

PRODUCT FACT SHEET



PTX100R NFC Reader IC

The industry's best-performing NFC controller for point-of-sale terminals and mobile point-of-sale applications

- Industry best sensitivity and output power
- Superior RF performance enables EMVCo 3.0 certification with small antenna or noisy display
- Ultra-precise wave shaping dramatically reduces time to market
- On Chip EMVCo 3.0 HW accelerator delivers significantly more timing margin for Level 2 development



Innovative RF architecture enables flawless NFC connectivity in PoS terminals

The PTX100R is a comprehensive NFC reader system-on-chip for use in point-of-sale (PoS) terminals and mobile PoS applications. It provides a complete NFC reader implementation optimized for use in contactless payment terminals, including the RF physical layer, power management circuit, and on-chip EMVCo hardware accelerator.

Superior NFC performance

The PTX100R sets a new, high standard for the performance of NFC reader ICs, thanks to an innovative RF architecture developed by Panthronics. Implementing unique DiRAC direct-to-antenna technology, the PTX100R dispenses with the EMC filter and other lossy, large-tolerance components used by the conventional NFC readers in today's PoS terminals. Instead, the Transmit and Receive circuits in the PTX100R are connected directly to the antenna, producing exceptional RF performance:

- The industry's best sensitivity of -80dB, more than twice as sensitive as conventional readers
- The industry's highest power output of >2W at the antenna
- Finer control of the shape of the modulated output signal

This superior RF performance provides manufacturers of PoS terminals and mobile PoS applications with valuable benefits:

- Easier to achieve compliance with the broader set of more demanding interoperability tests specified in the latest EMVCo 3.0 standard for contactless payment terminals
- Reliable NFC coupling in challenging operating environments, such as through an antenna mounted behind a PoS terminal's display
- 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

The PTX100R reader provides a new, easier way to embed NFC connectivity thanks to its low component count and simple RF implementation.

Applications

- Contactless payment terminals
- Point-of-sale equipment
- Mobile point-of-sale devices
- NFC readers
- IoT devices



Features

- Accurate digitally-controlled output wave shaping
- On chip EMVCo 3.0 hardware accelerator
- EMVCo 3.0 ready
- Supported host interfaces: SPI, I²C, UART
- Supply voltage range: 2.7V to 5.5V
- Ambient temperature range: -40°C to 85°C
- Compatible with Linux® operating system, commercial RTOSs and MCUs with no operating systems

PTX100R
BLOCK DIAGRAM

