



AN AEROSPACE & DEFENSE GUIDE

HOW TO ACHIEVE END-TO-END TRACEABILITY

WITH PAPERLESS INVENTORY AND MOBILE BARCODING

RFgen

WHY YOU NEED TRACEABILITY

A fighter jet suffers a critical system failure during flight. A guidance system in a defense battery fails to intercept incoming missiles. A naval ship at sea loses navigation abilities. These nightmarish scenarios usually are the result of faulty components, counterfeit parts, and materials of substandard quality. Prevention demands that all materials in aerospace and defense supply chains be traceable with stringent quality control processes. The ability to fully trace parts and components from raw materials into mission-critical military assets is vital for both security and compliance.

While your ERP can trace parts from their origin, tracking materials through the production lifecycle remains a challenge. Manual data entry and paper processes further complicate inventory handling. Aerospace and defense companies that fail to modernize inventory management practices risk losing thousands or millions of dollars each year due to inefficiency—or going out of business entirely due to noncompliance.

HOW MANUAL TRACKING ADDS TO CHALLENGES

Government contractors in the aerospace and defense industries must be able to track and trace all parts and materials to their original manufacturers in order to comply with government regulations. Manual tracking—such as with paper tickets or data entry—makes accurate tracking slow, cumbersome, and inaccurate. Fast, efficient traceability is nearly impossible.

But failing to satisfy regulations like DFARS, NDAA, ITAR, and others can result in penalties, contract cancellation, or removal from considerations for renewal.

Meanwhile, inefficient inventory handling costs the business in productivity and lost materials. Tracking data at a granular level for serialized and lot-controlled items, or consumables with expiration dates, like epoxy or composites, becomes a major hurdle.



DoD Contractors Face Inventory Challenges

One of the toughest challenges DoD contractors face is handling large volumes of inventory data that must be recorded in their ERP system. Many contractors do not have the adequate resources to handle such volumes. This includes not only maintaining accurate and compliant record-keeping but operability at scale, which may be a prerequisite to winning larger contracts.

Another challenge is low visibility into their inventories due to lack of real-time digital processes. Accurately managing raw materials, components, and government-furnished parts and equipment becomes a significant burden—easily 3,000 additional work hours per year due to inefficiency alone.

When contractors fail to gain sufficient visibility or granularity of inventory data, they risk falling out of compliance with government regulations. Tracking materials by lot and serial numbers makes responding to an audit or recall and locating defects prohibitively difficult and costly. Future viability as a business is at stake.

Faulty or Counterfeit Parts

Counterfeit parts, or even materials of sub-standard quality, can arise from the use of electronic waste or from intellectual property theft, both of which are pervasive problems on the global scale. The number of counterfeit parts in supply chains has been increasing at an alarming rate in recent years. Many companies don't even realize when counterfeit parts are being used since the problem may come from suppliers.

The DoD recommends purchasing parts, materials, and components from authorized partners, such as the original manufacturer. Although this is the safest way to ensure genuine and quality parts, DoD contractors must do their part to keep substandard items from reaching their warehouses. If counterfeit parts get into a finished product, contractors risk losing their contract and subsequently going out of business. End-to-end traceability solutions are necessary to prevent counterfeit parts from infiltrating their supply chains and to maintain compliance with DFARS and NDAA.

HOW TO CREATE FORWARD-TO-BACKWARD TRACEABILITY

Aerospace and defense companies of all types are embracing technologies like mobile barcoding to solve inventory and traceability challenges. Mobile barcoding replaces paper and manual processes with high-speed digital automation. These solutions equip your operation with real-time control and visibility in the palm of your hand, seamlessly integrate with your ERP, reduce costs, and automate track-and-trace.

Automating Traceability with Mobile Barcoding

Although the DoD does not mandate a specific traceability technology, a robust traceability solution is crucial. When it comes to mission-critical electronic parts that impact human safety, the DoD has a zero-tolerance policy. Mobile barcoding not only extends your ERP's visibility into inventory management but also automates traceability, whether you work online or offline.

Corresponding traceability information will follow each part through every stage of production, even as it gets integrated into part assemblies, larger components, and finished products delivered to customers. This allows you to easily track all parts, materials, and


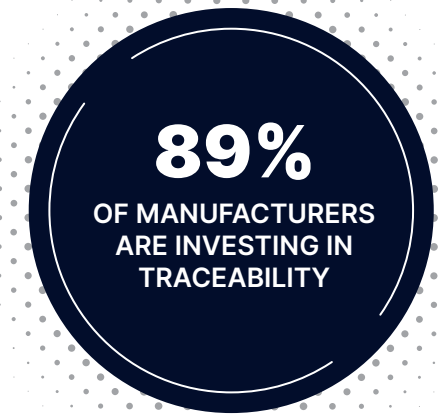
components, from stock levels to consumption, and even back to the original manufacturer.

Defective components or counterfeit parts can be easily flagged and blacklisted instead of entering your warehouse or shop floor. Recalled parts can be quickly located and isolated by lot, serial, or part number. Attempting this with either paper or manual data entry would be tedious, time-consuming, and inaccurate. Mobile barcoding's high level of accuracy and data granularity reduces the time to trace materials by days or even weeks.

Achieving 100% Billing Accuracy

You probably rely on your ERP for project-based accounting and tracking to fulfill contractual requirements for payment. Mobile barcoding can simplify and enhance these ERP processes for inventory handling, including:

- ▷ End-to-end traceability and counterfeit detection
- ▷ Accurate data collection at remote or offline sites
- ▷ Faster GFE/GFM report compilation
- ▷ Asset and consumable tracking for MRO
- ▷ Asset status and proof of inspection
- ▷ Proof of delivery with signature confirmation



BENEFITS OF MOBILE BARCODING FOR AEROSPACE & DEFENSE:

- ▷ 99.9% Accuracy or Higher
- ▷ 30%+ Efficiency & Productivity
- ▷ 75%+ Faster Quality Control
- ▷ 80%+ Faster Training
- ▷ Enhanced Compliance



DEFEND YOUR BRAND.

When human lives and national security are at stake, there is no room for defective materials or counterfeit parts. You need a partner you can trust to help you eliminate substandard practices and comply with government requirements for track-and-trace—at rapid speed and pinpoint accuracy. RFgen offers deep industry experience and a decades-long history of digitizing inventory control and automating traceability for aerospace and defense companies. Armed with RFgen, it's time to go on the offensive and transform your business with mobile barcoding.

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