

physical made digital



Professional Services



Professional Services Group

VALUE DELIVERED:

- » Decrease Integration Costs
- » Shorten Time-to-market
- » Build Business Case
- » Ensure Project Success

HANDS-ON GUIDANCE:

- » Proven expertise
- » RFID thought leadership
- » Diverse integration experience
- » IP protection

LIFE-CYCLE SOLUTIONS FOR EMBEDDED RFID:

- » Feasibility
- » Integration
- » Best Practices
- » Customization
- » Education

Application Overview

SkyeTek's Professional Services Group assists original equipment manufacturers (OEMs) to quickly and efficiently deliver RFID-enabled finished products. SkyeTek Professional Services Group supports all phases of the embedded RFID development cycle including requirements analysis, design, integration, and testing. Customers gain the benefit of SkyeTek's industry-leading experience in delivering embedded RFID solutions which results in significantly reduced integration costs and time-to-market compared to in-house implementations.

SpringBoard™

The first step in RFID integration, SpringBoard™ is a fixed price one-week review where SkyeTek engineers will examine requirements, documentation, current products/prototypes, and produce a recommendations document concerning the feasibility of integrating RFID while meeting the relevant design goals such as cost, form factor, and performance. This review is an invaluable precursor to a larger-scale engagement comprised of any one or several of the services detailed below. Regardless of vendor selection, the customer may keep and enact any recommendations.

Integration Services

Tag Selection – SkyeTek compares customer requirements against tag specifications such as protocol, size, cost, availability, read range, memory capacity, and security features, while drawing upon experience with multiple silicon and inlay manufacturers to select the most suitable tags for the targeted application.

Finished Product Selection – SkyeTek assists in the selection of off-the-shelf finished products in support of the customers' embedded RFID program goals. In cases where a finished reader is required, SkyeTek can introduce a rich network of finished reader manufacturers.

Tag Provisioning – Once customers select tags for their application, they must then select the appropriate printers to encode and provision those tags. In addition to supporting tags from any printer, SkyeTek has partnered with printer providers to support custom printing requirements for specific, higher security applications.

Module Integration – Having provided assistance for 100+ production customers in a variety of applications, SkyeTek's Professional Services Group has developed the breadth of experience needed to minimize RFID integration issues. Module-level integration assistance includes:

- **Mechanical** – provide installation and location support for readers, cabling, and antennas.
- **Electrical** – assist linking host system including power, communications and GPIO with RFID subsystem.
- **Software** - determine how best to integrate host software with the RFID subsystem
- **RF** – make recommendations on product design that enhance performance of RFID subsystem

Antenna Consulting - SkyeTek will select off-the-shelf antennas and tune them or, if required, design an application-specific antenna. SkyeTek's works with a wide-range of material types (Polyimide, FR4, Ceramics, etc.), antenna approaches (fractal, dipole, microstrip, patch), and frequencies (HF, UHF, Inductive UHF) to provide manufacturers with optimal antenna solutions.



About SkyeTek:

SkyeTek transforms traditional RFID into a networking technology enabling goods and assets to participate in a connected world. SkyeTek develops readers that serve as intelligent edge devices and software that binds policies to tagged items. By extending networks to the physical world, our customers increase revenue through their ability to predict demand, prevent counterfeiting, and personalize user interactions.

SkyeTek combines intelligent software with an inexpensive hardware platform to provide a modern RFID security model, distributed policy management engine, and network-ready readers. Enterprises deploy SkyeTek's solutions to deliver a seamless RFID edge network capable of centralized management and real-time response for applications in item tracking, product authentication, access control, and patron management.

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Best Practices

Regulatory Certification –SkyeTek consultants provide advice and guidance to customers as their products incorporating SkyeTek technology pass through radio and security certifications, such as FCC Part15 and ETSI. SkyeTek can also assist with industry specific certifications, such as Consumer Electronics Product Certifications, Contactless Payment certifications, and Medical/FDA Certifications. Customers receive a 25% discount on all such consulting when they utilize a SkyeTek approved test facility.

Security Consulting and Review – Many RFID-based systems require adherence to governmental or commercial security requirements, or may be prone to specific security threats (e.g. Product Counterfeiting). SkyeTek's experienced security consultants can conduct a security review, pointing out and evaluating the likelihood of potential threats, and recommend technical or process solutions to address them.

Licensed Manufacturing Support – Several SkyeTek customers already take advantage of a unique offering – the ability to license SkyeTek hardware designs, customize them for integration into a custom system, and manufacture them at cost. While SkyeTek hardware is designed from the outset with this in mind, the professional services group also provides focused consulting support around key issues that can arise in this type of deployment:

- **Process** – leveraging “lessons learned” from the manufacturing process in conjunction with your CM, EDM, or ODM to minimize fall out. This can include recommending manufacturing test procedures and test station design.
- **Customization** – assisting in customizing hardware designs for different geometries and form factors, including alternative part selection.
- **First Article Review** – testing initial production lots of devices (or when significant revisions are made) using test suites and standards to provide confidence that the licensed design is meeting both parties' expectations.

Customization Services

Network Integration – SkyeTek completes the RFID integration process by ensuring that SkyeTek and third-party readers, sensors and other edge devices are connected to an End-user Organization's network. SkyeTek designs and implements networks using multiple topologies and protocols including WiFi (802.11), Zigbee and Ethernet. A rich bench of networking partners ensures all necessary hardware to connect readers and complete the system.

Software Customization – SkyeTek Professional Services offers software customization support for deeper integration of the RFID subsystem into customer-defined environments. Custom software can be developed for use on the reader (including pre-set autonomous operation, integration with attached actuators, sensors or indicators, or customized tag adapt filtering) or on existing systems (such as custom interfacing of the reader to your or third party applications).

Hardware Customization – SkyeTek's Professional Services Group has the capability to provide turn-key custom circuit boards and finished readers.

- **Custom Reader Boards** – SkyeTek works with existing designs to integrate readers and circuitry on shared boards or develop board encapsulating antenna, multiplexer and reader.

Finished Reader Design – SkyeTek will design and develop SkyeModule-based finished readers in form-factors such as portals, access control points, payment terminals, etc in line with customer applications.

Education

SkyeTek provides its valued customers with comprehensive, hands-on training aimed at familiarizing students with all aspects of embedding RFID into their products. Benefits include:

- Learn from the original architects
- Hands-on experience
- Dynamic topics to address all skill levels
- Small, intimate class setting

Group Training - SkyeTek can provide one or two day on-site training sessions designed to familiarize organizations on RFID technology, SkyeTek products, and RFID design considerations. This training will typically be tailored towards the specific needs of the customer.

Hands-On Training – All SkyeTek training sessions include at least one-half day of hands-on learning for staff.

SkyeTek Reader Technology SkyeTek provides a variety of reader technology at both 13.56 MHz (HF) and 860- 960 MHz (UHF). ReaderDNA, a comprehensive reference design, is available for component level integration of the technology including complete design files, BOM, and test fixture. All SkyeTek readers leverage powerful firmware that drastically reduce hardware costs and are delivered in conjunction with ReaderDNA. SkyeModules are controlled via the SkyeTek Protocol, a powerful but simple communication protocol that grants the user access to all features of an RFID transponder. Further, they have been designed with flexible and modular embedded software that allows one to select only the features desired.

