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 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

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

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.
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.

### Technical specifications: Pegoda contactless smartcard readers

<table>
<thead>
<tr>
<th>Feature</th>
<th>MFEV710</th>
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<tbody>
<tr>
<td>Operating distance (mm)</td>
<td>Up to 75</td>
</tr>
<tr>
<td>Host interface: USB, Ethernet, JTAG (with additional connection board)</td>
<td>Yes</td>
</tr>
</tbody>
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### 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)

<table>
<thead>
<tr>
<th>Type number</th>
<th>Description</th>
<th>12NC</th>
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<tbody>
<tr>
<td>MFEV710</td>
<td>CLRD710 Pegoda reader, sample cards, CD with documentation and software</td>
<td>935294166599</td>
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<tr>
<td>CLRD710</td>
<td>CLRD710 Pegoda reader only</td>
<td>935294165599</td>
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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)