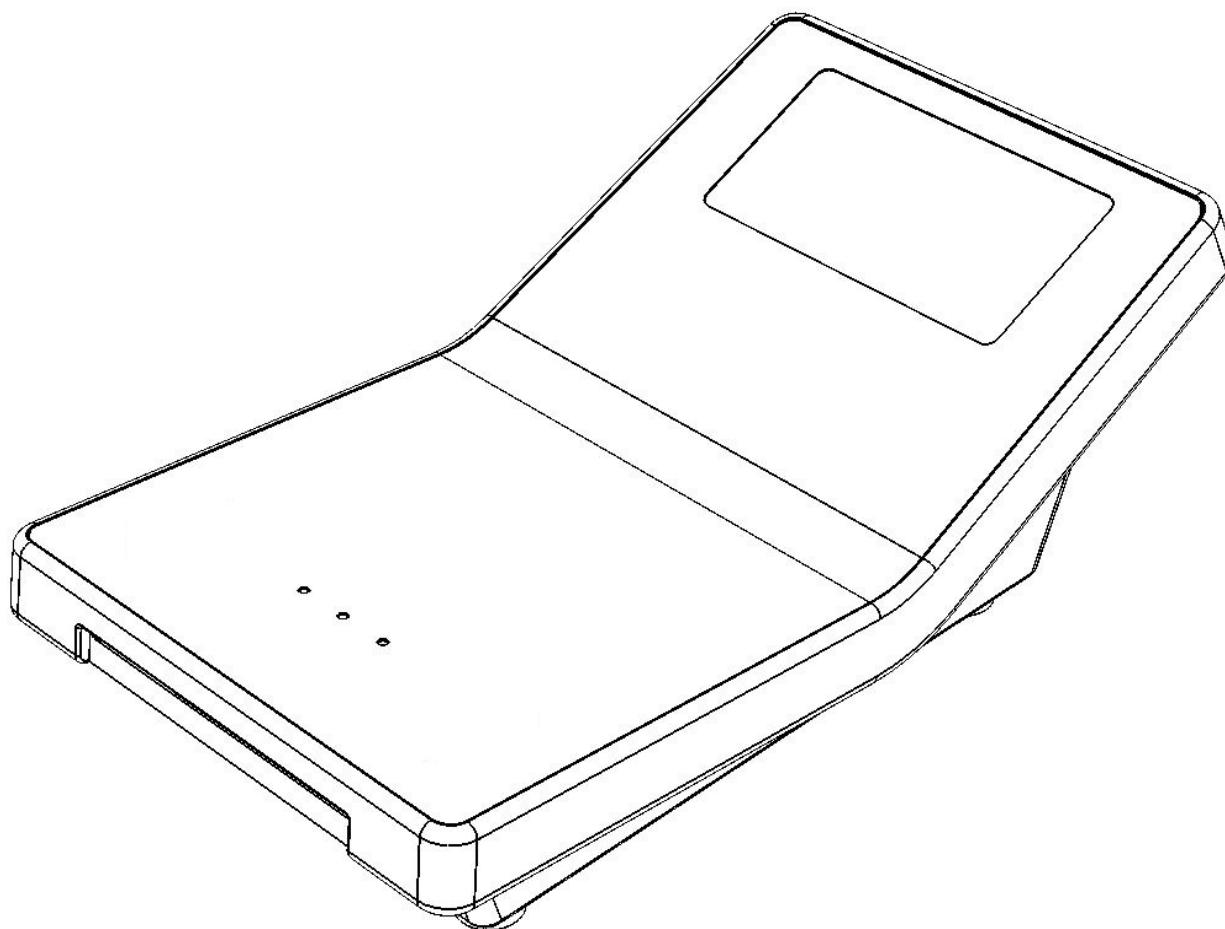




ID CPRPOS

Card reader for contactless and contact smart cards



Note

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1. Safety Instructions / Warning - Read before start-up !

