


# Manual for Smartreader Web App

- Original Manual -

 <b>TTX Smartreader Configuration</b>	
<b>Device Status</b>	<b>Device Status</b>
<a href="#">Settings</a>	CPU Temperatur: <b>67°C</b>
<a href="#">Global Settings</a>	RFID Temperatur: <b>30°C</b>
<a href="#">Reading</a>	Network Connection: <b>Online</b>
<a href="#">Backup</a>	RFID Connection: <b>Offline</b>
<a href="#">Tests</a>	DB Connection: <b>Not Monitored</b>
<a href="#">User Management</a>	Device Time: <b>25-07-2022 08:34:26</b>
<a href="#">Device Informations</a>	
<a href="#">Admin Config</a>	
<a href="#">Logout</a>	

## THERMOTEX NAGEL GmbH

Schutterstr. 14, 77746 Schutterwald, DEUTSCHLAND

Tel. +49 781 9616-0, Fax +49 781 9616-50

info@thermo-tex.de, www.thermo-tex.de



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## 1 Introduction

This manual is for the THERMOTEX Smartreader web application.

**A compatible reading system with a running THERMOTEX Smartreader application and a network connection is required for use!**

Compatible systems are:

- THERMOTEX UHF Long-Range Reader/Writer SIL-9400-MUX4 (#23746)
- THERMOTEX UHF Long-Range Reader/Writer SIL-9400-MUX8 (#23733)

To access the THERMOTEX Smartreader web application you need to enter the IP address of the reader into your browser.

There are 2 ways to access the device-specific configuration page / firmware management of the RFID device:

1. Select the Admin Config menu item from the main menu
2. Via the address IP address/config.html

**The use of this configuration page is usually not required and is only needed in case of a firmware update. All necessary settings can be made directly in the THERMOTEX Smartreader web application.**



- **When you reload a page, the entire application is reloaded**
- **The application is optimised for use on a desktop computer.**
- **The application may not be fully displayed on mobile devices.**

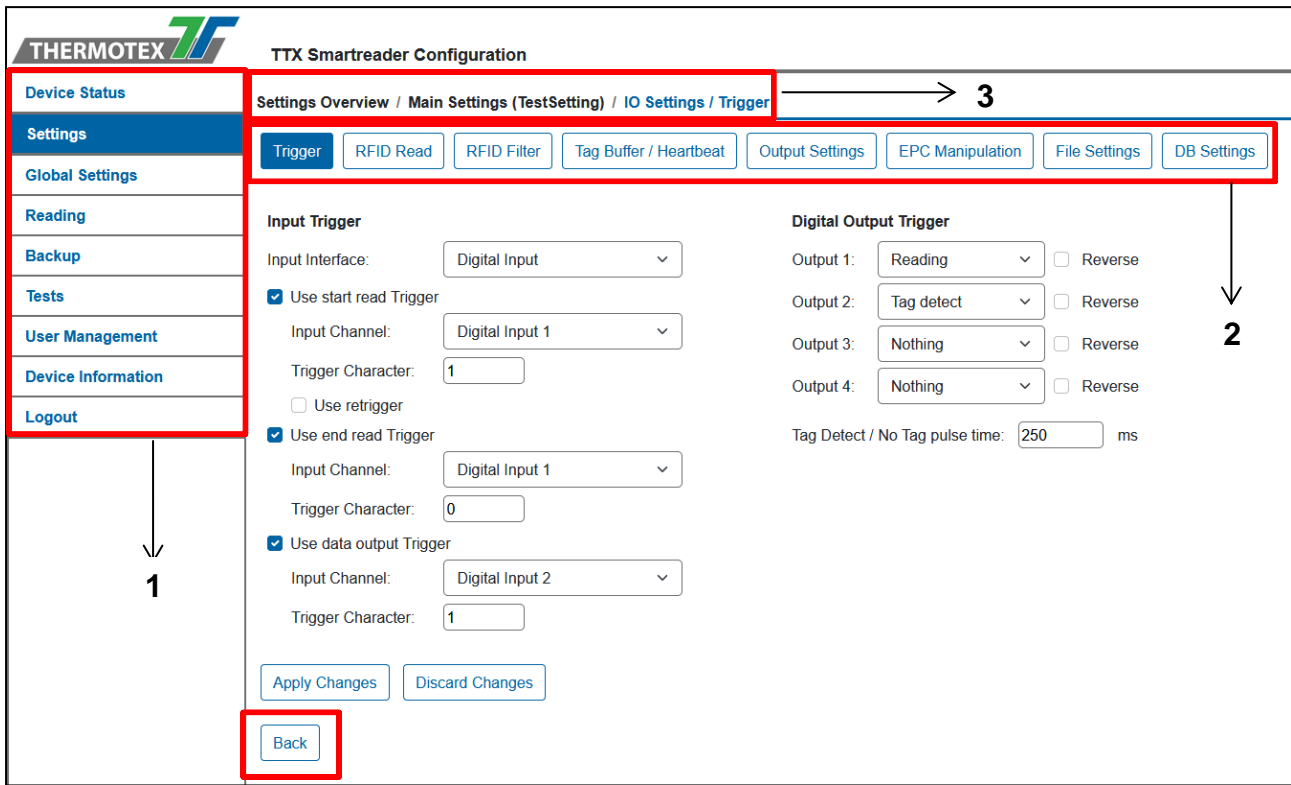
**If you need additional help or support to this manual, please contact the technical hotline of THERMOTEX Nagel GmbH.**

**Phone +49(0)781/9616-36, Fax +49(0)781/9616-30 or e-mail: [hotline@thermo-tex.de](mailto:hotline@thermo-tex.de)**

**For Switzerland: Phone +41 (0)61751-9100, Fax +41 (0)61751-9101, E-Mail: [info@thermo-tex.ch](mailto:info@thermo-tex.ch)**

## 2 Overview

### 2.1 Navigation



#### 1. Main Menu

On the left side is the main menu. All main functions can be called up via this menu. The active menu is highlighted in blue.

#### 2. Submenu

On some pages there is a submenu. This is represented by a row of buttons at the top of the content. By pressing the buttons, you can navigate to the desired page / function. The active submenu is highlighted in blue.

#### 3. Breadcrumbs

The Settings page has a breadcrumb menu. This shows the call-up levels. The breadcrumb menu can be used to navigate back to the selected page. The current page is displayed in blue.

#### 4. Back Button

Some pages have a back button at the bottom of the content. This can be used to navigate back one level.

## 2.2 Settings

**THERMOTEX** TTX Smartreader Configuration

Settings Overview / Main Settings (TestSetting) / IO Settings / Trigger

Trigger | RFID Read | RFID Filter | Tag Buffer / Heartbeat | Output Settings | EPC Manipulation | File Settings | DB Settings

**Input Trigger**

Input Interface: Digital Input

Use start read Trigger

Input Channel: Digital Input 1

Trigger Character: 1

Use retrigger

Use end read Trigger

Input Channel: Digital Input 1

Trigger Character: 0

Use data output Trigger

Input Channel: Digital Input 2

Trigger Character: 1

**Digital Output Trigger**

Output 1: Reading  Reverse

Output 2: Tag detect  Reverse

Output 3: Nothing  Reverse

Output 4: Nothing  Reverse

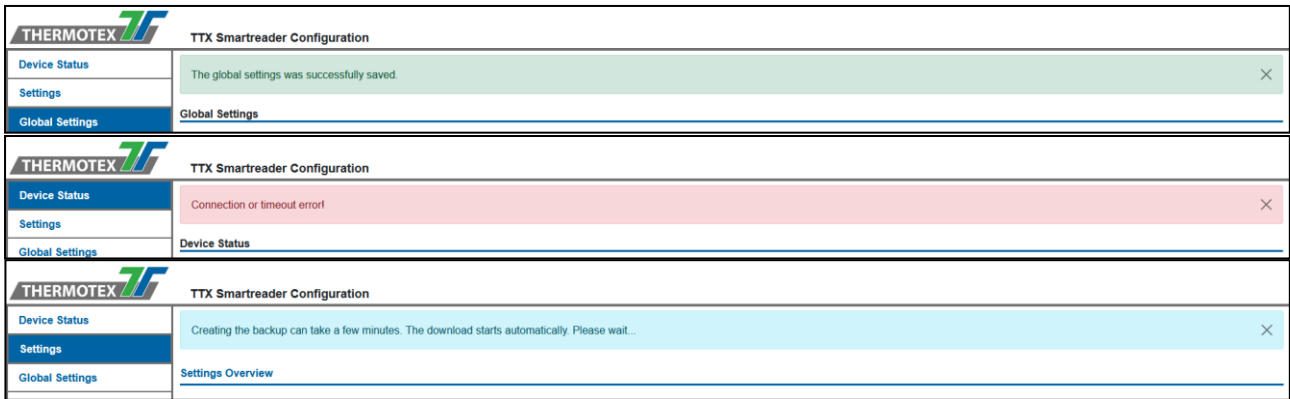
Tag Detect / No Tag pulse time: 250 ms

Apply Changes | Discard Changes

Back

On all setting pages where changes can be made, there are 2 buttons, Apply Changes and Discard Changes. With these you can save your changes or undo them.

