

# PTX130R NFC READER IC

The industry's best-performing NFC controller for Android™ devices



The PTX130R is a comprehensive NFC reader system-on-chip for use in Android™ devices and point-of-sale (PoS) terminals. It provides a complete NFC reader implementation including the RF physical layer, power management circuit, and on-chip MCU.

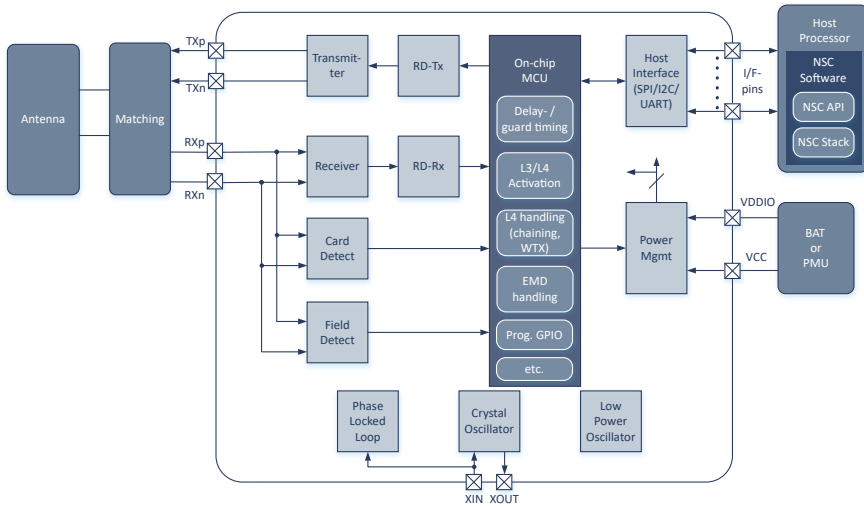


## Features and Benefits

Product Features	Customer Benefits
High output power up to 2W @5.5V Very high Receiver sensitivity (-80dBc)	Allows to pass with margin the EMVCo 3.0/3.1 tests of VoV Allows to design antenna in challenging environment (behind display, small area...) Higher reading distance in Type A, B, F, V (up to 40% increase in Type V vs competition)
DiRAC: Direct antenna connection for Tx and Rx	BoM reduction (EMI) Less components allow to assure marginal NFC variation between devices during production
Removal of second resonating structure introduced by EMI	Simplification of Antenna tuning No EMI filters for optimal interoperability with different Types of Cards form factor (Card, Dongle, token, wearable, smartphone, ring)
Sine Wave output Accurate Digital Wave Shaping	Allows to pass EMVCo PCD and NFC Forum Waveform tests with margin No 3rd harmonic simplifying FCC certification
Android™ integration support	Supports integration on both MCU and Android™ based device

# PTX130R NFC READER IC

## PTX130R Block Diagram



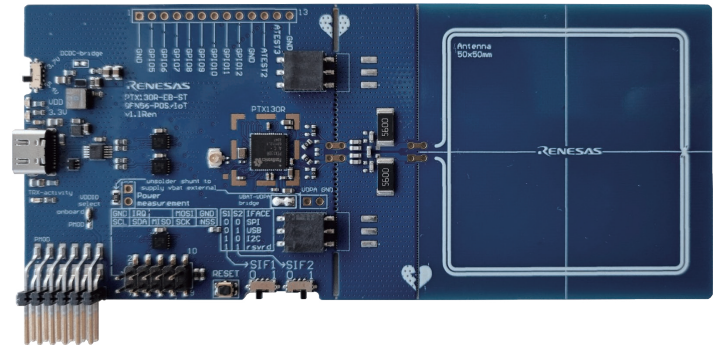
This superior RF performance provides manufacturers of Android™ devices and PoS terminals with valuable benefits:

- Easier to achieve compliance with the broader set of more demanding interoperability tests specified by NFC Forum and EMVCo standards
- Reliable NFC coupling in challenging operating environments
- Supports operation through an antenna typically 4-5 times smaller than that required by conventional NFC readers
- Fewer external components for bill-of-materials cost and space savings

## PTX130R Evaluation Kit

### Evaluation Kit Development Features

- Connection for customized antenna design for RF evaluation
- PC application for easy evaluation and development with PTX130R
- PMOD connector to attach application specific microcontroller
- Interface selection between SPI / I2C / UART
- Option for external clocking
- Adjustable voltage supply value



### Evaluation Kit Contents:

- PTX130R NFC Reader Evaluation Board
- 1 H-Field Detector Card
- USB A-C Cable

## Typical Applications

- [Single Board Computer](#)
- [High-Performance HMI System](#)
- Android™-based Devices
- PoS
- Authentication
- Brand Protection
- ID Reader
  - Public Transportation Pass Reader
- PDA



For more details, please visit: [renesas.com/PTX130R](https://www.renesas.com/PTX130R)

Renesas Electronics Corporation

[www.renesas.com](http://www.renesas.com)

© 2025 Renesas Electronics Corporation. All rights reserved.  
All trademarks are the property of their respective owners.

Document No. R19PF0086EU0200