- The device may only be used for the intended purpose designed by for the manufacturer.
- The operation manual should be conveniently kept available at all times for each user.
- Unauthorized changes and the use of spare parts and additional devices which have not been sold or recommended by the manufacturer may cause fire, electric shocks or injuries. Such unauthorized measures shall exclude any liability by the manufacturer.
- The liability-prescriptions of the manufacturer in the issue valid at the time of purchase are valid for the device. The manufacturer shall not be held legally responsible for inaccuracies, errors, or omissions in the manual or automatically set parameters for a device or for an incorrect application of a device.
- Repairs may only be executed by the manufacturer.
- Installation, operation, and maintenance procedures should only be carried out by qualified personnel.
- Use of the device and its installation must be in accordance with national legal requirements and local electrical codes .
- When working on devices the valid safety regulations must be observed.
- Special advice for carriers of cardiac pacemakers:
Although this device doesn't exceed the valid limits for electromagnetic fields you should keep a minimum distance of 25 cm between the device and your cardiac pacemaker and not stay in an immediate proximity of the device respective the antenna for some time.

2. Characteristics of the ID CPRPOS

The ID CPRPOS is a smart card reader for contactless and contact smart cards according to ISO 14443-A/B and ISO 7816. The reader is designed as desktop device and is due to the support of different chip types like mifare classic, mifare DESFire and mifare PLUS suitable for a wide range of applications. In addition to the contact based smart card interface for ID-1 sized smart cards the ID CPRPOS has one SAM socket for ID-000 sized smart cards available.

The ID CPRPOS can be connected and controlled by a host system via its RS232, USB or Ethernet interface. A connected host system is able to use the ID CPRPOS to communicate with smart cards and to control the user guidance via display, LED and buzzer. The reader could be configured by the connected host system, too.

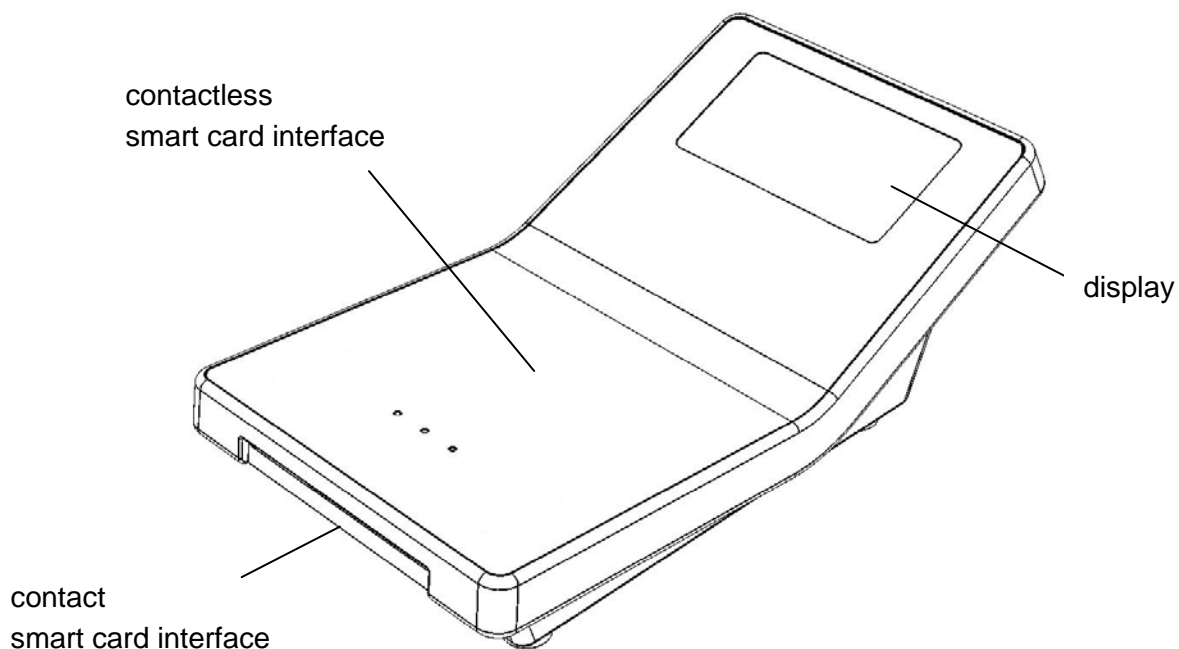


Figure 1: Surface of the ID CPRPOS

2.1. Scope of delivery

The scope of delivery includes following components:

