

RFID Aerospace Assets Management



looking towards the future





Aircraft Assets Management

Save time, Save money

Technoval
Sales office
Hong-Kong, CHINA

MAINtag Americas

Sales & Support office
Atlanta, GA, USA

MAINtag S.A.S

Head Quarter
Paris, FRANCE

ID Integration
Seattle, WA, USA

EMEA

55%

Asia

10%

Americas

35%

Genser Ltd

Bangalore, INDIA

Deistvie" Ltd

Moscow, RUSSIA

Ramp

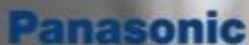
Sydney, AUSTRALIA



SPEC2000



They trust us...





Why?

Why RFID in aerospace market

- AIRLINES Strategy is to reduce operation cost :
RFID for Cabin Inventories
- AIRBUS and BOEING' STRATEGY by 2020 IS LEASING AIRCRAFTS FULL SERVICE INCLUDED.
RFID for Maintenance data management

How

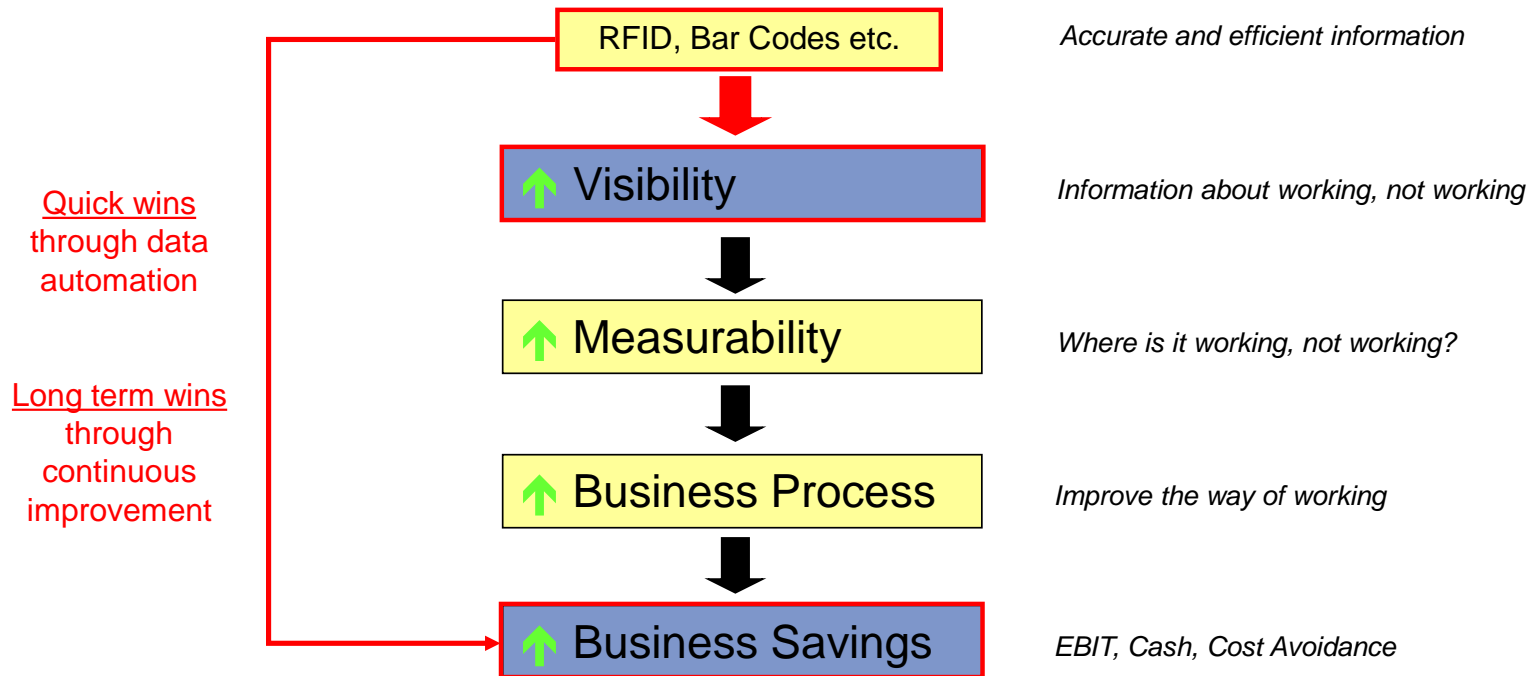
Using RFID technology to create a maintenance book on the part itself.
Increase maintenance visibility to growth business for all players.
Manage Cabin inventory within a minute.

