microSensys
RFID in motion

**iID®**
**software.**
**tools**

# *Quick Start Guide*

# *iID® software tools*

# iID® DEMOsoft

microsensys 2020-09

# Content

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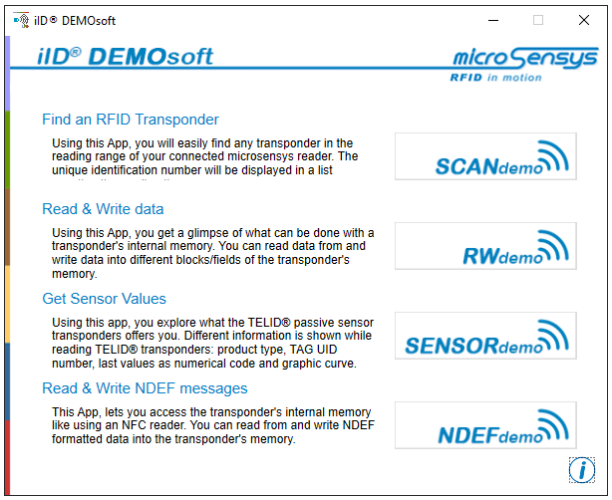
# Introduction

iID® DEMOsoft 2020 is a software to show functionalities of MICRO-SENSYS® RFID transponders, sensor transponders and iID® contactless RFID readers. There are 4 included applications:

- SCANdemo
- RWdemo
- SENSORdemo
- NDEFdemo

to find a transponder, to read or write data on or from it, to read sensor data, and to read or write NDEF records of an NFC transponder.



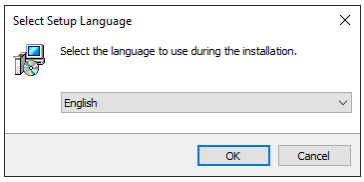

iID® DEMOsoft supports both iID® contactless RFID readers for HF and UHF frequency, therefore the range of functionality depends on the connected RFID reader and transponders or sensor transponders, which will be detected.

# System requirements / installation

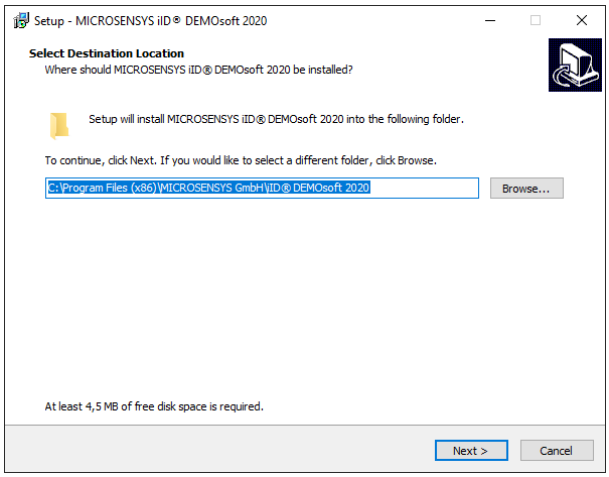
iID® DEMOsoft 2020 is ready to run on Microsoft Windows XP to Windows 10 32- and 64-bit. In order to execute, it requires the Microsoft .Net Framework Version 4 Client Profile and optional underlying basic driver for the RFID interface (USB driver). Also needed is the iID® CONNECTIONtool for configuration of the reader connection and storage of the configuration file.

In order to execute, the software requires iID® 3000 PRO HF/NFC or iID® 4000 UHF RFID interface hardware.

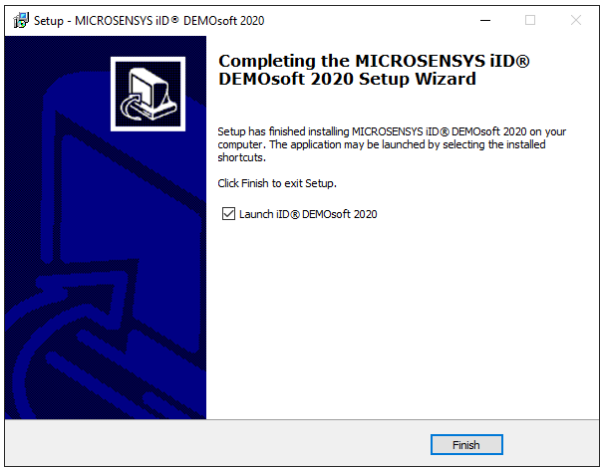
The software is installed by using the Windows Installer package. In the first step, you have to select your preferred language.




To install, follow the menu prompts in the setup program. You will be prompted to select the program storage location and access settings.



Upon successful completion of the setup procedure a final screen is displayed, from now on the program can be started using "Start Menu / iID® DEMOsoft 2020".