- 1 x Electronic unit ID CPRPOS
- 1 x Power supply unit
- 1 x USB connection cable
- 1 x Wire strap

2.2. Available accessories and spare parts

Table 1: Available accessories and spare parts

Order Number	Article	Description
4219.000.00	OBID myAXXESS ID NET.5V-EU	Power supply unit (5 V DC / 1 A); Length of the connection cable: 1,5 m
4218.000.00	ID CAB.RS-C	RS232 connection cable incl. connector for power supply - Host connector: D-SUB 9 poles - Device connector: RJ-12 plug 6 poles - Power supply connector: RJ-12 jack 6 poles - Length: 2,0 m

3. Dimensions

The ID CPRPOS is designed as desktop device. Its small form factor offers the possibility to place the reader directly on a sales counter or at a cashier station. Due to its rubber feet the reader is suitable for slippery undergrounds.

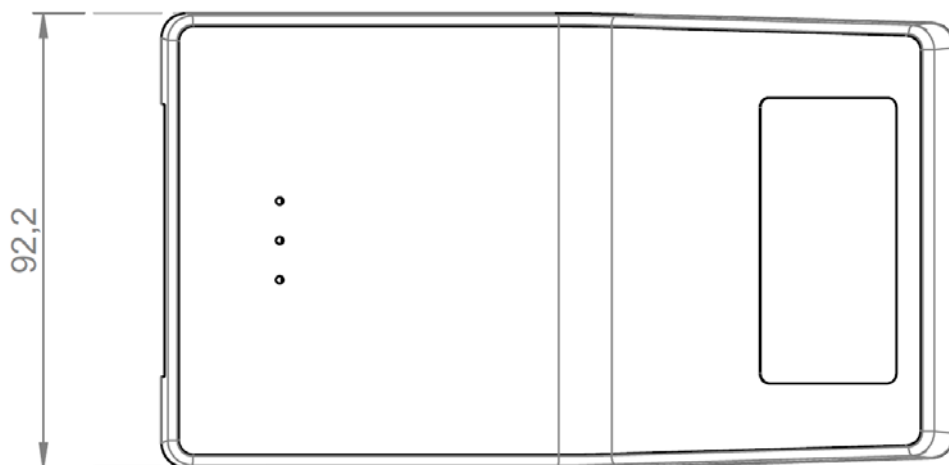


Figure 2: Top view

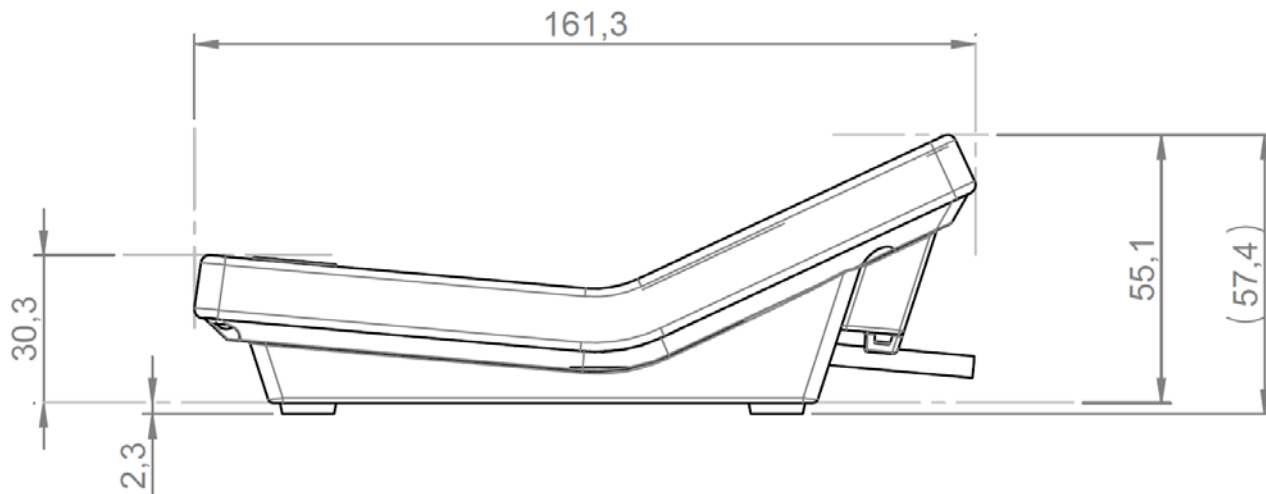


Figure 3: Side view

4. Connections

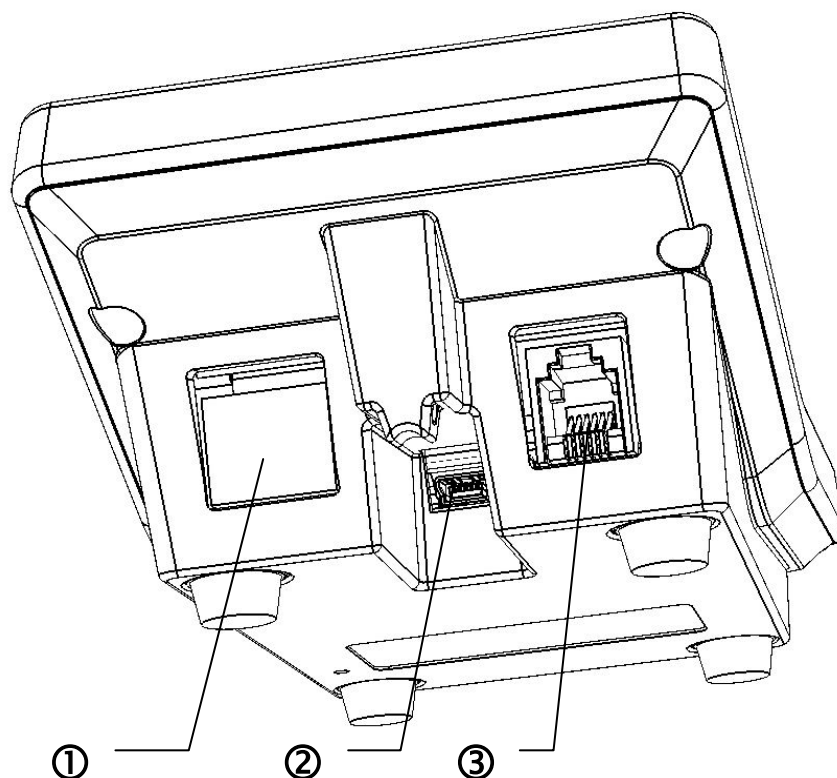


Figure 4: ID CPRPOS - position of the connectors

- ① Ethernet interface (RJ-45)
- ② USB interface (Mini-USB)
- ③ RS232 interface and power supply (RJ-12)

NOTE:

Only one host interface should be used at the same time. The usage of more than one host interface at the same time can cause malfunctions.

4.1. Ethernet interface

The ID CPRPOS has an integrated 10/100 base-T network port with a common RJ-45 connector and an automatic “crossover correction”.

With structured cabling CAT5 cables should be used. This ensures a reliable operation at 10 Mbps and 100 Mbps.

The prerequisite for using TCP/IP protocol is that each device has a unique address on the network. All readers have a factory set IP address. The communication parameter could be configured user-defined.

Table 2: Standard factory configuration of the ethernet interface

Network	Address
IP address	192.168.10.10
Subnet mask	255.255.0.0
Port	10001
DHCP	OFF

NOTE:

- *The reader is equipped with a DHCP ready ethernet interface.*
- *It is recommended to use a screened STP (shielded twisted pair) CAT5 cable.*

4.2. USB interface

The ID CPRPOS is equipped with a USB on-the-go interface (USB mini jack). It allows a direct connection to a host system for controlling, configuration and firmware update of the device (ID CPRPOS is USB slave). In addition the ID CPRPOS offers the possibility to connect an external USB memory stick to the electronic unit by means of a USB on-the-go adaptor (ID CPRPOS is USB master).



