G7

Smart 7 Install Guide

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Author: Wolfgang Renner, 23 January 2020
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Copyright: Crane Payment Innovations AG
Nordringstrasse 16
CH-4702 Oensingen

Tel: +41 62 388 45 45

Fax: +41 62 388 45 55

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History

Date:	Modification
27.01.2020	First Draft version of document
04.02.2020	First internal version v1.0 of document
07.02.2020	Product name changed to “Smart 7”
01.04.2020	Added Mounting the device
28.05.2020	Added Compliance Section 7

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1 Introduction

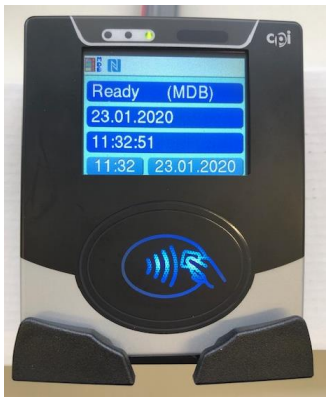
This document describes the CPI Generation 7 iSmart Readers Firmware- and Configuration install and set up procedures. It considers the basic differences between the previous reader generations in terms of set up, operating and testing procedures.

2 Smart 7 Hardware

The Smart 7 comes in two different Type Models, the Smart 7 MDB and the Smart 7 RS232.
Each of them are available in two versions, with display and without display.

2.1 Smart 7 MDB

The pictures below show the front side of the Smart 7 MDB Display version on the left, and the Smart 7 MDB without display on the right.



As shown on the center picture above, the devices have two physical interface connectors on its back, a **G7 MDB Socket** to connect to the VMC with the G7 MDB Cable that comes with the package and a **Type C USB Socket** for install and maintenance.

2.2 Smart 7 RS232

The Display and the MBH version of the Smart RS232 look pretty identical to the Smart 7 MDB variants, but the difference is their interface.

The devices also have two physical interface connectors on its back, a **G7 RS232 Socket** to connect to the Coinchanger with the G7 RS232 Cable that comes with the package and a **Type C USB Socket** for install and maintenance.

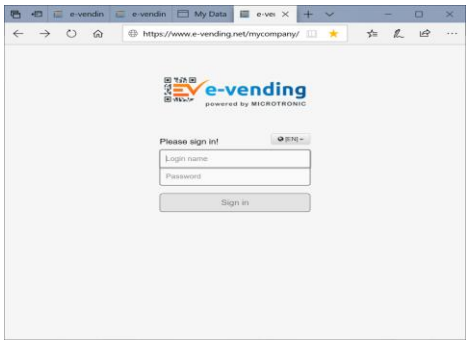
3 Smart 7 Install and Configuration

Unlike previous Generation 6 devices, the G7 Reader Configurations will **only** been managed via the **e-Vending** online platform, which also provides the most recent Firmware versions for the hardware. An Additional software tool, like the Generation 6 MDSmanager, is neither required nor supported anymore in Generation 7. This also means no backward compatibility to G6 configurations.

In G7, the Firmware of the reader is automatically updated to the newest version when the Reader Configuration is changed or updated. Both files, Firmware and Configuration are contained in an archive with encrypted files included, which has to be transferred to the reader. If the reader receives an archive, unzips it and verifies the integrity of its content. Then it performs the Firmware Update if a newer version comes with the archive, before applying the new configuration subsequently.