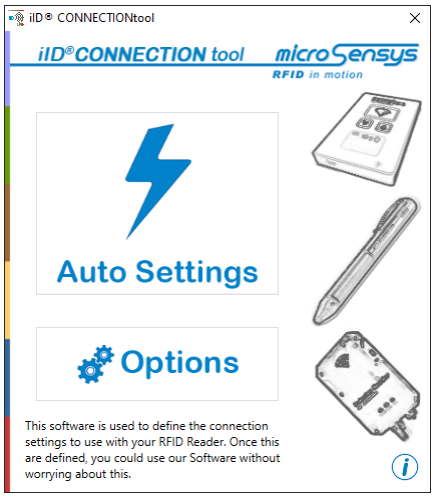

*Following installation, please check whether updates to the .Net Framework 4 Client Profile are available. The program can subsequently be started from the Start menu.*

After successful installation of iID® DEMOsoft 2020 a device setup using iID® CONNECTION tool / LAN config tool is required. If you already did the device setup, you may skip page 6-10.

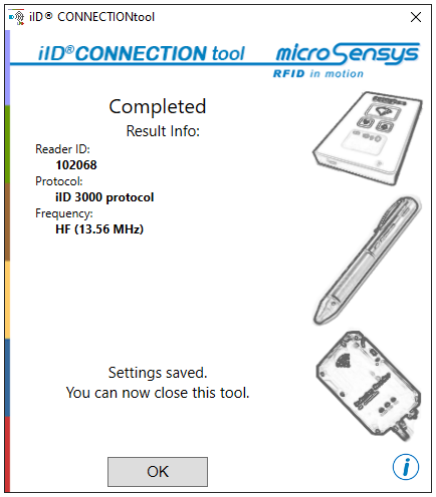
# Setup - iID® CONNECTION tool

Before you start the software for the first time, please ensure that an iID® 3000 PRO compatible RFID interface is connected to your PC and all necessary drivers are installed for this purpose.

Connect the RFID interface automatically with button “Auto Settings” or manual by pressing “Options”.

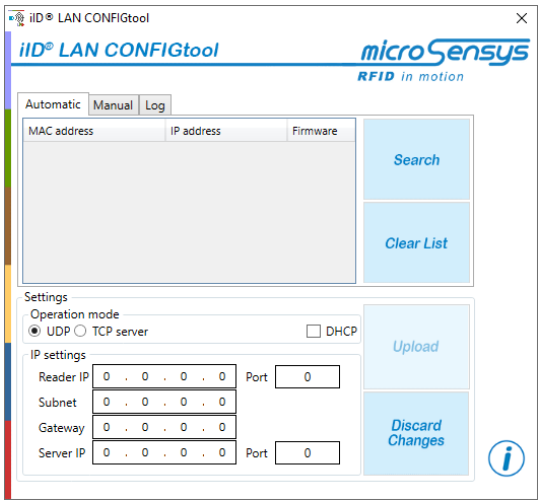



When the configuration is confirmed, the reader ID of the RFID interface should be displayed.



# Setup - iID® LAN CONFIGtool

In order to allow specific parameter settings of iID® contactless RFID interfaces with LAN (network) interface, the usage of iID® LAN CONFIGtool is required. The installation of iID® LAN CONFIGtool is done automatically during the setup of iID® INTERFACE configuration tool.

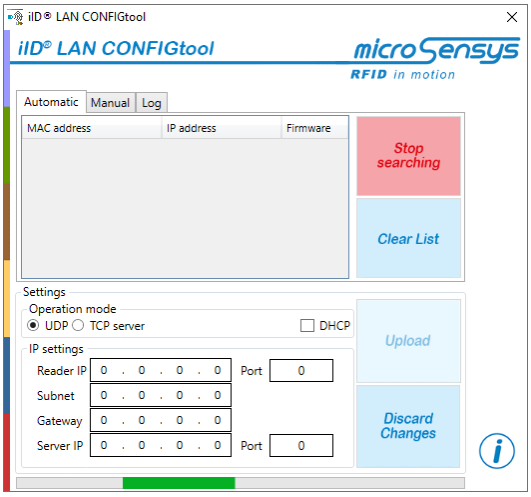



*Attention: The setting of network-specific parameters should only be carried out by qualified personnel, since the communication with the iID® contactless RFID interface can be impaired by setting incorrect parameters.*

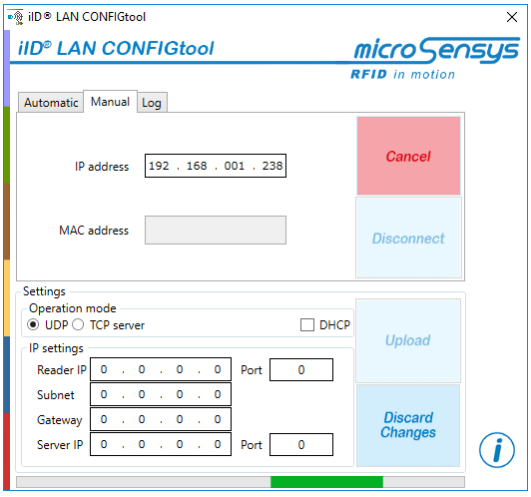
Follow these instructions to set network parameters:

- Connect your LAN-capable iID® contactless RFID interface to network infrastructure and power supply
- start the iID® LAN configuration tool

To connect to the iID® contactless RFID interface, please use the button "search" or the "Manual" tab for IP-based search, see the following illustrations.

