

GENERAL INFORMATION

1.1. Product description

> Main functions

Read / write contact and contactless cards on two separate channels
Secure download of the reader firmware in EEPROM memory
Dual card power supply protection, command to switch the card interfaces
Self test after power-up

> Hardware architecture

32-bit ARM® RISC microcontroller operating at up to 50 MHz
Security features: CC EAL4+, crypto coprocessor (3DES, AES, SHA-1, RSA, ECC, key generation, true RNG), physical and environmental protection, unique serial number
Secure memory: 32 KB ROM, 256 KB EEPROM, 100 KB RAM

> Host interface

USB 2.0 Full Speed at 12 Mbps
CCID V1.1 protocol handled separately by each interface



> Contact card interface

Standard: ISO 7816-1 to -4, EMV 2000 V4.1 and IAS V1.0
Protocols: T=0 and T=1
Card power supply: 5 V, 3V and 1.8 V (Class A, B and C)
Supports all ISO 7816 TA1 parameters, up to TA1 = 97 h with a 4 MHz reader clock
Baud rate: 9.6 Kbps to 500 Kbps
Card movement and type detection
Short circuit and thermal protection



> Contact card connector

8 friction contacts, ISO 7816 location, ID-1 card size
Embossed smart cards supported
Reliability: 100,000 insertion cycles

> Contactless card interface

Standards: ISO 14443- 1 to -4 type A and B, and NFC (smart card emulation mode)
Protocols: T=CL and MIFARE®
Operating frequency: 13.56 MHz
Built-in antenna, reading distance: Up to 4 cm
Baud rate: 106 Kbps to 848 Kbps
All MIFARE® cards supported: Classic 1 K / 4 K, DESFire, Ultra Light, Smart MX
Up to 80 MIFARE® keys stored both in volatile and non volatile memory

> Operating Systems (OS)

Windows® 2000
Windows® XP 32 / 64 bits
Windows® Vista 32 / 64 bits
Windows® CE 5.0 and 6.0
Linux Kernel (V2.6 and above)
Mac OS® 10.4 to 10.6

> Drivers

Compliant with PC/SC V1.0 and CCID V1.1 specifications
Plug and Play
Compliant with native PC/SC drivers embedded into the last Service Packs (SP) of Windows® 2000, XP and Vista
Proprietary PC/SC drivers available for the other OS
Microsoft® Windows® Hardware Quality Labs (WHQL) certified, Windows® Logo Program WLP 2.0
Support of MIFARE® cards

> Visual indicators

- ☒ One blue LED for the contactless interface
- ☒ One yellow LED for the contact interface
- ☒ The LEDs indicate the card power up, read / write operations and failures

> Environmental

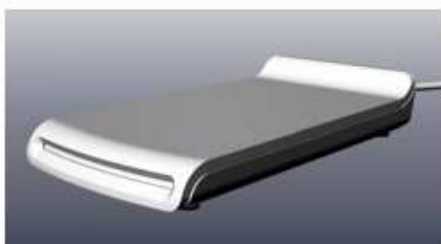
- ☒ Operating temperature: 0 °C to +50 °C
- ☒ Storage temperature: -20 °C to +60 °C
- ☒ Humidity: 0 % to 95 %
- ☒ ECM: CE89 / 336 / CEE, FCC Part 15 Class B, VCCI
- ☒ Security: UL 1950, cUL CSA 950
- ☒ RoHS and WEEE compliant
- ☒ MTBF: 400,000 h at +20 °C (contactless)

> Power supply and cable

- ☒ Power supply: USB high-power
- ☒ USB cable length: 1.8 m
- ☒ Connector USB 2.0 type A

> Physical characteristics

- ☒ Dimensions: 68 mm x 125 mm x 24 mm
- ☒ Weight: 150 g

**> Certifications and compliances**

- ☒ EMV 2000 V4.1 level 1 (contact)
- ☒ IAS V1.0 (contact)
- ☒ Compliant with FIPS 201 - PIV and ICAO - MRTD specifications (contactless)

**> Development tools**

- ☒ Microsoft® PC/SC environment with associated drivers
- ☒ Gemalto CILK CCID API source code (contact)
- ☒ Gemalto SmartDiag and Gem_PCSC test tools
- ☒ Firmware download tools: Windows® software for local loading and .dll libraries for remote loading (all OS)