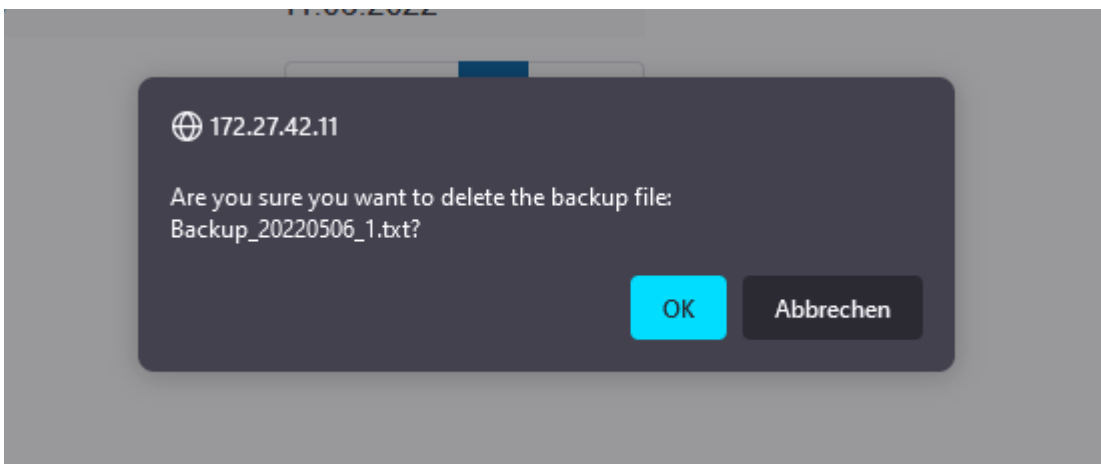
## 2.3 Notifications



Above the content is a notification bar. This is not visible by default. When notification events are performed, the notification bar appears. The colour of the notification bar indicates what type of notification it is. The notification bar can be closed via the 'X' on the right edge.


<b>Green</b>	The green notification displays a successful action. The notification disappears automatically after 15 seconds.
<b>Red</b>	The red notification displays faulty actions. The notification does not disappear automatically.
<b>Blue</b>	The blue notification displays information's. The notification disappears automatically after the information is no longer needed.

## 2.4 Dialogues



For all security queries, a dialogue is displayed that can be confirmed or the action can be cancelled. The appearance and position of the dialogue depends on the browser.

3 Reader Information

 <b>TTX Smartreader Configuration</b>	
<b>Device Status</b>	<b>Device Information</b> <hr/> Device Name: <b>SIL-9400-MUX4</b> Firmware Version: <b>1.14.0</b> Serialnumber: <b>20100001</b> Number of Antennas: <b>4</b> Location: <b>Hall 2 / Entry / Box Left</b> Application Version: <b>1.0.2</b> Webpage Version: <b>1.0.4</b>
<b>Settings</b>	
<b>Global Settings</b>	
<b>Reading</b>	
<b>Backup</b>	
<b>Tests</b>	
<b>User Management</b>	
<b>Device Information</b>	
<b>Admin Config</b>	
<b>Logout</b>	

On the device information page, you can find the data of the device.

<b>Device Name</b>	The name of the device.
<b>Firmware Version</b>	The current firmware version of the device.
<b>Serialnumber</b>	The serial number of the device.
<b>Number of Antennas</b>	The number of antennas that the device has.
<b>Location</b>	The reader location information set in the Global Settings.
<b>Application Version</b>	The program version currently running on the device.
<b>Webpage Version</b>	The version of the web application currently running on the device.

4 Reader Status

		<b>TTX Smartreader Configuration</b>	
<b>Device Status</b>		<b>Device Status</b>	
<a href="#">Settings</a>		CPU Temperatur:	67°C
<a href="#">Global Settings</a>		RFID Temperatur:	30°C
<a href="#">Reading</a>		Network Connection:	Online
<a href="#">Backup</a>		RFID Connection:	Offline
<a href="#">Tests</a>		DB Connection:	Not Monitored
<a href="#">User Management</a>		Device Time:	25-07-2022 08:34:26
<a href="#">Device Information</a>			
<a href="#">Admin Config</a>			
<a href="#">Logout</a>			

The device status page is displayed after login. The current status values are displayed in this Interface, which were set in the monitoring settings. The current device time is also displayed. The data is updated every 5 seconds.

Online	The green online status indicates that everything is working.
Offline	The red offline status indicates that there is an error.
Not Monitored	The grey status indicates that the component is not monitored.

CPU Temperature	Displays the current CPU temperature.
RFID Temperature	Displays the current RFID module temperature.
Network Connection	Displays the status of the network connection.
RFID Connection	Displays the status of the RFID connection.
DB Connection	Displays the status of the database connection.
Device Time	Displays the current device time.



## 5 Global Settings

Global settings are cross-profile settings and apply to the whole device.

### 5.1 General

TTX Smartreader Configuration	
<b>Device Status</b>	<b>Global Settings</b> <hr/> <b>General</b>   Network Paths  <b>Reader Location Infos</b> Location: <input type="text" value="Hall 2"/> Process: <input type="text" value="Entry"/> Description: <input type="text" value="Box Left"/> Delimiter: <input type="text" value="/"/> Preview: <b>Hall 2 / Entry / Box Left</b>  <b>Network Config</b> <input type="checkbox"/> Use DHCP IP-Address: <input type="text" value="172.27.42.11"/> Subnetmask: <input type="text" value="255.255.0.0"/> Gateway: <input type="text" value="172.27.0.1"/>  <b>Timezone</b> Timezone: <input style="border: none; border-bottom: 1px solid #ccc; padding: 2px 5px;" type="text" value="Europe/Paris"/> <span style="font-size: 0.8em;">v</span>  <input type="button" value="Apply Changes"/> <input type="button" value="Discard Changes"/>
<b>Settings</b>	
<b>Global Settings</b>	
<b>Reading</b>	
<b>Backup</b>	
<b>Tests</b>	
<b>User Management</b>	
<b>Device Information</b>	
<b>Admin Config</b>	
<b>Logout</b>	

In the general tab of the Global Settings, you can adjust the network connection, the reader locations and the time zone.

## 5.1.1 Reader Location Info

With the location information it is possible to define your device and its area of activity. This information can be inserted later e.g., in the mail body via placeholder.

<b>Location</b>	Specifies the place where the device is located.
<b>Process</b>	Specifies the process in which the device is used.
<b>Description</b>	Specifies a description of what the device does.
<b>Divider Character</b>	Specifies the character that will be placed between the specifications.
<b>Preview</b>	Specifies a preview, which is composed of the data specified above.

## 5.1.2 Network Configuration

With the network configuration it is possible to assign a fixed IP address to your device or to have it assigned automatically (DHCP).

<b>Use DHCP</b>	Specifies whether DHCP is enabled. The IP address, netmask and gateway are then determined automatically. This may cause the address of the device to change after a reboot.
<b>IP-Address</b>	Specifies the IP Address of the device.
<b>Sub netmask</b>	Specifies the netmask of the network in which the device is located.
<b>Gateway</b>	Specifies the gateway of the network in which the device is located.

## 5.1.3 Time zone

<b>Time zone</b>	Specifies the time zone in which the device is located.
------------------	---------------------------------------------------------

## 5.2 Network Paths

TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

General
Network Paths

**Network Access**

Use Network Access

Username:

Password:

Domain:

**Backup Network Path**

Use Backup Network Path

Server address:

Shared folder / drive:

Folder path:  Test Path Access

**Output Network Path**

Use Output Network Path

Server address:

Shared folder / drive:

Folder path:  Test Path Access

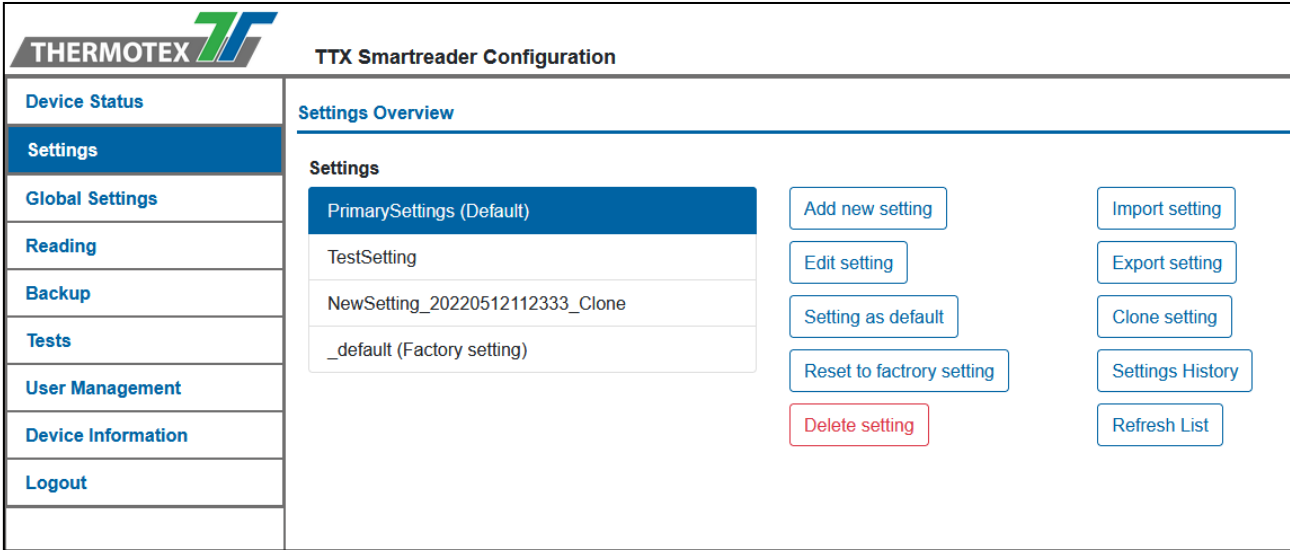
Apply Changes
Discard Changes

The network access allows saving backups as well as device outputs on a Windows device, which is located in the same network. This requires a Windows user with read and write rights.

<b>Use Network Access</b>	Specify whether the network access should be used.
<b>Username</b>	Specifies a Windows user name with read and write permissions on the target network.
<b>Password</b>	Specifies the password of the specified Windows user.
<b>Domain</b>	Specifies the domain of the target network.
<b>Use Backup Network Path</b>	Specifies whether the network path should be used for the external backup.
<b>Use Output Network Path</b>	Specifies whether the network path should be used for the file output.
<b>Server address</b>	Specifies the IP address of the target device where the files will be saved.
<b>Shared folder / drive</b>	Specifies the shared folder or drive where the files will be saved.
<b>Folder path</b>	Specifies the path to the folder where the files will be saved.