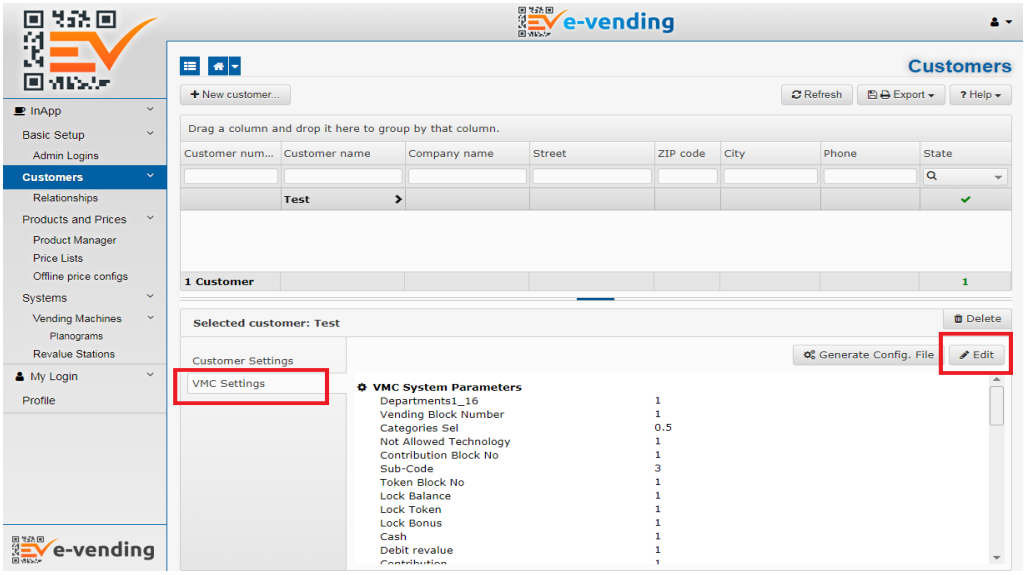
3.1 Using the e-vending server

Since configurations and firmware updates are managed via the e-Vending server only, an account with corresponding login data is required.



Once logged into your e-Vending account, there is a Tab “VMC Settings” available at each of the following levels, where the reader settings can be configured accordingly:

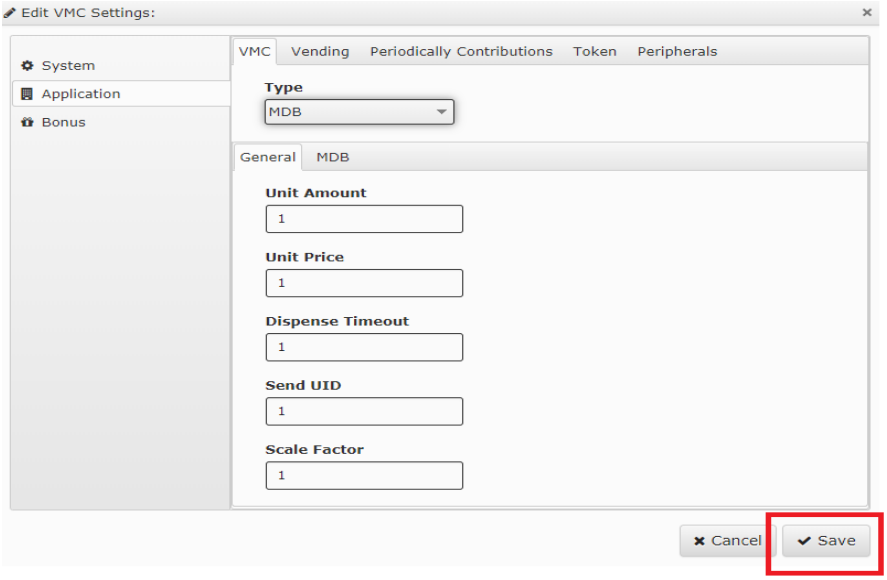
- Customer > Configuration is applicable for all readers of the customer
- Customer Location > Configuration is applicable for all readers at this customer location
- System Location > Configuration is applicable for all readers at this system location
- System > Configuration is only for this particular reader



