

The company's new trade name is intended to reflect its growing focus on wireless sensing products and solutions that measure and transmit sensor data without requiring batteries.

By Claire Swedberg

Tags: [Automotive](#), [Manufacturing](#), [Asset Tracking](#), [Innovation](#), [Inventory / Warehouse Management](#), [Sensors](#)

Apr 23, 2018—Business demands, and subsequently the solutions offered, for RFMicron have changed throughout the years, from integrated circuits to full sensor-based wireless solutions. Last week, at [RFID Journal LIVE! 2018](#), the company announced that it had changed its name to Axzon in order to reflect that transition.

The company, located in Austin, Texas, will still serve its customers with the same products and solutions, including integrated circuits, according to Alan Hansford, Axzon's marketing and business development VP, but will simply do so under the new trade name. The name Axzon plays on the word "axon"—a nerve fiber that serves as the primary transmission lines of the nervous system.

For the past several years, Hansford says, the company has sold RFID-enabled sensors that harvest power from RFID interrogation to enable users to wirelessly access data regarding conditions around their assets and inventory. The firm also sells middleware and software to manage the sensor and RFID data captured by the interrogator. "Traditionally, RFID ICs were what we offered," Hansford says, "but in the past three years, we've grown significantly."

Three years ago, in fact, was when the company began selling sensors linked to those RFID chips and data-analytics services to manage the sensor data captured by the readers. The firm has since offered its Smart Passive Sensing products for automotive manufacturing, health care, cold chain and data center conditions management (see [SMARTRAC, RFMicron Release Passive RFID Temperature Sensor Technology](#)).

In the case of automotive manufacturing, Axzon RFM2110 Quality Control Moisture Intrusion Sensor tags are being placed within vehicles before the interior and trim assembly, but prior to high-pressure washing. "There have been a variety of methods for finding leaks" that could come with the assembly of a new car, Hansford explains. These include opening the vehicle following a pressure wash and inserting probes in corners, or using a white glove to look for wetness.

The greatest concern, the company reports, is small or medium-sized leaks that could go undetected. Over time, such leaks could lead to the soaking of cabling and electronics located under the thick carpet foam, for instance, that can cause damage to the vehicle's interior over time. In fact, Hansford says, about 3 percent of new vehicles leave the assembly line with a potentially damaging leak.

Axzon's sensor tags come with an on-chip temperature-sensing circuit that transforms a product's temperature value into a 12-bit number. Off-the-shelf UHF RFID readers interrogating those tag can receive their data, along with each tag's unique ID number, and use the company's software to convert the 12-bit number to a temperature reading, ranging from -40 degrees to +85 degrees Celsius (-40 degrees to +185 degrees Fahrenheit). In industrial settings, the company notes, the system reports temperatures up to 125 degrees Celsius (257 degrees Fahrenheit).

Although RFID use has become common for asset tracking, Hansford says—multiple parts are tracked as they flow to the assembly site or during assembly—these sensor tags provide another level of benefit. Axzon's tags are also used for other sensing-based data applications, such as monitoring the temperature of an engine for diagnostic purposes.

Automotive manufacturers currently testing or utilizing the system are reading tags with [Zebra Technologies](#) fixed readers for moisture-sensing systems, and [Nordic ID](#) handheld readers, typically, for diagnostics. They use Axzon middleware to manage the data at the reader level, Hansford says, before forwarding the information to a server. That, he explains, reduces the need for a large volume of data being sent to a server and managed there. Instead, Hansford says, the network of readers can distill the raw data and forward what is relevant to the company's own enterprise resource planning (ERP) system.

In the future, Axzon software will be able to enable analytics as well. For instance, an auto manufacturer could begin tracking data such as the link between a large number of leaks and the glue being used, or other assembly conditions. "We can sell the sensors," Hansford states, "but we now also offer the full solutions," which include data management and, in the near future,

analytics.

The transition into full solutions came at the request of customers, Hansford says. "We found, as we sold our technology to companies, they were requesting this full solution," he recalls. The firm continues to develop ICs, he adds, as well as temperature and humidity onboard passive tags.

Testing is also underway of a new sensor tag that serves as a strain gauge for bridges and other structures at risk of damage from wear and tear or earthquakes. The tag offers a 19-meter (62.3-foot) read range so that users can interrogate it for sensor data, even if the tag is not physically accessible.

What's more, the company offers a tag known as the RFM3240 Long-Range Rugged Wireless Temperature Sensor, which provides failure detection for electric busbars that are commonly used in data centers. The device captures temperature conditions when interrogated by a UHF RFID reader, and is designed to work well on metal. The RFM3260 is a similar device designed for use in harsh and extreme electric switchgear environments. The sensor tags are currently being tested by utility companies and large electric distribution providers, in order to monitor equipment's condition before a dangerous malfunction can take place. The tag can be interrogated at a distance of up to 12 meters (39.4 feet).