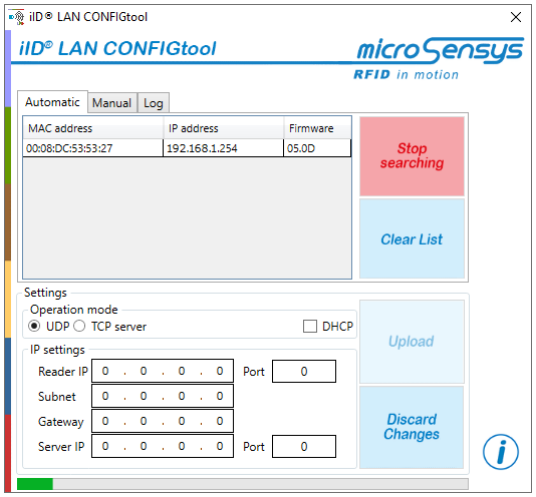



The manual connection to the iID® contactless RFID interface via TCP port 1461 is recommended if the reader is on a remote network or the UDP port 1460 is blocked by firewall or port rules. For manual connection, please enter the known IP address of the iID® contactless RFID interface into the IP address field.

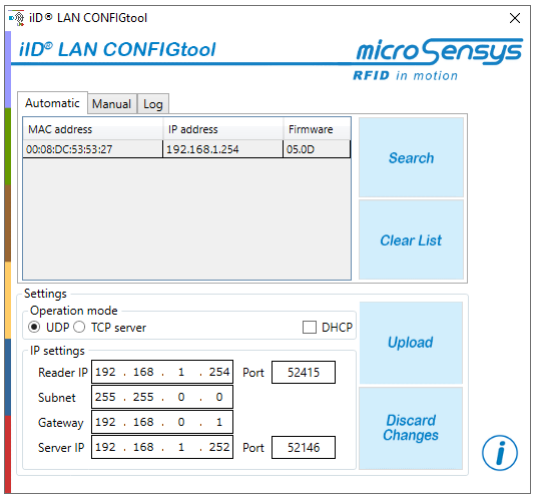



*Attention: Please make sure that the PC and RFID interface are in the same LAN sub-net for the time of configuration.*

If one or more iID® contactless RFID interfaces are listed in the search box, press stop searching.

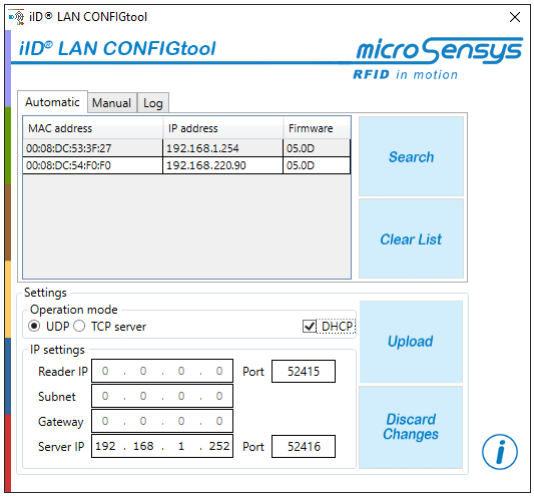



By selecting the desired participant, the LAN parameters of the RFID interface are displayed in the "TCP/IP Settings" area. It is also possible to adapt the desired parameters.




By pressing the button "upload" the updated data is transferred to the RFID interface.

If your network infrastructure has a DHCP-Server you can use the DHCP mode by checking this function. Thereby the interface will get all necessary configuration data.



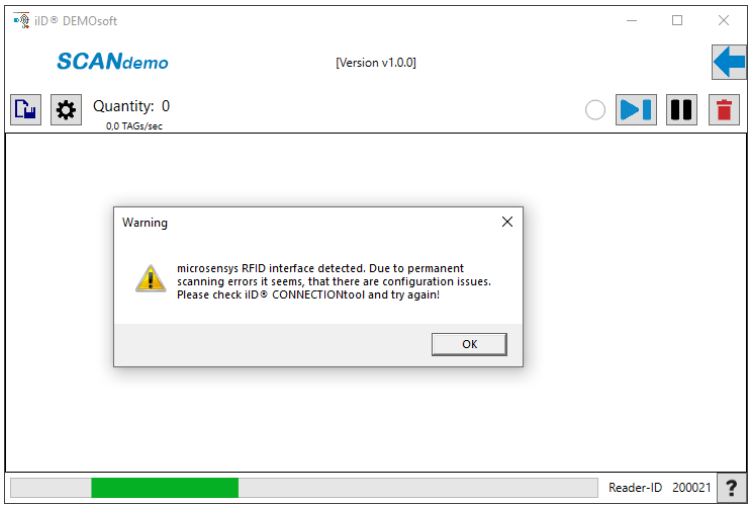

*Attention: Changing the LAN settings of the RFID interface can make a reboot system necessary, e.g. when UDP data packets are to be sent to a new destination address in the script operation mode.*

