

RF Controls Powers AI-Driven, RFID-Based, Battery-Free RTLS Projects at University of Memphis AutoID Lab

Innovation Built in the U.S.A.

ST. LOUIS, MO, UNITED STATES, July 31, 2025 /EINPresswire.com/ -- [RF Controls](#), a Missouri-based pioneer in advanced, passive, battery-free, real-time location systems (RTLS), is accelerating the future of logistics and automation through a strategic deployment at the University of [Memphis](#)' AutoID Lab. The lab has installed RF Controls' patented CS-445B Smart Antennas, establishing a premier academic demonstration site for scalable RFID and AI integration. (click [video](#) to view demonstration)



University of Memphis AutoID Lab has installed RF Controls' Smart Antennas to demonstrate scalable RFID and AI integration

At the core of RF Controls' technology is a breakthrough in overhead passive RFID performance, offering unmatched range, accuracy, and density handling capabilities. These Smart Antennas dynamically scan zones between 1,000–5,000 sq. ft. from ceilings up to 50 feet high—capabilities previously unattainable with legacy overhead systems.

"RF Controls is a preferred RFID solution for passive, RTLS, AI projects because of its scalability and unique install height and pinpoint location accuracy data-generating capability, which unlocks promising IoT and AI opportunities," said Dr. Kevin Berisso, Director of the AutoID Lab and keynote speaker at RFID Journal LIVE! 2025.

Next-Gen Technology in a Hands-On Environment

The installation of four CS-445B antennas transforms the AutoID Lab into a live testbed for next-generation passive RTLS applications. The facility now serves as a hands-on hub where students, researchers, and industry partners model and test real-world use cases across high-impact sectors like parcel logistics, defense, and healthcare.

RF Controls' system brings several key advantages to enterprise and academic environments:

- Up to 300 Dynamic Scan Points: Configurable based on ceiling height, throughput requirements, and object velocity.
- Optimized for High Tag Density: Maintains performance in zones with thousands of tags, unlike traditional systems.
- Minimal Overlap, Maximum Accuracy: Enables wide area coverage without sacrificing precision.
- Proven 50-ft Install Capability: Operates effectively in high-bay warehouses, aviation hangars, and manufacturing facilities.

"Our lab is more than a research space—it's a proving ground," said Dr. Berisso. "We're using RF Controls' technology to show how AI, IoT, and RFID work together to build intelligent, adaptive systems. It's a mix of serious science and real-world application—with a touch of fun."

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"It's incredibly rewarding to see our team's innovation scale into mission-critical deployments," said Tom Ellinwood, Founder and CEO of RF Controls. "We've always believed in the power of American engineering, and today we're proving it to the world."

As governments, Fortune 500s, and academic institutions seek scalable automation solutions, RF Controls is uniquely positioned to meet the moment—transforming passive ceilings into intelligent data networks and enabling real-time visibility across complex environments.

See It Live

To schedule a live demonstration at the University of Memphis or an active RF Controls deployment site, visit www.rf-controls.com.

About RF Controls

Headquartered in St. Louis, Missouri, RF Controls is a pioneering developer of passive battery-free, real-time location system (RTLS) solutions. The company's patented CS Smart Antennas provide overhead, hands-free RFID tracking with unmatched accuracy and scalability. RF Controls serves Fortune 500 manufacturers, Department of Defence (DoD), defense contractors, and logistics providers across North America and Europe, helping them unlock next-generation operational intelligence.

About the University of Memphis AutoID Lab

The AutoID Lab at the University of Memphis is a leading research and development center focused on advancing Automatic Identification technologies, including RFID, IoT, and real-time location systems. Part of the Herff College of Engineering, the lab collaborates with industry, government, and academia to drive innovation in smart logistics and supply chain visibility.

Through applied research and field testing, the lab helps shape the next generation of identification and sensing technologies.

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