PRODUCT AUTHENTICATION SOLUTION

OVERVIEW

In many industries product tracking reaches beyond "in" or "out". It is important to know the pedigree of the product— the life it had before it reached the shelf or the consumer's hands. Counterfeited products can have destructive effects, not only on customer satisfaction but also sometimes even on consumer health or life. Clearly, this leads to a damaged business image and decreased revenue.

RFID technology has been used to authenticate products such as pharmaceuticals for over a decade and with the invention of smaller and smaller tags, RFID has penetrated also the electronics and consumer goods manufacturing.

SOLUTION

For our client, we developed a Product Authentication Solution based on TAGMATIKS, our cutting-edge enterprise, cloud-ready sensory adaptive network software platform, that enables rapid deployment and integration of scalable, real-time visibility solutions. The system provides provides unique ID generation and writing tools including encryption, as well as tracking and authentication tools.

But what does the system enable?

- Unique identification of product for authentication
- Reading information about product (expiration date, manufacturing date, etc.) from the embedded RFID tag
- Supply chain information from manufacturing to store
- Lot recalls
- Warranty tracking and service
- Inventory management

CUSTOMER PROBLEM

For years, our client, a wearable technology manufacturer, has been dealing with counterfeit products that have resembled their own very closely and upon the first view could have easily fooled not only the consumer but also the customer service representative.
In order to recognize and appropriately service their own product, the client had to find a way how to reliably authenticate it. This has become especially important, since the counterfeiters have become very sophisticated and they have been able to relatively easily duplicate any external and internal authentication markings. In addition to security, the new authentication method had to be reliable, fast and efficient, so that it can be seamlessly integrated into the manufacturing process.

HARDWARE USED

RFID tags (UHF RFID) in very small sizes are embedded into the product itself. RFID tags are encoded with a unique ID based on the manufacturer's requirements, which is encrypted and cannot be rewritten. This ID is then matched with a product database, where variations or duplicates would trigger an alarm.

At our client's facilities, the RFID Read & Program fixed reader stations are placed on manufacturing lines, where they program the User Memory of the embedded tags with a serial number, part number and a date and time. All programmed data as well as the tag UTID (Unique Tag Identification number) is captured into the database and used for product authentication in stores and service centers.
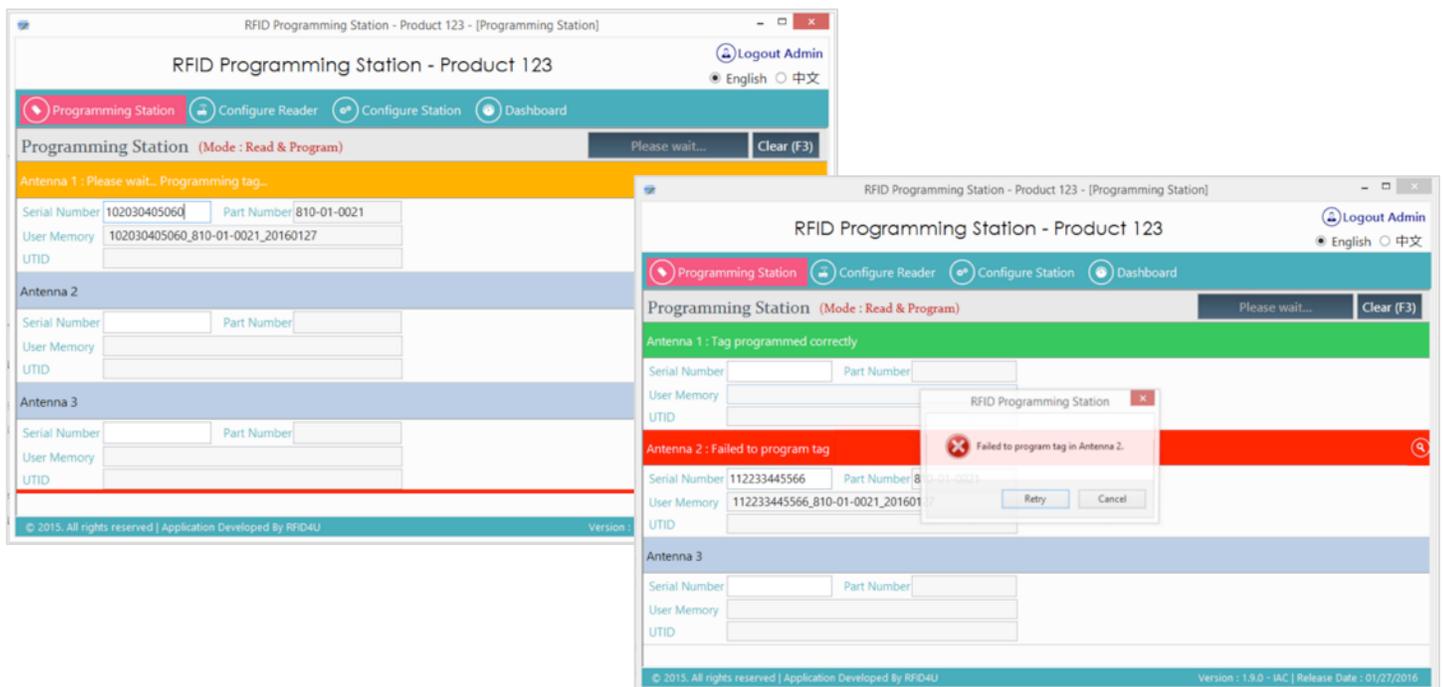
BENEFITS

- Unique identification of product for authentication ensures that the product has been manufactured by our client, the brand manufacturer, and therefore the recipe or technology is safe, sound and guaranteed. This prevents customer dissatisfaction and increases safety.
- Information about product, such as the serial number, product number, date and time, helps not only to authenticate the product but can be also used for sorting for inventory management (FIFO), recalls, picking, etc.
- Increased security of a supply chain from manufacturing to store that ensures that product is authentic and has not been tampered with throughout the supply chain.
- Warranty tracking and service enable servicing only authentic products that are in warranty, which saves time and cost (counterfeited products break more often and products out of warranty are usually not eligible for free service or exchange).