Collaborative approach

- A/C, Maintenance station / companies
- Airlines
- Suppliers and parts manufacturers

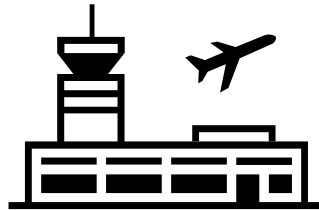
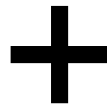


Why increase Visibility, Why RFID

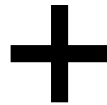


Improving visibility is a pre-requisite to improve the “way of working” and deliver business savings

Business RADAR CONCEPT

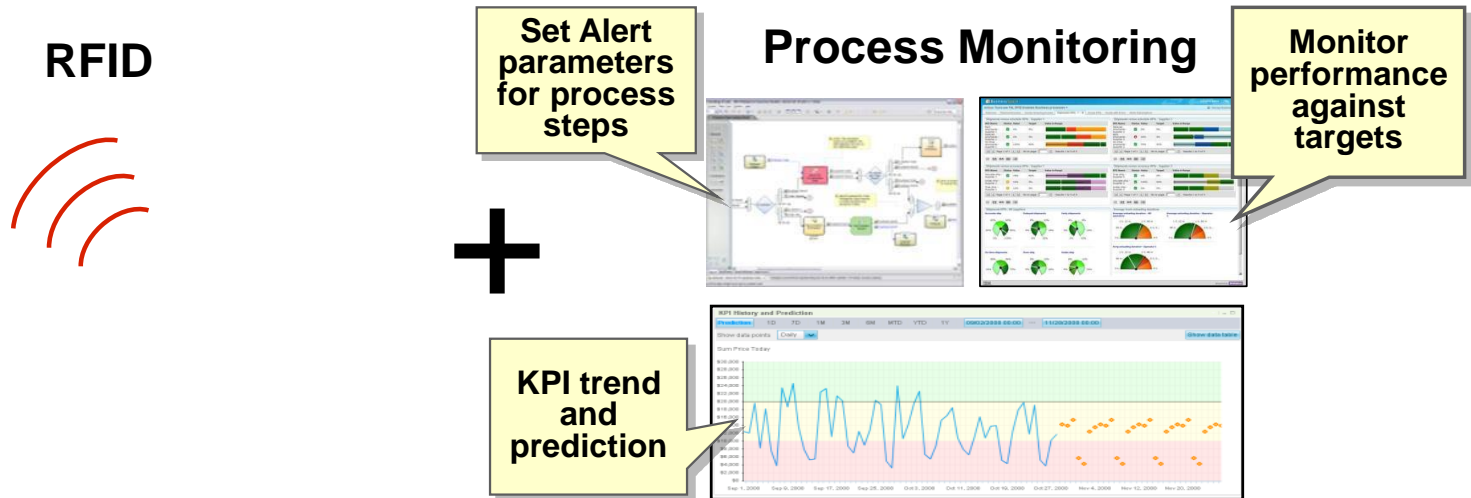


Accurate
Streamlined
Efficient operations



Accurate
Streamlined
Efficient operations

Business RADAR CONCEPT – RFID + Process monitoring



Automation

- Productivity
- Quality
- Cycle time

Real time reporting

- Process Optimisation
- Identify Variations
- Automated Alerts

RESULT = Leaner and more competitive business processes

A WINNING PARTNERSHIP

This is an English translation of the article "Partenariat gagnant" that appeared on February 22nd issue of *Pacte PME*.

With its dream of optimizing aircraft equipment maintenance and safety using RFID, MAINTag was a decade ahead of its time. Airbus selected the company's solution in 2010 for the A350 XWB program, helping set this SME (small and medium-sized enterprise) based in the Paris region on a course toward world leadership.

