SIEMENS

SIMATIC HMI

Unified Comfort Panels Control Panel V19

Operating Manual

11/2023

UCP Image V19.0.0.0

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Ⓟ 11/2023 Subject to change

Table of contents

1 Overview of functions

The table below shows the icons of the Control Panel and provides links to the corresponding function descriptions in the appropriate sections.

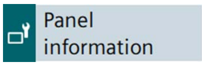
Icon	Name	Assigned functions
🏠	-	Open the main window of the Control Panel
▶	Start Runtime	Start project on the HMI device See also "Automatic runtime start (Page 19)"
🛠	System Properties	Panel information (Page 7) Display (Page 8) Screensaver (Page 9) Update OS (Page 10) Reboot (Page 12) Performance (Page 14) Taskbar (Page 15) Event Logger (Page 16) Touch sound (Page 18)
▶	Runtime Properties	Project information (Page 19) Automatic runtime start (Page 19) Alarm persistency (Page 20) Web client (Page 21) Load project from storage (Page 22)
🖧	Network and Internet	Network settings (Page 25) Remote connection (Page 29) Network drive (Page 31)
🛡	Security	User management (Page 35) Certificates (Page 43) Control panel access (Page 47) UMAC settings (Page 49)
⌨	External Devices and Input	Hardware interfaces (Page 51) Connected devices (Page 51)
🌐	Language, Region and Formats	Date and time (Page 53)
🛠	Service and Commissioning	Transfer (Page 55) Update OS (Page 10) Backup (Page 58) Automatic backup (Page 60) Restore (Page 65) Trace options (Page 66)
📦	Apps	Apps (Page 68)

Some settings, such as interface parameters, runtime settings, settings for remote access or user management, can be configured in WinCC and loaded to the HMI device. After loading, you can adjust the settings as needed in the Control Panel of the HMI device.

System Properties 2

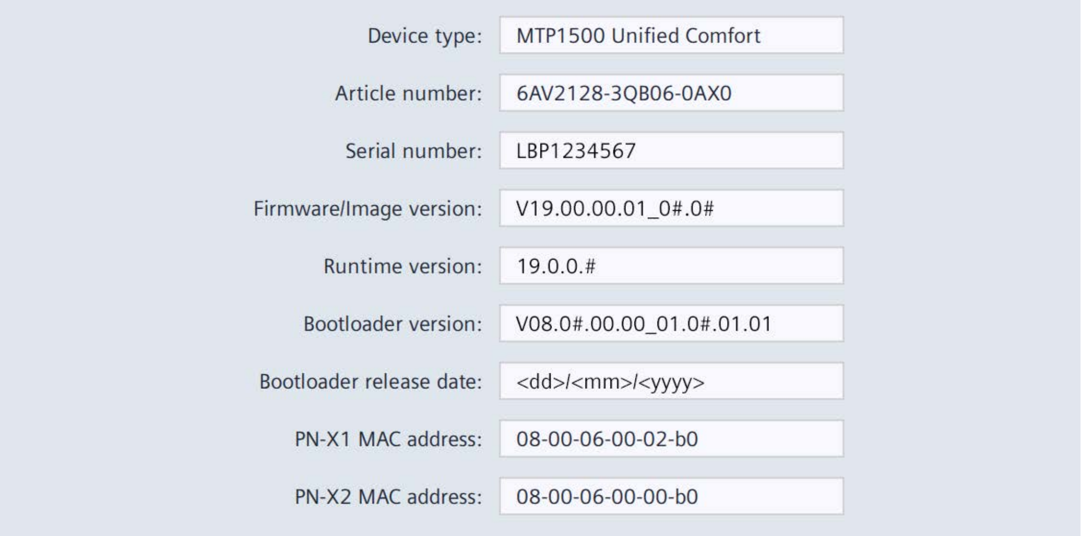
2.1 Panel information

Under "Panel information" you will find information specific to your HMI device, which you will need, for example, if you contact Technical Support.



Properties

The following figure shows an example. Variable display values are shown with the wildcard character "#" or between angle brackets "<>".

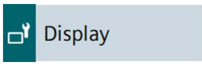


Device type:	MTP1500 Unified Comfort
Article number:	6AV2128-3QB06-0AX0
Serial number:	LBP1234567
Firmware/Image version:	V19.00.00.01_0#.0#
Runtime version:	19.0.0.#
Bootloader version:	V08.0#.00.00_01.0#.01.01
Bootloader release date:	<dd>/<mm>/<yyyy>
PN-X1 MAC address:	08-00-06-00-02-b0
PN-X2 MAC address:	08-00-06-00-00-b0

- "Device type": HMI device type designation
- "Article number": Article number of the HMI device
- "Serial number": HMI device serial number
- "Firmware/Image version": Version of the firmware and operating system.
- "Runtime version": Version of the runtime software located on the HMI device
- "Bootloader version": Version of the bootloader
- "Bootloader release date": Bootloader release date
- "PN-X1 MAC address": MAC address of the HMI device interface X1
- "PN-X2 MAC address": MAC address of the HMI device interface X2

2.2 Display

Under "Display" you define the display orientation and the display brightness via the intensity of the backlight.