Figure 5: USB mini jack



Figure 6: USB mini cable for host connection

With the delivered wire strap the USB cable could be fixed at the housing and a strain relief for the cable connection could be established.

NOTE:

The device needs a separate power supply via the RJ-12 jack. A power supply of the device via the USB interface is not supported.

4.3. RS232 interface / Power supply

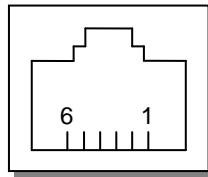


Figure 7: Pin assignment RJ-12 jack

Table 3: Pin assignment RJ-12 jack

Pin No.	Name	Function
1	Vcc	5 V DC, approx. 500 mA
2	RS232-RxD	RS232 interface
3	RS232-TxD	
4	nc	not connected
5	nc	not connected
6	GND	Ground

By using USB or Ethernet as communication interface the power supply unit included could be directly connected to the RJ-12 jack of the device.

For usage of the RS232 interface a special RS232 connection cable is available (see 2.2. Available accessories and spare parts). In that case the included power supply unit has to be connected to the RJ-12 jack of the connection cable. The RJ-12 plug of the connection cable has to be connected to the RJ-12 jack of the device.

CAUTION:

The device has to be supplied by a limited power supply (e.g. NEC Class 2/LPS power supply) according IEC EN 60950, only!

Reversing the polarity of the supply voltage may destroy the device.

5. Display and LED

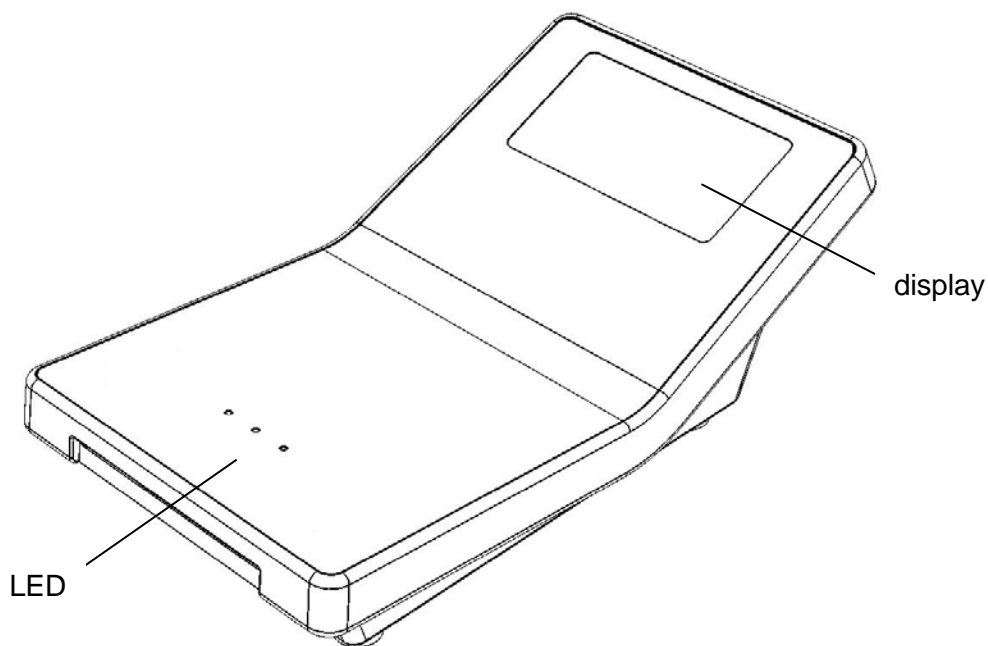


Figure 8: Display and LED

The ID CPRPOS is equipped with a display as well as LED for user guidance and to show status information.

5.1. Display

A connected host system can send text messages via the interfaces RS232, USB, and Ethernet to the integrated graphic display to realise a user guidance. Customised graphics (monochrome Bit-maps with size 128 x 64 dots; e.g. company logo or advertisement) could be stored in the device and could be shown outside the user guidance. For further information please read the system manual H31010-xx-ID-B.pdf.

Note:

With temperatures below -10 °C the display contents could be shown slower.

5.2. LED

The three LEDs of the ID CPRPOS indicate the status of the device for the user. The device is equipped with 1 green, 1 yellow, and 1 red LED.