3.1.1 Edit Configuration

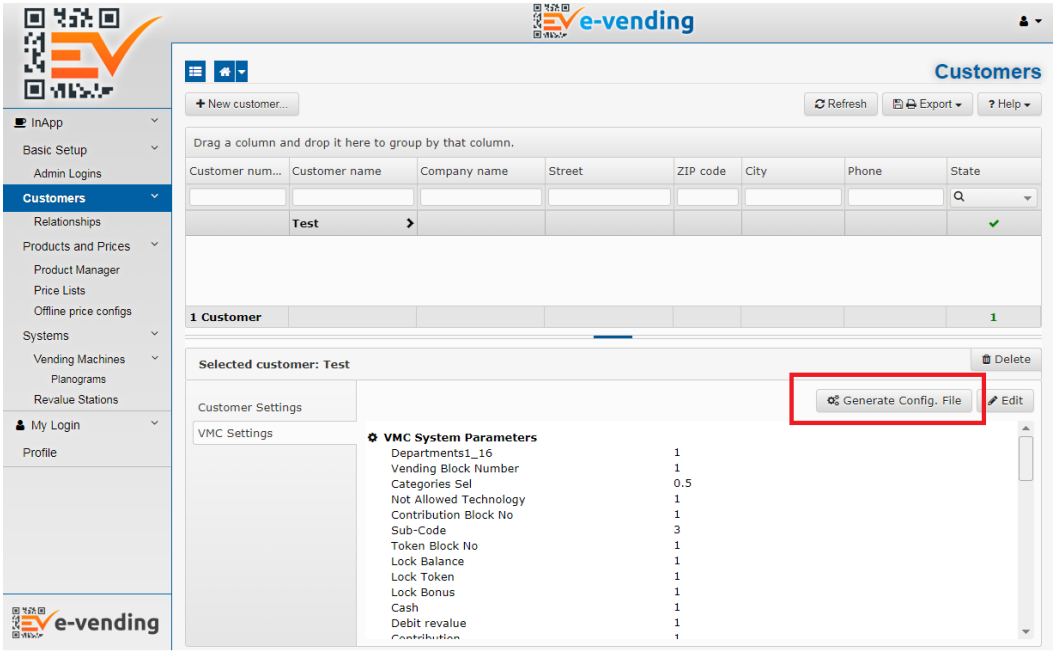
Basically each reader comes with a default configuration. Unless it will be edited, the Default Configuration can be downloaded with the “Generate Config. File” button to the computer and transferred to the reader, either directly or via USB Stick.

By clicking on the “Edit” button, the configuration menu opens and the Reader Configuration can be edited individually according to specific requirements and their corresponding settings.



When all settings are done, clicking the “Save” button, saves the configuration on the server and switches back to the previous screen.

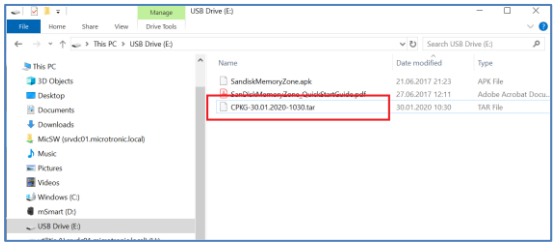
3.1.2 Generate Config. File



With the “Generate Config. File” button a new configuration file will be generated. The Config. File is an **encrypted archive**, containing the necessary hashes for integrity checks, the configuration file and eventually an updated version of the firmware.

3.1.3 Archive File Format

The configuration file isn't downloaded to the reader directly but is included in an archive file that is downloaded to the reader. It comes within a compressed *.tar archive, including 5 encrypted .fcon files.



The reader unpacks the archive verifies the integrity of its content and then copies the configuration file to the appropriate location on the reader. After copying the configuration file, the reader performs a reset to apply the configuration change. When successfully done, the Config. File will be deleted from the reader, which also visually confirms a successful install. If the Config Archive File is corrupted or does not include the right keys, the device does not delete it, but rather it leaves it where it is.

3.2 Smart 7 Set Up and Configuration Summary

In summary, the Smart 7 install process is as follows:

3.2.1 Set up configuration

- Start web browser.
- Login to the e-Vending portal.
- Select reader.
- Edit configuration if required.
- Save configuration.
  -> The e-vending server generates a configuration setting as described in 3.1.1

3.2.2 Generate Config. File

- Start web browser.
- Login to the e-Vending portal.
- Select reader.
- Download Config. File to PC.
  -> The e-vending server generates a configuration archive file as described in 3.1.2

3.2.3 Download Copy Config. File from PC to the reader

- Connect reader via USB to PC.
- "Open" reader using e.g. Windows-Explorer.
- Copy Config. File reader per drag and drop to the reader

3.2.4 Download Config. File via USB Stick to the reader

- Connect USB stick Type C to PC.
- Copy Config File to USB stick.
- Power up the Reader via MDB or respectively RS232 connection to its host.
- Plug in USB stick to reader.

  -> Reader automatically copies the Config File from the USB Stick.

