



## CUSTOMER CASE STUDY

# RFID Solution Reduces Material Transactions and Inventory Possession Days by 33 Percent

## Fiber Optic Cable Manufacturer Automates and Improves Inventory Accuracy

### About Sumitomo Electric Lightwave

If you're in the high-speed networking business, chances are you've heard of Sumitomo Electric Lightwave, Inc. Located in Research Triangle Park, N.C., Sumitomo Electric Lightwave manufactures and supplies a wide range of fiber optic solutions to businesses and residential LAN/WAN providers. The business is well known for its innovative fiber optic and ABF cabling designs.

### Challenge

Sumitomo Electric Lightwave knows exactly what it takes to accelerate Internet connections to the speed of light. Always on the cutting edge, the company is always looking for ways to streamline and automate its internal processes wherever possible.

When management noticed that their warehouse supervisor had to manually record all material movement transactions each day, they sought a way to simplify the process. Even though the company staffed the warehouse eight hours a day, material moved 24 hours a day. The result was that the warehouse manager had to catch up with a backlog of movement transactions—time better spent looking for ways to help achieve overall business objectives.

Management also discovered that when manual data entry missed material movements to shop floor locations, the in-house enterprise resource planning (ERP) system reported a shortfall of materials within the manufacturing facility. These deficits then required an investigation and subsequent move transactions to correct them—consuming even more time and human resources. In fact, the size of the manufacturing facility and the number of possible locations for material often cost the company one to two hours of valuable time to investigate each instance of negative quantity.

What's more, sale forecasts showed a significant uptick in sales, and with a host of new products coming on line, the company needed to keep a close watch on the flow of raw materials. Manufacturing already required 120 unique raw materials, and this was about to expand by 40 percent to 150 with the new product rollout. Each raw material in the supply chain required tracking a specific volume of stock at different inventory locations, and each with unique movements and usage to track. If the company ran out of even one raw material, a serious negative impact on the schedule and the bottom line would result.

Sumitomo Electric Lightwave needed a solution—fast. The company recognized that with limited resources and fluctuating business conditions, it needed to ramp up the new product line and meet sales forecasts more efficiently than in prior years, and with the same number of personnel. In addition, long-term sales forecasts suggested a steady growth in business. Whatever solution they selected required enough reliability, flexibility, and scalability to move more material through the warehouse, each year, while meeting the strictest of budgets.

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### Customer

Sumitomo Electric Lightwave, Inc.

### Industry

Fiber optic cable manufacturing solutions

### Challenge

Reduce inventory possession while automating and improving accuracy

### Partner

Alien

### Solutions

- Alien® ALR-9900 Gen 2 Enterprise reader
- Zebra® R110™ RFID printer and Zebra non-RFID bar code printer

### Results

- Automates material and inventory movement transactions
- 33 percent decrease in inventory possession days
- Dramatic improvement in raw material inventory accuracy
- Flexible system that scales as raw material and inventory flow increases

**The right asset. In the right place. At the right time.**



## Solution

Management was under tremendous pricing pressure and there was no way to add additional indirect cost, such as adding more warehouse personnel. Raw materials already used bar codes, and a small number of forklift trucks contained bar code readers. However, trucks drivers rarely used the readers to scan the bar codes and perform the correct transactions. Overall, the bar code system remained unused.

Instead, management began to research an automated way to tag and record materials, their flow, and the associated transactions. They looked for a system that could reuse existing networking infrastructure already in the warehouse. Management determined that they could use their existing wireless points in the shop floor to transmit data from the readers installed at different portals to the ERP system.

After careful consideration, Sumitomo concluded that passive radio frequency identification (RFID) tags and RFID reader portals offered the optimal, automated solution. Once deployed, the RFID system could capture raw material movement, and transmit the information to the existing ERP system for precise tracking and tracing.

## Results

To initially test out the concept, Sumitomo began a pilot program using an Alien® ALR-9900 Gen 2 Enterprise reader with Alien labels printed with a Zebra® R110™ RFID printer. The deployment team set up a test portal on stands and labeled as much different raw material possible. They then drove the different raw materials back and forth through the portal and recorded the results on a laptop. After the pilot program ended, management felt confident to move forward.

Once deployed, Sumitomo quickly realized immediate return on its investment. With hundreds of movement transactions now occurring automatically, the RFID system eliminated the need to add more warehouse personnel or add hours to the staff's already tight workload. In fact, RFID completely removed the manual transaction reporting overhead, thus dramatically improving raw material inventory accuracy. For the bottom line, Sumitomo realized a 33 percent decrease in inventory possession days. As management focuses on continuous process improvement, the company expects to improve inventory possession even further. It's a win-win solution for Sumitomo—it wins with a more efficient process—and its customers win with on-time, on-budget product delivery.

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GSA#: GS-35F-0268N  
P1043778 (8/11)



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