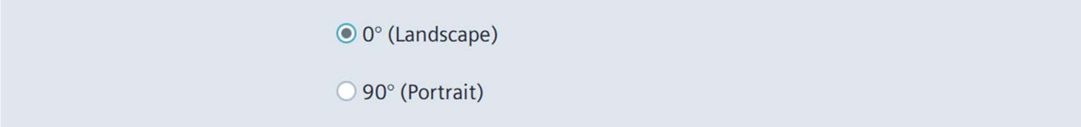


NOTICE

Backlight reduction

The brightness of the backlight decreases with increasing service life.
To avoid shortening the service life of the backlight unnecessarily, reduce the backlight.

Orientation



● 0° (Landscape)

○ 90° (Portrait)

- "0° (Landscape)" (default setting): Select this option for HMI devices that have been installed and configured in landscape format.
- "90° (Portrait)": Select this option for HMI devices that have been installed and configured in portrait format.

Note

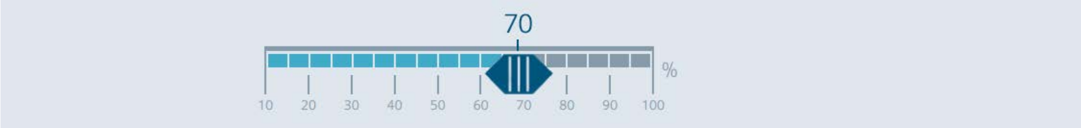
Display orientation and Runtime project

The display orientation in the Control Panel should match the display orientation of the HMI device in the WinCC configuration. After switching the orientation in the Control Panel, adjust the configuration and reload the project into the HMI device.

The display orientation in the Control Panel should only be switched if no runtime project is running on the HMI device.

If you switch the display orientation while a Runtime project is running on the HMI device, the project may not be displayed correctly on the HMI device display after switching. To display the project correctly, restart the Runtime software or the HMI device.

Brightness

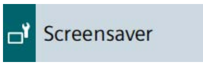


Set the desired display brightness using the slider.
Value range: 10 to 100%. Default setting: 70%

The display brightness can also be set within the value range via the configuration.

2.3 Screensaver

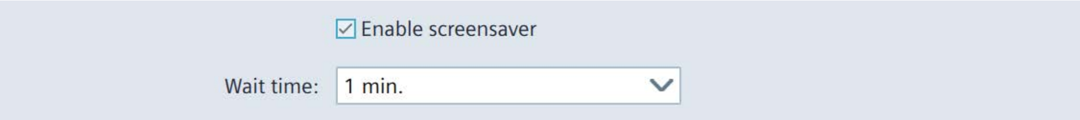
Under "Screensaver" you define the time until the automatic activation of the screensaver and the brightness of the backlight when the screensaver is active.



Screensaver

NOTICE
Activating the screensaver
If an image is displayed on the screen for long time, its outline may remain dimly visible on the display.
This effect is reversible when you use a screensaver.

General Settings



☑ Enable screensaver

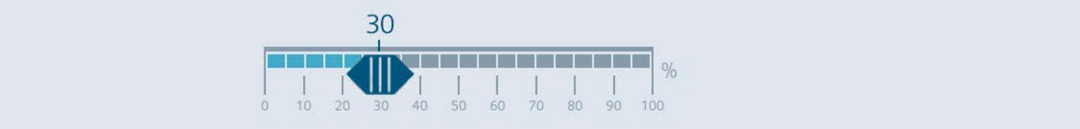
Wait time: 1 min.

- "Enable screensaver": Select this option to activate the screensaver.

  Default setting: "deactivated".
- "Wait time": Time to activate the screensaver, value range 1 to 120 minutes. Default setting is "1 min."

The screensaver is automatically activated if the HMI device is not operated within the specified period of time.

Brightness of screensaver



Use the slider to set the desired display brightness of the screensaver, value range 0 to 100%. Default setting is "30 %".

To deactivate the screensaver, tap the touch screen briefly. For safety reasons, this touch is not evaluated as an operator action. Therefore, no unintentional functions can be triggered.

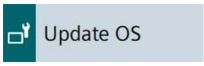
The screensaver is also deactivated when the HMI device is accessed remotely, for example, via SmartClient or the configuration PC.