The following table describes the setting parameters:

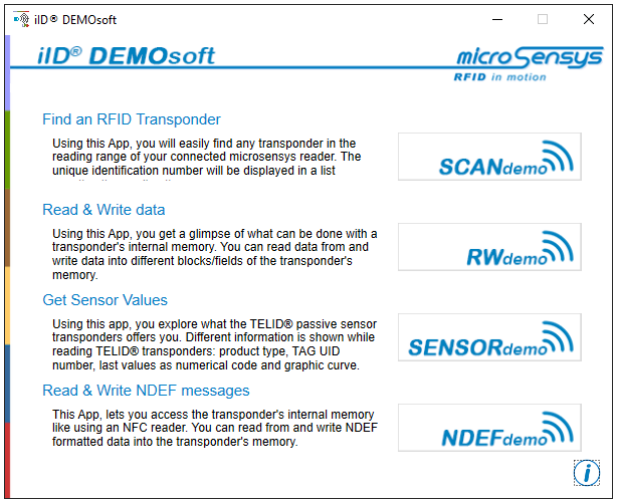
| Parameter | Description |
|---|---|
| **Reader IP** | IP address of RFID interface |
| **(Reader) Port** | Port of the RFID interface for incoming data |
| **Subnet** | IP-Subnet of RFID interface and host system |
| **Gateway** | IP-Gateway in the subnet |
| **Server IP** | IP address of host system (e.g. for UDP packets in script mode) |
| **(Server) Port** | Outbound data port of the RFID interface / port of the host system for incoming data |

# Operation

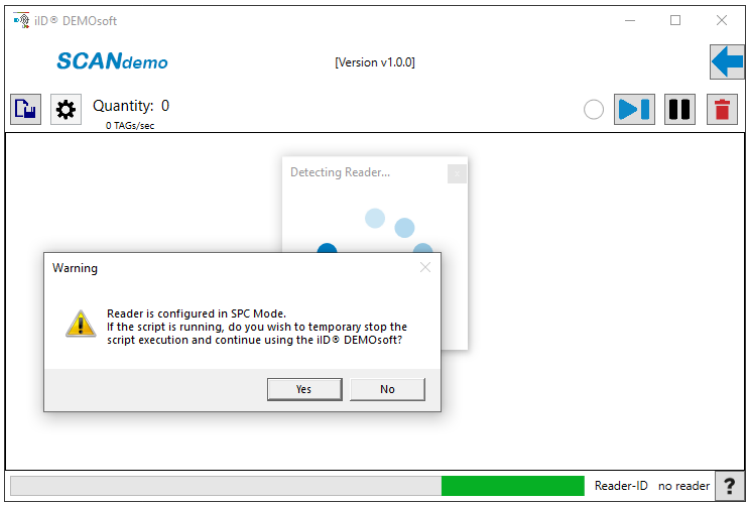
Once the RFID interface has been installed and configured, no further hardware settings are required in the software.
Errors in the parameterization of the RFID reader will be displayed with the following error message, after you opened one of the applications in the iID® DEMOsoft 2020 software. In this case, please proceed as described on page 6 (chapter „iID® CONNECTIONtool“) and correct the RFID reader settings!




After an error-free startup of the application, the Welcome screen should appear when you first start. There you can choose one of four applications, which will be described more precisely in the following chapters.



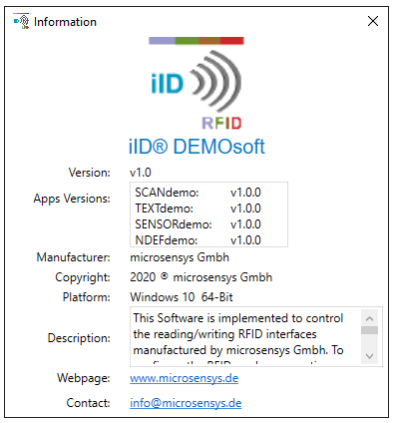
If the connected reader is configured in SPC mode with a script, you will see the following message box, where you be asked to change to DOC mode temporarily. When you close the software, the SPC mode will be reactivated.




The function of the various controls is shown by the question mark in the lower right corner. This possibility to get a deeper look into the controls of the software is presented in every application.