> Warranty

- ☒ 24 months or 100,000 smart card insertions

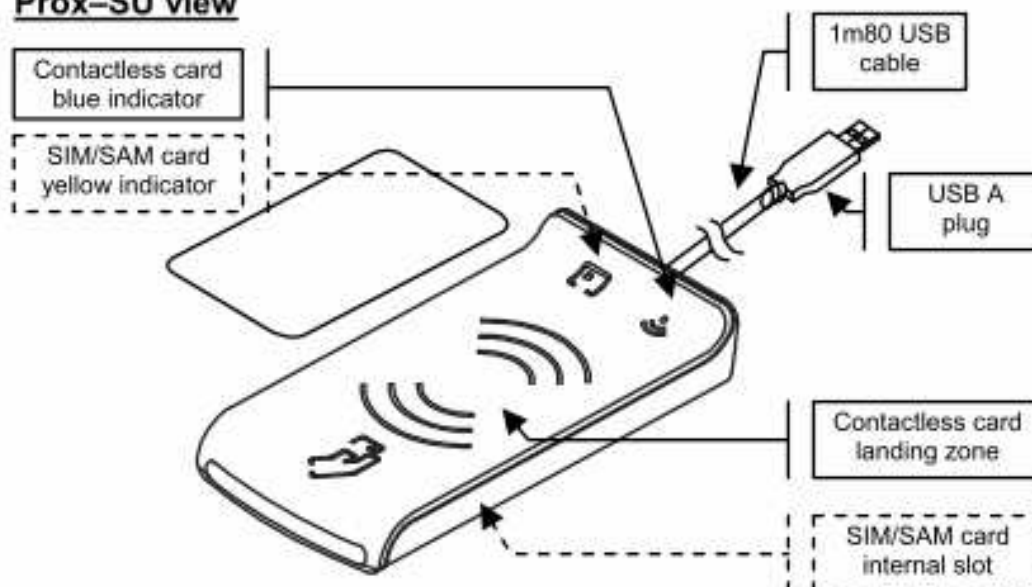
> Options

- ☒ Stand
- ☒ Customization : Packaging, sticker, logo, casing color



Prox-SU Quick Installation Guide

Prox-SU view



Prox-SU computer installation

Plug the USB cable into the USB port of your computer and follow the on-screen instructions when the installation wizard appears.

Use the PC/SC driver package or web link available in the Gemalto web site <http://support.gemalto.com>

PC/SC driver OS support:

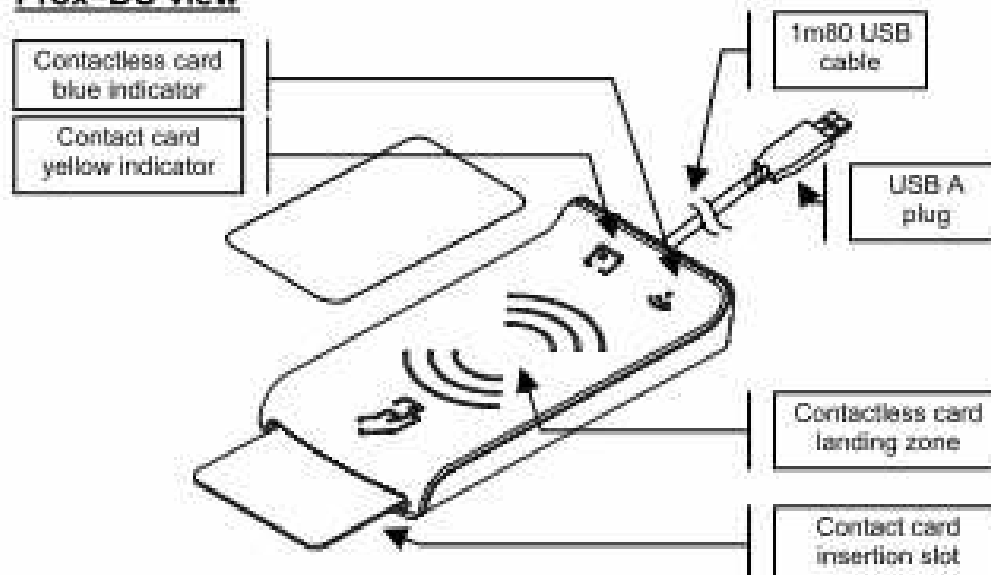
- + Windows: 2000, XP 32/64 bits, Vista 32/64 bits, Seven 32/64 bits
- + Windows: CE 5.0 / 6.0 / 6.0 R2
- + Linux: Red Hat / Debian / Ubuntu distributions
- + Mac OS: Tiger 10.4 / Leopard 10.5

For installation recommendation please refer to the Prox-SU installation guide available in the Gemalto web site <http://support.gemalto.com>



Prox-DU Quick Installation Guide

Prox-DU view



Prox-DU computer installation

Plug the USB cable into the USB port of your computer and follow the on-screen instructions when the installation wizard appears.

Use the PC/SC driver package or web link available in the Gemalto web site <http://support.gemalto.com>

PC/SC driver OS support:

- + Windows: 2000, XP 32/64 bits, Vista 32/64 bits, Seven 32/64 bits
- + Windows: CE 5.0 / 6.0 / 6.0 R2
- + Linux: Red Hat / Debian / Ubuntu distributions
- + Mac OS: Tiger 10.4 / Leopard 10.5

For installation recommendation please refer to the Prox-DU installation guide available in the Gemalto web site <http://support.gemalto.com>

1.2. Related Submittal(s) / Grant(s)

All host equipments used in the test configuration are FCC granted, when relevant.

1.3. Tested System Details

The FCC IDs for all equipment, with description of all cables used in the tested system are:

- Internal max frequencies: 27.12MHz

Input/output:

- 1 x USB port

Auxiliaries used for testing:

- 1 x Laptop DELL n°51495	Model: PP11L	Sn: 423- 546-849-19
- 1 x Power supply unit for laptop DELL PA-12	Model: AA22850-L	Sn: CN-OU7088-16293-548-02BW
- 1 x Contact less card GEMPLUS (00501001)		
- 1 x Contact card GEMPLUS (GemSAFE Logon)		

I/O cables used for testing:

- 1 x USB cable of EUT, shielded, length: 1.8m (attached on equipment)

1.4. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-2009, FCC Part 15 Subpart C.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.5. Test facility

Tests have been performed on December 7th, 2010.

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-2009 in a letter dated March 25th, 2008 (registration number 94821). This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.