# "WHY" MANUFACTURERS ADOPT RFID TECHNOLOGY

Manufacturers are finding properly designed and installed RFID technology an ideal tool to help achieve aggressive material management goals. Manufacturing supply chains are also adopting RFID data collection solutions to more efficiently collect and manage data related to finished goods, goods-in-transit, receipt and inventory warehouse management.

RFID-based data collection systems provide four inherent technical advantages to manufacturing applications over optically based barcode or human input manual spreadsheet systems. RFID uniquely offers:

- Accelerated Data Gathering Speed – RFID technology can scan 100+ tags in a second or two depending on the application, tag and reader combination vs. 1 tag read per second using a barcode technology approach. Further, a UHF RFID reader does not require line-of-sight to gather tag information and therefore RFID tags can be read through several materials such as cardboard boxes, plastics, etc.

- Automated Data Gathering - Properly selected and installed RFID fixed readers and antennas at selected choke points such as personnel/dock doors and corridor intersections will automatically gather reads from passing tagged assets and report movement and various alerts without human intervention.

- Extended Read Ranges – UHF RFID tag read range is measured in feet rather than inches offered by barcode approaches.

- Scalability – Once an RFID tag/reader/software infrastructure is in place to track and locate production assets, other valued assets such as employees, visitors, trucks, etc. can be tagged and tracked often using much of the same previously installed tag/reader/antenna/software infrastructure for inventory management applications. This newly collected information can then be integrated into company legacy systems such as ERP, SAP, ServiceNow, Oracle and WMS. As an added advantage for manufacturers, company forklifts can be upgraded with "bolt-on" integrated RFID readers/antennas and touchscreen PCs to work in real-time with your back-end ERP software generating pick lists and bills of lading. The system will tell the forklift driver where to pick-up and drop-off specific products. Order, shipping and count errors are eliminated. This level of automation and efficiency is not possible with bar code approaches.

What are the potential benefits for manufacturing enterprises employing RFID technology? They include:

- Lower operational costs resulting from automated RFID and minimum 10X faster data gathering than barcode based options.
- Increased inventory accuracy of raw materials, parts, tools and partially finished and finished goods inventory from well-designed and positioned RFID fixed readers.
- Improved personnel utilization resulting from the overall accelerated 10X data collection rate and automated option of RFID-based data collection.
- Quickly located lost or misplaced tagged assets using RFID handheld readers.

- Ability to extend the initial RFID installation to new applications such as emergency evacuation (i.e., mustering), real-time detection of unauthorized personnel or visitor movement at minimal additional expense.

If your manufacturing plant's goals for 2021 include improving inventory visibility and accuracy, optimizing material management processes and generating real-time work-in-process information, give DataSpan a call and we'll help you take a look at scalable RFID options for your manufacturing operations.

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