CLOUD-ST25TA02KB

NFC Forum Type 4 Tag IC demonstration board

Features

- Ready-to-use printed circuit board with
  - ST25TA02KB-P NFC/RFID Tag in UFDFPN5 ECOPACK®2 package
  - 19 mm^2 single layer inductive antenna, etched on the PCB
- Contactless interface
  - TruST25™ digital signature
  - NFC Forum Type 4 Tag
  - ISO/IEC 14443 Type A
  - 106 kbps data rate
  - Internal 50 pF tuning capacitance, enabling design of small inductive antennas

- Memory
  - 256 Byte (2 Kbit) EEPROM with NDEF data support
  - 200-year data retention
  - 1 million erase-write cycles endurance
  - 128-bit password data protection
  - 20-bit event counter for read or write access with anti-tearing feature
- Digital pad
  - Configurable general purpose output (GPO) indicating, for example, RF field detection

Figure 1. CLOUD-ST25TA02KB board (top view)
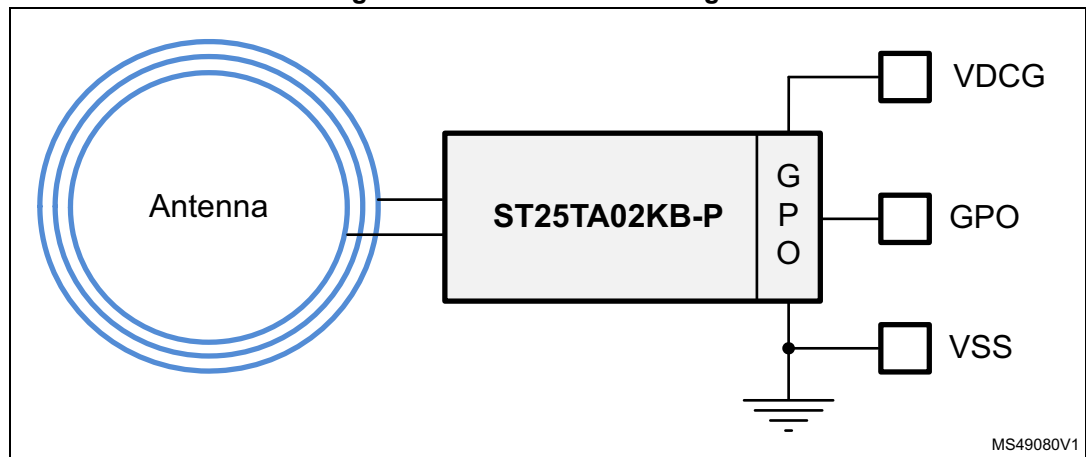
1   Description

The CLOUD-ST25TA02KB is a ready-to-use demonstration board intended to evaluate the ST25TA02KB-P device.

The ST25TA02KB-P is a dynamic NFC/RFID tag IC with a digital General Purpose Output (GPO), embedding a 2 Kbit EEPROM that supports NDEF tag applications for NFC Forum Type 4.

The device communicates using the ISO/IEC 14443 Type A protocol, and is fully powered by the RF field. When the GPO output is used, an external reference voltage is required to set the high level voltage of the GPO signal to be directly compatible with the I/O voltage of the MCU or Host, without the need for any level shifter.

The GPO signal is active High when asserted, and can be used as a rising edge interrupt. It may be configured through the RF interface for various uses, like indicating Field Detection (by default) to wake-up an MCU, or Host like a Bluetooth® or a Wi-Fi® chipset.

Figure 2. Functional block diagram

2   Revision history

Table 1. Document revision history

Date	Revision	Changes
15-Jan-2018	1	Initial release.

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