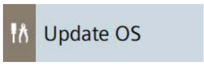
2.4 Update OS

The firmware and operating system version of the HMI device must be compatible with the firmware and operating system version of the installed WinCC software. If this is not the case, then you must update the operating system.

Use "Update OS" to update the operating system of the HMI device. The operating system is contained in several firmware files. The master file has the extension ".fwf". The number of additional files varies; these files have the file name of the master file and a sequential number (".0", ".1", ".2", etc.) as an extension.

The "Update OS" function is available under both "System Properties" and "Service and Commissioning".





NOTICE

Updating the operating system deletes data on the HMI device

Project, parameter sets and user administration will be deleted when you update the operating system on the HMI device.

Before updating the operating system, backup the data on the HMI device, if necessary.

All settings, except the following settings which you changed in the Control Panel before updating the operating system, are retained even after the update of the operating system:

- The external interfaces become activated again (default setting), see section "Network settings (Page 25)".
- The time zone is reset to the default setting "(UTC) Coordinated Universal Time", see section "Date and time (Page 53)".
- The credentials for connected network drives must be entered again, see section "Network drive (Page 31)".

NOTICE

Automatic backup and updating the operating system

When the "Automatic backup" function is activated while the operating system is being updated, the HMI device may not start up again correctly.

If you want to update the operating system of the HMI device and have activated the "Automatic backup" function, follow these steps:

1. Deactivate the "Automatic backup" function.
2. Update the operating system.
3. Activate the "Automatic backup" function.

Leave the system memory card in the HMI device before and during the entire update.

Use a SIMATIC SD memory card with 32 GB or more or an industrial USB flash drive to load the firmware.

Firmware files for the HMI devices can be downloaded from the Internet (https://support.industry.siemens.com/cs/ww/en/view/109746530). Observe the documentation included with the download.

Note

Do not rename firmware files

If you change the name of the firmware files, the operating system can no longer be updated with these firmware files. The firmware files become unusable. Leave the name of the firmware files unchanged.

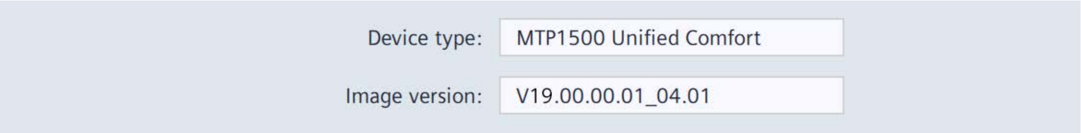
Note

Copy firmware files completely

If you copy the firmware files, be sure to also copy the master file ".fwf" together with all associated firmware files (".0", ".1", ".2", etc.).
If one of the files is missing, the operating system cannot be loaded.

Alternatively to the "Update OS" function in the Control Panel, you can use the "Update OS" function in WinCC.

Panel Information

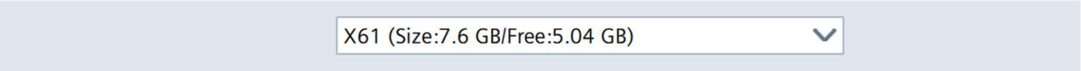


Device type: MTP1500 Unified Comfort

Image version: V19.00.00.01_04.01

- "Device type": HMI device type designation.
- "Image version": Version of the firmware and operating system.

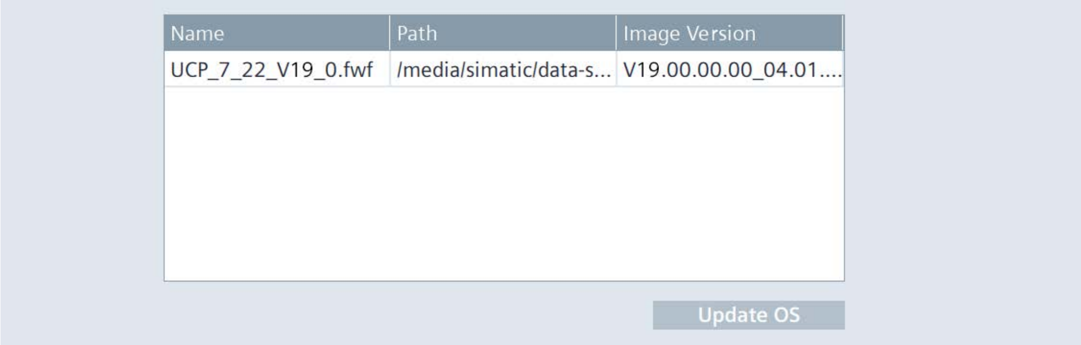
Select storage media for OS update



X61 (Size:7.6 GB/Free:5.04 GB)

Use the selection list to select the storage medium on which the firmware file is located.