For the update process via USB Stick, the reader must be powered via MDB / RS232 connection, respectively needs to be connected to the VMC or peripheral device.

As soon as the USB Stick / Cable is connected, the reader switches into Service Mode and the MDB communication will be on hold. The display shows “Service Mode” and the orange LED is blinking.

The Smart 7 performs the install / update process and restarts when the USB Stick / cable is removed. Subsequently the VMC starts up and the reader is ready for operation.

4 Smart 7 Status and Display Messages

The Smart 7 DIS versions provide status- operation- and maintenance information by a list of Display Messages given in 4.1 while the Smart 7 MBH variants provide basic information via Status LED only.

4.1 Display Messages

The status messages on display will show up as listed below and simultaneously give the corresponding LED status signals shown in 4.2

Reader ready,
Connected to VMC

Reader starting up
connection to VMC

Reader not connected
to VMC

Service mode active,
Reader connected to USB Stick/Cable

4.2 Status LED

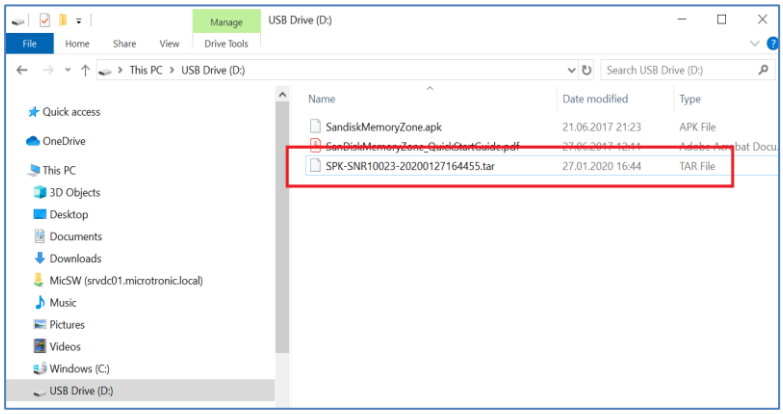
The table below lists the corresponding LED signals

Status Messages:			
●	●	●	Ready
●	●	●	Red LED blinking 1x with Pause „Startup“
●●	●	●	Read LED blinking 2x with Pause „No Connection“ (to VMC or Coinchanger)
●●●	●	●	Read LED blinking 3x with Pause „No Sale“ or TWN 7 active
Service Mode			
●	●●	●	Orange LED blinks 2x with Pause “Service Mode”
●	●●	●	Red LED lighting, Orange LED blinking 1x with Pause “Config. Udate”
Exceptional Errors			
●●	●●	●●	Exception Error-Code
AutoConfig AC WAIT			
●	●	●	Reader in AutoConfig WAIT mode (LED red and green alternating)

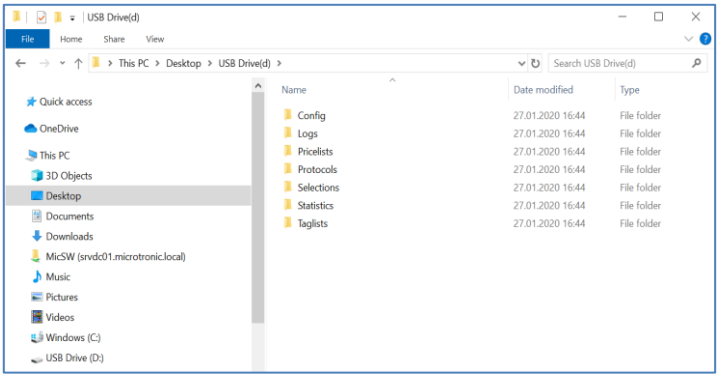
5 Support Packages

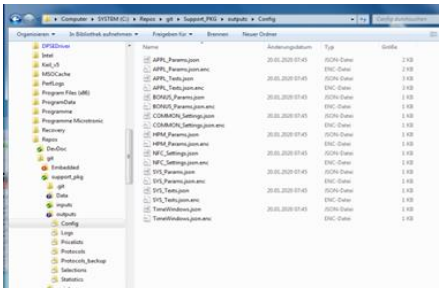
If an USB Stick is connected to the Reader, it goes into Service Mode and a Service Package will be created and copied to the USB Stick. When the USB Stick is removed, the Reader performs a reset.