## 6 Settings

### 6.1 Settings overview



In the settings overview you can see all stored settings profiles. You can edit them using the buttons.

<b>Add new setting</b>	Creates a new settings profile based on _default settings.
<b>Edit setting</b>	Opens the interface for editing the selected settings profile.
<b>Setting as default</b>	Sets the selected settings profile as the default profile. The default profile is the active profile. There can only be 1 default profile.
<b>Reset to factory setting</b>	Resets the selected setting profile to the factory settings.
<b>Delete setting</b>	Deletes the selected setting profile.
<b>Import setting</b>	Opens the file selector where a setting profile can be selected to be imported.
<b>Export setting</b>	Downloads the selected settings profile.
<b>Clone setting</b>	Adds a new setting profile. It is based on the selected setting profile.
<b>Settings History</b>	Opens the settings history.
<b>Refresh List</b>	Refreshes the settings profile list.


## 6.1.1 Settings overview for admins

THERMOTEX  TTX Smartreader Configuration																
<ul style="list-style-type: none"> <li>Device Status</li> <li style="background-color: #0056b3; color: white;">Settings</li> <li>Global Settings</li> <li>Reading</li> <li>Backup</li> <li>Tests</li> <li>User Management</li> <li>Device Information</li> <li>Admin Config</li> <li>Logout</li> </ul>	<p><b>Settings Overview</b></p> <p><b>Settings</b></p> <table border="1"> <tr> <td style="background-color: #0056b3; color: white;">PrimarySettings (Default)</td> <td>Add new setting</td> <td>Import setting</td> </tr> <tr> <td>NewSetting_202200512112333_Clone</td> <td>Edit setting</td> <td>Export setting</td> </tr> <tr> <td>TestSetting</td> <td>Setting as default</td> <td>Clone setting</td> </tr> <tr> <td>_default (Factory setting)</td> <td>Reset to factory setting</td> <td>Settings History</td> </tr> <tr> <td></td> <td>Delete setting</td> <td>Refresh List</td> </tr> </table> <hr/> <p><b>Admin Settings</b></p> <p> <input type="button" value="Reboot device"/> <input type="button" value="Backup Device"/> <input type="button" value="Restore Device"/> </p>	PrimarySettings (Default)	Add new setting	Import setting	NewSetting_202200512112333_Clone	Edit setting	Export setting	TestSetting	Setting as default	Clone setting	_default (Factory setting)	Reset to factory setting	Settings History		Delete setting	Refresh List
PrimarySettings (Default)	Add new setting	Import setting														
NewSetting_202200512112333_Clone	Edit setting	Export setting														
TestSetting	Setting as default	Clone setting														
_default (Factory setting)	Reset to factory setting	Settings History														
	Delete setting	Refresh List														

As an admin you have additional functions.

<b>Reboot device</b>	Reboots the device
<b>Backup Device</b>	Creates a device backup file with all current data. This can take several minutes.
<b>Restore Device</b>	Restores a device backup and restarts the device.

## 6.2 Main Settings



### TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

#### Settings Overview / Main Settings

---

Description:

Start read on startup:

Is Primary (default):

Apply Changes
Discard Changes

Interface Settings: Show Settings

IO Settings: Show Settings

Backup Settings: Show Settings

Monitoring Settings: Show Settings

Authentication Settings: Show Settings

Back

In the main settings, the name as well as the start setting can be changed. You can also navigate to all other settings from here.

<b>Description</b>	The name of the setting profile.
<b>Start read on start up</b>	Should the reading start on the device start?

## 6.3 Interface Settings

**TTX Smartreader Configuration**

- Device Status
- Settings**
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

**Settings Overview / Main Settings (TestSetting) / Interface Setting**

Use Ethernet

Interface mode:

Port:

Use USB

Interface mode:

Use Serial

Baudrate:

In the interface settings you can switch the interfaces on or off and configure them.

<b>Use Ethernet</b>	Specifies whether the network interface should be used.
<b>Network Interface Mode</b>	Selection of the network mode. Currently only the host mode is available.
<b>Port</b>	Specifies the port of the network over which the data can be received. Port 2101 and 46662 are reserved for internal systems.
<b>Use USB</b>	Specifies whether the USB interface should be used.
<b>USB Interface mode</b>	Selection whether USB-HID or USB-CDC mode should be used. USB-HID: Simulates a keyboard USB-CDC: Simulates a serial port If USB-CDC is selected, a baud rate must be selected
<b>Use Serial</b>	Specifies whether the serial interface should be used.
<b>Baud rate</b>	Specifies the baud rate of the serial interface.

## 6.4 I/O Settings

In the I/O settings the input and output specific settings can be set. For example, the read settings, the input and output triggers, the data output and filters can be set.

### 6.4.1 Trigger Settings

The screenshot shows the 'Trigger' settings page in the TTX Smartreader Configuration application. The page is titled 'Settings Overview / Main Settings (TestSetting) / IO Settings / Trigger'. It features a navigation menu on the left with options like 'Device Status', 'Settings', 'Global Settings', 'Reading', 'Backup', 'Tests', 'User Management', 'Device Information', and 'Logout'. The main content area is divided into two columns. The left column, 'Input Trigger', contains three sections: 'Use start read Trigger' (checked), 'Use end read Trigger' (checked), and 'Use data output Trigger' (checked). Each section has an 'Input Channel' dropdown and a 'Trigger Character' input field. The right column, 'Digital Output Trigger', contains four 'Output' sections (Output 1 to 4) with dropdown menus and 'Reverse' checkboxes. A 'Tag Detect / No Tag pulse time' field is set to 250 ms. At the bottom, there are 'Apply Changes', 'Discard Changes', and 'Back' buttons.

The input triggers and output triggers can be defined in the trigger settings. With the input triggers the reading and the data output can be controlled by external signals. The output triggers can control external devices during reading.

#### Input Trigger

<b>Input Interface</b>	Specifies via which interface the reader should listen to input triggers.
<b>Use start read Trigger</b>	Specifies whether the trigger for starting the read operation should be used.
<b>Use end read Trigger</b>	Specifies whether the trigger for stopping the read operation should be used.
<b>Use data output Trigger</b>	Specifies whether the trigger for outputting the read data should be used. If this trigger is active, then no data is output during reading. The read data can only be output via this trigger or the user interface.
<b>Input Channel</b>	The Input Channel is only necessary if the input interface is set to Digital Input. The Input Channel specifies the input port for the trigger signal.



# Settings



<b>Trigger Character</b>	Specifies the character to check for in order to fire the trigger. The trigger character can be any alphanumeric character. With Digital Input as the input interface, however, only 1 and 0 are possible.
<b>Use retrigger</b>	Specifies whether the retrigger function should be used. The retrigger function enables a fixed reading time to be extended by the set reading time during reading by sending the read trigger again.

## Output Trigger

<b>Output 1-4</b>	Specifies which trigger is to be sent via which digital output. The following triggers can be selected <ul style="list-style-type: none"><li>• Nothing</li><li>• Reading</li><li>• Tag detect</li><li>• No tag</li></ul>
<b>Reverse</b>	Indicates whether the output trigger should output the reverse value. By default, the output triggers are active high. But with Reverse they are active low.
<b>Tag Detect / No Tag pulse time</b>	Specifies the minimum pulse time of the Tag detect / No tag trigger.

## 6.4.2 RFID Read Settings

TTX Smartreader Configuration

Device Status

**Settings**

Global Settings

Reading

Backup

Tests

User Management

Device Information

Logout

Settings Overview / Main Settings (TestSetting) / IO Settings / RFID Read

Trigger
RFID Read
RFID Filter
Tag Buffer / Heartbeat
Output Settings
EPC Manipulation
File Settings
DB Settings

ID Number:

Session Flag:

Target:

Use fixed read time interval:  
Time interval:  ms

Use time after last new code:  
Time interval:  ms

Use global power:

Use antenna 1: Power:

Use antenna 2: Power:

Use antenna 3: Power:

Use antenna 4: Power:

Apply Changes
Discard Changes

Back

In the RFID Read settings you can set which antennas read with which power, as well as the read time and the read mode.

<b>ID Number</b>	Specifies which ID number of the tag is to be output. <b>Currently only the EPC number can be output.</b>
<b>Session Flag</b>	Specifies with which session flag the transponders are to be read. It is possible to choose between S0, S1, S2, S3 and an alternating mode of S2 and S3. The change takes place after each antenna cycle.
<b>Target</b>	Specifies which target is to be used for reading. It can be selected between A and B or a special B+A mode. In this mode the first antenna cycle is read with target B and afterwards only with target A.
<b>Use fixed read time interval</b>	Specifies whether a fixed time is to be read. If this is not active and also the time after the last code is not active, reading is permanent.
<b>Use time after last new code</b>	Specifies whether an additional time should be read after the last unique code has been read.
<b>Time Interval</b>	Specifies the time how long should be read.
<b>Use global power</b>	Specifies whether all antennas should be active and have the same power. If this is not active, all antennas can be configured individually.

<b>Use antenna 1-8</b>	Specifies which antenna is to be used. For a 4 port device only 4 antennas are displayed, for an 8 port device 8 antennas are displayed.
<b>Power</b>	Specifies the power of the antenna. A power from 1 to 15 can be selected.

## 6.4.3 RFID Filter Settings

**THERMOTEX TTX Smartreader Configuration**

Settings Overview / Main Settings (TestSetting) / IO Settings / RFID Filter

Trigger | RFID Read | **RFID Filter** | Tag Buffer / Heartbeat | Output Settings | EPC Manipulation | File Settings | DB Settings

- Use filter
  - Filter mode: Include
- Use Prefix
  - Prefix: 0F0A
- Use Suffix
  - Suffix: 0000
- Use filter mask
  - Filter mask start: 10
  - Filter mask: A7BC
- Use length filter
  - Code length: 24
- Use pre scan filter
  - Memorybank: Epc
  - Mask start: 4
  - Bit mask: 5454
  - Example length: 24
  - Example: XXX5454XXXXXXXXXXXXXXXXXXXX
- Use RSSI filter
  - Min: -70

Buttons: Apply Changes, Discard Changes, Back

The RFID filters can be used to filter the transponders. They can be filtered before reading and after reading.  
The pre scan filters allow only certain codes to be read. The normal filters are applied after reading to filter them before output.