Going against the current

A is for Airbus, B for bravery, C for constancy, D for Dassault, E for effort... It could take an entire alphabet to tell the story of MAINTag's success. Indeed, it took a good deal of bravery for Bruno Lo-Ré to suggest in 2002 that RFID chips could be used for maintenance logs that are kept aboard aircraft, on the components of parts that require maintenance. In the words of the chairman and CEO of MAINTag: "At the time, RFID was primarily used to replace barcodes on fast-moving consumer goods. This meant that tags had to be as simple and inexpensive as possible, and they had extremely short useful lives. My idea of developing sophisticated tags with significant memory capacity and capable of withstanding extreme environments over very long periods went completely against current dogma."

Setting the sky as the limit

MAINTag – the name signifies maintenance with tags, naturally – was created in 2004, notably as the result of a project involving Dassault. The project got off the ground in 2003, via a first company created by Bruno Lo-Ré, and had a budget for prospective studies on RFID use aboard aircraft: "The company's strategy always targeted the aeronautics industry and becoming the global leader in it, with all of the tags and solutions that implies, including readers, software and technology management. To reach this goal, we had to lay the groundwork for success in terms of environment and contacts." Considerable thought was given to the target sector. "Unlike the rail and nuclear industries, which require complex systems and in which MAINTag operates today, the aeronautics industry is very concentrated with a high degree of interoperability. All decisions are made at a global level. Thanks to the big two aircraft makers, Airbus and Boeing, and the hundred or so tier-one parts suppliers, standardization is automatic. We were specifically targeting the onboard market, where high entry barriers and very demanding qualifications create the ideal conditions for becoming a world champion," said Lo-Ré.



Philippe Nicolas

VP Procurement
Avionics and Customer
Services
Airbus



"Airbus was the first aircraft maker to deploy radiofrequency identification (RFID) tags for its A350 XWB program. The goal is to keep a comprehensive maintenance history of so-called flyable aircraft parts, most of which are in an unprotected environment. To this end, in 2010, Airbus selected a French SME based in the Paris region, MAINTag. By forging the right partnerships, MAINTag put itself in a position to offer the product selected in our call for tenders, beating out competitors that ranged from other SMEs to multinational firms.

A phase of industrialization followed to assure that MAINTag could meet all technical requirements, both in terms of quality and industrial maturity, and keep up with the A350 XWB ramp-up. The action plan spanned two years with Airbus field engineers working at MAINTag. As it moved forward, MAINTag acquired new skills and resources, including funding in the form of assistance in structuring its financing round. It also moved into new offices.

At the same time, the company continued to develop commercially. Working with the Air Transport Association (ATA) on RFID standardization, MAINTag has earned the trust of a large number of OEMs working on the systems and cabin components of the A350 XWB program.

Albert Verrens, Airbus's SME correspondent, emphasizes how much Airbus and MAINTag's strategy for working together is in the spirit of best practices when it comes to procurement between partners: "The cooperation between Airbus and MAINTag has facilitated value creation for both parties. RFID technology will help us substantially simplify and improve the tracking of chip-equipped parts, at an affordable cost."



AIRBUS

AN EADS COMPANY



The partner of the aerospace industry





AIRBUS A350 XWB Avionics bay with FLYtag RFID



The partner of the aerospace industry

- They trust us

63 Customers (Tier one - A/C – Airlines...)
Multi Programs, Boeing/Airbus/Bell/...
625 000 ATA Tags on board aircrafts
0 Product default



- RFID ATA Ic chips,

950 000 FLYchip® onboard dispatched.

