

RA Ecosystem Partner Solution

Pantronics PTX105R Pmod Board for IoT



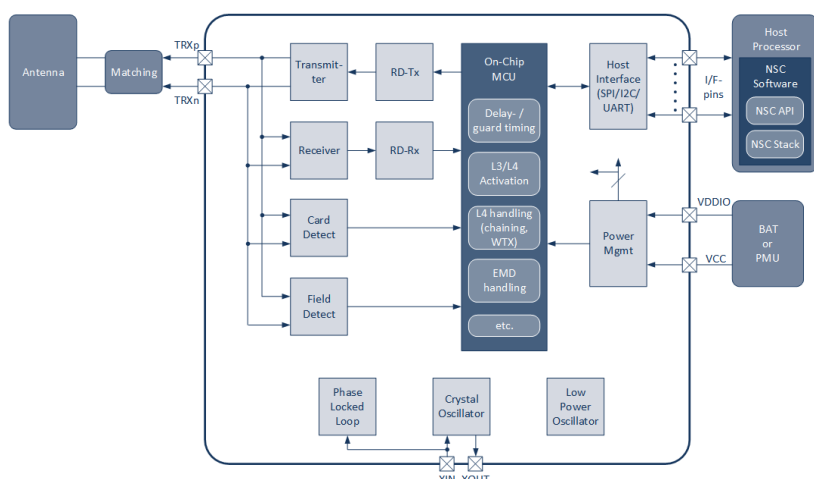
Solution Summary

Pantronics PTX105R Pmod board is fully integrated into the Renesas Quick-Connect IoT ecosystem and provides a full featured high-end reader for NFC integration into challenging environments. Using the standard Pmod form factor allows NFC evaluation on many Renesas MCU evaluation kits. The Pantronics NFC stack is precompiled on the [Renesas RA2E1](#) 48 MHz Arm Cortex-M23 general-purpose microcontroller.

Features/Benefits

- Accurate Digital Wave Shaping
- DiRAC: Direct antenna connection
- Very high Receiver sensitivity
 - -80dBc
- Programmable GPIO functionality
- On-chip processing of time critical commands
- Easy evaluation any RA EK board
- Simplified antenna tuning
- No EMI filters for optimal interoperability
- Higher reading distance in Type A, B, F, V
- Less NFC variation between devices during production and BoM reduction
- No 3rd harmonic simplifying FCC certification

Diagrams/Graphics



Target Markets and Applications

- IoT Readers
- Access Control
- Brand Protection
- ID Reader
- Door Lock

Product Description

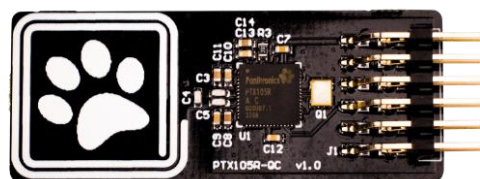
Panthronics PTX105R NFC IC is a highly integrated NFC reader IC for contactless communication with improved key performance parameters such as output power and RX sensitivity (-80dBc). While eliminating EMI filter and matching components, it enables simple integration and compact design without the complexity associated with existing solutions.

Due to its split stack architecture, time-critical operations are running on the on-chip MCU and the rest of the NFC logic is running in the host controller. Panthronics provides a complete SDK with pre-defined APIs to facilitate software integration.

Package content

- PTX105R Pmod board
- PTX105R / RA2E1 Demo Start Guide
- Reference schematics
- NFC Stack library for RA2E1
- Software integration guidelines

[PTX105R Pmod Board](#)



Innovative NFC for Security, Power and IoT

Panthronics AG is headquartered in the semiconductor hub of Graz, Austria, and was founded in 2014. Since then, we have been working on the development of **innovative products based on NFC technology**, consisting of hardware and software and we are the only independent provider of this technology.

To date we have successfully launched **multiple NFC ICs** into the market. Our NFC products are used in **Point of Sale terminals, wireless charging of wearables and in the field of Internet of Things (IoT)**. The innovative strength of our company, which has now grown to more than 70 employees, was also confirmed by winning the Austrian Innovation Award 2020/2021 as well as the **CES 2022 Innovation Award**.

With our **fully-qualified supply chain** and in house operations, Panthronics provides customers with **custom and standard silicon, software products and solutions**.

About Us

Since 2014 Panthronics has been developing ground-breaking NFC technology and products, targeting the most demanding applications in high growth markets such as NFC Wireless Charging, Mobile and Point of Sale.

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