### Normal Filter

<b>Use filter</b>	Specifies whether the filters should be used.
<b>Filter mode</b>	Specifies the filter mode. It is possible to choose between Include and Exclude.
<b>Use Prefix</b>	Specifies whether the prefix filter should be used.
<b>Prefix</b>	Specifies the prefix to filter by. Only hexadecimal characters can be entered.
<b>Use Suffix</b>	Specifies whether the suffix filter should be used.
<b>Suffix</b>	Specifies the suffix to filter by. Only hexadecimal characters can be entered.

# Settings



<b>Use filter mask</b>	Specifies whether the filter mask filter should be used.
<b>Filter mask start</b>	Specifies the starting point of the filter mask.
<b>Filter mask</b>	Specifies the filter mask to filter by. Only hexadecimal characters can be entered.
<b>Use length filter</b>	Specifies whether the code length filter should be used
<b>Code length</b>	Specifies the length of the codes to be output.

## Pre scan Filter

<b>Use pre scan filter</b>	Specifies whether the pre scan filters should be used.
<b>Memory bank</b>	Specifies in which memory bank of the transponder the bit mask specified below is to be searched for.
<b>Mask start</b>	Specifies the starting point of the filter mask.
<b>Bit mask</b>	Specifies the filter mask to filter by. The mask can have only an even number of digits! Only hexadecimal characters can be entered.
<b>Example length</b>	Specifies how many characters the example should have.
<b>Example</b>	Displays an example of the specified data, and visualizes where the bitmask is located in the code.
<b>Use RSSI filter</b>	Specifies whether the RSSI filter should be used.
<b>Min</b>	Specifies the RSSI minimum value. All transponders that have this or a higher value are read.

## 6.4.4 Tag Buffer / Heartbeat Settings

TTX Smartreader Configuration

---

- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Admin Config
- Logout

Settings Overview / Main Settings (TestSetting) / IO Settings / Tag Buffer and Heartbeat

Trigger
RFID Read
RFID Filter
Tag Buffer / Heartbeat
Output Settings
EPC Manipulation
File Settings
DB Settings

Use Heartbeat  
 Output Interface:

Time Interval:  s  
 Character:

Use Tag Buffer  
 Time Interval:  h  m  s Preview: 01:30:00  
 Reset interval on code read  
 Use output trigger on blocked codes

Show Tag Buffer

Apply Changes
Discard Changes

Back

With the heartbeat, a character can be sent at an interval via an interface to assure another system that the device is available.

With the tag buffer, read tags can be locked for a period of time and are then not output.

### Heartbeat

<b>Use Heartbeat</b>	Specifies whether the heartbeat should be used.
<b>Output Interface</b>	Specifies the interface for the heartbeat output.
<b>Time Interval</b>	Specifies the time interval in which the heartbeat is sent.
<b>Character</b>	Specifies the heartbeat character which is sent.

### Tag Buffer

<b>Use Tag Buffer</b>	Specifies whether the Tag Buffer should be used.
<b>Time Interval</b>	Specifies how long a code remains locked. The time interval is specified in hours, minutes and seconds. The maximum time is 60 hours.
<b>Preview</b>	Displays a preview of the time interval.
<b>Reset interval on code read</b>	Specifies whether the lock time starts again from the beginning each time a code is read.
<b>Use output trigger on blocked codes</b>	Specify whether the output triggers such as Tag Detect / No Tag should also be triggered for locked codes.

<b>Show Tag Buffer</b>	Displays the current tag buffer data. This is only possible with the active setting.
------------------------	-----------------------------------------------------------------------------------------

## 6.4.4.1 Tag Buffer Data

TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

Settings Overview / Main Settings (PrimarySettings) / IO Settings / Tag Buffer Data

Trigger
RFID Read
RFID Filter
Tag Buffer / Heartbeat
Output Settings
EPC Manipulation
File Settings
DB Settings

**Tag Buffer Data**

Show  entries Search:

Tag	Read Time	Release Time
54540114493000000002A485	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A492	05/16/2022 11:25:37	05/16/2022 11:27:37
54540114493000000002A499	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A4B1	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A4B5	05/16/2022 11:25:37	05/16/2022 11:27:37
54540114493000000002A4C0	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A4C1	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A4DC	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A4DD	05/16/2022 11:25:35	05/16/2022 11:27:35
54540114493000000002A4EC	05/16/2022 11:25:34	05/16/2022 11:27:34

Showing 1 to 10 of 252 entries

Previous
1
2
3
4
5
...
26
Next

Clear Tag Buffer
Refresh

Back

All current tag buffer data is displayed here. The tag buffer data remains available even after a restart if the device has not been off for longer than the lockout time.

<b>Clear Tag Buffer</b>	Deletes all tag buffer data after confirming a security prompt. All read codes are now output again.
<b>Refresh</b>	Updates the tag buffer data.

## 6.4.5 Output Settings

TTX Smartreader Configuration

Device Status

**Settings**

Global Settings

Reading

Backup

Tests

User Management

Device Information

Admin Config

Logout

Settings Overview / Main Settings (PrimarySettings) / IO Settings / Output Settings

Trigger
RFID Read
RFID Filter
Tag Buffer / Heartbeat
Output Settings
EPC Manipulation
File Settings
DB Settings

Output Interface:

Output Format:

Output path:  Test Path Access

Time Format:

Use two char output

Output string: Placeholder ^

Placeholder name	Placeholder value	Example
ID-Number	{ID}	0F0A31144900000000000001
Antenna	{ANTENNA}	1
Rssi	{RSSI}	-42
Datetime	{DATETIME}	See the selected time format
Carriage return	<cr>	<cr>
Line feed	<lf>	<lf>
Carriage return line feed	<crlf>	<crlf>

Example: 0F0A31144900000000000001<crlf>

Apply Changes
Discard Changes

Back

The output settings can be used to set which interface is to be used to output the read data and in which format.

<b>Output Interface</b>	<p>Specifies via which interface the data should be output. The following options are available:</p> <ul style="list-style-type: none"> <li>Ethernet</li> <li>Serial</li> <li>USB-Mass storage</li> <li>USB-CDC</li> <li>USB-HID</li> </ul>
<b>Output Format</b>	<p>The output format specifies how the data should be output. You can choose between Plain Text, File and Database.</p> <ul style="list-style-type: none"> <li>The formats are linked to the set interface.</li> <li>Plain text works for all interfaces.</li> <li>File only works with USB-Mass storage and Database. Database is only available with Ethernet.</li> </ul>
<b>Output path</b>	<p>The output path is only visible if the output format is File!</p> <p>The output path specifies where the file should be saved. If Ethernet is selected, the network output path from the Global Settings is displayed here. If USB mass storage is selected, the path from the File Settings is displayed here.</p>

# Settings



<b>Test Path Access</b>	Checks if the path is accessible.
<b>Time Format</b>	Specifies how the timestamp is formatted. This is used for the placeholder in the output string and the database entry
<b>Use two char output</b>	Adjusts the output of the Tag ID to a 2-character format. Ex: 0F0A31144900000000000001 becomes 0F 0A 31 14 49 00 00 00 00 00 01 in the output.
<b>Placeholder</b>	Opens or hides the available placeholders.
<b>Output string</b>	Specifies how the output data should be formatted.  Here you can insert placeholders and free text to format the output data.  This is only necessary for Plain Text and File.
<b>Example</b>	Shows an example of how the data is output.



## 6.4.6 EPC Manipulation Setting

TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

Settings Overview / Main Settings (TestSetting) / IO Settings / EPC Manipulation

Trigger
RFID Read
RFID Filter
Tag Buffer / Heartbeat
Output Settings
EPC Manipulation
File Settings
DB Settings

**Cut Settings**

Use cut from start  
Cut amount from start:

Use cut from end  
Cut amount from end:

**Add Settings**

Use add prefix  
Prefix:

Use add suffix  
Suffix:

Apply Changes
Discard Changes

Back

**With the EPC manipulation the Tag data can be adjusted before the output. Characters can be truncated at the front and back and extra characters can be added. The cutting of the data is executed before the adding to be able to use both at the same time.**

<b>Use cut from start</b>	Specifies whether characters are to be truncated from the beginning.
<b>Cut amount from start</b>	Specifies how many characters should be truncated from the beginning.
<b>Use cut from end</b>	Specifies whether characters are to be truncated from the end.
<b>Cut amount from end</b>	Specifies how many characters should be truncated from the end.
<b>Use add prefix</b>	Specifies if additional characters should be added to the beginning.
<b>Prefix</b>	Specifies which characters should be added to the beginning.
<b>Use add suffix</b>	Specifies if additional characters should be added to the end.
<b>Suffix</b>	Specifies which characters should be added to the end.

## 6.4.7 File Settings

TTX Smartreader Configuration

- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Admin Config
- Logout

Settings Overview / Main Settings (PrimarySettings) / IO Settings / File Settings

Trigger
RFID Read
RFID Filter
Tag Buffer / Heartbeat
Output Settings
EPC Manipulation
File Settings
DB Settings

Filepath USB: /media/sda1/output Test Path Access

Filename: Output

Filetype: .txt

Filename preview: Output\_20221215\_083937.txt

Use file packages  
 Package trigger time: 0 s

Use save after time  
 Save after: 120 s

Use box mode

Apply Changes
Discard Changes

Back

The file output settings can be used to define how and where the output file is output and when the output takes place. The file path is only used for the USB-Mass storage, because for network output it is specified via the global settings.