# Information

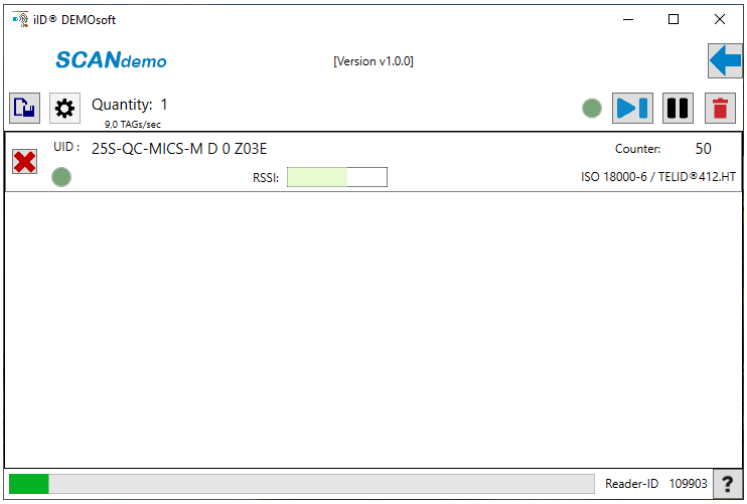
Clicking on the ⓘ icon in the lower right area opens the program's information dialogue.



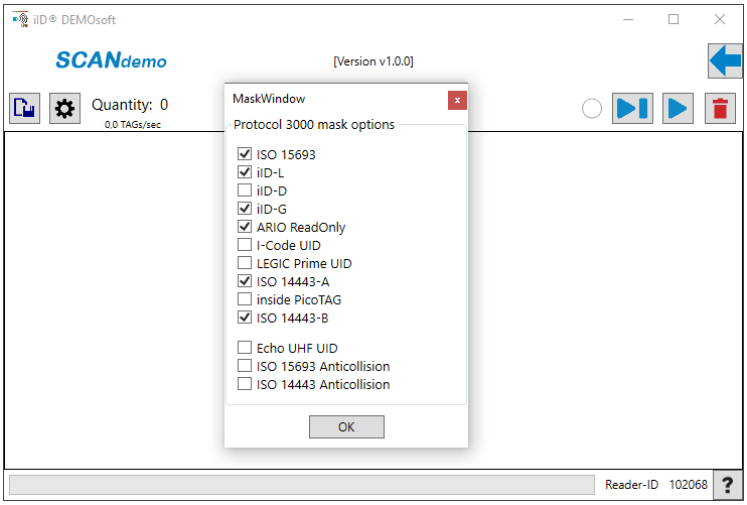

Here you will find information on program and applications version, web URL, a contact email address, and a short description of the program.

## SCANdemo

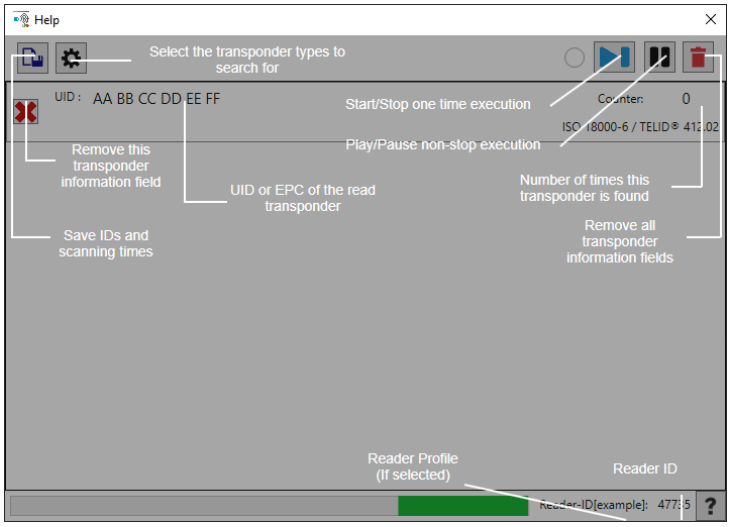
Using this application, you will find easily any transponder in the reading range of your connected Microsensys reader. The unique identification number (UID) or the related EPC code for UHF application will be displayed in a list. Further, you can see the type of transponder, a counter, with the number of detections and a colored bar, which shows the level of detection quality.




Depends on the connected RFID reader some of these controls are not active. For example, if an UHF reader is connected the settings icon ⚙ is disabled. Is it an HF reader instead, you can choose the transponder types to search for.



The following picture demonstrates the context of all controls in the SCANdemo application.

