Product Brief PTX30W NFC Wireless Charging Listener IC

Product Description

The PTX30W is a powerful and efficient NFC Listener system-on-chip for NFC wireless charging applications alongside data communication. PTX30W features single chip solution for NFC based wireless charging systems which harvest power, handles wireless charging protocol, and charges a Lithium-ion battery. While eliminating external discrete components. The superior RF performance of PTX30W enables small antenna design, fast charging and allows flexible placement of Poller and Listener antennas.

Features

- Highly integrated NFC Wireless Charging Listener device
  - Highly efficient Active Rectifier
  - RF interface according to Forum Type 2 Tag
  - Li-Ion battery charger with charging current from 5mA to 250mA
  - MCU LDO with 1.8V or 3.3V output, up to 50mA
  - Embedded power negotiation logic
- High-efficiency NFC wireless charging listener IC with up to 1W received power capability
- Designed according to NFC Forum Wireless Charging standard
  - Static and negotiated WLC control support
- Standalone operation (optional external Host MCU)
- I2C slave interface
- 2x configurable GPIOs
- On-chip overvoltage limiter circuit
- On-chip temperature sensor for over-temperature detection/protection
- 1.78x1.78mm, 16 pins, 0.4mm pitch WL-CSP package

Applications

NFC wireless charging of devices, e.g.:

- Smartwatches, Fitness Trackers, Wristbands
- Smart and Audio Glasses
- Earbuds, Headphones, and Hearing Aids
- Stylus Pens and computer Mouses
- Industrial devices

It integrates easily into existing products to add NFC based wireless charging, data exchange, and pairing features.

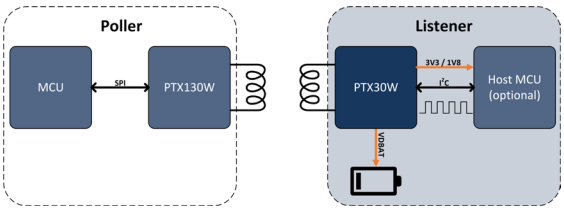
It pairs with Panthronics PTX130W NFC WLC Poller device for a complete wireless charging solution.

Applications

NFC wireless charging system consists of:

- WLC Poller (power transmitter and communication initiator)
- WLC Listener (power receiver)

NFC wireless charging solution is based on well-established NFC technology operating at 13.56MHz.



1 Block Diagram

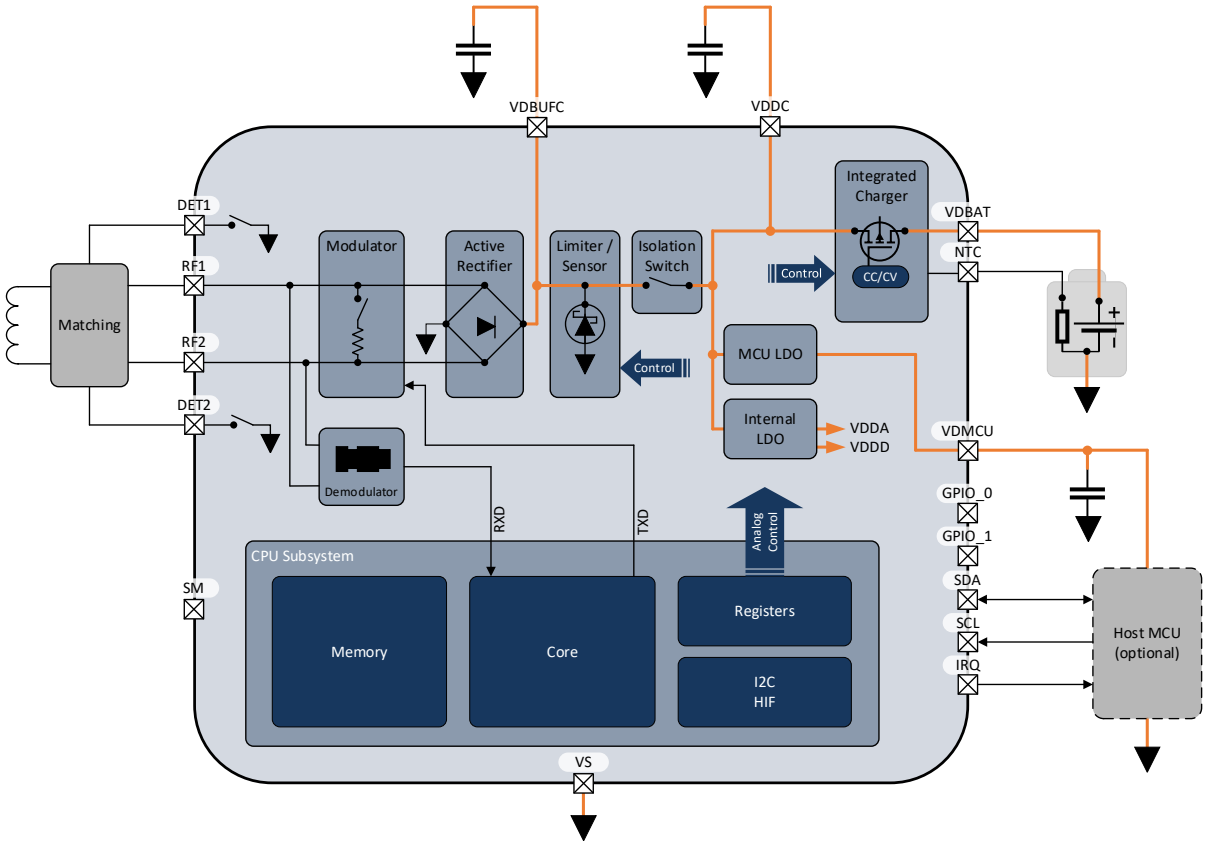


Figure 1: Block Diagram

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