

TRF7960RHBT
1k units from:
€ 3.77

TRF7961RHBT
1k units from:
€ 3.08

TRF7960EVM
Evaluation Module
€ 142.50

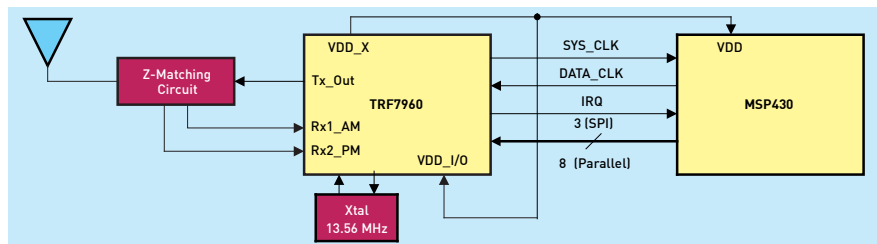
TRF7960/1

RFID Solutions



Lionel Deflandre, Silica France

Across the world, highly sophisticated data management systems track inventories, control quality, automate accounting, and try to keep track of the fast-moving business world. These systems rely on accurate data collection — not always possible with manual approaches or even barcode systems. A breakthrough in radio frequency identification (RFID) called “smart labels” is delivering dramatically higher levels of performance in automatic identification and tracking. TI offers a complete range of solutions from antennas, Readers and Tags in different frequency. Proximity applications are mainly concerned with ticketing and payments, where reading distances are up to 100mm (4”). This is the standard ISO/IEC 14443 operating at 13.56MHz which TI covers solution for Identification cards - Contactless integrated circuit(s) cards - Proximity cards. Vicinity applications include product identification and tracking and would be capable of identifying objects up to 1m (39”). This is the ISO/IEC 15693. TI is providing Identification cards - Contactless integrated circuit(s) cards - Vicinity cards. There is also a generic ISO standard for RFID systems operating at 13.56MHz. This is the ISO/IEC 18000-3 Physical Layer, Anti-collis-



sion and Protocol for 13.56MHz systems. Additionally there is a proposed EPC recommendation for 13.56MHz. This is the 13.56MHz ISM Band Class 1 Radio Frequency Identification Tag Interface. Different levels of readers are provided from completed OEM reader module, from Ireader IC's all the way to complete OEM reader modules. Two IC readers the TRF7960 and TRF7961 are designed for such 13.56MHz applications are available. They Support ISO14443 A and B tag reader (only for TRF7960), and ISO 15693/ISO18000-3. The receiver system enables AM and PM demodulation using a dual-input architecture. The received signal strength for AM and PM modulation is accessible via the RSSI register. The receiver also includes an automatic gain control option and selectable gain. Also included is a selectable bandwidth to cover a broad range of input subcarrier

signal options. The receiver output is selectable between a digitized subcarrier signal and any of eleven integrated subcarrier decoders to support both (low and high) bit rates for vicinity and proximity systems.

Key Features

- Tag:
 - Inlay in 13.56MHz in different package size (28 different label)
- Reader:
 - TRF7960/61
 - 100 or 200mW output power
 - Auto-Configured Default Modes for each
 - Supported ISO Protocol
 - Adjustable ASK Modulation Range (8...30%)
 - Wide input supply range: 2.7...5V
- Several Power Modes:
 - Power Down < 1µA
- Standby 120µA
- Active (Rx only) 10mA
- Parallel 8-bit or SPI bus interface

Key Design Tips

- TRF7960EVM: Evaluation board
- <http://focus.ti.com/lit/ug/slou192b/slou192b.pdf>
- Source code for MSP430 and reader available

Product Family	Name
Tag-it HF- I Plus Inlays	Tag-it HF-I Plus Inlays (several form factors available)
Tag-it HF- I Standard Inlays	Tag-it HF-I Plus Inlays (several form factors available)
Tag-it HF- I Pro Inlay	Tag-it HF-I Plus Inlays (several form factors available)
Tag-it HF- I Standard Inlay	Tag-it HF-I Standard Inlay 45x45 mm
Tag-it HF- I Plus Wafers	Tag-it HF-I Transponder IC (150um, 265um thickness, AU, AU/NI bumps)
Tag-it HF- I Standard Wafers grind, sawn on tape)	Tag-it HF-I Transponder IC (150um thickness, AU/NI-AU bumps)
Tag-it HF- I Pro Wafers Tuning Module	Tag-it HF-I Pro Transponder IC (150um thickness, AU/NI-AU bumps)
HF TRANSPONDERS-PACKAGED TRANSPONDERS	13.56MHz Vicinity Card Transponder (150um thickness, AU/NI-AU bumps)
Over molded Tags (RF-HDT-WNMC-M0, RF-HDT-WNME-M0)	TI over molded Tags designed for harsh environment

Service available or already delivered T&R from Manufacturer.
Tapes are available, but not stocked at Avnet Logistics due to low demand.
Device supported by or programming equipment, but the socket for this package must be provided by customer.

P/N	Package	Programming	Taping & Reeling	Marking
TRF7960RHBT	32-lead QFN			
TRF7961RHBT	32-lead QFN			