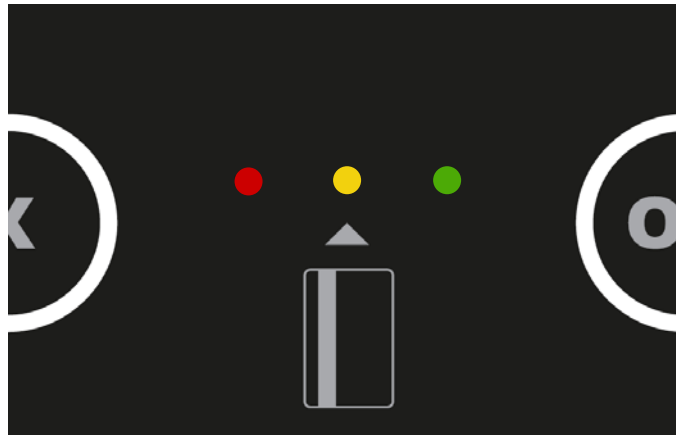


Figure 9: Position of the LED on the ID CPRPOS

Table 4: LED on the ID CPRPOS

LED	Description
green	Communication with a contactless smart card
red	Error
yellow	-

In table 4 the meaning of the LEDs with standard configuration is described. The LED could be controlled by a connected host system and a customized LED indication is possible.

6. Installation of a Secure Access Module (SAM)

To install a secure access module (SAM) the bottom part of the housing has to be opened. After removing the 4 screws the bottom part of the housing could be opened.

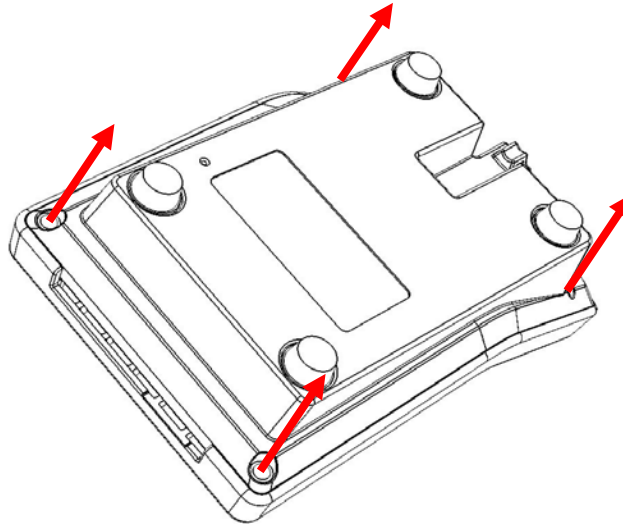


Figure 10: Opening of the housing

A socket is located on the PCB in which the SAM can be plugged in. To open the socket the cover of the socket has to be pushed slightly in direction "OPEN". Afterwards it can be lifted. The SAM has to be inserted according Figure 11: Installation of a SAM. The golden contacts of the chips are facing towards the PCB when the socket is closed. After the socket is closed it has to be locked again by pushing it slightly towards in direction "CLOSE". Afterwards the housing could be closed and the screws could be replaced.