<b>File path USB</b>	Specifies where to save the file. This is only necessary if the output interface is USB-Mass storage. <b>/media/sda1/</b> is the default USB root path for all USB-Mass storage devices. It is added automatically if not specified in the path already.
<b>Test Path Access</b>	Checks if the path is accessible.
<b>Filename</b>	Specifies the name of the file. The saving time is automatically appended to the end of the file name
<b>Filetype</b>	Specifies the file type. This can be a text file (.txt) or a CSV file (.csv).
<b>Filename preview</b>	Shows a preview of how the filename is set up
<b>Use file packages</b>	Specifies whether the file packing should be used. With file packaging, all codes read during this time are written to a separate file after the trigger time has elapsed.
<b>Package trigger time</b>	Specifies the time after which the data should be saved to a new file.
<b>Use save after time</b>	Specifies whether the file should always be saved after a specified time. All read data will be saved in the output file after the time has elapsed.
<b>Save after</b>	Specifies the time interval after which the data is to be saved.

<b>Use Box mode</b>	Specifies whether the file should be saved in box mode. All data from the beginning of a reading to the end of the reading is collected and written to a file after reading.
---------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## 6.4.8 Database Settings

In the database settings the database connection and the update method can be set. You can choose between an update script and a tabular assignment.

### Database Connection

<b>Server address</b>	Specifies the server address of the SQL server. The IP address of the server is preferred.
<b>Instance</b>	Specifies the instance name of the SQL Server.
<b>DB name</b>	Specifies the name of the database to be used.
<b>Username</b>	Specifies the user's name to be used to log in to the SQL database.
<b>Password</b>	Specifies the password for the user.
<b>Options</b>	Specifies the additional connection parameters, such as a connection timeout.
<b>Connection string</b>	Shows the complete connection string used for the connection.
<b>Check Connection</b>	Checks if the connection to the specified SQL database is possible.

# Settings



## Update Script

<b>Use update script</b>	Specifies whether an update script should be used to update the database.
<b>Update script</b>	Specifies which update script should be used.
<b>Upload File</b>	<p>Opens the file explorer to upload a SQL-script. The SQL script must contain the placeholders as parameters. There are currently 2 placeholders.</p> <ul style="list-style-type: none"> <li>EPC must be present in the script as @EPC parameter.</li> <li>DATETIME must be present in the script as @DATETIME parameter.</li> </ul>
<b>Delete File</b>	Deletes the selected SQL script from the device.

## Table

Use update script

Use table

Tablename:

Column name:	Data field:	
<input type="text" value="CodeId"/>	<input type="text" value="EPC"/> ▼	<input type="button" value="Add row"/> <input type="button" value="Remove last row"/>
<input type="text" value="ReadTime"/>	<input type="text" value="DATETIME"/> ▼	

<b>Use table</b>	Specifies whether table data should be used for updating the database.
<b>Table name</b>	Specifies the name of the database table where the data should be stored.
<b>Add row</b>	Adds another row to select another column in the table, which will be filled with the read data.
<b>Remove last row</b>	Removes the last row.
<b>Column name</b>	Specifies the name of the column in the table which is to be filled with data.
<b>Data field</b>	<p>Specifies which data is to be written. It can be selected between currently between EPC and DATETIME.</p> <p>EPC is for the read tag ID</p> <p>DATETIME is the read time. The date time format can be selected in the output settings</p>

## 6.5 Backup Settings

TTX Smartreader Configuration

- Device Status
- Settings**
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Admin Config
- Logout

Settings Overview / Main Settings (Primary Settings) / Backup Setting

Backup lifetime:  Days

Use external backup

Output interface:

Backup path:

The lifetime of the internal backup files can be specified in the backup settings. As well as whether and where an external backup should be created.

<b>Backup lifetime</b>	Specifies how long the internal backup data should be stored. The maximum is 999 days.
<b>Use external backup</b>	Specifies whether an external backup file should be created in addition to the internal backup.
<b>Output interface</b>	<p>Specifies via which interface the external backup file should be created. You can choose between USB mass storage and Ethernet.</p> <p>If USB mass storage was selected, then the path can be entered under Backup path.</p> <p>If Ethernet was selected, then the network path stored under point <a href="#">5.2</a> is displayed and used.</p>
<b>Backup path</b>	<p>Specifies the external storage path.</p> <p>If USB-Mass Storage interface is selected <b>/media/sda1/</b> is added as the default USB root path for all USB-Mass storage devices. It is added automatically if not specified in the path already.</p>
<b>Test Path Access</b>	Tests whether the specified backup path can be accessed

## 6.6 Monitoring Settings

TTX Smartreader Configuration

---

**Device Status**

**Settings**

Global Settings

Reading

Backup

Tests

User Management

Device Information

Admin Config

Logout

Settings Overview / Main Settings (TestSetting) / Monitoring Setting

---

Mail Settings: Show Settings

**Temperature Monitoring**

Use temperature monitoring

Monitoring interval:  s

Use send mail

Use restart by warning

Restart timer:  s

**RFID Monitoring**

Use RFID monitoring

Monitoring interval:  h

Use send mail

Use restart by warning

Restart timer:  s

**Network Monitoring**

Use network monitoring

Monitoring interval:  min

Use send mail

Use restart by warning

Restart timer:  s

**Database Monitoring**

Use database monitoring

Monitoring interval:  min

Use send mail

Use restart by warning

Restart timer:  s

Apply Changes
Discard Changes


Back

In the Monitoring Settings you can set the monitoring and navigate to the Mail Settings. The monitors can send an email in case of warnings and even restart the device after a countdown.

<b>Use temperature monitoring</b>	Specifies whether the temperature monitoring should be used. The temperature monitoring checks the CPU and RFID temperature.
<b>Use RFID monitoring</b>	Specifies whether the RFID monitoring should be used. The RFID monitoring checks <b>whether a special dummy transponder can be read.</b> (See page 36" Search dummy tag")
<b>Use network monitoring</b>	Specifies whether the network monitoring should be used. The network monitoring checks if the network is still reachable.
<b>Use database monitoring</b>	Specifies whether the database monitoring should be used. Database monitoring checks whether the database specified in the database settings under I/O settings is accessible.
<b>Monitoring interval</b>	Specifies in which interval the selected monitoring should be checked.
<b>Use send mail</b>	Specifies whether an e-mail should be sent in the event of a warning. The mail content and the recipients can be set in the mail settings.

<b>Use restart by warning</b>	Specifies whether the device is to be restarted in the event of a warning.
<b>Restart timer</b>	Specifies how long to wait until the device restarts.

## 6.6.1 Mail Settings



### TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

[Settings Overview](#) / [Main Settings \(TestSetting\)](#) / [Monitoring Setting](#) / [Mail Setting](#)

**Mail Settings:**

Receiving mail addresses:

Publishing mail address:

Mail subject:

Mail Body:

Attention there are problems with {DEVNAME}

{DEVINFO}

{OVERVIEW}

Please check the device and correct the error that occurred

This message was generated automatically.

**SMTP**

Mailserv address:

Mailserv port:

Username:

Password:

The mail settings can be used to specify to which persons a warning mail is sent and what information is contained in it. To send a warning mail a mail server is needed.

<b>Receiving mail addresses</b>	Specifies the mail addresses to which the warning mail is to be sent. Multiple mail addresses must be separated with a semicolon ( ; ).
---------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------

# Settings



<b>Publishing mail address</b>	Specifies the publishing mail address
<b>Mail subject</b>	Specifies the mail subject.
<b>Mail body</b>	Specifies the text of the mail. Inserted placeholders are replaced when the mail is sent.
<b>Placeholder</b>	Opens or hides the available placeholders. A list of available placeholders can be seen below.
<b>Mail server address</b>	The address of the mail server that should be used to send the mail.
<b>Mail server port</b>	The mail server port which should be used for SMTP mail sending.
<b>Username</b>	The username of the user who should be used for sending mails.
<b>Password</b>	Password of the specified user.
<b>Send Test Mail</b>	Sends a test mail to the specified mail addresses. The test mail consists of the mail body with the placeholders replaced with default values.



## 6.6.1.1 Mail Placeholder

Placeholder name	Placeholder value	Example
Date	{DATE}	11.01.2022 15:12:37
Status Overview	{OVERVIEW}	CPU Temp: 56°C RFID Temp: 30°C RFID State: Online Network State: Online DB State: Not Monitored
CPU Temp	{CPUTEMP}	56°C
RFID Temp	{RFIDTEMP}	30°C
Temp Status	{TEMPSTAT}	CPU Temp: 56°C RFID Temp: 30°C
RFID Status	{RFIDSTAT}	RFID State: Offline
Network Status	{NETSTAT}	Network State: Online
DB Status	{DBSTAT}	DB State: Not Monitored
Device Infos	{DEVINFO}	Device Name: SIL9400 Firmware Version: 1.6.0 Serialnumber: 20100001 App Version: 1.0.0 Location: Laundry Room / Entry / Box 1 Left
Device Name	{DEVNAME}	Device Name: SIL9400
Firmware	{DEVFIRM}	Firmware Version: 1.6.0
Serialnumber	{DEVSER}	Serialnumber: 20100001
APP Version	{DEVAPP}	App Version: 1.0.0
Reader Location	{DEVLOC}	Location: Laundry Room / Entry / Box 1 Left
Status Message	{MESSAGE}	Warning! The cpu temprature is over the threshold with 75°C

## 6.7 Authentication Settings

TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Admin Config
- Logout

Settings Overview / Main Settings (Test Setting) / Authentication Setting

Use authentication at start

Use credentials  
 Use UserID

Apply Changes
Discard Changes


Back

In the Authentication settings you can set whether you have to log in after starting the device. Furthermore, the preselected login type can be selected.

<b>Use authentication at start</b>	Specifies whether a login is required after starting the device in order to use it. If no login is required, the admin user is automatically logged in.
<b>Use credentials</b>	Specifies that the login is done with a user and password by default. Logging in with the UserID is still possible.
<b>Use UserID</b>	Specifies that the login is done with the UserID by default. <b>Logging in with the user's name and password is still possible.</b>

- Login with the UserID is only possible via the local login of the THERMOTEX Smartreader application at the RFID device.
- Login via the Smartreader Web App is only possible with a user name and a password.