Firmware files on external storage



Name	Path	Image Version
UCP_7_22_V19_0.fwf	/media/simatic/data-s...	V19.00.00.00_04.01....

- The list shows all firmware files that can be loaded into the HMI device.

  Select the desired firmware master file (.fwf) from the list.
- "Update OS": Button for starting the loading process.

  The HMI device restarts after the "Update OS" button is pressed. The loading process then begins.

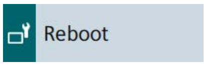
  A dialog with a progress bar is displayed on the HMI device for each firmware file.

  The HMI device is restarted again after the completion of the loading process.

  The main window of the Control Panel is displayed after the restart. The operating system on the HMI device is updated.

2.5 Reboot

You can restart the HMI device manually under "Reboot". The restart can be carried out normally or in maintenance mode.



In the following cases the HMI device is automatically restarted after confirmation:

- You have made changes to the PN-X1 interface under "Ethernet parameters Port 1" or "Ethernet parameters Port 2", see section "PN-X1 (Page 25)".
- You have made changes under "General network settings", see section "General (Page 29)".
- You have switched the "Enable alarm persistency" option, see section "Alarm persistency (Page 20)".

A manual restart of the HMI device is required in the following case:

- You have changed the interface parameters under "Media redundancy" in the configuration and loaded the project to the HMI device again.

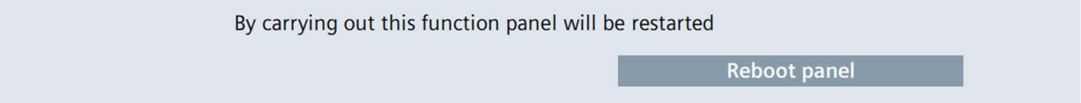
NOTICE

Data loss

All volatile data is lost with a restart.

Make sure that no project is running on the HMI device and no data is being written to the flash memory.

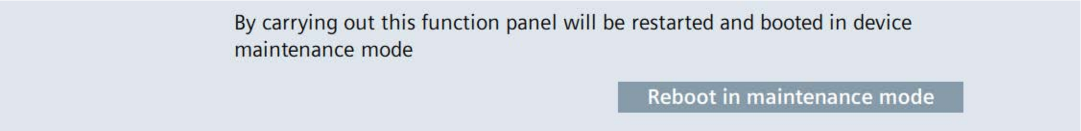
Reboot panel



By carrying out this function panel will be restarted

"Reboot panel": Button for a simple restart of the HMI device ("soft reboot").

Reboot in maintenance mode



By carrying out this function panel will be restarted and booted in device maintenance mode

"Reboot in maintenance mode": Button for a restart in maintenance mode. The restart in maintenance mode is required to reset the HMI device to factory settings.

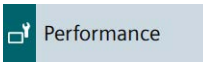
The HMI device restarts after the "Reboot in maintenance mode" button is pressed. The "Maintenance Mode" dialog box is displayed for a period of 10 minutes. In this period you can connect the HMI device to a configuration PC and reset the HMI device to factory settings with the ProSave software.

See also

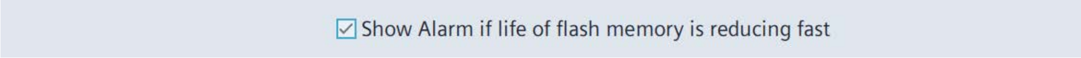
Resetting an HMI device to factory settings via ProSave (Page 81)

2.6 Performance

Under "Performance" you can activate the monitoring of the internal flash memory.



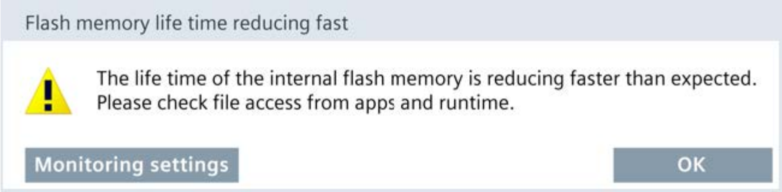
Flash Memory Monitoring Section



☑ Show Alarm if life of flash memory is reducing fast

"Show Alarm if life of flash memory is reducing fast": Option to activate flash memory monitoring. The default setting is "activated".

If the option is activated, the state of the flash memory is checked cyclically. If the cyclical check results in a high load on the flash memory, the message "Flash memory life time reducing fast" is displayed regularly.