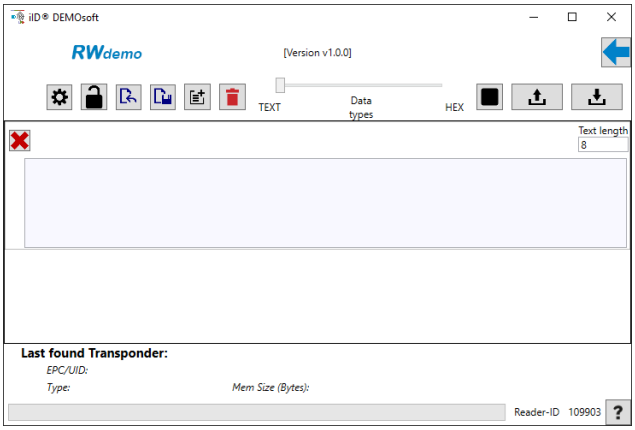



There are some differences between UHF and HF RFID transponders, the following table shows their properties.

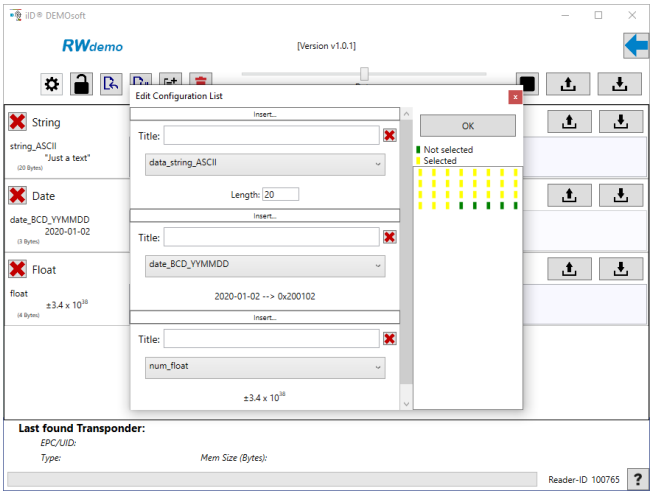
| Properties | UHF | HF |
|---|---|---|
| **Scanned numbers** | EPC code<br>EPC : E2 80 11 70 00 00 02 0F 73 7D 38 8F | Unique ID<br>UID : 5C FE 4F D7 50 01 04 E0 |
| **Signal strength** | RSSI: | - |

## RWdemo

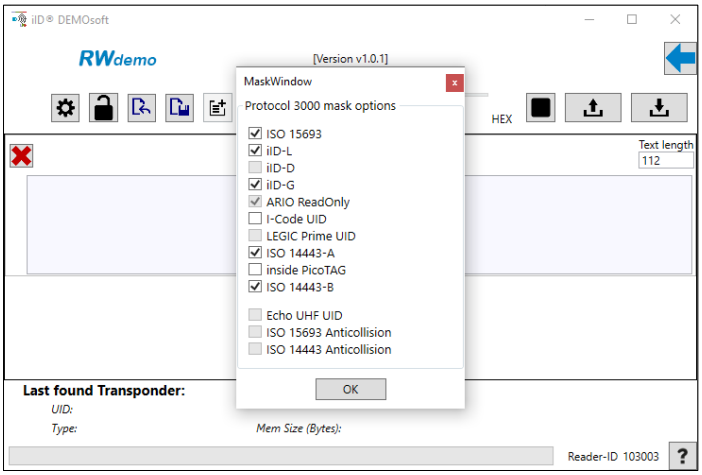
Using this application, you get a glimpse of what can be done with a transponder's internal memory. You can read from and write data into different blocks/fields of the transponder's memory.



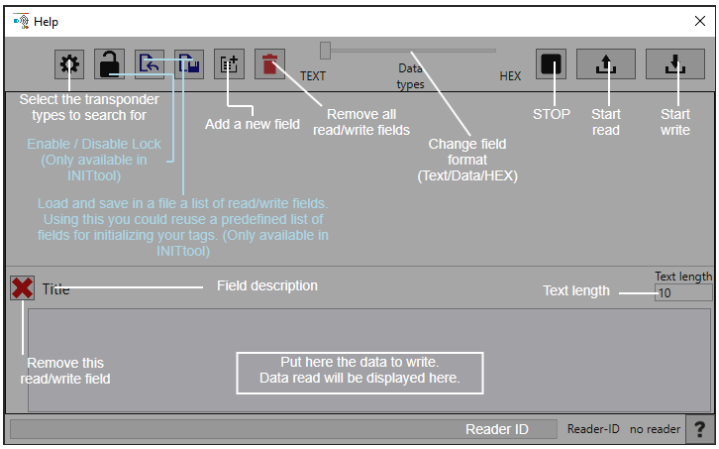

In case of access to memory, you can choose different formats for reading and writing operations. To switch between them, you move the slider to one of the three positions. If you want to add additional fields (except *TEXT*), you push the icon. In the following screen, you can enter a title, select a data format, and for some of them entry the length. With the button *Insert...* you can add even more fields. Independent of selected data format, the used number of bytes will be displayed in the "memory view" of the Edit Configuration Lost.



