



## **Texas Instruments and RFID4U Propose Smart Processes for RFID Supply Chain Label Usage**

### *White Paper Details Tag Testing for 'Five-Nines' Read Performance*

DALLAS, Dec. 13 /PRNewswire/ -- The expectation that 100 percent of RFID- labeled products can be read 100 percent of the time at all points in the supply chain is unrealistic; but with proper tag testing and verification, companies can increase their odds of achieving "five-nines" performance (five read points at a 99.999 percent read rate), according to a new white paper from Texas Instruments Incorporated (NYSE: [TXN](#)) (TI) and RFID4U.

The paper outlines a systematic approach that end users and systems integrators can take to increase the performance of their Ultra-High Frequency (UHF)-based RFID systems. This approach includes establishing a baseline of initial performance, conducting a performance analysis of tags, and factoring in variables in product and packaging materials as well as pallet size and case quantity. The paper also answers the questions, "How do I measure tag performance" and "What parameters are most important?" by providing an overview of the testing types, metrics and pros/cons of static and dynamic methods.

"RFID has been getting a bit of a bad rap due to the expectations that tags can be read 100 percent of the time at every point for every product," said Mark Brown, vice president of professional services, RFID4U. "With proper empirical testing, companies can find the best tags and labels for their application, and gain the data they need for improved supply chain tracking."

An "RF-challenged" product, such as those containing liquid or metal, may only achieve a 50 percent read rate at an individual read point. The paper proposes practical suggestions to increase read performance including the use of more sensitive tags, upgrading the reader interrogation zones with more sensitive antennas or adding additional read zones at new locations in the supply chain.

"It's important to test a statistically significant sample of both tags/labels and products, and perform the test in a real-world environment," said Chris Cook, field application specialist, TI-RFid(TM) Systems. "Starting with well-tagged assets puts you way ahead in achieving the kind of visibility and performance from your RFID system that can drive true business process improvements."

To download the white paper authored by Chris Cook and Mark Brown titled, "Practical Performance Expectations for Smart Packaging," click on: [http://www.ti.com/rfid/docs/manuals/whtPapers/wp-Performance\\_expectations\\_for\\_smart\\_packaging.pdf](http://www.ti.com/rfid/docs/manuals/whtPapers/wp-Performance_expectations_for_smart_packaging.pdf) .

In addition, a new case study available from TI details how, Ryerson, a metal services processor and distributor, worked with solution providers Ship2Save, Metalcraft and TI to improve RFID tag performance. To reduce RF interference, foam separation was used to increase the distance of the tag from the metal products being tagged which amplified



the RF signal. As a result, the company achieved tag reads above 200 per second, and increased the read range up to 15 percent. "Bad reads" were reduced to one percent, bringing "five-nines" read performance closer to reality for this distributor of "RF-challenged" materials. To view the Ryerson case study, click on <http://www.ti.com/rfid/shtml/news-casestudies-11-13-06.shtml> .

### **About Texas Instruments**

Texas Instruments is the world's largest integrated manufacturer of radio frequency identification (RFID) transponders and reader systems. Capitalizing on its competencies in high-volume semiconductor manufacturing and microelectronics packaging, TI is a visionary leader and at the forefront of establishing new markets and international standards for RFID applications. For more information, contact TI-RFid(TM) Systems at 1-800-962-RFID (7343) (North America) or +1 214-567-7343 (International), or visit the Web site at <http://www.ti-rfid.com> .

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Texas Instruments is traded on the New York Stock Exchange under the symbol TXN. More information is located on the World Wide Web at <http://www.ti.com> .

### **About RFID4U**

RFID4U is a worldwide leader in vendor neutral RFID learning solutions. We have assembled a full complement of products and services to help you align technology with business objectives. A pioneer in RFID learning, RFID4U has maintained a steadfast focus on developing a robust and highly acclaimed catalog of RFID courses. We also offer a training implementation program customized to fit your organization's needs. Please visit <http://www.rfid4u.com> for more information.

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