When connecting a USB Cable, a Service Package will be created immediately. This is included in a SPK .tar file and can be copied to the PC. For Technical Support it can be uploaded to the e-Vending Portal or send to CPI mic_support@cranepi.com



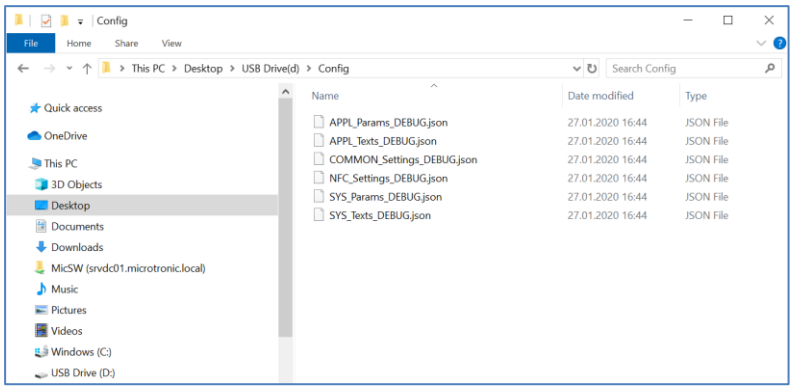
The SPK-SNRxxxx-xxxxx.tar Support Package archive includes all relevant reader information within a folder scheme as given below. Data can be either open, or encrypted as file type ".enc"





5.1 Config

The "Config" folder contains all configuration data and settings for this particular reader.

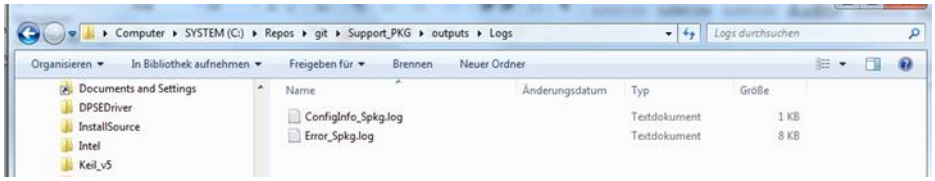


The .json raw data can be viewed in Notepad or in a JSON viewer:

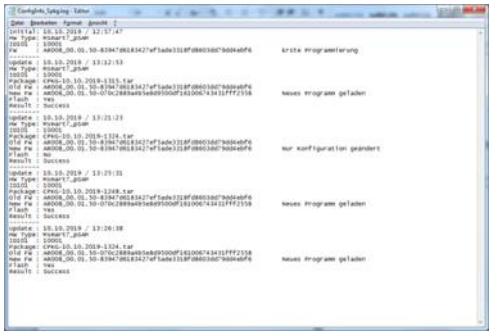
https://jsonformatter.org/json-pretty-print

5.2 Logs

The Logs folder includes the Config- and Error log files ….