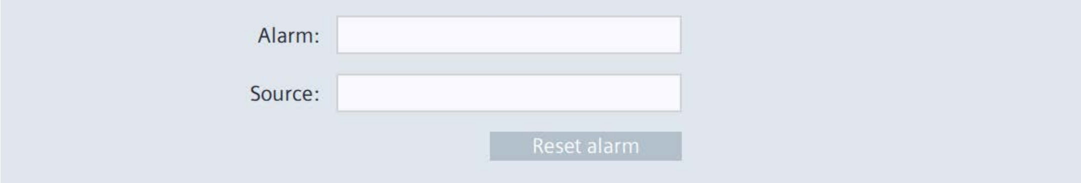


Flash memory life time reducing fast

The life time of the internal flash memory is reducing faster than expected.
Please check file access from apps and runtime.

- "Monitoring settings": Button for opening the "Performance" settings in the Control Panel. Press the button, note the cause specified under "Source" and contact the corresponding administrator or configuring engineer.
- "OK": Button for acknowledging the alarm.

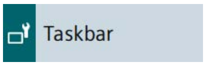
Last alarm



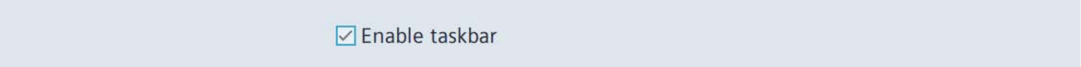
- "Alarm": Display panel with the last alarm that was displayed about the status of the flash memory.
- "Source": Display field with information on the cause of the last alarm. Pass this information on to the administrator or project engineer, who can change the settings in the corresponding app or the configuration of the HMI device so that the "Flash memory life time reducing fast" alarm no longer appears.
- "Reset alarm": Button for deactivating the regularly occurring "Flash memory life time reducing fast" alarm. The button can only be operated by users with the "Control Panel Administrator" authorization. After pressing the button, the "Flash memory life time reducing fast" alarm is only displayed again when the next cyclic check results in a high load on the flash memory.

2.7 Taskbar

Under "Taskbar", you specify whether the taskbar is displayed on the HMI device and at which position.

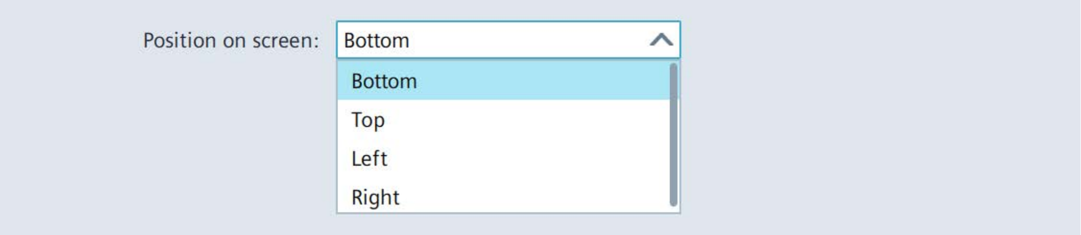


General Settings


☑ Enable taskbar

"Enable taskbar": Option to enable or disable the taskbar. The default setting is "enabled".

Position of taskbar


Position on screen: Bottom

"Position on screen": Drop-down list to specify the position of the taskbar on the display. The drop-down list is only active when the "Enable taskbar" option is selected.

Selection options:

- "Bottom": The taskbar is displayed at the very bottom on the display.
- "Top": The taskbar is displayed at the very top on the display.
- "Left": The taskbar is displayed at the very left on the display.
- "Right": The taskbar is displayed at the very right on the display.

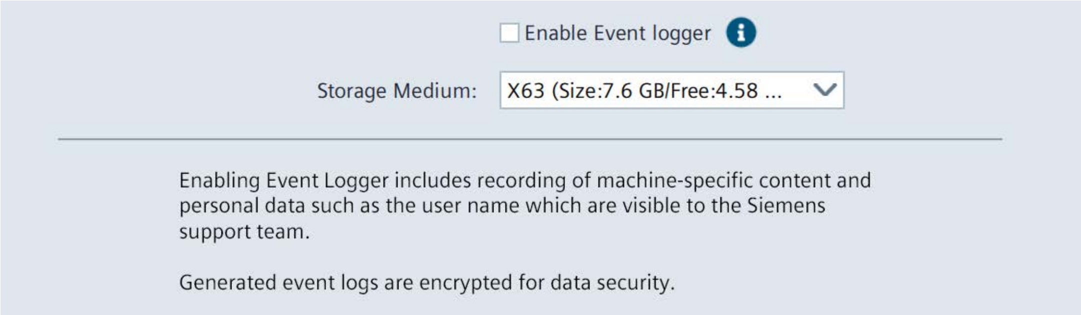
Default setting is "Bottom".

2.8 Event Logger

The "Event Logger" function gives you the option of recording complete runtime operating scenarios on a storage medium.

The recorded data includes all "tracing" information, screen contents, screen changes and operator actions. The recorded data can be used, for example, to analyze the cause of errors by the Technical Support.

