

# Application

## Fujitsu RFID and Sensor Solution for the Aerospace Industry

Fujitsu's advanced RFID solutions enable real-time parts traceability to optimize aerospace company operations

Aerospace manufacturers and suppliers face daunting inventory and asset management challenges. Suppliers must manage the flow of expensive parts from their facilities to multiple customers, often to meet just-in-time production schedules. Aircraft manufacturers need to accurately track the movement of those parts throughout the production process. And customers need to know when products will be delivered in order to accurately manage their inventories and create replenishment orders.

Manually tracking these components is time consuming and inaccurate. Bar code scanning can provide some relief, but is impractical for many applications. Aerospace parts often pass through harsh production processes that expose the parts to high temperatures,

chemicals, and paint that can damage or destroy a bar code label.

Radio frequency identification (RFID) provides a robust track-and-trace solution for the aerospace industry that ensures real-time visibility.

### Automate inventory processes

### Improve parts visibility

### Eliminate manual processes

Fujitsu provides a complete Automated Identification Technology (AIT) solution that includes flexible software and application development tools, as well as rugged RFID tags that can survive the harsh production



RFID tags can tie production data directly to a part and operating environments onboard an aircraft.

### Real Time Traceability

Parts traceability is critical for the aviation industry. Major manufacturers like Boeing and Airbus, as well as the U.S. Department of Defense and other customers, have stringent tracking requirements. Parts must be identified using serial numbers and other data to facilitate tracking.

RFID tags provide a way to encode data directly onto a part so that it can be captured and recorded with no manual intervention. Fujitsu's RFID Tracking Pro platform and rugged RFID tags provide accurate, up-to-date part-level data that can be shared with trading partners and customers, and used to optimize production operations for manufacturers and suppliers.

Using RFID, companies can automate work-in-process tracking, inventory management, shipment verification, receiving, inspections, and maintenance management. RFID also provides a durable solution for part authentication and verification.



Fujitsu offers a full line of durable RFID tags built to withstand the rigorous aviation environment.

As tagged parts pass by RFID readers in a facility, manufacturers can track what inventory has arrived at their production facility and update in real-time the amount of parts on hand. There is no need for line of sight to accurately scan and record a part's location. Suppliers receive automatic receipt confirmation as soon as the shipment reaches the dock door.

Because the data on the tags is rewritable, manufacturers can tie production data directly to the part that can be read later by customers and other third parties. This can accelerate and allow for more targeted recalls, as well as provide other data that can help pinpoint the cause of a component failure.

#### **End-to-End RFID Benefits**

RFID provides value up and down the aviation supply chain – not just for aircraft OEMs. Tags placed on these parts by manufacturers can be leveraged by airlines for tracking maintenance and usage data, for example.

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### Easy integration with existing systems

### Pre-built applications for fast deployments

### Rugged tags designed for aerospace environments

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For parts suppliers, RFID can be used to help improve shipping and receiving processes, verify bill of materials information, and record lot/batch information and testing data. Suppliers can also manage their own internal inventory, asset management, and shipping operations using RFID.

#### **Rugged, Scalable RFID Solutions**

Fujitsu provides a one-stop shop for your aerospace AIT needs, including rugged RFID



Fujitsu provides a one-stop shop for aerospace Automatic Identification Technology needs.

tags, RFID readers from leading providers, application software, middleware and deployment services.

With Fujitsu RFID Tracking Pro, you can quickly create RFID applications that can be easily integrated with legacy enterprise systems. It includes a middleware component with the native ability to accept RFID, bar code, text and sensor input.

RFID Tracking Pro works with all GS1 EPCglobal Gen 2 readers that support the Low Level Reader Protocol (LLRP), and has extensive, user-configurable tag reading and filtering capabilities. That allows you to control what information is passed from tags to readers and software applications. The platform also supports multiple aerospace data structures, including ATA Spec2000, UID, and others.

RFID Tracking Pro also includes a pre-built client/server part tracking application that can automatically track and populate a back-end database for work-in-process, tracking, inventory control, equipment inspections, and other aerospace applications.

Fujitsu also offers a full line of durable RFID tags built to withstand the rigorous aviation environment. Our 64KByte RFID Tag is the highest-capacity tag on the market, and provides industry-leading performance on metal surfaces. The Fujitsu 8KByte RFID Tag is a high memory tag that can perform on metal. Both of these tags also meet the Aerospace Standard SAE AS5678 specification requirements.

Real-time parts traceability is a must for aerospace suppliers and manufacturers that want to remain competitive. Fujitsu's RFID platform provides the building blocks that can help you achieve cradle-to-grave visibility and improve supply chain and manufacturing performance.

For more information about how Fujitsu's RFID solutions can improve your manufacturing and supply chain operations, contact us today.

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#### **Contact**

##### **Japan Office**

Fujitsu Limited  
AIT-Smart Network Division  
Phone: +81 3 6252 2612

##### **North America Office**

Fujitsu America Inc.  
New Solution Business Unit  
Phone: +1 425 451 3100

##### **Europe Office**

Fujitsu Technology Solutions  
Phone: +49 89 62060 4409

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E-mail: [ait-fujitsu@ml.css.fujitsu.com](mailto:ait-fujitsu@ml.css.fujitsu.com)

Website: [www.fujitsu.com/global/solutions/business-technology/intelligent-society/ait](http://www.fujitsu.com/global/solutions/business-technology/intelligent-society/ait)

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