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.
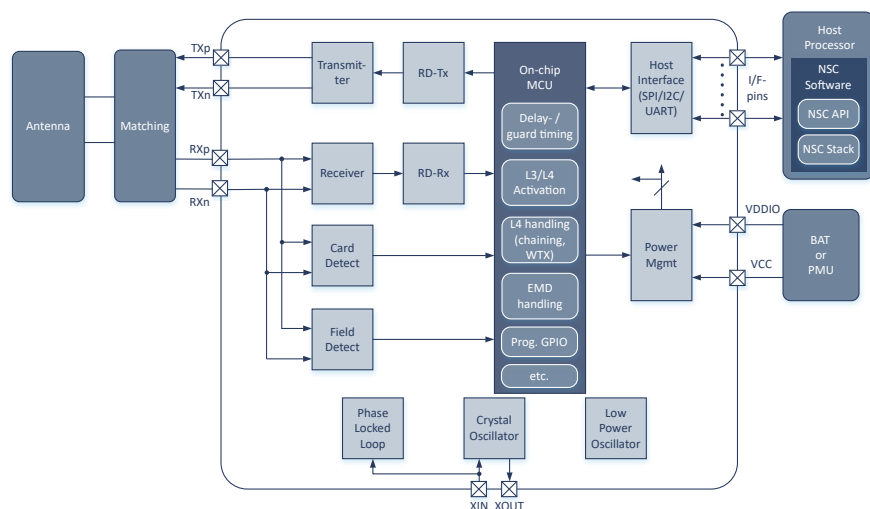
Features and Benefits

Product Features	Customer Benefits
High output power up to 2W @5.5V	Allows to pass with margin the EMVCo 3.0/3.1 tests of VoV
Very high Receiver sensitivity (-80dBc)	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	Allows to pass EMVCo PCD and NFC Forum Waveform tests with margin
Accurate Digital Wave Shaping	No 3rd harmonic simplifying FCC certification
Android™ integration support	Supports integration on both MCU and Android™ based device

PTX130R NFC READER IC
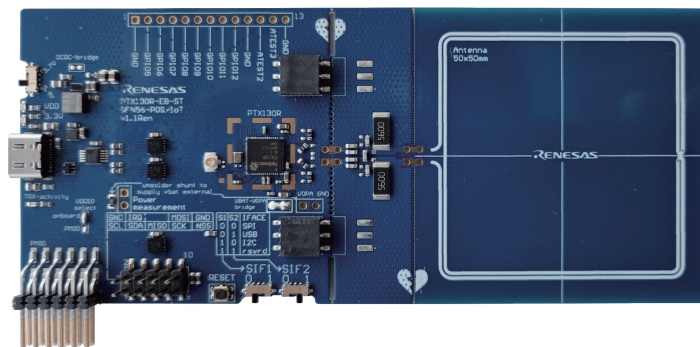
PTX130R Block Diagram

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

WINNING COMBINATIONS
Renesas' complementary product portfolios of Analog + Power + Embedded Processing + Connectivity work together to deliver comprehensive solutions.

For a complete list, visit **renesas.com/win**

For more details, please visit: renesas.com/PTX130R

Renesas Electronics Corporation

www.renesas.com