- Certified

AS / EN 9100
IPCA AIRBUS – HONEYWELL – PARKER – SAFT –
FAI Performed

- Market Focus

AEROSPACE – FULL SOLUTION

COMPLETE SOLUTION STACK

ATA High-Memory Chip
 FLYchip⁶⁴

On-Board certified parts marking
 FLYtag[®]

Cabine Checking & Inventory
 FLYcheck[®]

Enterprise RFID solutions
 FLYplug[®]

FLYchip⁶⁴

ATA High-Memory Chip

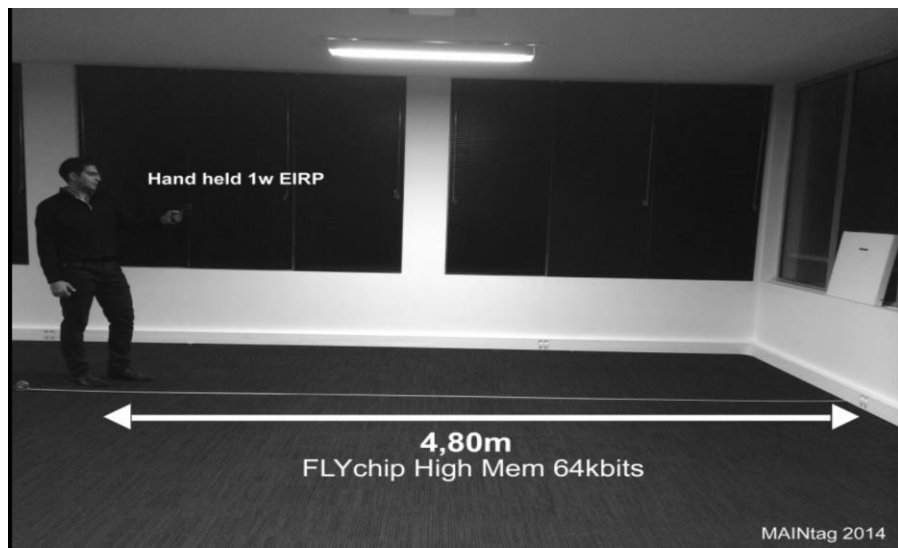
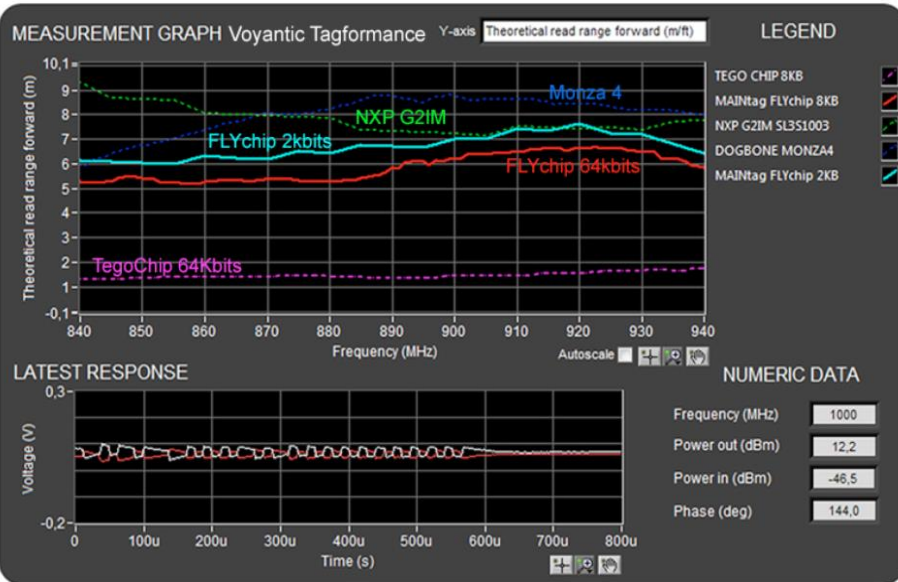
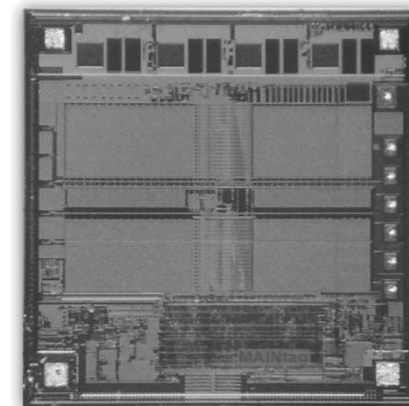


FLYchip⁶⁴

FLYchip64, the Highest-Performing RFID Memory Chip Meeting ATA Spec 2000 Standards.