Depends on the connected RFID reader some of these controls are not active. For example, if an UHF reader is connected the settings icon ⚙ is disabled. Is it an HF reader instead, you can choose the transponder types to search for.




The following picture demonstrates the context of all controls in the RWdemo application.



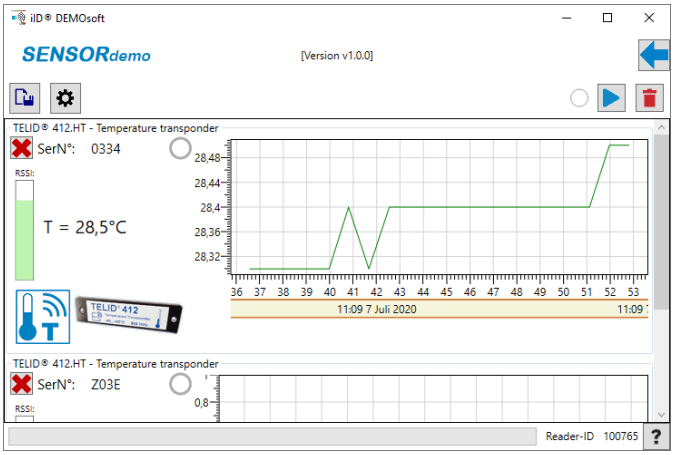

Please note that the transponder has a user memory if you are using a UHF transponder. The RWdemo read and write only on user memory of the UHF transponder. Reading and writing on EPC area is not possible with that software tool.

*Please keep in mind, that RWdemo is a demonstration application for iID® contactless RFID interfaces. You can access the full functionality for TAG user memory programming, including csv or xml data import, multiple field definitions and file logging in "iID® INITtool".*

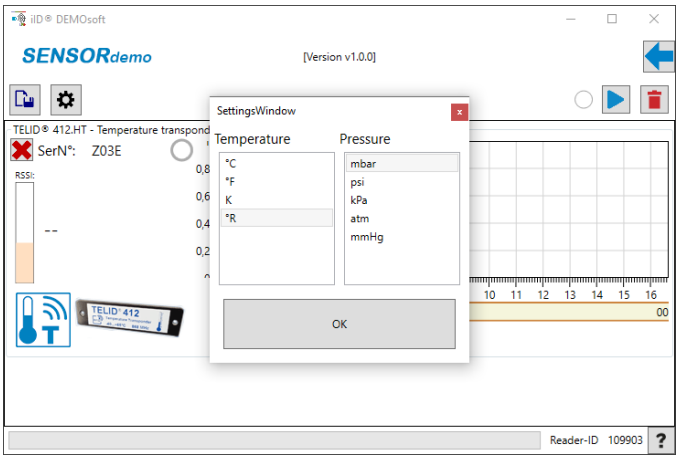
*Please ask microsensys for further information about "iID® INITtool".*

## SENSORdemo

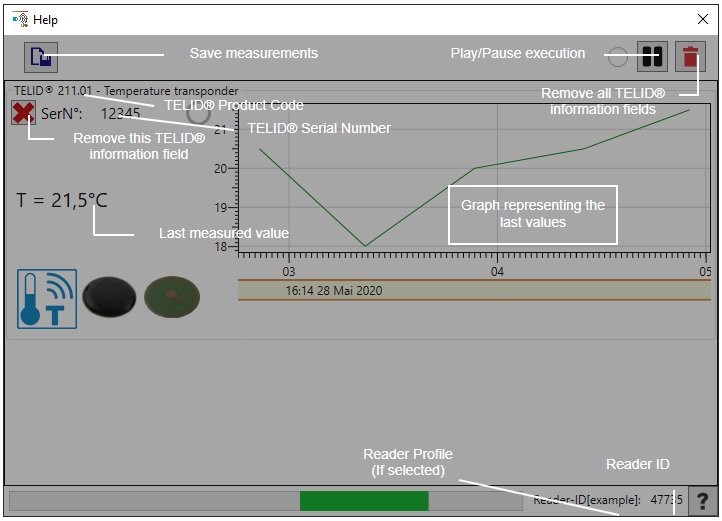
Using this application, you explore what the TELID® passive sensor transponders offer you. Different information is shown while reading TELID® transponders: product type, TAG UID number, last value as numerical code, and graphic curve.




Depends on your favorite regionally specific settings you can change the physical unit of temperature and pressure under the settings icon ⚙.

