Delivering Real-Time Visibility For Aerospace And Defense
Zebra Technologies For Aerospace Manufacturing

Aerospace manufacturing operations are characterized by high capital investment, skilled work force, expensive inputs and rigorous process control standards. Multiple management disciplines must be combined to optimize production in this complex environment.

Critical assets such as direct material, indirect material, capital equipment and personnel must be visible throughout the facility for multiple constituencies. While asset owners require visibility, other process owners can make better decisions with a more complete view of assets. Groups that must collaborate to optimize throughput typically include production, material management, and facility management and information technology.

Automatic data capture is key to providing accurate asset visibility while maximizing ‘wrench time.’ Zebra’s thermal printers secure card printers, passive RFID encoders and active Real Time Location Systems provide a suite of capabilities that support multiple business processes within the aerospace and defense industry covering supply chain, distribution & logistics, manufacturing and maintenance and repair operations. Today Zebra solutions are deployed by multiple organizations who are already taking advantage of the increased visibility in their operations and seeing ROI within 9-12 months.
Zebra Applications

Zebra Technologies products and solutions address four key areas of aerospace manufacturing: this include Supply Chain, Logistics and Distribution, Assembly Lines/Manufacturing and Maintenance & Repair.

SUPPLY CHAIN

Managing several suppliers and millions of supplied components require a seamless process to validate the accuracy of advanced shipping notice (ASN) and supplier personnel on your facility. Zebra Technologies offer multiple solutions and products that help address this critical phase of your business.

Inbound Material — Use Zebra’s range of active or passive RFID solutions for inbound shipments to close out transportation in advance of the inprocessing supply action. These solutions ensure prevention of mislaid or frustrated cargo that arrives but does not get checked in and prevent costly errors in your operations.

Outbound Material — Use Zebra’s range of active or passive RFID solutions for outbound shipments to monitor travel time until receipt confirmation. Helps validate records and automates future audits for easy return and reconciliation.

Access Control — Zebra card printers provide an instant ability to provide staff and visitors secure IDs leading to improved site security and a solution to address card counterfeiting and unauthorized alterations. The printer offers high levels of customizable security features such as laminates embedded with overt, covert and forensic features for higher card security and durability. Zebra card printers work with a variety of card-based access credentials, including proximity, magnetic stripe, smart cards and RFID.

LOGISTICS AND DISTRIBUTION

With deliveries going to several different locations within your facility, ensuring an automated trailer management and fast gate process in your yard will ensure trailers are assigned to the right dock doors. This ensures warehouses receive the right supplies in time and expedited shipment orders are prioritized in the appropriate manner. Efficient management of inventory in your warehouse is also a critical factor in the success of your manufacturing process.

Warehouse Management — Zebra provides the expertise, thermal transfer printers, supplies, and label design software needed to easily and economically meet warehouse labeling and compliance requirements.

Yard Management — Zebra’s Yard Management System helps increase your yard, dock and gate operation efficiency through intelligent yard planning, gate management, switcher management and inventory control. Only Zebra can offer you a standalone yard management system (YMS) solution or one integrated with real-time location capabilities to see gain a full view into all aspects of your yard management operations.
ASSEMBLY LINES AND MANUFACTURING

The complex assembly and manufacturing process in the aerospace industry mean physical assemblies take place in multiple locations and across flight lines. To ensure efficiency at each assembly point it is important to have visibility not just to the process but to the tools and consumable materials used in the assembly process. This visibility ensures personnel have access to the right tool on time and materials are flowing through the process at the right consumption rate.

Material Replenishment Management — Zebra ensures a wireless and simple to install electronic Kanban system using its RTLS technology, this solution ensures personnel on assembly lines have instant access to materials. With the push of a button, an alert is sent out to all relevant stakeholders about the required replenishment material, the quantity, priority and the required location enhancing your manufacturing execution systems (MES).

Asset Tracking & Management — Zebra’s broad range of passive and active RFID technologies enables real-time visibility of all assets across the manufacturing facility. Our technology support activities such as tool tracking across assembly facilities eliminating tools hoarding, search times and increasing tool utilization levels.

MAINTENANCE AND REPAIR OPERATIONS

Aircrafts and air transportation equipment require regular checks and maintenance leading to several repeatable tasks and processes. Automated tracking and management for work-in-process equipment and activities ensure an efficient and optimal way to carry out these tasks be it regulatory requirement checks or part repairs.

Work in Process Management — Gaining visibility to WIP activities ensure personnel focus on core activities. Zebra offers products from thermal-transfer labeling solution through passive RFID to active RFID ensuring easy-to-use, lowest-cost UID marking and data accuracy.

ENABLING REAL-TIME VISIBILITY FOR KEY AEROSPACE BUSINESS PROCESS

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Zebra Solutions Components

Zebra technologies has one of the most complete solution offerings in the data capture tagging, tracking and locating space, with industry leading intellectual property around thermal printers, media and supplies, retransfer printers, mobile printers, passive encoding systems, real-time location systems and the software and processes to integrate into production systems. The Zebra partner ecosystem includes SAP, Oracle and IBM, making best in class solutions from industry leaders for mission critical implementations.

The broad product portfolio combined with industry partners enables Zebra to partner with business process experts to understand management information shortfalls as well as opportunities to improve current data capture systems. Zebra’s technical knowledge and best practice experience lead to an integrated solution design, covering multiple asset classes and supporting multiple user groups across the organization. Combined technology and process innovation often results in transformed business processes with measurable return on investment.

Why Zebra?

The unparalleled depth and breadth of our product and solution portfolio combined with the industry’s most extensive, multi-layered partner program enables Zebra to meet our customers’ needs today and aspirations of tomorrow. Our products and solutions deliver rapid returns on investments.

Zebra exceeds customers’ expectations through exceptional design, finished products, technical support, and customer service. Customer satisfaction research consistently shows that the vast majority of our distributors, partners, and end users would recommend Zebra.

Our more than 7500 engaged and energetic professionals share a common passion for ensuring partners and customers achieve smarter business results. They make it a pleasure to do business with Zebra.

Besides the business process fit and broad technology portfolio, Zebra also appeals to several executive Wand management staff for:

CEO: Zebra is a best in class, global, mature business. Zebra is a business to business supplier for mission critical applications from small businesses to the Fortune 50. CFO: Zebra is publically traded, financially stable, with consistent sales based on well validated ROI to our customers.

CIO: Zebra products are easy to manage and have a low cost of ownership. The broad product portfolio provides a single vendor solution across multiple automatic identification technologies.