



NTAG® 213/215/216: NFC Forum Type 2 Tag Compliant IC with 144/504/888 Bytes User Memory

NTAG213_215_216

Last Updated: Dec 17, 2024

NTAG 213, NTAG 215, and NTAG 216 have been developed by NXP® Semiconductors as standard NFC tag ICs to be used in mass-market applications such as retail, gaming, and consumer electronics, in combination with NFC devices or NFC-compliant Proximity Coupling Devices. NTAG 213, NTAG 215, and NTAG 216 (from now on, generally called NTAG 21x) are designed to fully comply to NFC Forum Type 2 Tag and ISO/IEC14443 Type A specifications.

Target applications include Out-of-Home and print media smart advertisement, SoLoMo applications, product authentication, NFC shelf labels, and mobile companion tags.

Target use cases include Out-of-Home smart advertisement, product authentication, mobile companion tags, Bluetooth® or Wi-Fi pairing, electronic shelf labels, and business cards. NTAG 21x memory can also be segmented to implement multiple applications at the same time.

Thanks to the high input capacitance, NTAG 21x tag ICs are particularly tailored for applications requiring small footprints, without compromise on performance. Small NFC tags can be more easily embedded into, e.g., product labels or electronic devices.

The mechanical and electrical specifications of NTAG 21x are tailored to meet the requirements of inlay and tag manufacturers.

Contactless energy and data transfer

Communication to NTAG 21x can be established only when the IC is connected to an antenna.

When NTAG 21x is positioned in the RF field, the high-speed RF communication interface allows the transmission of the data with a baud rate of 106 kbit/s.

Simple deployment and user convenience

NTAG 21x offers specific features designed to improve integration and user convenience:

- The fast read capability allows scanning the complete NDEF message with only one FAST_READ command, thus reducing the overhead in high throughput production environments
- The improved RF performance allows for more flexibility in the choice of shape, dimension, and materials
- The option for 75 µm IC thickness enables the manufacturing of ultrathin tags, for a more convenient integration in, e.g., magazines or gaming cards

Security

- Manufacturer programmed 7-byte UID for each device
- Preprogrammed Capability container with one-time programmable bits
- Field programmable read-only locking function
- ECC-based originality signature
- 32-bit password protection to prevent unauthorized memory operations

NFC Forum Tag 2 Type compliance

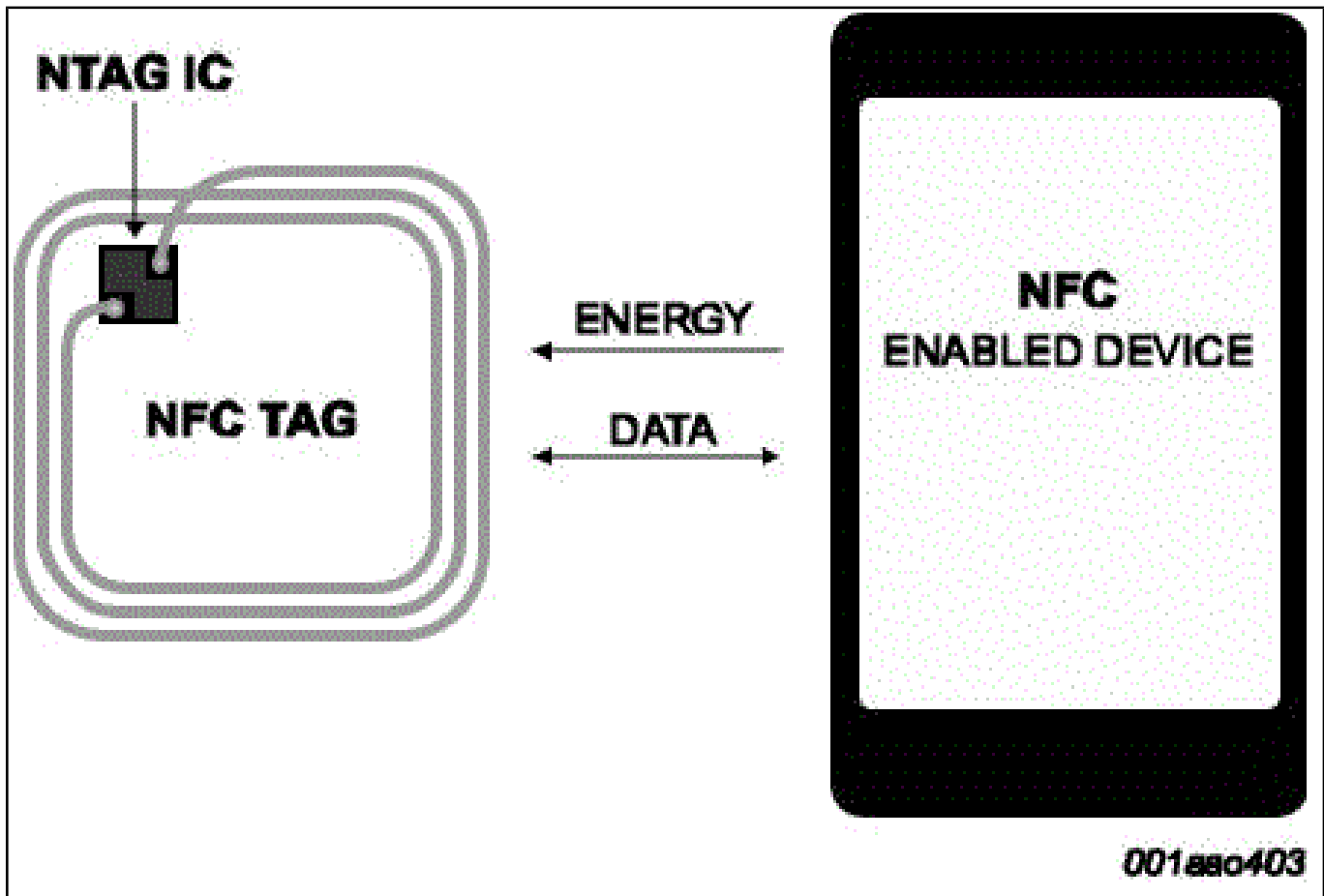
NTAG 21x IC provides full compliance to the NFC Forum Tag 2 Type technical specification and enables NDEF data structure configurations.

Anti-collision

An intelligent anti-collision function allows operating more than one tag in the field simultaneously. The anti-collision algorithm selects each tag individually and ensures that the execution of a transaction with a selected tag is performed correctly without interference from another tag in the field.

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NTAG 213/215/216 Block Diagram



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