



# NXP ICODE UID-OTP smart label IC SL2 ICS12

## Securing the medical supply chain

The pharmaceutical industry is moving to RFID labels to curb counterfeiting and improve its supply chain. NXP's ICODE technology provides the ideal solution with our ICODE UID-OTP smart label IC SL2 ICS12. Featuring a one-time programmable (OTP) user memory, it provides an efficient, reliable and safe system for item-level tracking.

### Key benefits

- ▶ Provides optimum counterfeit protection and helps reduce product diversion
- ▶ Supports fast reading of multiple tags on production lines and in distribution centres
- ▶ Ensures customer privacy
- ▶ Enables higher supply chain efficiency and transparency
- ▶ Improves the process of clinical trials

### Key features

- ▶ NXP programmed unique identifier (UID)
- ▶ Supports EPC or customer-specific numbering schemes
- ▶ Runs on ISO 15693 infrastructures with simple reader firmware update
- ▶ Anti-collision with identification speeds of up to 200 labels/s
- ▶ Destroy command with 24-bit code protection
- ▶ One-time-programmable user memory

### Key applications

- ▶ Counterfeit protection for pharmaceuticals
- ▶ Pharmaceutical supply chain management
- ▶ Patient and medical device tracking
- ▶ Access and inventory control
- ▶ Hospital laundry and services

ICODE UID-OTP is a dedicated solution for item-level RFID tracking in pharmaceutical supply chains. It supports the EPC numbering convention and high performance protocol, which allows faster read rates of up to 200 labels per second. An NXP-programmed Unique Identifier (UID) guarantees that each RFID tag is unique.

It is the ideal solution for pharmaceutical companies that need to meet increasing requirements to prove a drug is genuine and counter the growing trade in counterfeit and fake medicines. Already in the United States, the Federal Drug Administration is looking to introduce electronic pedigree schemes for pharmaceutical products, recommending RFID as one of the most promising technologies.

In addition to providing proof of a product's pedigree, ICODE UID-OTP also brings benefits to the pharmaceutical supply chain. Its fast read rates and anti-collision technology

help speed up processes and in-line checking, improving efficiency all along the supply chain from manufacture to the pharmacy shelf. The product features a one-time programmable (OTP) user memory, which locks the data on the tag after programming. It also offers a destroy command which can be used to disable the tag. This allows the tag to be destroyed when the customer picks up their prescription from the pharmacy, ensuring their privacy.

ICODE UID-OTP can also improve the process of developing drugs and running clinical trials. As all data can be electronically stored and linked to the label, it helps to decrease the amount of paperwork needed. This reduces human error when entering data and ensures procedure compliance in sample tracking. And with faster and more accurate statistics, pharmaceutical companies can bring new drugs to market more quickly.

Product Features	ICODE UID-OTP SL2 ICS12
<b>Memory</b>	
Size [bit]	192
Data Retention [yrs]	5
Organisation	24 blocks x 1 byte
<b>RF-Interface</b>	
According to	HF EPC Class 1 *
Frequency	13.56 MHz
Baudrate [kbit/s]	up to 53
Anti-collision	according to HF EPC Class 1 *
Operating Distance [m]	up to 1.5
<b>Security</b>	
Unique Identifier [bits]	40
Write Protection	OTP
<b>Special Features</b>	
EPC	yes
Destroy Command	yes
<b>Packaging</b>	
Sawn Wafer (Au-Bumped)	SL2 ICS1201DW/V1

\* MIT Auto ID Centre Specification