

The company is rolling out an RFID-enabled hardware and services platform, initially to the rejuvenated rail industry and companies shipping by rail.

By Mary Catherine O'Connor

May 25, 2006—As fuel prices continue to climb, shippers are starting to increase usage of rail as an alternative to trucking. As a result, rail operators are seeing revenue increases of as much as 19 percent, according to [RFTrax](#), a Sugar Land, Texas, provider of asset-management solutions. Shippers and rail operators are also looking for better ways to track and monitor high-value goods being shipped, says Hal Haygood, president of RFTrax.

This week, RFTrax announced a products and services suite, the Asset Management Platform (AMP), combining RFID interrogators with other sensors to generate location and environmental data that is sent to a back-end system via a wireless GSM cellular or [Iridium](#) satellite communications link. RFTrax is partnering with [Identec Solutions](#) for the RFID hardware offered as part of AMP. The company is initially marketing the platform to the rail industry, and to shippers using rail.



RFTrax customers purchasing the RFID-enabled ACU (shown above) can also buy Identec Solutions' IQ UHF active tags, which they can then encode and attach to goods.

[Specialized Rail Transport](#), a Houston-based rail operator that ships large turbines, generators and transformers for companies such as [General Electric](#), has already committed to using the new platform. "A generator can be worth as much as \$10 million," says Bob Felix, Specialized Rail Transport's vice

president, "so our customers want to know exactly what's going on with that unit," and where it is at any given time.

Specialized Rail Transport has been using a device that sends the GPS data for its railcars in transit to the company's back-end systems. The unit, which includes a shock sensor, does not function as consistently as the company would like, Felix says. The company also wants to integrate RFID into its tracking system so it can identify specific products in transit, and to have the ability to add different types of sensors.

Felix says his company plans to offer tracking and monitoring services to its clients as a premium on top of its transport services, which is how it currently uses the GPS and shock tracker. The firm has ordered five ACU units and a license for the AMP software, which RFTrax says it can easily integrate with most existing enterprise resource planning (ERP) or manufacturing execution system (MES) platforms.

Rail operators and shippers can use the AMP suite to track the locations of railcars, as well as the goods each car is hauling and their condition. RFTrax's sensor and tracking device, the Asset Command Unit (ACU), is a modular device able to accommodate a GPS receiver, a GSM cellular communication unit (or Iridium data modem, at the customer's discretion), an Identec Solutions i-card UHF interrogator and multiple sensors for sensing shock, radiation, temperature or other forces to which goods being shipped are exposed during transit. RFTrax customers purchasing the RFID-enabled ACU will also buy Identec Solutions' IQ UHF active tags, which they can then encode and attach to goods. The interrogator and each of the sensors can be programmed remotely, over the GSM or Iridium communication link to the RFTrax back-end system. For example, the reader can be set to search for tags with ID numbers, or for those that have sensed that a railcar has started or stopped moving. Each user can choose which conditions to monitor and add additional sensors, depending on business needs.

The ACU runs on a lithium battery charged by a solar panel mounted outside each railcar. RFTrax says the battery, with periodic charges, has a lifespan of up to 10 years. On a full charge, the battery can run for up to six months, allowing for long periods without the railcar receiving sun exposure.

The AMP software lets companies set up business rules that can be used to alert workers if a tagged object is removed from a railcar at a time when or a place where it should not be moved. Haygood says the RFTrax is already using this software, along with temperature sensors inside locomotive engines, to help rail operators save on fuel costs. In northern cities, rail operators tend to run the diesel locomotive engines constantly—otherwise, they would run the risk of not being able to restart the engines during cold weather. With the RFTrax sensors, they can turn the engines off, then turn them back on before the temperature in the engine falls below a predetermined setting. Haygood says this can save rail operators in northern climates up to 150,000 gallons of fuel each month.

The RFID-capable AMP is available now, says RFTrax, and pricing for the ACU runs from \$600 to \$1,500, depending on the volume and the sensor package chosen. In addition, each RFTrax customer

pays a monthly subscription fee that covers RFTrax's GSM or satellite communication costs. This price can run as low as \$15 per month for a subscription involving just one unit that sends data to RFTrax once daily, but it will increase with the quantity of ACUs deployed and the number of times they transmit data.

RFTrax is owned by [Fairfield Industries](#), a global company specializing in manufacturing electronic equipment, including seismic monitoring.