



NXP® UCODE® DNA Track

Originality confirmed
Product authentic!

Your digital eye to confirm originals and spot fakes

This advanced RAIN RFID chip delivers precise, automated tracking while also offering secure product authentication based on AES encryption. The result is detailed inventory control with the ability to let businesses and consumers confirm originality.

KEY FEATURES

- ▶ Tag authentication with AES using 128-bit secret key
- ▶ EPC G2V2 compliant untraceable command
- ▶ 96-bit TID
- ▶ Pre-serialized for 96-bit EPC
- ▶ Fast encoding: 32 bits in 1.5 ms
- ▶ Parallel SKU encoding: 100 tags in 60 ms
- ▶ 448-bit EPC memory, 256-bit user memory
- ▶ Read sensitivity: -19 dBm
- ▶ Write sensitivity: -11 dBm
- ▶ Integrated product status flag
- ▶ Tag power indicator
- ▶ 32-bit kill password
- ▶ 32-bit access password
- ▶ 100 K write cycles
- ▶ 20-year data endurance

TARGET APPLICATIONS

- ▶ Long-range automated product authentication
- ▶ Sales-channel diversion detection
- ▶ Inventory management
- ▶ Supply-chain management

KEY BENEFITS

- ▶ Provides consumers and businesses with a secure way to confirm product originality and reveal fakes
- ▶ Improves quality by being able to store quality check flags directly on the chip
- ▶ Offers automated RFID tracking, using handheld, gate, and tunnel readers, for precise inventory control as products proceed from manufacturing to warehouse, store, and end user



UCODE DNA Track offers long-range automated tracking and secure authentication.

Supporting widely used RAIN RFID applications in inventory control, UCODE DNA Track gives retailers an edge, since it lets you know exactly what's where. At any given moment, store managers can use the information generated by UCODE DNA Track to see what's on the shelf, what's missing, and what needs to be replenished.



UCODE DNA Track goes the extra mile by providing retailers with the ability to prove product authenticity to their customers. During the RAIN RFID inventory count, UCODE DNA Track verifies the originality, so merchants can determine if a branded product is a properly sourced genuine item.

The ability to demonstrate authenticity increases consumer trust and brand loyalty. Retail customers may verify originality of a product at an In-Store RFID service kiosk. This increases the value of the retailer and drives traffic into the store.

Confirming product originality is especially important when it comes to digital sales. With online pharmaceutical ordering, for example, the authentication feature in UCODE DNA Track helps ensure that any medication you order is safe to use, serves its intended purpose, and is quality guaranteed by the manufacturer.



In the automotive sector, UCODE DNA Track can help increase safety by tracking components in the supply chain and guaranteeing their authenticity before being assembled into a vehicle.

This makes it easier to identify fake components, which may not comply with industry specifications and often have a shorter lifetime. Fake components pose a serious risk to people, and, once a brand has been damaged by counterfeit components, it can be a long and expensive operation to regain consumer trust.

UCODE DNA Track's authentication feature is based on Advanced Encryption Standard (AES) techniques and uses a 128-bit AES secret key.

The tag IC also complies with the latest standards, including GS1™ UHF RFID Gen2 v2.0 (Annex N, Tag Alteration), which adds powerful security options to protect data and prevent tag counterfeiting, and ISO/IEC29167-10, for proof of origin based on AES.

ORDERING INFORMATION

UCODE DNA Track	Delivery Form	Type	12NC
	Single Wafer Packing	SL3S5050N0FUD/00BG1	9353 3885 3003
	5 Wafer Packing	SL3S5050N0FUD/00BG1	9353 3885 3005

www.nxp.com

NXP, the NXP logo, UCODE and the UCODE logo are registered trademarks of NXP B.V. All other product or service names are the property of their respective owners. © 2017 NXP B.V.

Date of Release: March 2017

Document Number: UCODENATRACKLF REV 0

