



.... adding an electronic identity to bottles for counting, traceability & authenticity



Make any bottle smart

- long range 'item level' stock control
- brand protection
- consumer engagement

CapTag® RFID electronic labels generate business value

- In Retail

maintain service levels - with reduced inventory levels

increase

- on-shelf availability and reduce stock outs
- backroom to front-of-store inventory accuracy and replenishment

reduce

- time and labour costs with automated inventory
- shrinkage

track bottles 'live' as they move through the retail floor
.... with EAS (Electronic Article Surveillance) functionality

- In Hotels, Clubs & Restaurants

reduce time and labour costs with automated inventory

- without disturbing 'fine wines'

enable instant, accurate stock checks – even daily
monitor patterns of stock loss, deter staff theft
& deliver a 4% gross margin increase

- & for Brands

Brand Protection

- complete 'through the supply chain' automated tracking, accuracy and control
- tamper evident options – for brand and consumer confidence in the product

Consumer Engagement

- smartphone readable 'smart' NFC versions also connect consumers directly to the 'Digital Space'
 - enabling new direct marketing services such as product information or loyalty programs,
 - generating interactive consumer communication & engagement
 - building brand loyalty

Promotional

- Energy Harvesting options – for powering interactive displays 'over the air'



The Technical Bit



Identification and tracking solutions based on the patented CapTag® family of paper-thin standard-CapTag® UHF RFID and combination UHF & NFC smart-CapTag® labels now provide a revolutionary way of capturing the electronic identity of bottles of wine, spirits, beer or soft drinks

..... and even perfumes, cosmetics & blood.

Conventional RFID labels, widely used to identify and track garments, don't work with bottles of liquids because the liquid absorbs the radio waves on which all conventional labels depend on for their communication.

Now, CapTag® labels have been developed, and patents granted to uniquely use that radio absorption to read bottles, at high speed and from metres away

... and, as no line of sight is needed, those bottles can also be read inside sealed cartons, wooden cases, or when clustered on shelves or conveyors – unlike QR or traditional barcodes.



Features

CapTag® based systems can be used globally, as they are totally compatible with:

- ISO/IEC standard Gen 2 RFID readers operating at the permitted UHF bands in each ITU region of the world.
- 'smart-CapTag®' dual frequency versions also support ISO/IEC14443 Type A, NFC Forum™ Type 2 specifications at 13.56MHz

Each 'standard-CapTag®' UHF label contains: 96-bit Unique Tag Identifier (TID) factory locked, including 48-bit unique serial number; a 128 or 96bit code area, programmable with an EPC identity; & optionally 32bits of user programmable data where the EPC area is 96 bit.

Secure data relating to the bottle ID can be stored on web-accessed data bases for additional security or by using the Product Status Flag bit enabling the CapTag® label to be used as EAS (Electronic Article Surveillance) tag without the need for a back-end data base

Tamper-evident versions to protect the contents of the bottle operate either: by destroying the CapTag® label functionality; or by irreversibly changing the CapTag® label's chip to another unique identity, when the bottle is opened or tampered with

Each 'smart-CapTag®' dual frequency version is manufactured with a 96-bit unalterable unique identifier (UID) with the same UID number being used by both RF protocols to ensure full traceability. For the NFC interface, the smart counter increments its value each time the NFC message has been read by the end-user.

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