MAINtag's innovative UHF high memory design provides a new degree of sensitivity when it comes to accurate aircraft parts marking and inventory maintenance for the aerospace industry.

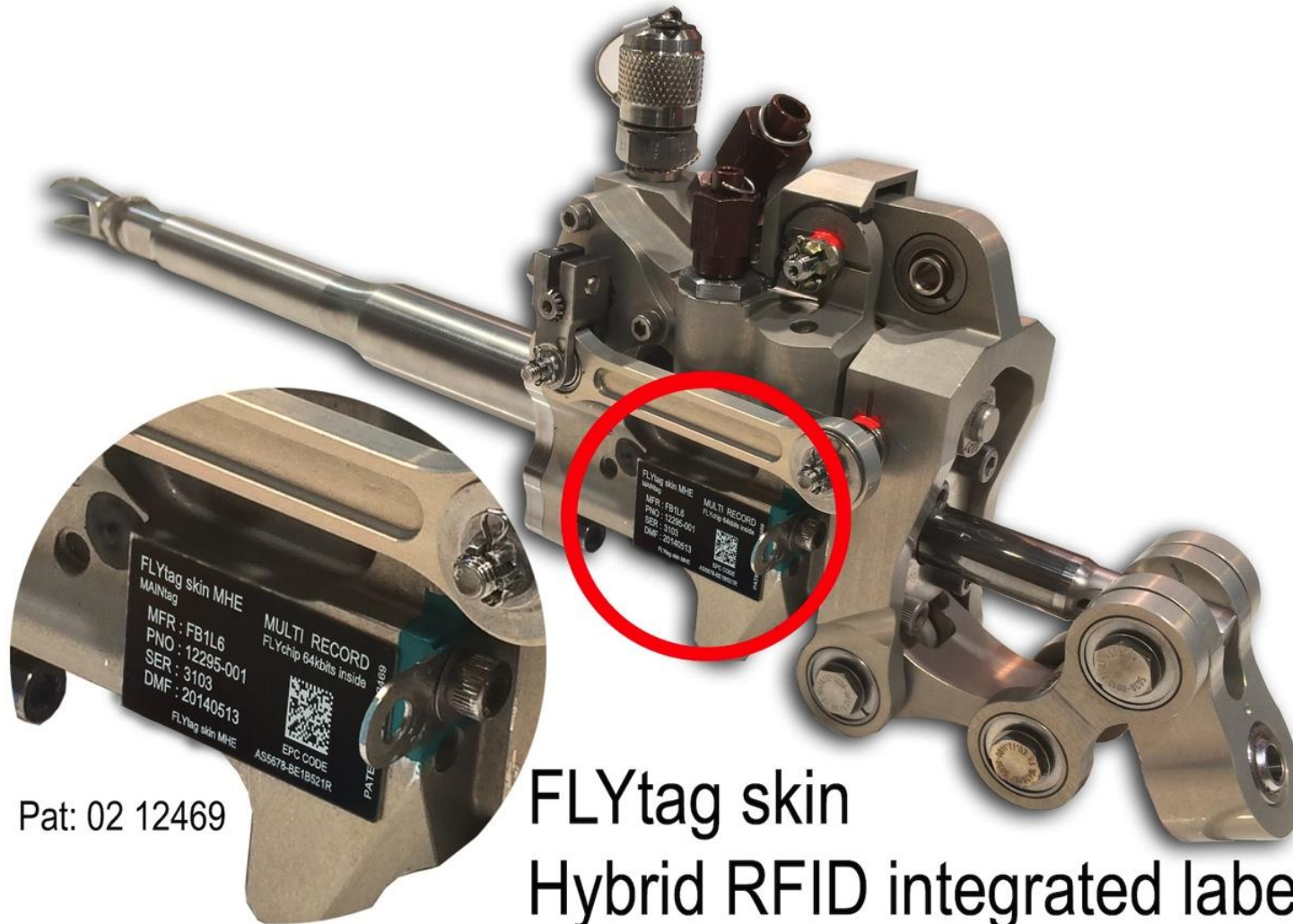
Taking asset management to the next level of efficiency and safety, FLYchip64, MAINtag's new UHF high-memory chip is fully compliant with ATA Spec 2000 and ISO18000-6C specifications. Retrofitting to create "smart" flyable parts is part of MAINtag's vision.





