The Counterfeiting Epidemic

According to recent estimates from the Organization for Economic Co-operation and Development (OECD), counterfeit goods may cost the economy up to $250 billion a year (1). This is a global epidemic to be sure, with several millions of these products being shipped to the United States every year.

Often when we think of counterfeit items, consumer goods such as high-end jewelry or handbags come to mind. Not only does this cost retailers billions of dollars each year, but we as consumers are also at risk. Imagine lacing up your brand new Air Jordan’s before a game only to realize that you paid the top-dollar for knockoffs worth only a fraction of their cost to you. Frustrating to say the least. Maddening if you think about it long enough. How about life-threatening? Probably a bridge too far for a pair of sneakers, but counterfeiting effects industries that can have a direct impact on our health and safety, as well.

In this paper, we’ll highlight some of the major counterfeiting problem areas, particularly in the healthcare and medical industries, and discuss how RFID is gaining popularity as a top anti-counterfeiting measure.

Counterfeiting in the Pharmaceutical Industry

U.S. Customs and Border Protection (CBP) agents seized nearly $80 million in counterfeit pharmaceuticals and personal care products last year (2). In this case, counterfeiting can have life-threatening consequences especially in developing countries that lack the regulatory and policing resources of the United States. For instance, The World Health Organization (WHO) reports that 200,000 people die each year due to ineffective and substandard malaria drugs that don’t clear a patient’s system of the active parasite.

Wealthy countries are also at risk. Although, many counterfeited drugs in North America can be categorized as “lifestyle” drugs such as Viagra, rather than life-saving drugs, some claim that the legitimate supply chain has been compromised. Roger Bate, a resident scholar at the American Enterprise Institute and expert on counterfeit prescription drugs says “You could go into a CVS or a Walgreens to fill your prescription for whatever it may be—it could be for a heart medication, a cancer drug, an antibiotic—and you could be killed by that medicine.”
How RFID is Helping in the Fight Against Counterfeit Pharmaceuticals

At one time, drug packages were labeled with barcodes only. However, the barcodes were not unique and to each product and became easy to replicate. Today, the big pharmaceutical houses are using RFID tags to track and identify pharmaceuticals on an individual level. Because RFID tags can hold more data than a standard barcode, the tags can contain information about the drug’s origin, key ingredients or medicament, serial numbers, electronic pedigree or it’s history through the supply chain, and more. In fact, U.S. FDA now strongly recommends the use of RFID for fighting counterfeit drugs (3).

RFID reading equipment is then used throughout the supply chain to verify authenticity from the factory to the point of dispensing within the pharmacy or hospital. Pharmacists or clinicians can be equipped with device-embedded or handheld RFID readers ensuring that the drug is authentic, safe to administer and within it’s expiration date.

Counterfeiting in the Medical Device & Consumables Industry

The WHO reports similar issues in the medical device market. Healthcare equipment and in vitro diagnostics covers a very broad range of products from tongue depressors to more complex medical devices. The WHO reported in 2010 that over 8% of these devices in circulation were counterfeit. The market for these devices increased by 50% in 2014, which highlights their increasing prevalence in healthcare today (4).

However, the presence of gray market medical devices in the healthcare field are only part of the problem. Many medical device manufacturers utilize a "razorblade" approach, and generate a large portion of their revenues in device consumables, rather than the device itself. Today, OEM's face the ever-growing challenge of counterfeit chemical reagents and device disposables which threaten patient safety, as well as a manufacturers brand reputation and revenue stream.

Embedded and Handheld RFID Solutions for Counterfeit Medical Substances and Disposables

Getting the right component – part, reagent, or sample – matched to the right system is critical not only to ensure manufacturing and testing integrity, but also to prevent hospitals or labs from using the wrong items. Handheld or embedded RFID readers built into medical devices, water analyzers, and other systems, can seamlessly identify correct and incorrect products.

As counterfeit proprietary substances become more prevalent, the need to authenticate original products becomes increasingly necessary. By embedding RFID directly into medical devices and healthcare delivery systems, manufacturers can foil counterfeiters and secure recurring revenue streams:

• Reclaim lost revenue – Permit only sanctioned disposables and stop counterfeits.
Anti-Counterfeiting Measures...

- Protect brand integrity – Thwart counterfeiting to neutralize negative brand association and market degradation.

- Improve product safety – Ensure that medical devices are assembled, configured and used in the manner intended by the manufacturer -- safely and securely.

- Limit legal liability – Eliminate counterfeiting and lesser quality substitutes in order to minimize liability. Prevent the use of assets with expired warranties or overdue service dates. Decrease chance of error involved with human interaction.

- Enforce expiration dates – Permit consumption of reagents within pre-defined expiration dates.

Embedded RFID or handheld RFID peripherals can be added wherever a device requires a disposable.

JADAK’s deep knowledge of anti-counterfeiting measures, particularly in the medical industry, makes us uniquely positioned to solve all types of counterfeiting challenges. By embedding RFID technology into new and existing products, OEMs can now gain the product differentiation and competitive advantage that RFID-enabled features and functions impart, while at the same time protecting revenue streams and brand integrity.

In addition to anti-counterfeiting, JADAK RFID solutions are engineered for applications such as Medical Equipment Tracking, Pharmaceutical Tracking, Inventory Management, Sterilization Tracking, Access Control, Patient Monitoring & more. To learn more about our full line of HF/UHF RFID products and services, contact us today at 315-701-0678.