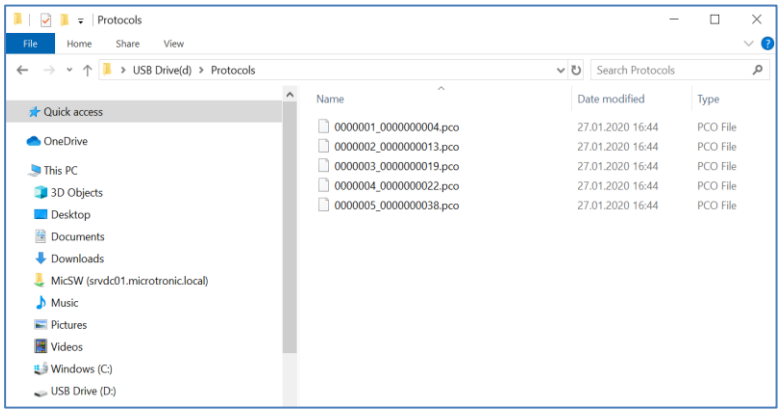


… which can be viewed in Notepad



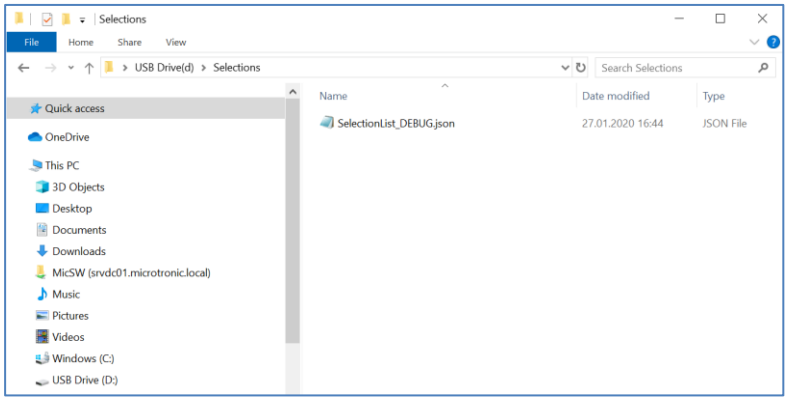
5.3 Protocols

The protocols are in .pco format and can only be viewed in CPI FileExplorer, respectively by CPI Support Staff.



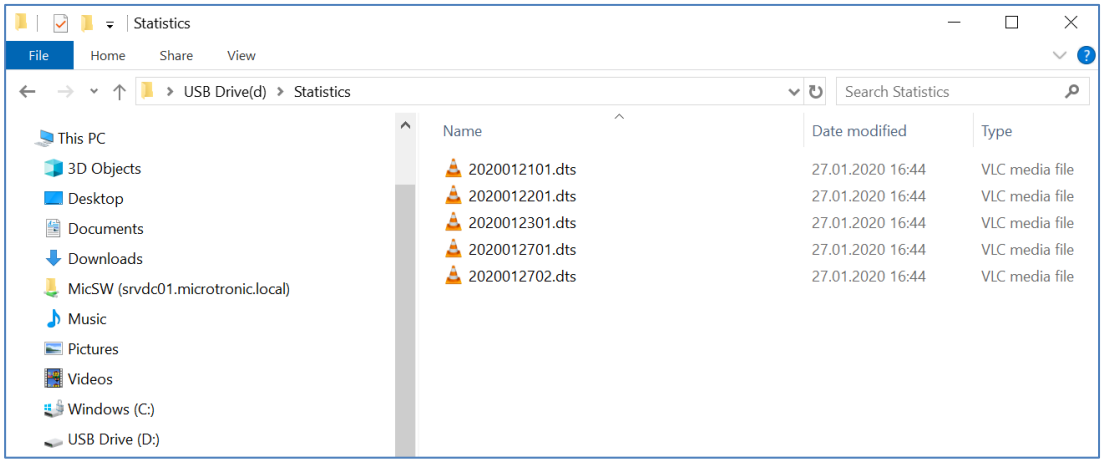
5.4 Selections

Selection list is also in .json format and can be read with the viewer or Notepad.