## 6.8 Settings History


TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

[Settings Overview](#) / [Settings History](#)

---

Last settings switch: **16-05-2022 15:49:29**

Last switch by: **admin**

Switch: **PrimarySettings -> TestSetting**

**Changes**

16-05-2022 15:49:30 by admin

16-05-2022 15:49:30 by admin

```
{
  "IsPrimarySetting": {
    "old": false,
    "new": true
  }
}
```

The settings history shows information about the switch of active settings and all changes of the current setting.

<b>Last settings switch</b>	Displays the last time the active setting was changed.
<b>Last switch by</b>	Displays by whom the last setting switch was made.
<b>Switch</b>	Displays which settings files have been switched
<b>Changes</b>	Displays the changes to the currently active setting in a list. The entries can be selected and the changes are displayed in the right-hand box.

## 7 Reading

TTX Smartreader Configuration

<ul style="list-style-type: none"> <li>Device Status</li> <li>Settings</li> <li>Global Settings</li> <li style="background-color: #0056b3; color: white;">Reading</li> <li>Backup</li> <li>Tests</li> <li>User Management</li> <li>Device Information</li> <li>Admin Config</li> <li>Logout</li> </ul>	<div style="border-bottom: 1px solid #0056b3; margin-bottom: 5px;"> <span style="font-weight: bold; color: #0056b3;">Reading</span> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <div style="background-color: #76b82a; color: white; padding: 5px; margin-bottom: 5px; text-align: center;">Start reading</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px; text-align: center;">End read</div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px; text-align: center;">Data output</div> <div style="border: 1px solid #ccc; padding: 5px; text-align: center;">Search dummy tag</div> </div> <div style="width: 65%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">EPC</th> <th style="text-align: center;">Count</th> <th style="text-align: center;">RSSI</th> </tr> </thead> <tbody> <tr><td>54540114493000000002A74C</td><td style="text-align: center;">1</td><td style="text-align: center;">-34</td></tr> <tr><td>54540114493000000002A814</td><td style="text-align: center;">1</td><td style="text-align: center;">-34</td></tr> <tr><td>54540114493000000002A831</td><td style="text-align: center;">1</td><td style="text-align: center;">-54</td></tr> <tr><td>54540114493000000002A81B</td><td style="text-align: center;">1</td><td style="text-align: center;">-36</td></tr> <tr><td>54540114493000000002A604</td><td style="text-align: center;">1</td><td style="text-align: center;">-72</td></tr> <tr><td>54540114493000000002A838</td><td style="text-align: center;">1</td><td style="text-align: center;">-65</td></tr> <tr><td>54540114493000000002A7E6</td><td style="text-align: center;">1</td><td style="text-align: center;">-70</td></tr> <tr><td>54540114493000000002A512</td><td style="text-align: center;">1</td><td style="text-align: center;">-53</td></tr> <tr><td>54540114493000000002A6D1</td><td style="text-align: center;">1</td><td style="text-align: center;">-58</td></tr> <tr><td>54540114493000000002A7CB</td><td style="text-align: center;">1</td><td style="text-align: center;">-57</td></tr> <tr><td>54540114493000000002A526</td><td style="text-align: center;">1</td><td style="text-align: center;">-63</td></tr> <tr><td>54540114493000000002A487</td><td style="text-align: center;">1</td><td style="text-align: center;">-69</td></tr> <tr><td>54540114493000000002A736</td><td style="text-align: center;">1</td><td style="text-align: center;">-39</td></tr> <tr><td>54540114493000000002A705</td><td style="text-align: center;">1</td><td style="text-align: center;">-72</td></tr> <tr><td>54540114493000000002A6E9</td><td style="text-align: center;">1</td><td style="text-align: center;">-62</td></tr> <tr><td>54540114493000000002A75B</td><td style="text-align: center;">1</td><td style="text-align: center;">-63</td></tr> <tr><td>54540114493000000002A7DE</td><td style="text-align: center;">1</td><td style="text-align: center;">-71</td></tr> <tr><td>54540114493000000002A78F</td><td style="text-align: center;">1</td><td style="text-align: center;">-41</td></tr> <tr><td>54540114493000000002A688</td><td style="text-align: center;">1</td><td style="text-align: center;">-57</td></tr> <tr><td>54540114493000000002A5E9</td><td style="text-align: center;">1</td><td style="text-align: center;">-52</td></tr> <tr><td>54540114493000000002A658</td><td style="text-align: center;">1</td><td style="text-align: center;">-77</td></tr> <tr><td>54540114493000000002A6E4</td><td style="text-align: center;">1</td><td style="text-align: center;">-69</td></tr> <tr><td>54540114493000000002A61F</td><td style="text-align: center;">1</td><td style="text-align: center;">-63</td></tr> <tr><td>54540114493000000002A6E5</td><td style="text-align: center;">1</td><td style="text-align: center;">-75</td></tr> <tr><td>54540114493000000002A772</td><td style="text-align: center;">1</td><td style="text-align: center;">-73</td></tr> <tr><td>54540114493000000002A760</td><td style="text-align: center;">1</td><td style="text-align: center;">-76</td></tr> <tr><td>54540114493000000002A58C</td><td style="text-align: center;">1</td><td style="text-align: center;">-59</td></tr> <tr><td>54540114493000000002A4B5</td><td style="text-align: center;">1</td><td style="text-align: center;">-62</td></tr> </tbody> </table> </div> </div> <div style="margin-top: 10px;"> <p><b>Total Codes: 336</b></p> <div style="border: 1px solid #ccc; padding: 5px; display: inline-block;">Reset UI</div> </div>	EPC	Count	RSSI	54540114493000000002A74C	1	-34	54540114493000000002A814	1	-34	54540114493000000002A831	1	-54	54540114493000000002A81B	1	-36	54540114493000000002A604	1	-72	54540114493000000002A838	1	-65	54540114493000000002A7E6	1	-70	54540114493000000002A512	1	-53	54540114493000000002A6D1	1	-58	54540114493000000002A7CB	1	-57	54540114493000000002A526	1	-63	54540114493000000002A487	1	-69	54540114493000000002A736	1	-39	54540114493000000002A705	1	-72	54540114493000000002A6E9	1	-62	54540114493000000002A75B	1	-63	54540114493000000002A7DE	1	-71	54540114493000000002A78F	1	-41	54540114493000000002A688	1	-57	54540114493000000002A5E9	1	-52	54540114493000000002A658	1	-77	54540114493000000002A6E4	1	-69	54540114493000000002A61F	1	-63	54540114493000000002A6E5	1	-75	54540114493000000002A772	1	-73	54540114493000000002A760	1	-76	54540114493000000002A58C	1	-59	54540114493000000002A4B5	1	-62
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The transponder reading can be controlled via the reading window. The reading window shows the current reading status. This is updated at a short interval.

<b>Start reading</b>	Starts the reading process. An active read operation can be recognized by the button with a green background.
<b>End read</b>	Ends the reading process.
<b>Data output</b>	Sends all collected tags via the set interface. The tags are reset after sending. This is only possible if the data output trigger has been activated in the trigger settings.
<b>Search dummy tag</b>	Starts a manual search for the <b>dummy transponder (with EPC: 00000000000000000000)</b> used for RFID monitoring. This is only possible when not reading.
<b>Total Codes</b>	Displays the number of all tags read.
<b>Reset UI</b>	Resets the UI and the Read Tags list.
<b>EPC</b>	Displays the EPC number of the read tag.
<b>Count</b>	Shows how many times the code was read. But currently this is not evaluated and therefore a 1 is always displayed
<b>RSSI</b>	Shows the RSSI value with which the tag was read.

## 8 Backup

TTX Smartreader Configuration

<ul style="list-style-type: none"> <li>Device Status</li> <li>Settings</li> <li>Global Settings</li> <li>Reading</li> <li style="background-color: #0056b3; color: white;">Backup</li> <li>Tests</li> <li>User Management</li> <li>Device Information</li> <li>Admin Config</li> <li>Logout</li> </ul>	<p><b>Backup</b></p> <p>Show <span style="border: 1px solid gray; padding: 2px;">10</span> entries <span style="float: right;">Search: <input type="text"/></span></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">File</th> <th style="text-align: left;">Creation date</th> <th style="text-align: left;">Age</th> <th style="text-align: left;">Date of deletion</th> </tr> </thead> <tbody> <tr><td>Backup_20220725_1.txt</td><td>25.07.2022</td><td>28 Days</td><td>24.08.2022</td></tr> <tr><td>Backup_20220727_1.txt</td><td>27.07.2022</td><td>26 Days</td><td>26.08.2022</td></tr> <tr><td>Backup_20220728_1.txt</td><td>28.07.2022</td><td>25 Days</td><td>27.08.2022</td></tr> <tr><td>Backup_20220729_1.txt</td><td>29.07.2022</td><td>24 Days</td><td>28.08.2022</td></tr> <tr><td>Backup_20220810_1.txt</td><td>10.08.2022</td><td>12 Days</td><td>09.09.2022</td></tr> <tr><td>Backup_20220811_1.txt</td><td>11.08.2022</td><td>11 Days</td><td>10.09.2022</td></tr> <tr><td>Backup_20220812_1.txt</td><td>12.08.2022</td><td>10 Days</td><td>11.09.2022</td></tr> <tr><td>Backup_20220815_1.txt</td><td>15.08.2022</td><td>7 Days</td><td>14.09.2022</td></tr> <tr><td>Backup_20220815_2.txt</td><td>15.08.2022</td><td>7 Days</td><td>14.09.2022</td></tr> <tr><td>Backup_20220815_3.txt</td><td>15.08.2022</td><td>7 Days</td><td>14.09.2022</td></tr> </tbody> </table> <p style="font-size: small;">Showing 1 to 10 of 26 entries</p> <div style="text-align: right; font-size: small;"> <span>Previous</span> <span style="background-color: #0056b3; color: white; padding: 2px 5px;">1</span> <span style="padding: 2px 5px;">2</span> <span style="padding: 2px 5px;">3</span> <span>Next</span> </div>	File	Creation date	Age	Date of deletion	Backup_20220725_1.txt	25.07.2022	28 Days	24.08.2022	Backup_20220727_1.txt	27.07.2022	26 Days	26.08.2022	Backup_20220728_1.txt	28.07.2022	25 Days	27.08.2022	Backup_20220729_1.txt	29.07.2022	24 Days	28.08.2022	Backup_20220810_1.txt	10.08.2022	12 Days	09.09.2022	Backup_20220811_1.txt	11.08.2022	11 Days	10.09.2022	Backup_20220812_1.txt	12.08.2022	10 Days	11.09.2022	Backup_20220815_1.txt	15.08.2022	7 Days	14.09.2022	Backup_20220815_2.txt	15.08.2022	7 Days	14.09.2022	Backup_20220815_3.txt	15.08.2022	7 Days	14.09.2022
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Download Backup  
Download All  
Delete Backup

All read transponders are stored with their read time in a backup. A separate file is created for each day. However, if these become too large, an additional file is created.