General Settings



□ Enable Event logger

Storage Medium: X63 (Size:7.6 GB/Free:4.58 ...

Enabling Event Logger includes recording of machine-specific content and personal data such as the user name which are visible to the Siemens support team.

Generated event logs are encrypted for data security.

- "Enable Event logger": Option to enable or disable the "Event Logger" function. The default setting is "deactivated".
- "Storage Medium": Storage medium on which the recorded data is saved (USB storage medium or SD card).

Starting and stopping the recording

1. Connect an external storage medium to the HMI device.

> **Note**
>
> The external storage medium must be connected to the HMI device before the "Event Logger" function is enabled.

2. Select the storage medium for the recording under "Storage Medium".
3. Select the "Enable Event logger" option.
   A message informs the user that a restart of the Runtime is required.
4. If a project is still running on the HMI device, close Runtime.

5. Start Runtime. The following data is included in the recording:
   - All "tracing" information
   - All screen contents and screen changes
   - All operator actions

   The recorded data is stored encrypted in a file in the root directory of the storage medium.

   Syntax for the file name of a recording: "telemetry_<date>_<time>_<id>"
   - <date>: Date in the format "yyyymmdd" (year, month, day)
   - <time>: Time in the format "hhmmss" (hour, minute, second)
   - <id>: Unique number for the recording

   Depending on the amount of data recorded, a recording can be comprised of multiple files.

   Recording is ended if the storage space on the storage medium is insufficient for the recording. Make sure that enough free storage space is present on the storage medium.
6. To stop the recording, clear the "Enable Event logger" option.

Switching to another storage medium

If multiple storage media are connected to the HMI device and you want to continue recording on a different storage medium, proceed as follows:

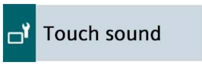
1. Clear the "Enable Event logger" option.
2. Select another storage medium under "Storage Medium".
3. Select the "Enable Event logger" option.
4. Start Runtime.

See also

Trace options (Page 66)

2.9 Touch sound

Under "Touch sound", you can set the sound playback for the touch operation.

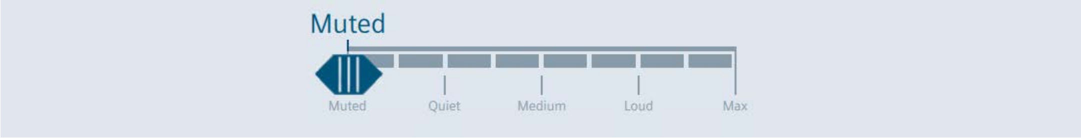


Note

MTP1500/1900/2200 Unified Comfort

The "Touch sound" function is not available for the built-in devices MTP1200/1500/1900 Unified Comfort with article numbers -...0.

Sound Level



Set the desired volume using the slider. Possible values are:

- "Muted" (default setting): No sound playback
- "Quiet": Minimum sound volume
- "Medium": Medium sound volume
- "Loud": High sound volume
- "Max": Maximum sound volume

If sound playback is activated, then acoustic feedback of the HMI device takes place on the following operator control actions:

- Touching of operating objects, typically tapping with a finger
- For two-handed operation: Tapping with the second finger, which operates the released object

There is no acoustic feedback for the following operator control actions:

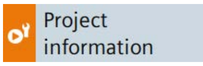
- Deactivating the screensaver
- Deactivating the clean screen
- Two-finger gesture, such as zooming
- For two-handed operation: Tapping on the release button

Runtime Properties

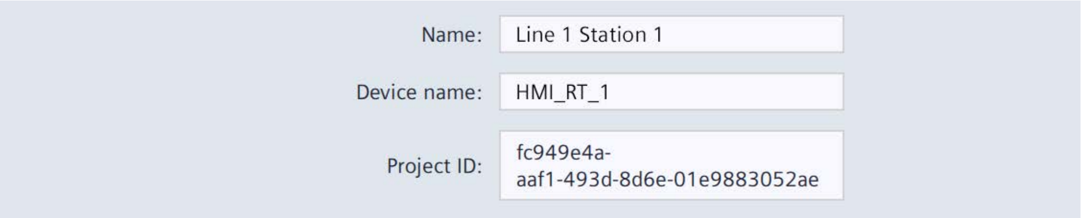
3

3.1 Project information

Under "Project information" you can view the project-specific information that uniquely identify the project on the HMI device.



