USB Card Reader (Desktop & MFP)

Technical Manual | USB Card Reader (Desktop & MFP)

Product Version: Mk. II

Version of this manual: 3.0.1

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Congratulations on your selection of Inepro card readers. We are certain you will be pleased with your purchase of one of the flexible solutions of the market.

We want to help you get the best result from your Inepro Back Office Suite. This manual contains information on how to do that; please read it carefully. Due to continuous product improvements this manual is subject to changes without notice.

We strongly recommend you read the license agreement to fully understand its coverage and your responsibilities of ownership.

Your Inepro dealer is dedicated to your satisfaction and will be pleased to answer your questions and your concerns.

Best wishes,
Inepro BV.
USB Card Reader (Desktop & MFP)

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Directives

ATTENTION!!
Read this manual carefully before installing the IP Reader!

Mains connection
Before connecting the appliance to the mains, check that the mains supply voltage corresponds
to the voltage printed on the type plate of the adapter. If the mains voltage is different, consult
your supplier.

Guarentee
No guarantee can be given if safety regulations are not followed.

Security
Always disconnect the power supply before handling anything inside the device.

Indoor User Only
This device may only be used indoors.

CE Conformité Europeène (Conform European Norm)
This device is in conformity with the EMC directive and low-voltage directive.

End of life directives
Inepro is paying a lot of attention to environmentally-friendly production. Your new device contain
materials which can be recycled and reused. At the end of its life specialised companies can
dismantle the discarded device to recycle the reusable materials and to minimise the amount of
materials to be disposed of. Please observe the local regulations regarding the disposal of
packaging materials, exhausted batteries and old equipment.
Introduction

The Inepro USB (Universal Serial Bus) card reader consists of a USB interface controller board with a proximity card reader. The controller board is programmed with software to read out the UID (Unique ID) of the proximity card. By default the card reader reads out the CSN (Card Serial Number) of the proximity card. Please note that the firmware version programmed in the controller board is depending on the proximity card technology and, if needed, customized read out of the UID of the user card.

When a user card is presented to the reader the host device receives the data as a keyboard input in hex format.

The Inepro USB Card Reader has an unique vendor and a application ID. The vendor ID of Inepro = 0x1DA6, the application ID = 0x0110. For each Inepro USB Card Reader the same vendor/application ID is used (regardless of the used Inepro USB card reader). At the connection procedure the software version of the Inepro USB Card Reader is send to the host device.

Supported Proximity Card Technologies
The Inepro USB Card Reader supports the following proximity card technologies:

- Mifare ISO 1443A
- Mifare Desfire ISO 1443A
- Legic Prime
- Legic Advant ISO 1443A
- Legic Advant ISO 15693

USB Communication
The Inepro USB card readers supports the USB 2.0 protocol as a Human Interface Device (HID).
Inepro USB Reader Component List
Inepro USB Card Reader Component List

The Inepro USB card reader comes in four versions, the desktop and the MFP version in the colours grey and red. The MFP version is meant to be mounted on the side of an MFP machine, the desktop version for use on a flat service or installment inside the MFP.

Inepro Desktop USB Card Reader (Grey) Kit Content 276001 (or Red 276003)

The Inepro Desktop USB Card Reader Kit consists of the following items:

1. Desktop USB Card Reader Kit
   - 1x Multi ISO Reader Desktop (Grey 276001, Red 276003)
   - 2x Double-sided adhesive tape (for attachment of the USB controller to the MFD (Multi Functional Device))
Inepro MFP USB Card Reader (Grey) Kit Content 276000 (or Red 276002)

The Inepro MFP USB Card Reader Kit consist of the following items:

2. MFP USB Card Reader Kit
   - 1x Multi ISO Reader MFP (Grey 276000, Red 276002)
   - 2x Cable Duct (PS8650)
   - 1x Manual Leaflet (P551211)
   - 1x Serial Stickers (P551360)
   - 1x Bottom Inlay Mounting Cover (Grey PS08818, Red )
Operation

Operation of the Inepro USB reader
The card number that is read by the Inepro USB Card Reader is a hex decimal format. This hex decimal number is divided into two and after that the keyboard representation code of the number shall be send by the USB interface controller. After the last character an <enter> keystroke code is send.

The software driver that runs in the host will convert the code to the ASCII character of the keystroke code. When the card is removed, only a single <enter> keystroke code is send.

For example:
• Read value: 0x12345678 (hex decimal number)
• Send keystroke data:
  <0x1E><0x1F><0x20><0x21><0x22><0x23><0x24><0x25><0x58>
• Conversion to ASCII characters by the HID host driver:
  <1><2><3><4><5><6><7><8><enter>
Software Test

Testing with the Inepro Test Tool:
The Inepro USB Card Reader can be tested with a PC or laptop. Connect the reader to the USB port of the PC or laptop. Start the Inepro Test Tool. This will show in the display which software version is currently used in the Inepro USB Card Reader and it will display the card ID when a card is presented to the reader.

![Inepro MFP Testtool](image-url)
Test with Windows Device Management:
1. On a PC or laptop without Inepro Test Tool you can also check the version that is in the Inepro USB Card Reader.
2. Connect the Inepro USB Card Reader to the PC or laptop.
4. On the main page there is a field “location” and here you will find the software version of the Inepro USB Card Reader.
Test with the Windows Calculator:
1. Connect to Inepro USB Card Reader to the USB PC or laptop.
2. Start the Calculator application on Windows, set de calculator under 'View' in on 'Scientific'.
3. Set the number system to hex decimal ('Hex').
4. Present a card to the Inepro USB card reader.
5. Set the number system to decimal ('Dec') to read out the decimal value of this number. This is the card number.
Hardware Test

Physical test Inepro USB card reader
1. Remove the top cover of the USB controller
2. Connect the Inepro USB Card Reader to the USB port of a computer.
3. Check the indicator LED's to see if the board is operating as it should.

LED's
On the USB interface board are a number of LED's. Each of the LED's has a label, explaining their use. See the table below.

<table>
<thead>
<tr>
<th>Image</th>
<th>Label</th>
<th>Function</th>
<th>Standby / OK</th>
<th>Busy</th>
<th>Not OK</th>
</tr>
</thead>
<tbody>
<tr>
<td>❌</td>
<td>&lt;undefined&gt;</td>
<td>&lt;undefined&gt;</td>
<td>&lt;undefined&gt;</td>
<td>&lt;undefined&gt;</td>
<td>&lt;undefined&gt;</td>
</tr>
<tr>
<td>📡</td>
<td>Connection</td>
<td>Connection / transmission</td>
<td>Burns continuously</td>
<td>Burns continuously</td>
<td>Off</td>
</tr>
<tr>
<td>✨</td>
<td>On / Off</td>
<td>On / Power</td>
<td>Burns continuously</td>
<td>Flashes</td>
<td>Off</td>
</tr>
</tbody>
</table>
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Hardware Test

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