



Mobile-RFID Solution

FEATURES:

- » Automated Item-Level Tracking
- » Real-Time Data Provided to Back-end Applications for Billing & Replenishment
- » Automated Item Traceability / Authentication

PAINS ADDRESSED:

- » Sales & Operations Time Spent on Manual Bar-code Based Processes
- » Product Shrinkage
- » Out-of-Stocks
- » Delayed / Inaccurate Billing on Consigned / Vendor-Managed Inventory

USE CASES:

- » Consigned Inventory
- » Vendor-Managed Inventory

BENEFITS:

- » Significantly Reduced Time Spent on Manual Bar-code Based Processes
- » Significantly Reduced Product Shrinkage & Out-of-Stocks
- » Reduced Shrinkage
- » Accelerated / More Accurate Billing on Consigned / Vendor-Managed Inventory

Solution Overview

SkyeTek's Mobile-RFID solution automates consigned and vendor-managed inventory management offering significant benefits over bar-code based solutions by reducing labor costs, improving billing accuracy / timeliness, reducing shrinkage, and accelerating cash collection.

The Mobile-RFID solution is comprised of the following:

- **SkyeModule**-powered RFID handheld readers
- RFID labels placed on items
- RFID tag / badge provisioning provided through SkyeTek Provisioning Services or **SkyeAPI** (ie, for product manufacturers that source their own tags and own RFID printer-encoders)
- **SkyeAPI** for integration with back-end applications
- Optional:
 - **SkyeTek Professional Services** for proof-of-concept, pilot, or production implementation

How the Solution Works

Once field personnel are outfitted with handheld readers and SkyeAPI has been configured for communication with back-end billing and inventory management applications, the following automated inventory management processes can occur in real-time:

- **Item-Level Tracking:** When the sales or service representative visits the customer site where the consigned or vendor-manage inventory resides, the handheld is used to read RFID tagged inventory on shelves or in a stock room. The current inventory level is compared to the last inventory level to determine which items have been removed. This information is sent to back-end applications via a pre-determine network backhaul (eg, cellular, 802.11).
- **Automated Billing & Replenishment:** Back-end billing and inventory management applications receive the RFID-generated inventory data from SkyeAPI and invoice for removed items and prepare orders to replenish stock before it runs out.



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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Solution Elements

The Mobile-RFID solution is comprised of SkyeTek-enabled handhelds, SkyeTek software and services, and best of breed third-party RFID tags and printers. SkyeTek brings them all together into one seamless solution that maximizes return on investment (ROI) and minimizes integration time, cost, and complexity.

Software

SkyeAPI – SkyeTek's application programming interface (API) offering seamless integration between host-side applications and SkyeModules. Supported languages / frameworks are ANSI C and .NET.

SkyeSecurity – Standards-based symmetric and asymmetric encryption / signing where anti-counterfeiting, anti-tampering and privacy are required.

SkyeOS – SkyeTek's embedded RFID reader operating system providing every SkyeModule with superior functionality, reliability, and upgradeability. Made available on a software license basis for customers that use ReaderDNA reference designs.

Hardware

SkyeModules – RFID Handhelds – Several manufacturers use SkyeModules as the RFID reader engine inside their handhelds - SkyeTek will assist in the selection of the model best-suited for the customer's specific use case. SkyeTek will also work with 3rd-party RFID handhelds that do not incorporate SkyeModules in cases where the customer has already standardized on a specific manufacturer.

SkyeModules – Embeddable RFID reader modules that lead the industry in cost, space, and power efficiency. Available in three form factors and operation in HF (13.56 MHz) and UHF (860 – 960 MHz).

ReaderDNA – Reference designs of SkyeModules allowing OEMs to integrate the entire module design, or just the analog sub-section, directly onto the main circuit board.

RFID Tags – SkyeTek works with the industry's leading RFID tag manufacturers such as UPM Raflatac and Avery-Dennison in order to best meet the tagging needs of customer applications.

RFID Printer-Encoders – SkyeTek works with the industry's leading RFID printer-encoder manufacturers, such as Zebra, Avery-Dennison, and Intermec to meet the printing needs of its applications.

Network Interfaces – SkyeTek works with off-the-shelf network connectivity hardware to provide seamless, cost-effective wired and wireless connectivity to the enterprise and internet.

Services

SkyeTek Professional Services – SkyeTek can turn-key the entire integration effort or provide assistance in specific areas. Either way, customers benefit from SkyeTek's industry-leading experience resulting in reduced project cost, risk, and time-to-market. Services include project management, requirements gathering, specification development, hardware selection / integration / customization, regulatory testing / certification, and training.

SkyeTek Provisioning Services – SkyeTek can provision tags / badges on behalf of its customers so that the only task remaining is to affix labels or assign badges. Mapping of SKU numbers to RFID tags or identities / roles to RFID badges and the subsequent printing / encoding process is managed by SkyeTek.

Other Offerings from SkyeTek 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. SkyeOS, the embedded software intelligence of the RFID reader, is available to ReaderDNA customers. All 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.