Project information



Name: Line 1 Station 1

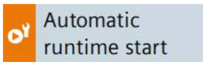
Device name: HMI_RT_1

Project ID: fc949e4a-aaf1-493d-8d6e-01e9883052ae

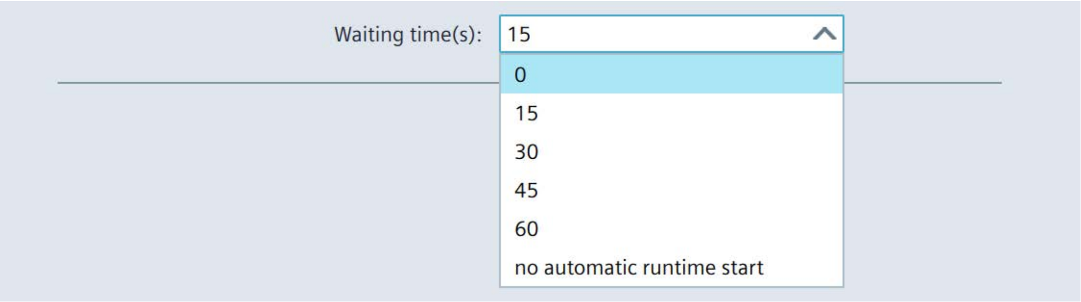
- "Name": Name of the project is equivalent to the name of the project in WinCC (TIA Portal).
- "Device name": Automatically generated name of the runtime project on the HMI device.
- "Project ID": Unique identification of the runtime project is equivalent to the "Runtime ID" of the project in WinCC (TIA Portal).

3.2 Automatic runtime start

Under "Automatic runtime start" you define whether the project on the HMI device starts automatically or not after a defined delay time.



Automatic runtime start



Waiting time(s): 15

"Waiting time(s)": Drop-down list for determining whether the project on the HMI device starts automatically after a specified delay time or not.

Selection options:

- "0": The project is started directly after the operating system.
- "15" to "60": The project starts after a delay time of 15 to 60 seconds. During the delay time, the dialog "Runtime Start" is displayed with a countdown and the following buttons:
  - "Cancel": The dialog is closed, Runtime does not start.
  - "Skip": The delay time is skipped, Runtime is started.
- "no automatic runtime start" (default setting): The project is not started automatically, but via the "Start Runtime" button in the Control Panel.

Starting Runtime

While Runtime starts on the HMI device, the dialog box "Runtime Start" is displayed with an initialization message. The Control Panel cannot be operated while Runtime is starting.

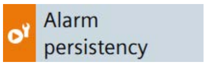
Note

Once the project has started, you have the following options to open the Control Panel:

- Via the taskbar.
- Via an operating object for which the "ShowControlPanel" or "StopRuntime" function has been configured.

3.3 Alarm persistency

You can enable or disable the retentivity of the alarm buffer under "Alarm persistency". The default setting is "deactivated".



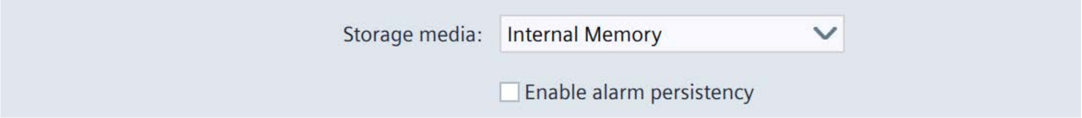
Alarm persistency

Note

Back up data before deactivating the retentivity

When you deactivate the retentivity of the alarm buffer and still need the data in the alarm buffer, back up this data before deactivating the retentivity in a log.

Alarm persistency configuration



Storage media: Internal Memory

☐ Enable alarm persistency

- "Storage media": Selection list for defining the storage medium for the retentive alarm buffer. Selection options:
  - "Internal Memory": Alarms are written to the internal flash memory.

- "Enable alarm persistency": Option to enable or disable the retentivity of the alarm buffer. The default setting is "deactivated".

  When the retentivity of the alarm buffer is activated, the retentive alarm data is backed up every two seconds to the selected storage medium. With a high number of alarms, the storage medium is subject to an equally high number of read and write cycles.

  If the retentivity of the alarm buffer is deactivated, the alarm buffer is emptied and the retentive alarm data is no longer backed up to the selected storage medium. This means the storage medium is used less with a high number of alarms.

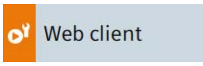
Switching the "Enable alarm persistency" option requires a restart, and the "Enable alarm persistency" dialog is displayed. Restart the system using the "OK" button.

See also

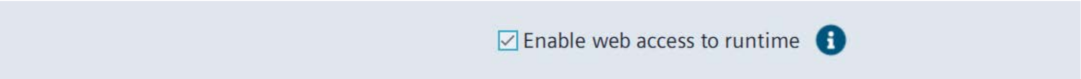
Reboot (Page 12)

3.4 Web client

Under "Web client", you can enable web-based client access to the runtime project. Operator control in runtime via a client is asynchronous, that is, the display content of the server does not change while the client is operating in runtime.



