

physical made digital



Product Authentication



Application Solutions for Product Authentication

THREATS:

- » Counterfeits
- » Generics
- » Substitutes

INDUSTRIES IMPACTED:

- » Manufacturing
- » Pharmaceuticals
- » Medical supplies
- » Consumer products

BENEFITS:

- » Protect brand integrity
- » Improve product safety
- » Assure product quality
- » Reclaim lost revenue
- » Build customer loyalty

Application Overview

The displacement of genuine products through counterfeiting, substitution and generics poses significant and costly issues in many industries.

Manufacturers and OEMs dedicate immeasurable innovation to create products and consumables that work in concert to provide an optimum experience for the customer while maximizing revenue. The displacement of these products through counterfeiting, substitution and generics are a major threat to an organization and their customers from several perspectives:

Threat	Result
Counterfeits	<ul style="list-style-type: none">• Lack of customer support• Concerns for customer safety
Low cost, low quality Generics	<ul style="list-style-type: none">• Deterioration of the brand• Displacement of revenue
Substitutes	<ul style="list-style-type: none">• Poor product quality• Lack of customer loyalty

Industries at risk of counterfeiting, substitution and generics include:

- **Manufacturing:** Where products such as printers and industrial machinery that depend on authentic companion consumables, such as printer inks and industrial filters, for optimal performance
- **Pharmaceuticals:** Where accurate dosing and synchronicity between various prescribed medications affects the quality of life for patients
- **Medical supplies:** Where authenticity and proper use are critical to patient safety
- **Consumer products:** Where components in everything from cars to household items and toys must be assembled in a particular order or location in order for the product to operate

SkyeTek is empowering organizations in multiple industries with the insight and control to solve this problem through a cost-effective, end-to-end, embedded RFID solutions approach. SkyeTek solutions prevent the entry of counterfeits into the supply chain; and the use of lower quality substitutes and generics at the point of implementation. SkyeTek's embedded RFID solutions are helping organizations to:

- **Protect brand integrity:** thwart counterfeiting to neutralize negative brand association and market degradation
- **Improve product safety:** insure product used as intended – safely and securely
- **Assure product quality:** engineer the entire customer interaction and guarantee uniform brand quality
- **Reclaim lost revenue:** permit only sanctioned consumables in devices
- **Build customer loyalty:** introduces product lock-in through branded consumables



www.skyetek.com



Product **Authentication**

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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Relevant Technical Solutions

SkyeTek provides complete technical solutions including embedded RFID modules, accessories and software all supported through integration services and custom development where applicable that address the unique characteristics of a Product Authentication application:

- **Continuous Authentication:** What are the identity credentials?



Guarantee authenticity and security of products and individuals alike, fight counterfeits, generics and substitutes to Protect brand integrity, assure product quality and reduce legal liability by network-connecting printers, medical devices and door badge readers to back-office systems.

Reference SkyeTek's *Continuous Authentication Solution Sheet* for full details.

Case Study: Advanced ID

Analysts estimate that as many as one in four of all tires sold are counterfeits. Counterfeited tires not only usurp income and tarnish the brand of the manufacturers, their compromised quality also endangers the lives of drivers and passengers. But counterfeited tires are big business and the counterfeiters have previously adapted to attempts by legitimate producers to curb such activity. With the help of SkyeTek's embedded reader modules, Advanced ID has designed a way to provide every tire a unique ID. With various readers embedded at retail, distribution and service locations tire manufacturer can track legitimate tires. Additionally, SkyeTek's advanced security protects against cloning and keeps producers one step ahead of the counterfeiters.

Case Study: Water Analysis Manufacturer

A leading provider of high-accuracy analytical instrumentation, designs its Total Organic Compound (TOC) analysis systems to identify microscopic concentrations of particles in water. These water analyzers prove absolutely critical in hospitals, washing stations and sophisticated manufacturing environments that require the world's purest water.

Liquid calibration samples are used to guarantee the quality and accuracy of the device's measurements. The authenticity and configuration of these samples is essential to the successful operation of the device, yet these consumables are often prone to tampering or replaced with counterfeits or lower-quality generics.

Case Study: Medica

Medica Corporation™ uses its proprietary knowledge of ion-selective electrodes and analytical microchemistry to manufacture a line of easy-to-use, easy-to-maintain, low-cost analyzers that can detect concentrations of various electrolytes in blood, such as potassium and sodium. Test reliability is highly dependent on the quality of the reagent in use. Medica designs its analyzers and reagents as a complementary system so that test accuracy is optimized. Therefore, authenticating the disposable reagent system used with the analyzer is critical to the quality of data received by the healthcare professional and the patient. Accurate test results are a precursor to proper patient treatment and ultimately patient safety. It took Medica only six months to get its EasyLyte™ Analyzers on the market with RFID as a feature that enabled authentication that a genuine reagent was being used.

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.

