



## Achieving Heightened Airframe Lifecycle Management with Advanced RFID Technology



**Ensuring the quality and operability of airplane parts is a critical responsibility of airframers and airlines alike. When Brady SmartID had to develop specialized mount-on-metal RFID tags for an aerospace application, they knew just who to call.**

In February 2016, Brady SmartID was preparing their response to an RFQ for an airframer and needed the help of an expert partner to meet the project's unique RFID tag requirements. There are only a handful of vendors in the United States who have experience with mount-on-metal tags, and given their demonstrated capabilities and convenient locale, Vizinex RFID was the obvious choice.

### Taking Tag Versatility to New Heights

The RFQ's most challenging requirements were specific to the tags' footprint, read range and data storage. The tags needed to have a small footprint and long read range relative to their size in order to be placed on small, often hard-to-reach metal surfaces of a commercial aircraft. Extended memory and long data retention were also must-haves to meet the airframer's standards for traceability throughout the tagged component's life cycle.

**Client:**

Brady SmartID

**Website:**

[www.bradysmartid.com](http://www.bradysmartid.com)

**Description:**

Brady is a global leader in high-performance identification products and solutions. Brady SmartID brings cutting edge capabilities in material science, electrical engineering and RFID technology to our customers in the form of custom business solutions and products.

Brady and Vizinex brought together a unique combination of materials, RFID expertise and commercial knowledge to rapidly meet the client's needs. It took 6 to 8 weeks to develop two specialized tags that met the RFQ's specific requirements. Aerospace tags must be conditioned to face harsh environments such as exposure to aviation fuel, hydraulic fluids and intense vibration. As a result, the tag design incorporates a unique construction that enables extended temperature tolerance and makes use of durable label materials to withstand challenging environments on metal surfaces. The tags underwent rigorous testing and validation to meet the durability requirements of Aerospace Standard SAE AS5678. Extensive manufacturing trials were conducted to guarantee production requirements for throughput and stability.

### Introducing ... NICKL and STIK

The tags developed through **Brady SmartID and Vizinex RFID's partnership** achieve an impressive read range while maintaining an inconspicuous footprint. The square tag, the NICKL, is roughly the size of its namesake at 0.6 in x 0.6 in x 0.2 and 14.0 mm x 14.0 mm x 5.8 thick, with a read range of 1.5 m. Its counterpart, the STIK, is a narrow rectangular tag 1.4 in x 0.3 in x 0.2 and 36.4 mm x 7.0 mm x 4.4 thick, with a read range of 2.35 m.

Brady SmartID and Vizinex RFID continue to collaborate on expanding the second-generation series of Brady On-Metal Rigid RFID Tags. By combining Vizinex's expertise with rigid, mount-on-metal RFID tags and Brady SmartID's knowledge of commercial aerospace RFID specifications and customer expectations, the partners are able to offer airframers rigid, high-functioning RFID tracking solutions to safeguard today's aircrafts – and beyond.

### About Vizinex RFID

Vizinex RFID, headquartered in Allentown, PA, designs and manufactures RFID tags for diverse asset tracking applications from rugged environments in the oil industry, to medical devices requiring repeated sterilization, to long-range vehicle tracking. With prototyping and manufacturing located in the U.S., our time from concept to delivery is unmatched. Vizinex RFID maintains a tradition of innovation, superior functionality and outstanding customer support, allowing us to deliver RFID ... the way you imagined.



**For more information about Vizinex RFID,  
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