

TRF7970A

Near Field Communication Transceiver IC

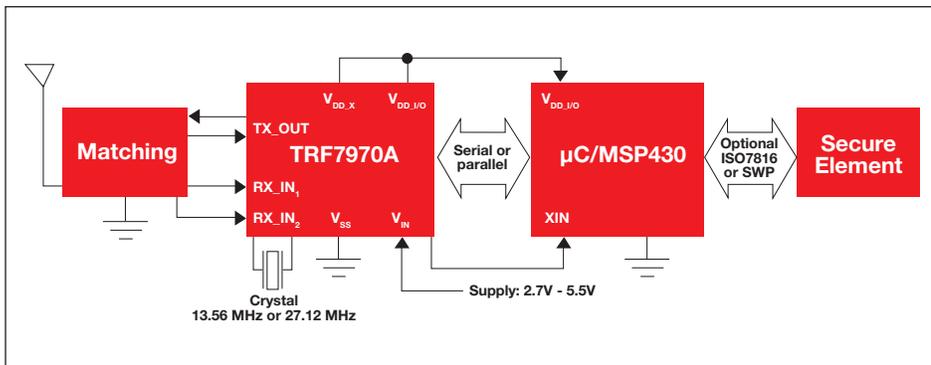
TI-NFC IC

TRF7970A

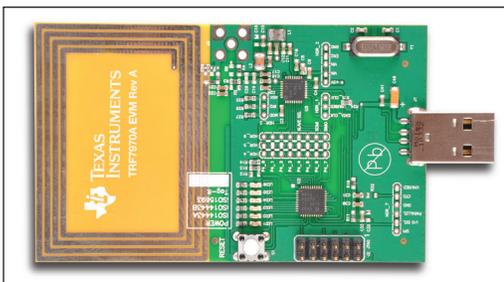


Product bulletin

The TRF7970A is the newest addition to the TRF796x HF Transceiver IC Family. TRF7970A supports Near Field Communication (NFC) Standards NFCIP-1 (ISO/IEC 18092) and NFCIP-2 (ISO/IEC21481) which defines the selection of any of the four possible communication modes (NFC peer-to-peer, card emulation, proximity reader/writer – ISO14443A/B or FeliCa and Vicinity reader/writer – ISO15693). Integrated encode, decode and data framing capability for data rates up to 848kbits, wide supply voltage range support (2.7V – 5.5V), large FIFO buffer for RF communication, relevant NFC software stack libraries and an innovative RF field detector allow for easy development efforts and robust, cost effective designs. Finally, eight selectable power modes and ultra-low power operation enable the longest battery life in the industry. The devices also offer unparalleled flexibility via the various direct communication modes on the device to allow implementations of custom protocols as well as other 13.56 MHz standards. The receiver system enables AM and PM demodulation using a dual-input architecture to maximize communication robustness.



▲ TRF7970A block diagram



▲ TRF7970A EVM board

Tools and support

Get started on NFC with the TRF7970A Evaluation Kit

- Order Code: TRF7970AEVM
- Reference Design
- Source Code

Key features

- NFCIP-1, NFCIP-2
- Peer-to-peer, card emulation, reader/writer functionality
- ISO14443A, ISO14443B, FeliCa, ISO15693
- Supply voltage range: 2.7 – 5.5V
- Operating temperature: -40°C to +110°C
- Parallel or SPI interface
- Integrated data framing, CRC and/or parity checking
- Integrated voltage regulators for MCU supply (20mA)
- Clock output for MCU
- Selectable receive gain with AGC
- Antenna driver using OOK or ASK modulation
- Programmable output power, 100mW and 200mW
- RF field detector with programmable wake-up levels
- Eight user selectable power modes
- Power down 1μA
- NFC software library available

Targeted applications

Infrastructure devices which communicate to the NFC enabled smart phones and PDAs

- Public transport / Event ticketing
- Access control / Digital door-lock
- POS contactless payment
- Medical equipment
- Product identification / authentication
- Sharing of electronic business cards
- Secure pairing
 - Bluetooth, wireless networks
- Short range wireless communication
 - FW updates

For more information, visit
www.ti.com/trf7970a

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