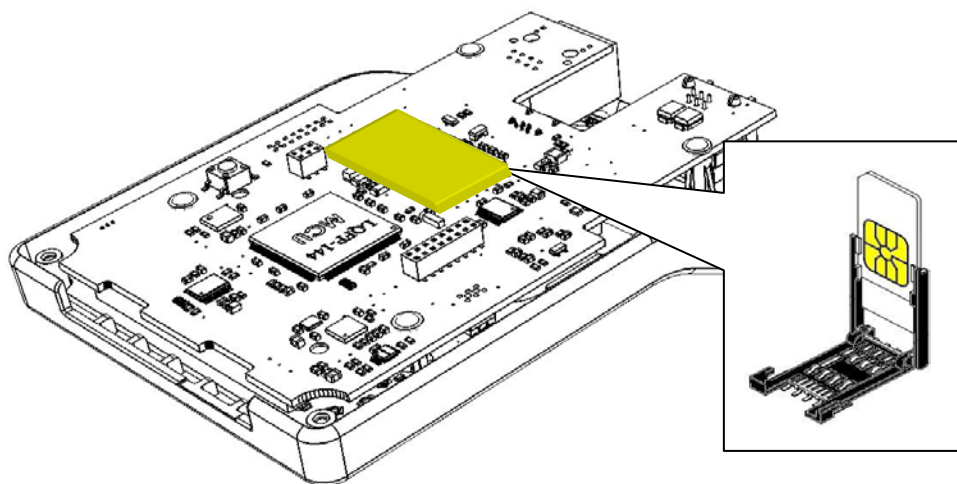


Figure 11: Installation of a SAM

NOTE:

The maximum tightening torque of the housing screws is 0,30 Nm.

7. Radio Approvals

7.1. Europe (CE)

When used according to regulation, this radio equipment conforms with the basic requirements of Article 3 and the other relevant provisions of the R&TTE Guideline 1999/EC dated March 99.



Equipment Classification according ETSI EN 300 330: Class 2

7.2. USA (FCC) and Canada (IC)

Product name:	ID CPRPOS
FCC ID:	PJMCPRPOS
IC:	6633A-CPRPOS
Notice for USA and Canada	<p>This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.</p> <p>Operation is subject to the following two conditions.</p> <p>(1) this device may not cause harmful interference, and</p> <p>(2) this device must accept any interference received, including interference that may cause undesired operation.</p> <p>Unauthorized modifications may void the authority granted under Federal communications Commission Rules permitting the operation of this device.</p> <p>This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.</p> <p>Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :</p> <p>(1) l'appareil ne doit pas produire de brouillage, et</p> <p>(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.</p>

Warning: Changes or modification made to this equipment not expressly approved by FEIG ELECTRONIC GmbH may void the FCC authorization to operate this equipment.

Installation with FCC / IC Approval:

FCC-/IC-NOTICE: To comply with FCC Part 15 Rules in the United States / with IC Radio Standards in Canada, the system must be professionally installed to ensure compliance with the Part 15 certification / IC certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States / Canada.

8. Technical Data

Table 5: Technical Data

		ID CPRPOS
Housing		plastic
Dimensions		92 mm x 161 mm x 58 mm
Weight		approx. 250 g
Protection class		IP20
Temperature range	operation	-20 °C up to +70 °C (-4 °F up to +158 °F)
	storage	-30 °C up to +80 °C (-22 °F up to +176 °F)
Relative air humidity		max. 95 %
Supply voltage		+5 V DC ± 5 %
Current consumption		approx. 500 mA
Contactless smart card interface		tested according to EMVCo Contactless Level 1
Operating frequency		13,56 MHz
Antenna		internal
Supported transponder types (contactless) (Read and Write)		ISO/IEC 14443-4, NFC card emulation mode Type 1, 2, 4, mifare classic, mifare PLUS, mifare DESFire, mifare ultralight, my-d move, my-d proximity, SR176, SR1x, Calypso (Innovatron radio protocol)
Contact smart card interface	ID-1	tested according to EMVCo Contact Level 1; landing contacts; 200 000 cycles
	ID-000	SAM socket; ISO 7816; 9600 up to 625.000 Bit/s T=0 and T=1 protocol Power Class A, B, C
Interfaces	USB	Mini-USB-Jack; Self powered device
	RS232	4.800 - 921.600 Baud; RJ-12-Jack
	Ethernet	10BASE-T/100BASE-TX; MDI/MDI-X cross over detection; IPv4
Optical indicator		1 x LED red; 1 x LED yellow; 1 x LED green graphic LCD, 128 x 64 dots
Acoustic indicator		1 internal buzzer
Flash memory		2 MByte write cycles 100.000

Radio Approval	Europe EN 300 330 USA FCC 47 CFR Part 15 Canada IC RSS-Gen, RSS-210
EMC	EN 301 489
Environmental (shock, vibration, climate)	IEC 60068
Health and Safety	EN 60950 EN 50364
Waste and Hazardous Substances	WEEE - 2002/96/EC RoHS - 2011/65/EC
Function	tested according to EMVCo Contactless/Contact Level 1