

Frost & Sullivan expects the market for RFID applications for automotive, aerospace and industrial products manufacturers to grow to \$225.7 million in 2012.

By Beth Bacheldor

Sept. 15, 2006—Although the retail sector continues to be one of the sweet spots for RFID in terms of both market size and growth, other sectors are gaining traction. In particular, the combined market for production and logistics RFID applications in automotive, aerospace and industrial products industries is expected to grow from \$71.3 million in 2005 to \$225.7 million in 2012, according to a new study released this week.

Research and consulting company [Frost & Sullivan](#) estimates the sizes of the individual markets (which equal the RFID revenues generated within each sector) in 2005 to be as follows: \$29.2 million for automotive, \$14.5 million for aerospace and \$27.7 million for industrial products. During the next six years, the expected annual compound growth rate (CAGR) is 18.8 percent for the automotive market, 23.1 percent for aerospace and 13.3 percent for industrial manufacturing.

The study, entitled "North American RFID Markets for Automotive, Aerospace and Industrial Manufacturing," considers manufacturing and logistics applications within each vertical segment and includes revenues from RFID hardware, middleware and software licensing fees, integration and installation charges, service agreement costs and maintenance fees. The study was conducted between January and April 2006.

In comparison, a 2005 report by Frost & Sullivan determined revenue in the RFID retail market to be \$400.2 million in 2004, a figure expected to grow to \$4,169 million by 2011 (see [Report Says Retailer RFID Spending Passed \\$400 Million](#)). The firm estimates the CAGR for the retail supply chain to be 39.8 percent between 2004 and 2011.

There are a number of events driving growth among the automotive, aerospace and industrial manufacturing sectors. Topping the list is the trend toward lean manufacturing, a methodology that attempts to drive all waste out of manufacturing processes by employing such tactics as just-in-time inventory to ensure goods arrive for production when needed rather than ending up as inventory. Other tactics used include *kaizen*, a Japanese term that refers to continuous improvement, and *kanban*, the Japanese term for signal, which establishes a "pull" instead of "push" system of moving goods through the factory.

As part of their lean-manufacturing initiatives, many manufacturing companies outsource various operations within their supply chains. "RFID enables real-time visibility of inventory, thereby ensuring integration of operational control across diverse manufacturing and logistics points," says Frost & Sullivan research analyst Priyanka Gouthaman. "Real-time tracking of assets across different locations and production sites also ensures increased productivity and cost-effective allocation of resources."

Other drivers of RFID in the automotive, aerospace and industrial-products manufacturing markets include legislative policies encouraging track-and-trace applications and RFID, Gouthaman says. Among them is the U.S. Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, from the [National Highway and Transportation Safety Administration](#) (NHTSA), which calls for the tracking of tire identification numbers, or TINs. That legislation has prompted [EPCglobal's](#) participation in creating a specific RFID standard for the auto industry (see [Auto Industry RFID Data Standard Proposed](#)).

"The efforts of the [Automotive Industry Action Group](#) (AIAG) in integrating the B-11 tire and wheel label, and the RFID standard with the [EPCglobal](#) data formats, are expected to increase interest for item-level tagging within the automotive industry," Gouthaman says.

Gouthaman attributes some of RFID's growth among the automotive, aerospace and industrial manufacturing industries to high-profile companies' RFID initiatives, including those of [General Motors](#), [Ford](#), [Boeing](#) and [Airbus](#). Boeing and Airbus, for example, are testing RFID to track engine parts through manufacturing facilities (see [Boeing Outlines Tagging Timetable](#)).

According to Gouthaman, there are potential pitfalls to RFID's growth in the three sectors. The technology's high costs, particularly for complete RFID installations, "could restrict the scope of the pilots and projects to the large [original equipment manufacturers], [electronics manufacturing service] providers, tier-one suppliers and distributors," she says.

In addition, concerns about the impact of RFID deployments on companies' profitability could inhibit growth. "A clear definition of the payback period is not easily conceivable, when enterprises are focused on objectives such as enhanced productivity, efficiency and optimal resource utilization," says Gouthaman.