On-Board RFID Certified Tags





Pat: 02 12469

FLYtag skin Hybrid RFID integrated label





FLYtag[®] manager

Aircraft parts marking & Maintenance

In new aircraft program, more than **3000 parts**, creating the Value Chain Visibility (VCV) to manage and develop the technology in the life cycle of an aircraft.

A manual process that used to take 14 hours, thanks to a more automated process enabled by RFID, takes now 26 minutes killing waist.

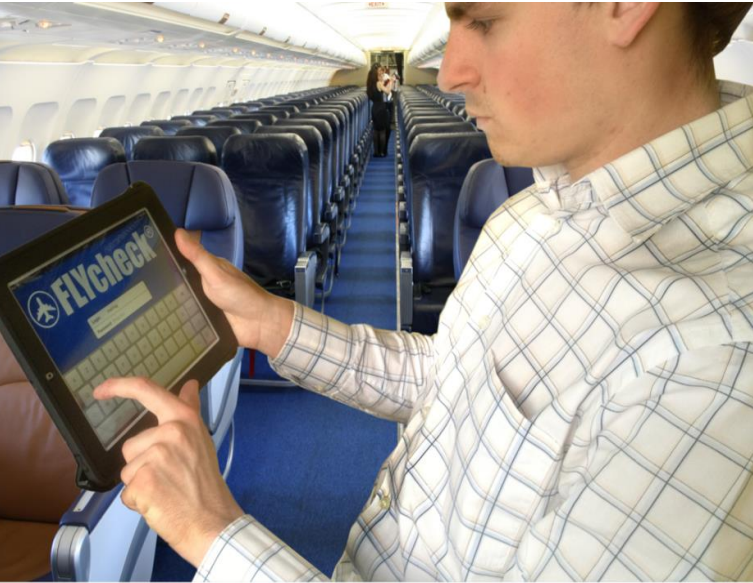


ID & Electronic maintenance book
and a name plate all in one

FLYcheck®

Cabine Assets Inventory





FLYcheck[®] Assets Cabin Inventory

Time spent in aircraft inspection is tremendous. RFID integrated solutions enables airlines technicians to get this information very simply, just walking in a cabin with a reader, getting the complete information about rotatable parts reducing inventory and maintenance lead time by more than 90%.

FLYcheck is a complete solution that allows the tracking and management for missing or expired life limited components (like life vest, oxygen generator, medical kits...) on board.

Based on RFID technology, FLYcheck scan and check cabin interiors assets within 3 minutes. In a very simple way, items can be replaced or removed, improving maintenance efficiency and performance.





FLYCheck® includes a web service available on secured servers. The web based GUI module provides access to the last theoretical aircraft configuration known as well as historic by aircraft / fleet. The GUI generates detailed analysis via the Dynamic Query Engine (DQE) that organizes and display relevant data from the database.



FLYcheck®

FLYcheck® uses the most popular smart tablet together with a high-performing RFID reader and the toughest protective case.

- iPad – Popular, user-friendly, intuitive and the uniqueness of a large, bright and HR multi-touchscreen.
- WAVEbox cube – iPad dedicated RFID UHF 2W tough reader that communicates w/ iPad via BT.
- iPad defender – The toughest iPad protective case to ensure long lastingness of your tablet.
- System – This assembly provides a unique and affordable system; an innovative alternative to existing systems.
- User-attractive – Tests have proven easy and quick adoption on top of efficient results from beginning.
- Rapid – At normal walking speed and from on of the aisle only, detect all RFID tag in 2mn or less.