<b>File</b>	The filename of the backup file. The structure of the name consists of "Backup" the day of creation and a sequential number.
<b>Creation date</b>	The day of the file creation.
<b>Age</b>	Displays the age of the file.
<b>Date of deletion</b>	The day when the backup file is deleted. This is dependent on the Backup lifetime set in the Backup Settings of the current settings profile.
<b>Download Backup</b>	Downloads the selected backup file.
<b>Download All</b>	Downloads all backup files. Caution, this can lead to a system crash with reboot if there are too many or too large files.
<b>Delete Backup</b>	Deletes the selected backup file, after confirming a security question.

## 9 Tests

The tests can be used to check the digital input and output ports and to test the antennas.  
The tests cannot be used during reading

### 9.1 I/O Tests

The I/O tests are divided into 2 sections. The output and input test.  
In the output test, the digital output ports can be set.  
In the input test, the input ports can be monitored.

#### 9.1.1 Output Test

**TTX Smartreader Configuration**

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

**Tests**

I/O Test
Antenna Test

**Output**

<input checked="" type="checkbox"/> Output 1	<input type="checkbox"/> Reverse	Value: 1
<input type="checkbox"/> Output 2	<input checked="" type="checkbox"/> Reverse	Value: 1
<input type="checkbox"/> Output 3	<input type="checkbox"/> Reverse	Value: 0
<input type="checkbox"/> Output 4	<input type="checkbox"/> Reverse	Value: 0

Start Output Test
Stop Output Test

**Inputs**

Input 1  
 Input 2

Refresh Rate:  
 ms

Start Input Test
Stop Input Test

Reset data

Input	Value	Time

# Tests



<b>Output 1-4</b>	Specifies whether the digital output port is to be switched active.
<b>Reverse</b>	Specifies whether the value of the digital output port should be inverted. If it is active, a 0 is output. If it is not active, a 1 is output.
<b>Value</b>	Displays the value that is applied to the digital output.
<b>Start Output Test</b>	Starts the output test. This is not possible while reading.
<b>Stop Output Test</b>	Stops the output test. The digital output ports are reset to their default value.

## 9.1.2 Input Test

**TTX Smartreader Configuration**

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

**Tests**

I/O Test
Antenna Test

**Output**

<input type="checkbox"/> Output 1	<input type="checkbox"/> Reverse	Value: 0
<input type="checkbox"/> Output 2	<input type="checkbox"/> Reverse	Value: 0
<input type="checkbox"/> Output 3	<input type="checkbox"/> Reverse	Value: 0
<input type="checkbox"/> Output 4	<input type="checkbox"/> Reverse	Value: 0

Start Output Test
Stop Output Test

**Inputs**

Input 1  
 Input 2

Refresh Rate:  
 ms

Start Input Test
Stop Input Test
Reset data

Input	Value	Time
Input 1	0	09:02:04.884
Input 1	0	09:02:04.884
Input 2	1	09:02:02.884
Input 1	1	09:02:01.685
Input 1	0	09:01:59.378
Input 2	0	09:01:59.378

# Tests



The input test monitors the specified digital inputs. Every change is shown and displayed in the list.

<b>Input 1-2</b>	Specifies whether the digital input port should be monitored.
<b>Refresh Rate</b>	Specifies the refresh rate at which the displayed data is updated. This cannot be less than 1000ms.
<b>Start Input Test</b>	Starts the input test. This is not possible while reading.
<b>Stop Input Test</b>	Stops the input test.
<b>Reset Data</b>	Resets the UI and the monitored data
<b>Input</b>	Indicates which input has changed its status.
<b>Value</b>	Indicates which value the input has.
<b>Time</b>	Displays the time of the status change



## 9.2 Antenna Tests

The screenshot shows the 'TTX Smartreader Configuration' interface. On the left is a navigation menu with options: Device Status, Settings, Global Settings, Reading, Backup, Tests (selected), User Management, Device Information, and Logout. The main area displays 'Antenna test scan started'. Under 'Tests', there are buttons for 'I/O Test' and 'Antenna Test'. The 'Antenna' section has four checkboxes: Antenna 1 (checked, Power: 5), Antenna 2 (unchecked, Power: 1), Antenna 3 (checked, Power: 7), and Antenna 4 (unchecked, Power: 1). Below is an 'RSSI Filter' with sliders for Min (-75) and Max (-35). At the top right of the results area are buttons: 'Start single scan', 'Start cycle scan', and 'Stop cycle scan'. The results table shows columns for EPC, Count, and RSSI. To the right of the table are summary statistics: #Tags: 220, #Tags/s: 141, Cycle Duration: 1.558s, #Cycles: 3, RSSI min: -75, and RSSI max: -36.


EPC	Count	RSSI
54540114493000000002A5A8	6	-45
54540114493000000002A65A	5	-45
54540114493000000002A6D4	3	-52
54540114493000000002A7A9	3	-64
54540114493000000002A744	3	-65
54540114493000000002A67F	3	-63
54540114493000000002A83C	3	-43
54540114493000000002A6D9	3	-63
54540114493000000002A671	3	-63
54540114493000000002A833	3	-58
54540114493000000002A603	3	-70
54540114493000000002A6FC	3	-55
54540114493000000002A61F	3	-67
54540114493000000002A62C	3	-73
54540114493000000002A7D0	6	-69
54540114493000000002A6B0	3	-61
54540114493000000002A510	6	-62
54540114493000000002A668	3	-62
54540114493000000002A727	3	-53

With the antenna test, the individual antennas can be tested. This can be done as a single test scan or in multiple cycles.

<b>Antenna 1-4 or 1-8</b>	Specifies which antenna to use for the test.
<b>Power</b>	Specifies with which power the antenna should read. A value between 1 and 15 can be selected.
<b>RSSI Filter Min</b>	Indicates the minimum value a read transponder must have in order to be processed.
<b>RSSI Filter Max</b>	Specifies the maximum value a read transponder may have in order to be processed.
<b>Start single scan</b>	Starts a reading cycle. In this read cycle, each antenna creates an inventory.
<b>Start cycle scan</b>	Starts the cyclic reading mode, this reads with each selected antenna alternately until the reading is stopped
<b>Stop cycle scan</b>	Ends the cyclic reading mode.
<b>EPC</b>	Shows the EPC number of the read transponder.
<b>Count</b>	Shows the number of times the transponder was read.
<b>RSSI</b>	Shows the last RSSI value with which the transponder was read.
<b>Statistic</b>	The statistics determines how many transponders have been read in total, it also determines the transponders per second. The time of the last cycle and the number of all cycles is displayed as well as the minimum and maximum RSSI value.

## 10 User Management

### 10.1 Users


TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

#### User Management

Users

Settings

Username: user

Userid: 12345678

**Access Rights**

IsAdmin

CanEditUserManagement

CanEditSettings

CanEditGlobalSettings

CanReadInWeb

CanDeleteBackup

Edit User

Change Password

In the user administration, users without special rights can manage their own users.

<b>Username</b>	Displays the username of the logged in user.
<b>Userid</b>	Displays the UserID of the logged in user.
<b>Access Rights</b>	Displays the access rights of the logged-in user
<b>Edit User</b>	Opens the user edit function where the user name and the UserID can be adjusted.
<b>Change Password</b>	Opens the edit password function where the user can change his password.

## 10.1.1 Edit User

TTX Smartreader Configuration


<div style="border-bottom: 1px solid black; padding: 2px;">Device Status</div> <div style="border-bottom: 1px solid black; padding: 2px;">Settings</div> <div style="border-bottom: 1px solid black; padding: 2px;">Global Settings</div> <div style="border-bottom: 1px solid black; padding: 2px;">Reading</div> <div style="border-bottom: 1px solid black; padding: 2px;">Backup</div> <div style="border-bottom: 1px solid black; padding: 2px;">Tests</div> <div style="background-color: #0056b3; color: white; padding: 2px; text-align: center;">User Management</div> <div style="border-bottom: 1px solid black; padding: 2px;">Device Information</div> <div style="border-bottom: 1px solid black; padding: 2px;">Admin Config</div> <div style="padding: 2px;">Logout</div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;">Edit User: user</div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <span style="border: 1px solid #ccc; padding: 2px 5px;">Users</span> <span style="border: 1px solid #ccc; padding: 2px 5px;">Settings</span> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>Username: <input style="width: 80%;" type="text" value="user"/></p> <p>UserId: <input style="width: 80%;" type="text" value="12345678"/></p> </div> <div style="width: 35%;"> <p><b>Access Rights</b></p> <p><input type="checkbox"/> IsAdmin</p> <p><input type="checkbox"/> CanEditUserManagement</p> <p><input checked="" type="checkbox"/> CanEditSettings</p> <p><input type="checkbox"/> CanEditGlobalSettings</p> <p><input checked="" type="checkbox"/> CanReadInWeb</p> <p><input type="checkbox"/> CanDeleteBackup</p> </div> </div> <div style="margin-top: 10px; display: flex; justify-content: space-around;"> <span style="border: 1px solid #ccc; padding: 2px 5px;">Save</span> <span style="border: 1px solid #ccc; padding: 2px 5px;">Cancel</span> </div>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Each user can edit their username and UserID. However, these must be unique on the system.

