

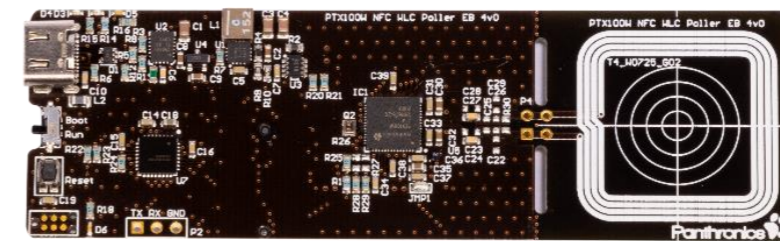
NFC IC	NFC WLC SOLUTION
PRODUCT	PTX100W
Product description	High-performance, high-power NFC Wireless Charging (WLC) frontend solution with multi-protocol reader functionality. Universal SW device integration.
Availability	✓
Technology	180nm
NFC Wireless Charging standards & Features	
NFC WLC Exclusive Poller	✓
NFC WLC static charging protocol	✓
NFC WLC negotiated charging protocol	✓
Data-exchange via NFC protocols	✓
FOD (Foreign object detection)	✓
Power regulation in steps [no. of steps]	5
Low Power Listener Detection current consumption, typ. [µA], @ 2 Hz	100 µA
Reader standards	
Reader / Writer	ISO/IEC 14443 A/B up to 848 kbit/s, MFCC ISO/IEC 18092, FeliCa™ ¹ up to 424 kbit/s ISO/IEC 15693 up to 26,5 kbit/s ISO/IEC 18000-3 M1
Carrier frequency [MHz]	13,56 MHz
NFC Forum tag type support	2, 3, 4, 5
Card emulation (HCE)	✓
NFC Tag-Type emulation @ bitrate [kbit/s]	4A @ [106 kbit/s]
Peer-to-peer (ISO/IEC 18092)	✓
Passive communication	Initiator
Product features	
Ultra-low power RISC µC with integrated Firmware	✓
High power digital conversion sine wave RF frontend	✓
DIRAC®: EMI filter-less solution	✓
Phase Accurate Active Load-Modulation HCE	-
Digital dynamic power control (DDPC)	✓
High receiver/LMA sensitivity [dB]	-80 dB
Very High Dynamic Range Receiver (VHDDR)	✓
RF transmitter supply voltage [V]	2.5 V – 5.5 V
Transmitter supply current, max. [mA]	650 mA
Power harvested on the listener, typ. [W]	1 W (misplacement +5mm x,y,z using PTX100W NFC WLC Eval Kit)
Host interface	SPI, I2C, UART
Supply voltage host interface [V]	1.8V, 3.3, 5.0V
Power-down mode current, typ. [µA]	3 µA
Standby current with LPFD ² @ HCE, typ. [µA]	16,5 µA
Standby current with LPFD and Host event, typ. [µA]	16,5 µA
Available packages	QFN56
Temperature range [°C]	-40 to +70
Field-detection signal output	IRQ
Product support and ordering information	
Product packages	QFN56
Product type	PTX100WDQ56
Order code single tray (dry pack)	PTX100WDQ56B
Order code reel (TR dry reel 7")	PTX100WDQ56D7
Evaluation boards	
Name of evaluation kit	PTX100W NFC WLC Eval Kit (Order number: 10009200)
Software	NFC WLC reader libraries for easy integration into MCUs, Linux and RTOS. SDK's for WLC for Non-OS, WLC Config Tool and Tag Demo GUI

For further details, please visit: www.panthronics.com Order your evaluation kit at: sales@panthronics.com

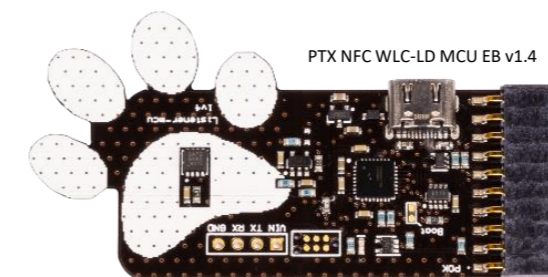
¹ FeliCa™ is a registered trademark of Sony Group Corporation
² Low Power Field Detection (LPFD)

EVALUATION KIT	NFC WLC SOLUTION
DEVELOPMENT KIT	PTX100W NFC WLC Eval Kit (Order number: 10009200)
Supported products	PTX100W
Contents and separate component ordering number	<ul style="list-style-type: none"> PTX100W NFC WLC Poller EB v4.0, WLC spacer, 1x cable USB type A to C (10009002) PTX NFC WLC-LD MCU EB v1.4, 1x cable USB type A to C (10009011) PTX NFC WLC-LDI Listener EB v6.0 (10009010) PTX WLC Power Monitor v1.1 (10009014)
Key features	<ul style="list-style-type: none"> NFC Wireless Charging SDKs for high-power, high-performance PTX100W NFC WLC platform Easy-to-use, ready-to-go SW integration into any wireless charging device host MCU architecture Discrete high-power harvesting WLC Listener Boards with PMIC and MCU Convergence with reader functions supporting all types of NFC and standard protocols (ISO14443 A/B, ISO18092, ISO15693, FeliCa) EMI filter less (DIRAC®) high-power end-application RF-design supported with Config Tool SDK
Certification	Planned: CE, FCC
Software and tools	<ul style="list-style-type: none"> SDK "Non-OS" WLC: NFC Wireless Charging libraries in C source code with compact code size. Applicable for any host MCU integration. Config Tool GUI (Windows 10 and Linux) <ul style="list-style-type: none"> Config Tool for PTX100W RF/antenna optimization and Tag read (via USB) Charging parameters optimization (e.g.: Charging cycles, charging current, parameter debugging) Antenna design support with open-source tool Qucs Studio.
Target applications	<p>High-power NFC WLC wireless charging solution with Poller and Listener system:</p> <ul style="list-style-type: none"> Wireless charging in combination with universal multi-market reader solution supporting all types of NFC reader protocols and applications Discrete solution for Listener systems Applications: <ul style="list-style-type: none"> Stylus Smart rings Smart glasses Wearable devices (e.g.: Smart watches) Hearing aids Small accessoires
Application team support for registered customers	<ul style="list-style-type: none"> SW integration support for your target system Excellent support of RF and antenna design for your end application <ul style="list-style-type: none"> Retrofit support: Customer antenna retrofitted with customer antenna design. End form factor RF optimization and verification

For registration, ordering of boards and SDK's please contact sales@panthronics.com



PTX100W NFC WLC Poller EB v4.0



PTX NFC WLC-LD MCU EB v1.4



PTX NFC WLC-LDx Listener EB v6.0

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