

NXP®
UCODE® 7 and
UCODE® 7m ICs

UCODE 7 for best-in-class RFID tagging

The latest generation of NXP's UCODE family delivers best-in-class RF performance and features, and is optimized for use in the most demanding RFID tagging applications.

KEY FEATURES

- ▶ Read sensitivity -21 dBm
- ▶ Write sensitivity -16 dBm
- ▶ Parallel encoding mode: 100 items in 60 ms
- ▶ Encoding speed: 16 bits per millisecond
- ▶ Innovative functionalities
 - Tag power indicator
 - Pre-serialization for 96-bit EPC
 - Integrated Product Status Flag (PSF)
- ▶ Compatible with single-slit antenna
- ▶ Up to 128-bit EPC
- ▶ 96-bit unique tag identifier (TID) factory locked
 - With 48-bit unique serial number
- ▶ 32-bit user memory (UCODE 7m only)
- ▶ EPC Gen2 v2.0 ready

TARGET APPLICATIONS

- ▶ Inventory and supply-chain efficiency
- ▶ Brand protection solutions for apparel and footwear, fast-moving consumer goods (FMCG), pharmaceuticals, etc.

KEY BENEFITS

- ▶ High-performance versatile global tags
- ▶ Smaller tags for existing and new solutions
- ▶ Fastest encoding speed
- ▶ Faster unique EPC encoding
- ▶ Higher printer throughput
- ▶ More mechanically stable antenna connection
- ▶ Easier design of label antenna

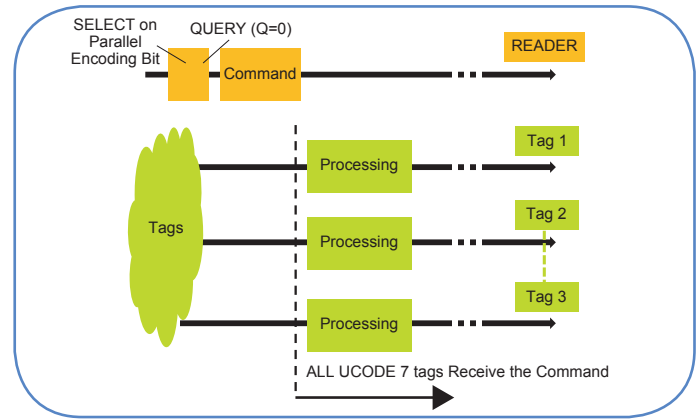


NXP UCODE 7 is particularly well suited for use in inventory and supply-chain efficiency applications, as well as brand protection. Best-in-class RF performance for any given antenna form factor gives UCODE 7 the ability to perform long-range, fast, and accurate inventory of dense RFID tag populations.

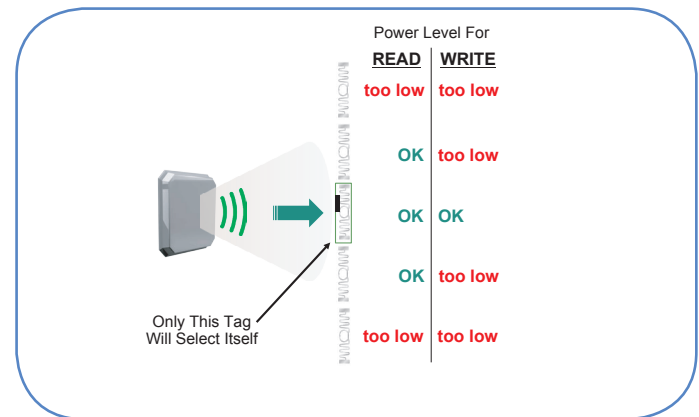
The device features pre-serialization for 96-bit EPC, and a parallel encoding feature. By combining the two, the same 58-bit stock keeping unit (SKU) can be encoded on multiple tags at the same time, so tag initialization is much faster and simpler.

- ▶ Parallel encoding considerably lowers the encoding time. This is especially true when coupled with the automatic self pre-serialization feature of UCODE 7, which means that only the same SKU data needs to be encoded.
- ▶ Single-slit antenna compatibility enables simpler antenna design. The extra input capacitance also provides margin for optimization of UCODE 7 to different antenna designs.
- ▶ The Tag Power indicator allows the inlay manufacturer to avoid crosstalk during tag initialization in a dense environment of tags, even though the reader may read more than one tag.
- ▶ The Product Status Flag (PSF) can easily be used as a flag for electronic article surveillance (EAS), a flag for quality checks, or similar indicators.

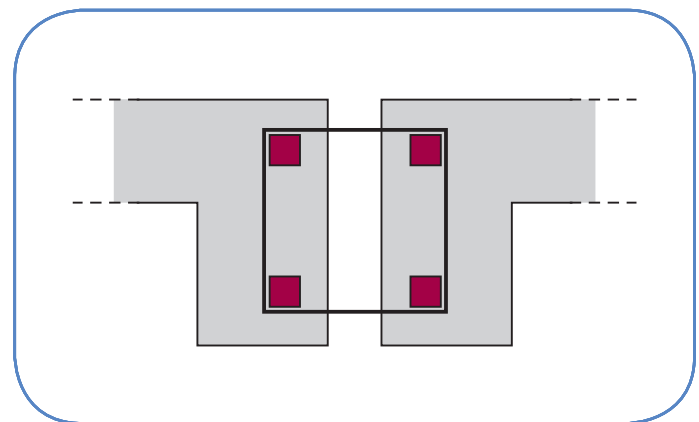
PARALLEL ENCODING WITH UCODE 7



UCODE 7 TAG POWER INDICATOR



COMPATIBLE WITH SINGLE-SLIT ANTENNAS



ORDERING INFORMATION: UCODE 7 AND UCODE 7m

Product	Delivery Form	Type
UCODE 7	Plastic extremely thin and small outline package, no leads, 6 terminals, body 1 x 1,45 x 0.5mm	SL3S1204FTB0/1
UCODE 7	Bumped die on sawn 8", 120 µm thickness wafer with 7 µm Polyimide layer	SLS3S1204FUD/BG1
UCODE 7m	Plastic extremely thin and small outline package, no leads, 6 terminals, body 1 x 1,45 x 0.5mm	SL3S1214FTB0/1
UCODE 7m	Bumped die on sawn 8", 120 µm thickness wafer with 7 µm Polyimide layer	SLS3S1214FUD/BG1

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