<b>Username</b>	Specifies the username of the logged in user.
<b>UserId</b>	Specifies the UserID of the logged in user.
<b>Access Rights</b>	Displays the access rights of the logged-in user.

	<ul style="list-style-type: none"> <li><b>Login with the UserID is only possible via the local login of the THERMOTEX Smartreader application at the RFID device.</b></li> <li><b>Login via the Smartreader Web App is only possible with a user name and a password.</b></li> </ul>
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## 10.1.2 Change Password


TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

### Change Password

Users

Settings

Username: admin

Current Password:

New Password:

Confirm Password:

Save

Cancel

Every user can change his password. To change the password, the current password is required.

<b>Username</b>	Displays the username of the logged in user.
<b>Current Password</b>	Specifies the user's current password.
<b>New Password</b>	Specifies the user's new password.
<b>Confirm Password</b>	Specifies the user's new password again for security. Both passwords must match. This is indicated by a green background in the Confirm Password field.

## 10.2 Admin / Edit User Management Functions

TTX Smartreader Configuration

<div style="background-color: #0056b3; color: white; padding: 2px;">Device Status</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Settings</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Global Settings</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Reading</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Backup</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Tests</div> <div style="background-color: #0056b3; color: white; padding: 2px; font-weight: bold;">User Management</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Device Information</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Admin Config</div> <div style="background-color: #0056b3; color: white; padding: 2px;">Logout</div>	<div style="border-bottom: 1px solid #0056b3; margin-bottom: 10px;"> <span style="font-weight: bold; color: #0056b3;">User Management</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <span style="background-color: #0056b3; color: white; padding: 5px 10px; border-radius: 3px;">Users</span> <span style="background-color: #e6f2ff; padding: 5px 10px; border-radius: 3px;">Settings</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 60%;"> <p>Username: <input style="width: 100%;" type="text" value="user"/></p> <p>UserId: 12345678</p> </div> <div style="width: 35%;"> <p><b>Access Rights</b></p> <p><input type="checkbox"/> IsAdmin</p> <p><input type="checkbox"/> CanEditUserManagement</p> <p><input checked="" type="checkbox"/> CanEditSettings</p> <p><input type="checkbox"/> CanEditGlobalSettings</p> <p><input checked="" type="checkbox"/> CanReadInWeb</p> <p><input type="checkbox"/> CanDeleteBackup</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-bottom: 10px;"> <span style="border: 1px solid #0056b3; padding: 5px 10px; border-radius: 3px;">Add User</span> <span style="border: 1px solid #0056b3; padding: 5px 10px; border-radius: 3px;">Edit User</span> <span style="border: 1px solid #ff0000; padding: 5px 10px; border-radius: 3px;">Reset Password</span> <span style="border: 1px solid #ff0000; padding: 5px 10px; border-radius: 3px;">Delete User</span> </div>
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As a user with Edit User Management rights, you can select other users, add new users, edit them, reset their password or delete them.

<b>Username</b>	Selection of a user. The own user is selected by default.
<b>Userid</b>	Displays the UserID of the selected user.
<b>Access Rights</b>	Displays the access rights of the selected user
<b>Add User</b>	Opens the function to create and add new users.
<b>Edit User</b>	Opens the user edit function of the selected user where the username and the UserID can be adjusted.
<b>Reset Password</b>	Resets the password of the selected user to the default password after confirming a security query. The password of the own user cannot be reset, but can be changed via the change password function.
<b>Delete User</b>	Deletes the selected user after confirming a security query. The own user cannot be deleted.

## 10.2.1 Add User

TTX Smartreader Configuration

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

Add User

Users
Settings

Username:

Userid:

**Access Rights**

- IsAdmin
- CanEditUserManagement
- CanEditSettings
- CanEditGlobalSettings
- CanReadInWeb
- CanDeleteBackup

Save
Cancel

Adding new users is the same interface as editing users

<b>Username</b>	Specifies the username of the logged in user.
<b>Userid</b>	Specifies the UserID of the logged in user.
<b>Access Rights</b>	Specifies the access rights of the logged-in user. If the user is given admin rights, all other rights are automatically assigned.

## 10.3 Settings

**TTX Smartreader Configuration**

- Device Status
- Settings
- Global Settings
- Reading
- Backup
- Tests
- User Management
- Device Information
- Logout

### User Management Settings

Users
Settings

**Password Guidelines**

Min Password Length:

- Upper and Lower case
- Min 1 Numeric Character
- Min 1 Special Character

**Default Password**

Default Password:


Confirm Password:

Save
Cancel

In the User Management Settings, the password policy and the default password can be set.

<b>Min Password Length</b>	Specifies the minimum length of the user passwords. If 0, there is no minimum length. The maximum value is 100.
<b>Upper and Lower case</b>	Specifies whether the user password must have at least 1 uppercase letter and at least 1 lowercase letter.
<b>Min 1 Numeric Character</b>	Specifies whether the user password must contain at least 1 number.
<b>Min 1 Special Character</b>	Specifies whether the user password must contain at least 1 special character.
<b>Default Password</b>	Specifies the default password. The default password must comply with the set password guidelines. All new users are assigned this password. Furthermore, the users can be reset to this password.
<b>Confirm Password</b>	Specifies the default password again for security. Both passwords must match. This is indicated by a green background in the Confirm Password field.
<b>Save</b>	Saves the settings after a validation.
<b>Cancel</b>	Resets all changed settings.

## 11 Login



### TTX Smartreader Configuration

Login

#### Login

Please enter your credentials to log in.

Username:

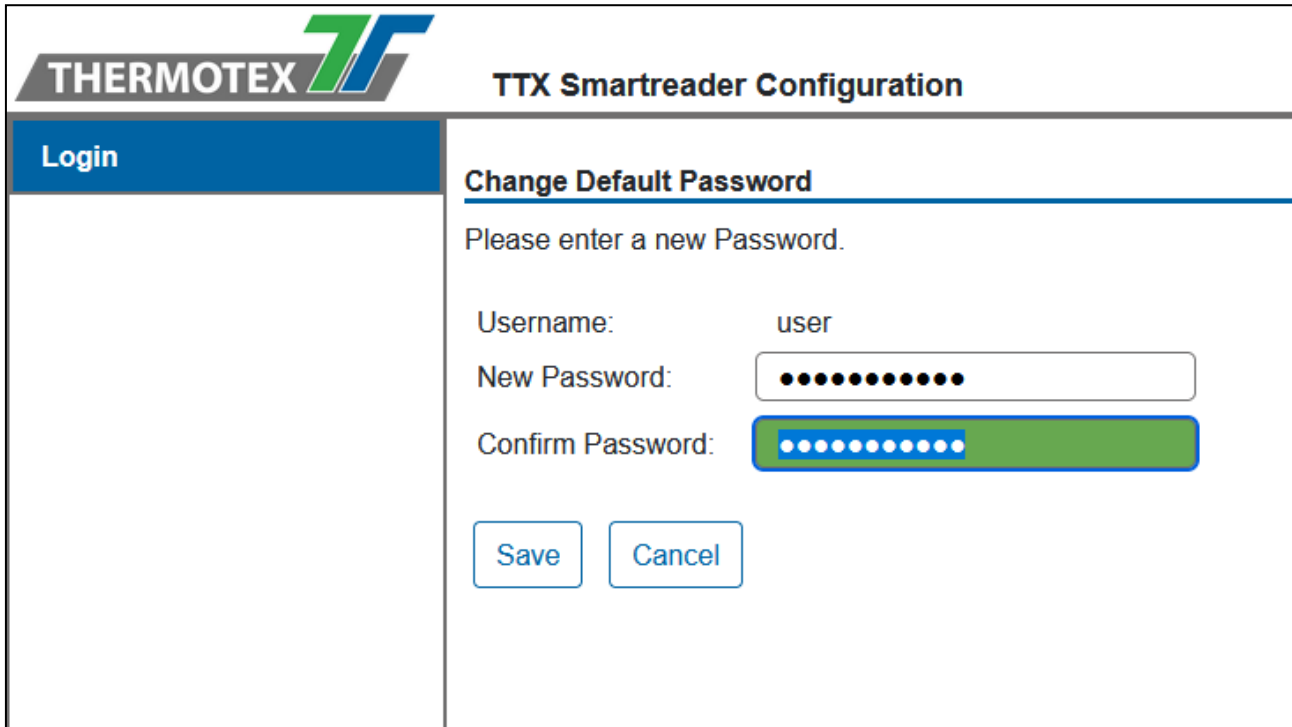
Password:

To use the web application, you must first log in. For this purpose, the username and password are required.

<b>Username</b>	Specifies the username of the user to login.
<b>Password</b>	Displays by whom the last setting switch was made.
<b>Login</b>	Checks the login data. If the check is successful, the user is logged in to the web application and redirected to the Device Status page. This can also be done by pressing the Enter key when the cursor is in the Password field.



## 11.1 Login with new user



When a new user logs in with their user’s name and default password, the Change Default Password page is loaded. Here the user can enter a new password. This password must comply with the set password guidelines.

<b>Username</b>	Displays the username for which a new password is to be assigned.
<b>New Password</b>	Specifies the new password of the user.
<b>Confirm Password</b>	Specifies the password again for security. Both passwords must match. This is indicated by a green background in the Confirm Password field.
<b>Save</b>	Check that both passwords are identical and that they comply with the password policy. If so, the password is saved and the user is logged in to the web application.
<b>Cancel</b>	Cancels the change of the default password and displays the login interface again.