



NXP Pegoda evaluation kit MFEV710

Fast, straightforward development of contactless reader applications

This evaluation kit uses an open software concept and PC-based tools to give designers a convenient way to develop contactless reader applications.

Key features

- ▶ Multiprotocol ISO/IEC 14443 support
- ▶ PC/SC- architecture based on a widely deployed hardware solution
- ▶ Full support for entire MIFARE card portfolio and MIFARE discover
- ▶ Full support for entire NTAG tag portfolio and NFCdiscover
- ▶ SAM support in standard or x-mode
- ▶ ARM Cortex-M3 microcontroller with integrated flash memory
- ▶ Firmware based on NXP Reader Library (source code and binary)
- ▶ USB host interface to PC and Windows-based user interface
- ▶ Optional support for RS232, RS485, JTAG, Ethernet

Key benefits

- ▶ Quick embedded development with portable code
- ▶ Easy customization with flash-based microcontroller
- ▶ Custom firmware and JTAG debugging with optional hardware extension board
- ▶ Fast, flexible development of SAM-based, secure reader systems

Key applications

- ▶ Access management
- ▶ Public transport
- ▶ PC peripheral terminal

Kit contents

- ▶ Pegoda reader (CLRD710 based on MFCR523 contactless reader IC and a powerful ARM Cortex-M3 processor)
- ▶ Three MIFARE cards
- ▶ CD with technical documentation and software
- ▶ USB cable
- ▶ Supports MIFARE™ Classic, MIFARE Ultralight™, MIFARE DESFire™*, MIFARE™ Plus*, MIFARE Ultralight™ C*, MIFARE SAM AV2* (in x- and non-x modes), NTAG203(F), NTAG21x(F).

The NXP Pegoda evaluation kit MFEV710 is built around an ARM Cortex-M3 processor using an open software concept and PC-based tools for developing contactless reader applications, including those for access management and public transport.

*Full functionality only with export controlled version of the NXP Reader library / MIFAREdiscover, available on request

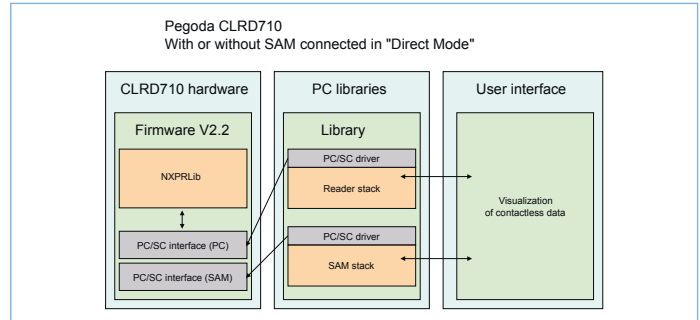


The flash-based microcontroller is open for customer code implementations, and the hardware interfaces are open for customer extensions. The software code and the hardware architecture are both reusable. The CLRD710 includes native support for USB and provides additional support for RS232, RS485, and Ethernet with an optional hardware extension board, available on request. The reader also has a JTAG interface, for debugging functionality directly on the microcontroller, and is accompanied by a free embedded tool chain for firmware customization. This kit includes sample code for a SAM-based, secure reader architecture that implements multiple protocols. The MIFAREdiscover GUI uses the familiar Windows look and feel and offers a range of features, including history, log, timing profile management, key management, show cards, and installer. For convenient interaction with NTAG products, a separate NFCdiscover GUI is also available on the NXP website.

Minimum system requirements

The minimum system requirements for running the evaluation kit are as follows: Intel Pentium 166 MHz or equivalent, 32 Mbytes RAM, 20 Mbytes free hard-disk space, USB support, and Windows 7, Windows XP, Windows Vista, or Windows Server in 32- or 64-bit version.

The PC/SC-based architecture of Pegoda reference designs



Technical specifications: Pegoda contactless smartcard readers

Feature	MFEV710
Operating distance (mm)	Up to 75
Host interface: USB, Ethernet, JTAG (with additional connection board)	Yes
RF interface	
Analog interface	MFRC523 contactless reader IC
Standards and protocols	
NFC tag type reader	Tag 1, 2, and 4
ISO/IEC 14443 A	Yes
ISO/IEC 14443 B	Yes
MIFARE Classic support	Yes
Security features	
MIFARE SAM AV1	Supported
MIFARE SAM AV2	Supported
Operating characteristics	
Supply voltage digital (V)	5.0
Temperature range	0 to +70 °C
Certification	
CE (Conformité Européene)	Yes
FCC (Federal Communications Commission)	Yes

Ordering information (kits available via NXP distributor)

Type number	Description	12NC
MFEV710	CLRD710 Pegoda reader, sample cards, CD with documentation and software	935294166599
CLRD710	CLRD710 Pegoda reader only	935294166599

For detailed ordering information please visit the NXP website (www.nxp.com), contact a local NXP distributor (www.nxp.com/support.html) or access the NXP distributor portal (<https://extranet.nxp.com>)

MIFARE, MIFARE Classic, MIFARE DESFire, MIFARE Plus, MIFARE Ultralight C and MIFARE DESFire 4/EV1 are trademarks of NXP Semiconductors N.V.

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Date of release: January 2013

Document order number: 9397 750 17350

Printed in the Netherlands