



Prox Development Kit

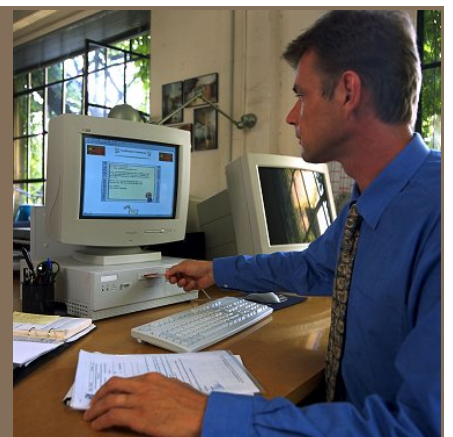
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Prox Development Kit

A complete set of tools to evaluate and test your contactless application

> A complete range of products for the growing contactless markets

Thanks to its reliability and friendliness, the contactless technology is adopted by a growing number of markets. Gemalto, a leader in Digital Security, has been developing expertise in contactless cards and readers for more than 10 years.

Its contactless interface range includes:

- OEM couplers and antennas: Prox-C series
- Packaged readers: Prox-P series
- Prox Chipsets
- Prox Development Kits.

> Convenience

The Prox Development Kit is a set of hardware tools, software modules and documentation that fulfills several needs: It allows new comers to get familiar with the contactless technology and to make simple PC-based demonstrations.

Then the GemProx technology performance can be evaluated and interoperability with the target card can be demonstrated.

Finally the Kit makes the application software easy to develop and test using the powerful Prox tools.

Prox Development Kit is friendly to use and does not require any particular experience in Radio Frequency.



The application software is dramatically simplified by using its high level command set, API library and PC/SC driver.

Automatic operating modes such as the PayPass level 1 algorithm or the mifare® Application Directory (MAD) are embedded and provide the highest possible level of performance.

> Market standards

Gemalto is actively participating to all the international standards working groups.

Therefore its contactless readers comply with all the major contactless market specifications such as:

- **Proximity payment:** PayPass level 1
- **Identity:** ICAO MRTD
- **Access Control:** FIPS 201 / PIV and mifare®
- **Mass Transit:** mifare® and ITSO.

The Gemalto Prox technology is fully compliant with the **ISO 14443 type A and B** contactless standard.

Consequently it also accesses any **NFC** device operating as a smart card as described in the ISO 21481 standard.

Prox readers read / write the **mifare®** family cards such as the Ultralight, Standard 1 K / 4 K, SmartMX and DESFire cards.

> Technical services and support

Depending on the experience of its customers, Gemalto proposes different levels of technical assistance:

- Training on the Prox technology and the development tools
- Technical support about the design of the reader and its antenna
- Test and certification of the complete device.

Specifications

> Kit composition

- A Prox-P2 reader
- A serial / USB adaptor for USB connection
- A universal power supply module
- A set of 15 mifare® and ISO 14443 type A and B contactless cards
- A CD ROM including technical documentations and software tools



Prox-P2 reader

> List of software tools

- C language API library functions and application examples
- PC/SC V2.0 driver for Windows 2000 and XP
- Demonstration software
- Gem_PCSC: PC/SC command analyzer
- Prox Manager: mifare®, ISO 14443 and ISO 7816 command analyzer

> Prox-P2 specifications

Card interface

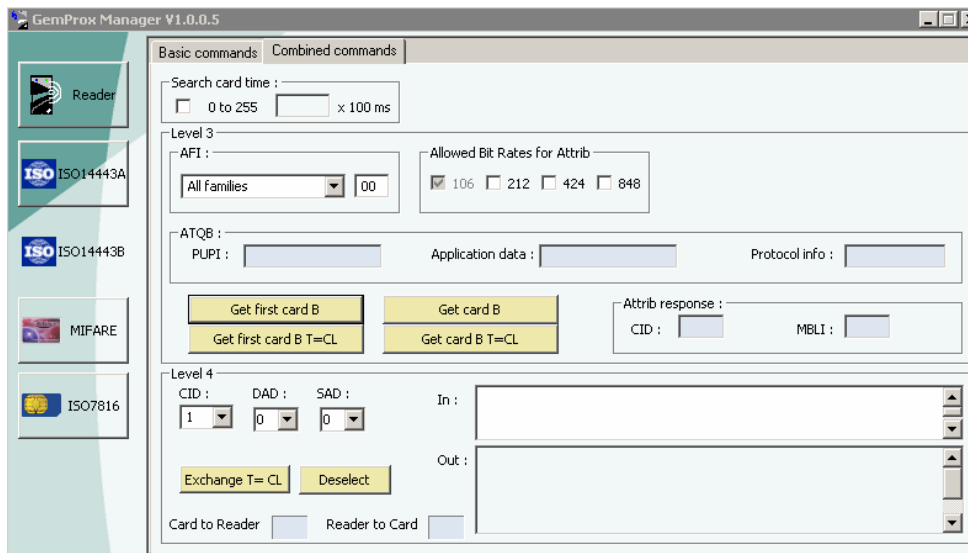
- Operating frequency: 13.56 MHz
- Full ISO 14443-1 to -4 compliant, T=CL protocol
- Baud rate: 106 Kbps to 848 Kbps
- On-board antenna

Interface with the host

- Type of interface: RS232 or USB using the serial / USB adaptor
- Protocol: Gemplus Block Protocol (GBP) or TLP224
- Baud rate: 1.2 Kbps to 115 Kbps

Main functions

- Read / write the following cards:
 - ISO 14443 type A and B
 - mifare® range
 - SR176, SRIX512 and SRIX4K chip based cards
- High level command set
- mifare® Application Directory (MAD)
- E-purse command set
- Low power management
- PayPass level 1 operating mode
- Self test.



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