

Prevent Counterfeiting & Diversion

The rising incidence of pharmaceutical counterfeiting has resulted in varying legislation worldwide to secure global supply chains. Despite these efforts, serialization is not an anti-counterfeiting solution. Issues such as diversion and serial number replication continue to put patients at risk. Companies are taking measures beyond regulatory compliance to address this growing problem. The challenge is finding a comprehensive solution that is:

- Covert, non-duplicable and secure
- Easy for supply-chain partners to validate

Affordable to implement and scale

With True Authentication

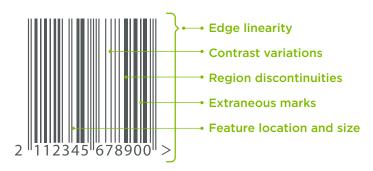
Product authentication at the individual item level is the most effective way to secure the supply chain and ensure quality and safety. What if the barcode on your existing drug package could be used to verify each product at any point in the supply chain, from the manufacturer to your patient?

UniSecure brand protection software empowers brand owners to do just that. Each medication becomes connected, giving partners and patients the ability to confirm authenticity and engage with you about that specific drug in real time.



How UniSecure Works

Printing is dynamic. Environmental and other input factors combine to produce small-scale variations or "noise" in printed data carriers. UniSecure intelligently analyzes these random, microscopic variations to create a unique signature, or e-Fingerprint, that cannot be reverse engineered or duplicated. This digital signature is then stored in the cloud for future authentication using a mobile app at any point in the supply chain.



Use Case

St. James's Hospital in Ireland dispenses drugs directly to patients, utilizing serialization and track-and-trace scanning via data matrix barcodes that comply with the European Serialization Model (ESM). In cooperation with Sharp Packaging (supplier) and Systech, the hospital ran a study that simulated the flow of pharmaceuticals through a serialized, international supply chain.

Pilot Test

Counterfeit products (cartons with barcodes copied from originals) were distributed alongside authentic products. The test analyzed individual effectiveness of three approaches to detect and prevent counterfeit medication from reaching patients—ESM and Pedigree Models (used in the DSCSA) and UniSecure.

Results

The pilot demonstrated that it is possible for counterfeit product to be dispensed to patients in a serialized supply chain. The UniSecure solution addresses existing security flaws with true authentication. These results indicate the percentage of counterfeit products identified:

ESM: 64% | Pedigree: 80% | UniSecure: 100%

View full details at Systech.one/StJamesCaseStudy.

Designed for Easy & Flexible Deployment

UniSecure camera on packaging line creates e-Fingerprint

- Works with printed data carriers including QR codes and UPC, EAN and 2D Data Matrix barcodes
- · e-Fingerprints stored on secure managed cloud

Smartphones perform authentication across the supply chain

- UniSecure mobile application available for download from AppStore and Google Play
- Software development kit allows customization to brand specifications and process flow

Authenticate



Results



Traceability



	UniSecure Solution	Additive Solutions
Package Changes	No	Most
Major Line Changes	No	Yes
Real-Time Authentication	Yes	Some
Non-Duplicable	Yes	No
Enables Customer Engagement	Yes	Some



Systech is revolutionizing brand protection. For over 30 years, global brands have relied on us to combat counterfeiting, prevent product diversion and meet regulatory compliance. Innovation is deeply ingrained in our DNA—from our start-up roots in advanced machine vision to pioneering pharmaceutical serialization and transforming traceability and non-additive authentication. Our software solutions keep products authentic, safe and connected across the supply chain—from manufacturing to the consumer's hands.

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