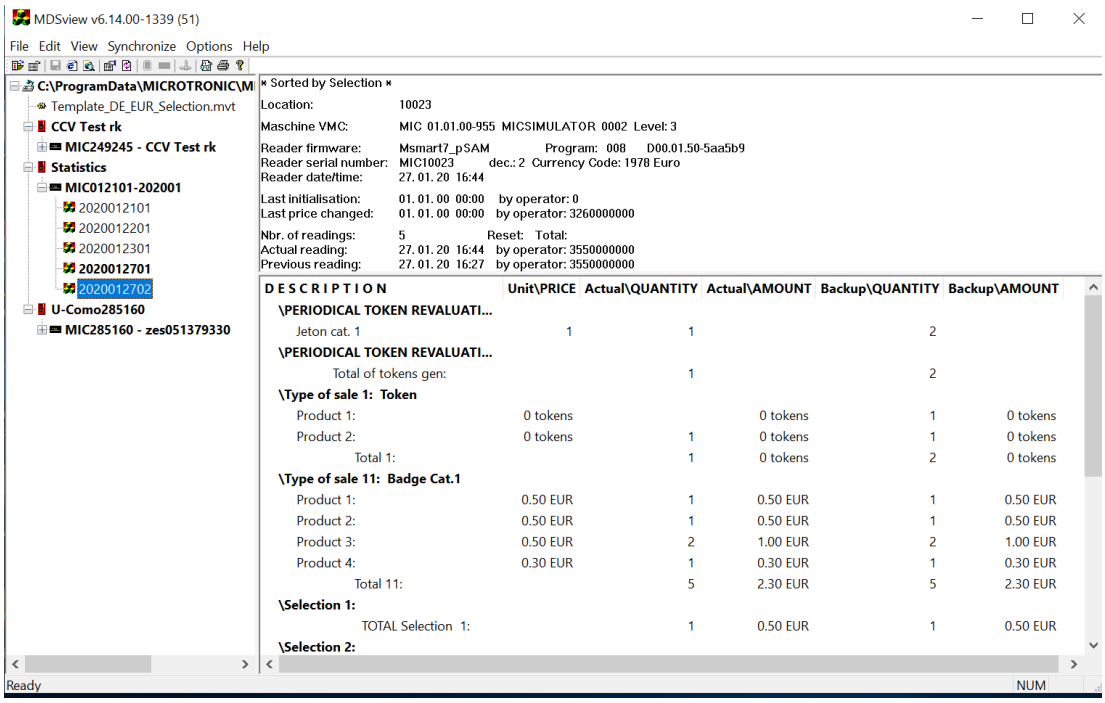


5.5 Statistics

The reader Statistics are provided in .DTS text format, the same as it was in previous Generation 6 readers.



It can be read in MDSview

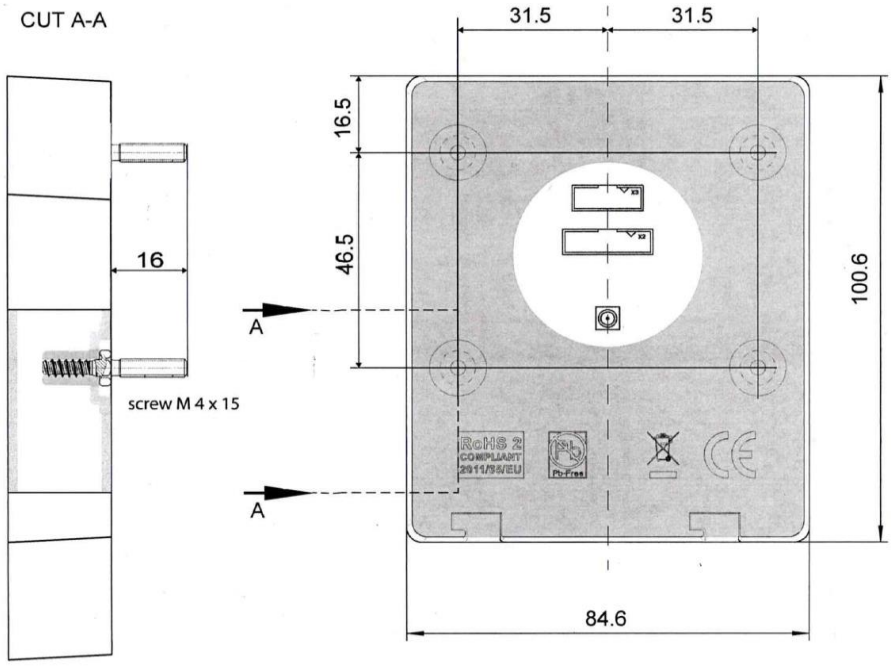


5.6 Taglist

Taglists includes a system information file, which is always encrypted.

6 Attaching the device

The Smart7 devices can be fixed with the M 4 x 15 screws coming within the box, according to the fitting scheme below:



A separate Drilling Scheme can printed in 1:1 scale to precisely drill the screwing holes.

7 Compliance:

Supply -
Input: 12 - 40Vdc
Power: 3 W.

USA - FCC ID: QP8SMART7
Canada - IC: 1297A-SMART7

"This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The SMART7 must not be operated in the presents of flammable gases, fumes, or water. The SMART7 is not suitable for ues in areas where ther could be direct contact with water jets.

Do not dispose of any part of the SMART7 by inceration.