE®
Sensor Solutions

Retail Merchandise Availability

Retail shelf losses due to Organized Retail Crime (ORC) are estimated to exceed \$30 billion a year in North America. Losses due to Out Of Stock (OOS) shelf merchandise are estimated to negatively impact at least 4% of annual gross store sales. These are big loss numbers, but think about the impact of loss in brand loyalty to the supplier and the negative image for the retailer, the amount of time spent by customers looking for a brand only to find it to be out of stock or the loss of productivity when an employee is trying to find stock in the back room.

Primary Drivers

- Reduce loss and improve visibility to ORC while it's happening.
- Know what items have been stolen.
- Improve in-stock availability.
- Improve inventory accuracy.
- Reduce labor cost per store by automating the inventory process.
- Use existing infrastructure.
- Forensic ability to analyze real item level movement off the shelf.
- Cost effective.

How can NeWave help?

NeWave's unique RFID Wave™ antenna provides superior data accuracy over traditional patch antennas that radiate a beam in a single direction. The Wave antenna is specifically designed to illuminate a volume of space, like a wide-angle photo lens. Reading RFID tags on industry standard metal store shelving presents unique challenges. The Wave antenna addresses these challenges in ways no other solution can provide.

What is the Current Approach to ORC & OOS?

- Modify store shelves with doors, catches, switches, plastic stops, lock ups and separators.
- Modify products' tags, keepers, printing and location.
- Install public CCTV viewing monitors and PA announcements.
- Install elaborate manned central CCTV monitoring.
- Electronic Article Surveillance (EAS) tagging systems.
- Coordinate with local police and FBI.
- Networked organized retail crime databases.

- Employee training and response.

This adds up to today's number one problem facing retailers and consumer goods manufacturers *"How do we know we have what customers want, when they want it?"* NeWave has the answer.

The NeWave Solution

The NeWave "Smart Shelf" solution provides information on shelf item movement in seconds. Much like a motion detector for shelf merchandise. The "Smart Shelf" is an active deterrent against organized retail crime and out of stock shelf conditions. Using NeWave's core Patented antenna technology, the issues related to metal shelving have been overcome. NeWave mounts the RFID tags on the shelf not the items, which simplifies implementations and saves time and money. "Smart Shelf" provides item level movement history and reports. You will know what products are in stock, when they were put on the shelf and when they were removed from the shelf, instantly or historically. NeWave Sensor Solutions addresses the Retail ORC and OOS issues by:

- Utilizing its Patented RFID zone coverage antenna. NeWave eliminates RFID tag orientation issues due to the antenna's built-in polarization and beam diversity to overcome fading and polarization mismatches.
- Placing tags on the shelf or shelf dispenser rather than the items provides a very cost-effective solution by eliminating the need to tag each item and the recurring labor costs.
- Maximizing time and labor savings by utilizing a "passive" tag that is disposable.

Smart Shelf Solution Benefits

- Financial benefits of increased visibility to organized retail crime.
- Financial benefits of increased visibility and reduction of shoplifting losses.
- Financial benefits of increased visibility to lost sales due to out of stocks.
- Financial benefits of increasing in-stock positions for brand protection.
- Forensic ability to analyze real item level movement off the shelf not just POS sales.
- Ability to engage manufacturers in the process by providing them a level of visibility that they never had before.
- Operational benefits of no recurring label or labor costs to tag items.
- Cost benefits of all at pennies per item.
- Operational benefits with no worry about privacy issues.