



## 13.56MHz RFID/NFC Bracelet – NTAG203 Chip

PRODUCT ID: 4043

This is a blank 13.56MHz RFID/NFC Bracelet with an NTAG203 chip – often used for train/bus passes, information sharing, contactless payment, but also found in other systems where a proximity card is desired. The bracelet contains a small RFID chip and an antenna, and is passively powered by the reader/writer when placed a couple inches away.

These can be read by almost any 13.56MHz RFID/NFC reader, but make sure it can handle ISO/IEC 14443 Type A cards (the standard NTAG uses) as there are a few other encoding standards (like FeLica).

These chips can be written to and store up to 144 bytes of data in writable EEPROM divided into 4 byte banks, and can handle over 10,000 re-writes. You can use our PN532 NFC/RFID breakout board or Adafruit NFC/RFID Shield for Arduino to read and write data to the EEPROM inside the tag. There is also a permanent 7-byte serial number ID burned into the chip that you can use to identify one tag from another – the ID number cannot be changed.

These use an NTAG chipset, a 'Type 2' tag that is usable with any smartphone. Unlike "Classic 1K" cards (a.k.a MiFare S50s), these tags are more secure and work with almost any phone with RFID support since they avoid the patent issues with Mifare, which requires an NXP chipset or license fee.

## TECHNICAL DETAILS

RFID chip specification:

- 144 bytes of user r/w memory area, divided in 36 pages (4 bytes each)
- 7 Byte unique identifier burned into the chip
- Operating frequency: 13.56 MHz

Tag specification:

- 13.8 grams / 0.48 oz
- Fits wrists/ankles/bionic hands up to 70mm (2.75") diameter / 25.4mm diameter
- Works about 4" away from reader



<https://www.adafruit.com/product/4043/1-23-19>