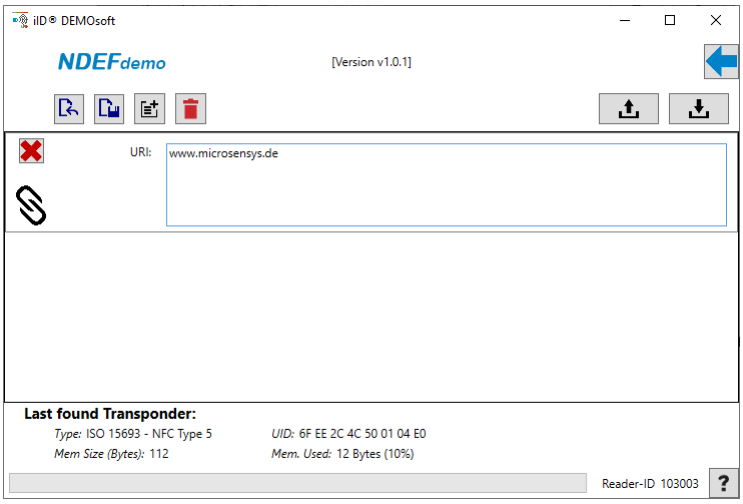


The following picture demonstrates the context of all controls in the SENSORdemo application.

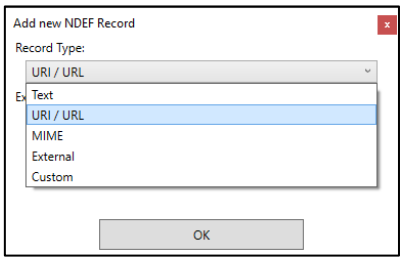


## NDEFdemo

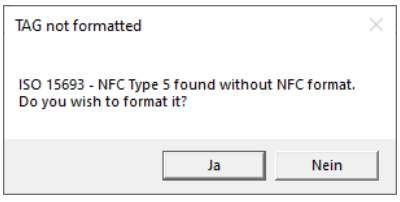
This application lets you access the transponder's internal memory like using an NFC reader. NDEFdemo will also allow you to format transponders compatible for readout with smartphone integrated NFC readers. You can read and write NDEF formatted data from and into the transponder's memory.



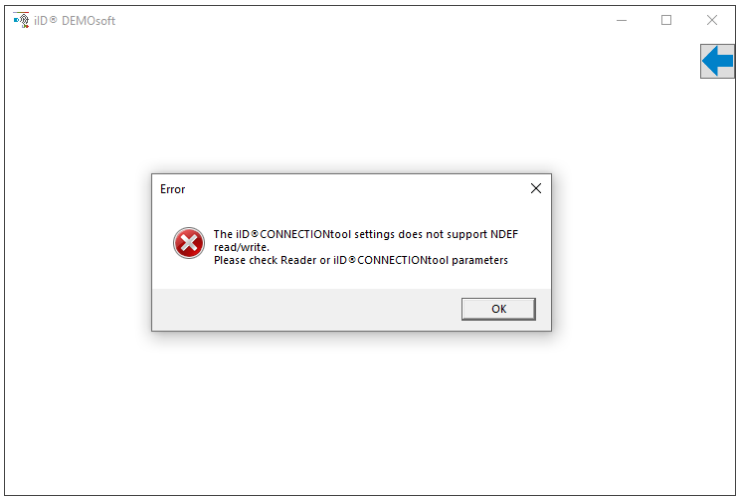

If you add a new field for reading or writing then you can choose different types.



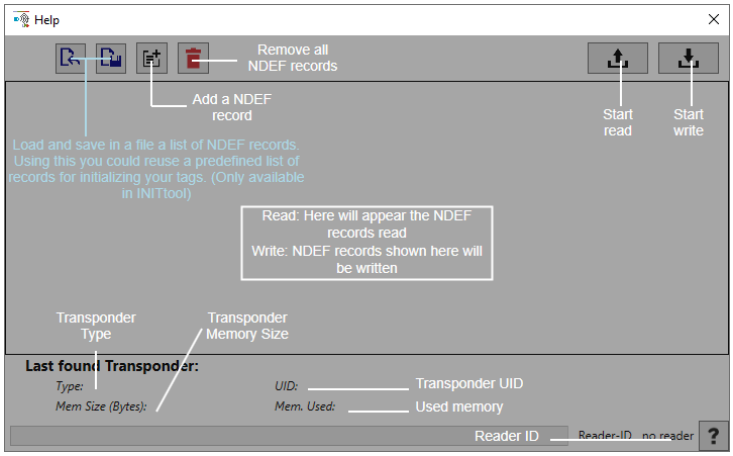

You will receive a message before data is written to a new transponder that is not formatted with the NFC format. To write to the transponder in NFC format, confirm the message with "Yes".



In case of a UHF RFID reader is connected you will see the following message box, which informs you about the non-supported reader. Only HF RFID reader are be able to work with NDEF messages.




The following picture demonstrates the context of all controls in the NDEFdemo application.




*Please keep in mind, that NDEFdemo is a demonstration application for iID® contactless RFID interfaces. You can access the full functionality for NFC compatible programming including csv or xml data import, multiple field definitions and file logging in "iID® INITtool NFC".*

*Please ask microsensys for further information about "iID® INITtool NFC".*

Do you have any questions?  Contact us:

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