

The aircraft maker plans to use the EPC Gen 2 RFID tags—which will have as much as 8 kilobytes of memory—to track thousands of repairable parts for its new A350 XWB planes.

By Rhea Wessel

Jan. 19, 2010—[Airbus](#) has signed a seven-year contract with a supplier of high-memory, passive EPC Gen 2 RFID tags. This deal comes as part of the aircraft manufacturer's plan to use radio frequency identification to track thousands of pressurized and non-pressurized parts and components on Airbus' new A350 extra-wide body (XWB) fleet, expected to enter service beginning in 2013.

The 8-kilobyte tags that Airbus will purchase will be used to track flyable aircraft parts and components, as well as store data, such as information regarding a part's initial construction and maintenance. In total, Airbus plans to tag approximately 3,000 parts per plane. Roughly half of these—or 1,500 parts—will require high-memory tags on which such data can be stored.



The FLYtag, available in two different sizes, will initially have 4 kilobytes of memory.

The high-memory tags, to be placed primarily on repairable parts, will enable Airbus, aircraft owners and aircraft repair companies to improve their processes, such as maintenance and warehouse logistics.

In mid-2009, Airbus provided RFID requirements to its suppliers of repairable parts, but it was unclear which company the manufacturer would select as its primary tag supplier (see [Airbus Issues RFID Requirements, Expands RFID Usage](#)). Last Tuesday, [MAINtag](#), a French provider of RFID solutions, and [Tego](#), a Massachusetts-based chipmaker, announced that they were chosen to supply the tags.

"The Airbus story is only the beginning for high-memory, passive RFID tags," says Holger Kisker, a senior analyst at [Forrester Research](#), in Germany. "Smart solutions with intelligent tags will find their

way quickly into many industries in asset management and other business areas."

MAINtag and Tego teamed up in summer 2009 to bid for the chance to provide Airbus and its suppliers with high-memory RFID tags for flyable parts. MAINtag is designing and manufacturing the tag, while Tego is providing the tag's high-memory RFID chip. The two partners also have a marketing agreement, under which Tego helps MAINtag bid on business in the United States, and MAINtag, in return, assists Tego in bidding on business in France.

Airbus is buying tags from MAINtag and recommending to suppliers that they do the same. The company plans to use the tags it purchases on parts it manufactures internally for its A350 XWB planes. For the majority of the equipment provided by external suppliers, Airbus recommends MAINtag so that all parts will have the same standards of technology, and so that suppliers can benefit from standard commercial conditions.

"Suppliers have full freedom when it comes to choosing their suppliers," says Martin Fendt, an Airbus spokesman. "This is just a recommendation to ease RFID adoption on parts throughout our supply base. It is an option that could simplify procurement/qualification processes for our suppliers."



*Carlo Nizam, Airbus' head
of value chain visibility*

Airbus and its suppliers will first receive 4-kilobyte tags, and will be offered an increased memory size of 8 kilobytes by the end of 2010, according to Carlo Nizam, Airbus' head of value chain visibility, and Tim Butler, Tego's CEO. The manufacturer will receive a final version of the 4-kilobyte tag at the end of March, Nizam notes, and will perform tests on the tag before it is made available to suppliers in June.

By the end of this year, Nizam and Butler report, suppliers will be able to upgrade their 4-kilobyte tags to 8 kilobytes at no cost, through software changes.

MAINtag and Tego will sell the tags for roughly \$15 apiece, depending on volumes. According to Tego, Airbus has approximately 500 orders for its A350 planes. The two partners will work directly with Airbus and about 50 or 60 of its parts suppliers to deliver the tags.

MAINtag and Tego indicate they have a market-ready 32-kilobyte tag, and that they are working with customers in other industries to use it. Indeed, Airbus tested prototype 32-kilobyte tags from Tego early last year (see [Tego Launches 32-Kilobyte EPC RFID Tag](#)). The results of those tests, according to Airbus, helped the company to gain confidence in the technology, such as read and write abilities, and also validated its use cases for the tags made with Tego's high-memory chips.

According to both Airbus and MAINtag, Airbus did not sign the contract for Tego's 32-kilobyte tag due to pricing reasons, and because the aircraft manufacturer's initial requirements requested only 4 kilobytes

of memory. As time goes by, Nizam says, Airbus would eventually purchase tags with more than 8 kilobytes of memory. "Having more memory doesn't hurt us, if it's available," he explains.

"Four kilobytes is a good start for us," says Paul Antoine Calandreau, who is responsible for flyable parts in Airbus' value chain visibility program, "and 8 kilobytes puts us in the comfort zone for the future."

The contract with Airbus stipulates that MAINtag will provide two designs of its so-called FLYtag, which can be utilized on metal parts. One version, intended for use on smaller aircraft parts, is circular in shape, with a diameter of about 0.5 inch; the other is rectangular, approximately 0.75 inch wide and 1.75 inches long. The tag read ranges will vary based on the environment and its form factor, with the smaller tag having a shorter read range, according to Bruno Lo-Re, MAINtag's CEO. However, both tag designs exceed the performance requirements set forth in the Airbus contract.

"This contract is historic for RFID," Lo-Re says, "because it's the first for a worldwide, open-loop application that includes high-value passive tags."