Enterprise RFID Printing Solution



SAP® Certified
Integration with SAP Applications

ORACLE
Validated Integration
Oracle E-Business
Suite





Enterprise RFID printing Solution

FLYplug is a **global integrated printing/encoding enterprise package** solution based on an ATA Spec 2000 specific distribution package of one of the most popular open AIDC (Automatic Identification and Data Collection) software worldwide. FLYplug package is a the perfect solution for **fast and cost efficient** printing/marking & encoding RIFD integrated label stand-alone as well as network implementation including:

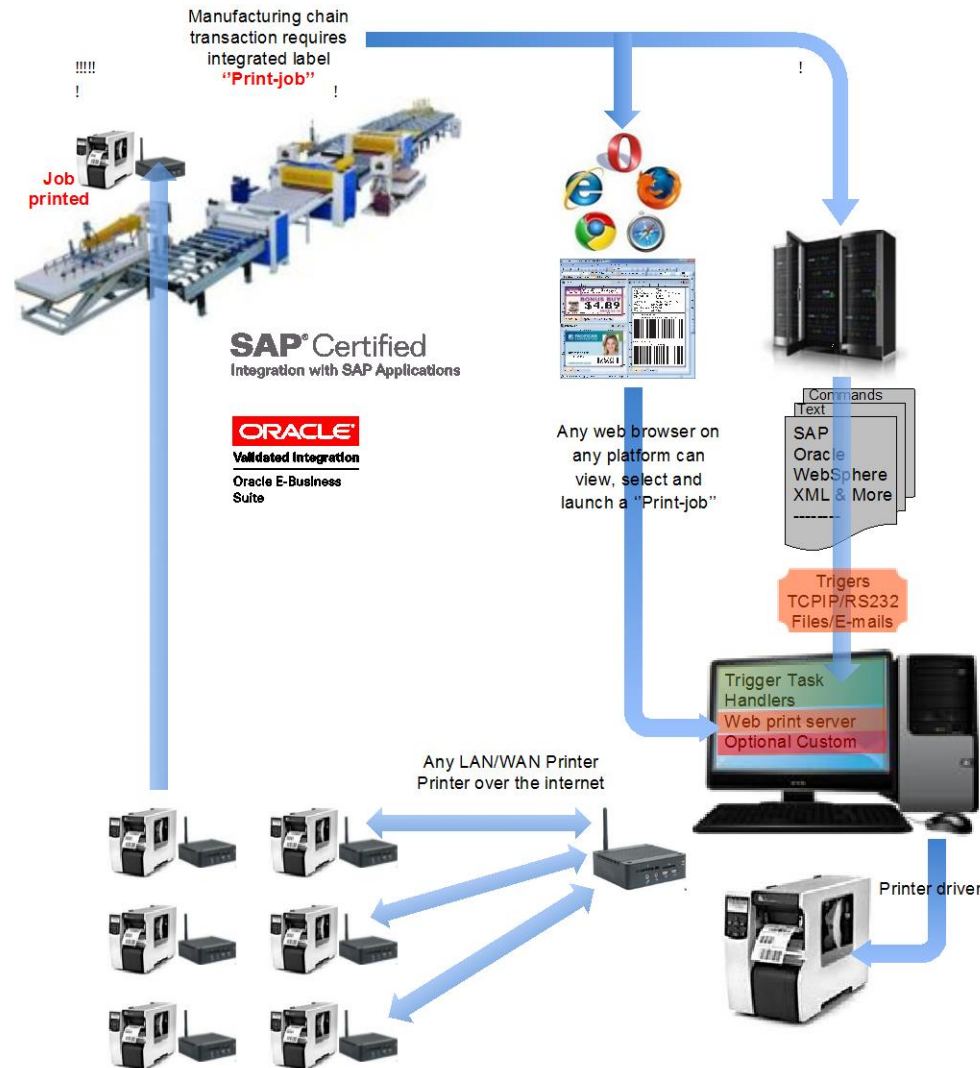
- Integration service package
- FLYplug's Enterprise Software ATA Spec 2000 distribution package license
- Commissioning & Training

FLYplug drives innovation by standardizing software and liberating resources. In fact, the first Auto ID solutions in the Industry were built on open technology. And these same open technologies are defining the future of Aircraft Auo-ID.



RFID ATA Spec 2000 FLYable parts marking program

Enterprise RFID Printing Solution



Thank you for flying with us!



SOFTWARE



TAG



SERVICE



READER



CHIP

