

CASE STUDY | GLOBAL SUPPLY CHAIN OPTIMIZATION WITH RFID

A global high-tech manufacturer was faced with the challenge of allocating millions of produced parts to the correct logistics channels. In particular, the location of a warehouse and distribution center in Singapore needed support for its warehouse and production processes. A reliable RFID solution was needed to track critical points in the supply chain.



TRACKING OF HIGH-TECH EQUIPMENT IN PRODUCTION LINE

INDUSTRY Production, Supply Chain

Key benefits

- Increased speed, efficiency and productivity
- Reduced costs
- Improved quality control
- Enhanced customer service

PARTNER BENEFITS

- Development of a specific RFID chamber in cleanroom areas
- Implementation of a comprehensive RFID system for monitoring of the supply chain

KATHREIN PRODUCTS

- Kathrein RAIN RFID antennas WRA 6060
- Kathrein RAIN RFID antennas WRA 7070
- Customised Chambers
- Customized Conveyor Systems
- Customization Software

- Would you like to receive additional information, case studies or white papers in the future? Subscribe to our newsletter [here](#).

High speed tracking

A leading global high-tech equipment company produces and ships out millions of parts and finished goods to its clients across the world. The logistics behind the movement of goods is extremely critical to support its various production lines across the globe. Being a regional warehouse and distribution hub, Singapore also does value-added processes utilizing a large workforce to support its warehouse and manufacturing operations. Speed, reliability and accuracy is vital to ensure a robust supply chain through the deployment of RFID to track and trace every critical path.

Customized RFID solution

The team of Intellistride supported by Kathrein Solutions integrated RFID and back-end systems to provide visibility in the supply chain of parts and finished goods. RFID tags were attached to individual components and finished products, along with readers installed at strategic points throughout the factory. Specially designed RFID chambers are deployed in clean room areas and strategic points to do high-speed and accurate reading of thousands of parts in a few seconds. With the RFID system, an immediate association of each shipment of parts to the required demands throughout the warehouse operation process was achieved.

Effective process optimization

The RFID system has helped the company to achieve the following results:

- Improvement of inventory accuracy by 100 % with the tracking at each stage of the process
- Automated association of bins / materials with parent container
- Doubling the capacity of the warehouse
- Faster and accurate dispatches with 100 % items audited
- Tracking of materials across over manufacturing facilities and locations
- Reduction in delivery of wrong parts
- Faster stock-taking and auditing process – hours to seconds

Advantages of using RFID

The use of the RFID system has brought the following advantages:

- Increased speed, efficiency and productivity
- Reduced costs
- Improved quality control
- Enhanced customer service

Here are some additional benefits of using RFID in high tech equipment manufacturing:

- Improved traceability: RFID can be used to track products throughout the manufacturing process, from raw materials to finished goods. This can help to identify and prevent problems, such as counterfeit products or product recalls.
- Increased security: RFID can be used to protect high-value equipment and materials from theft, damage and misplace.
- Reduced labor costs: RFID can automate many of the manual tasks involved in inventory management and production tracking. This can free up employees to focus on more value-added activities.
- Improved compliance: RFID can help manufacturers to comply with regulations, such as those governing the tracking of hazardous materials.

Next steps

The RFID system provides the foundation to implement more automation the operations. It is also an essential step to automate all the other operations in the same system so that the flow of parts and manufacturing processes are greatly improved. Overall, RFID is a powerful technology that can provide significant benefits for the high tech equipment industry and its ecosystem of service providers.



Illustrations: The materials are read and assigned in RFID chambers, among other things. The integrated software enables accurate monitoring of logistics processes.