Web client configuration



☑ Enable web access to runtime

- "Enable web access to runtime": Option to enable web access to the runtime project.

Web access to the runtime project

When web access is enabled, you can access the runtime project via a browser, see section "Web access to the HMI device (Page 76)".

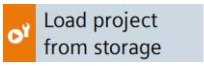
You can find more information on remote access via "Web client" in the TIA Portal Help under: "Visualizing processes (RT Unified) > Using distributed systems > Web client".

3.5 Load project from storage

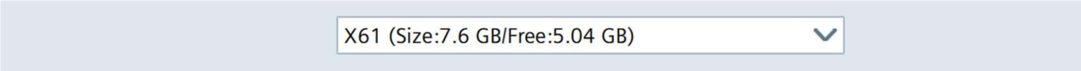
Under "Load project from storage", you can load into the HMI device a project that was backed up on an external storage medium in WinCC (TIA Portal).

You generate the necessary project data in WinCC by configuring the HMI device and then using drag-and-drop to move the folder of the HMI device (e.g. "HMI_1 [<*DeviceType*>]") to an external storage medium (icon) under "Card Reader/USB memory".

Recommendation: The Runtime and firmware versions of the project should match those of the HMI device.



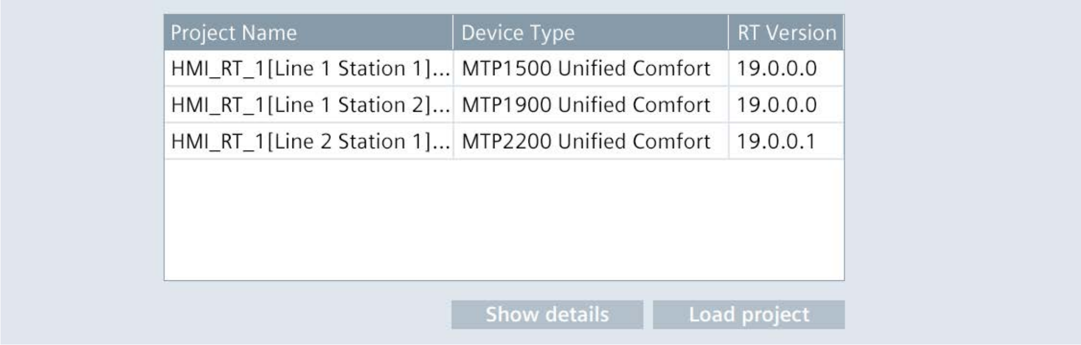
Select storage media for project transfer



X61 (Size:7.6 GB/Free:5.04 GB)

Select the storage medium on which the backed-up project is stored.

Projects on external storage

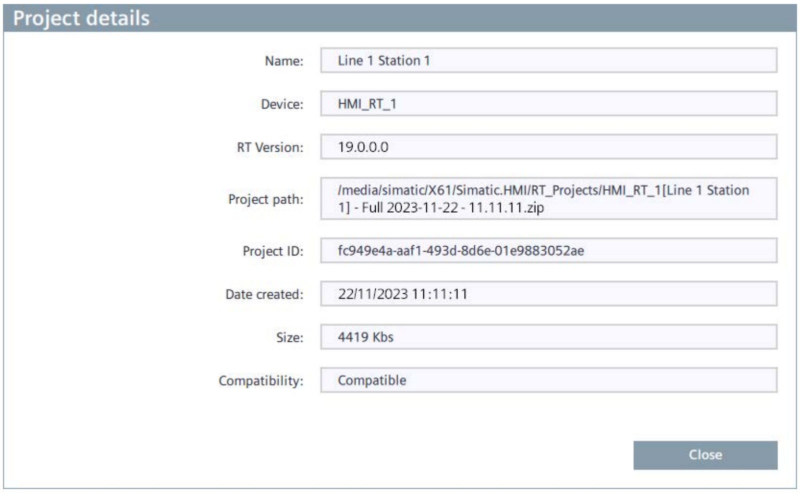


Project Name	Device Type	RT Version
HMI_RT_1[Line 1 Station 1]...	MTP1500 Unified Comfort	19.0.0.0
HMI_RT_1[Line 1 Station 2]...	MTP1900 Unified Comfort	19.0.0.0
HMI_RT_1[Line 2 Station 1]...	MTP2200 Unified Comfort	19.0.0.1

- The list includes all projects that are located on the external storage medium.
- "Show details": Button for displaying additional information on a selected project.
- "Load project": Button for loading the selected project.

Displaying details and checking compatibility

If you have selected a project you can use the "Show details" button to display more information about the selected project and check whether the project can be loaded into the HMI device.



Project details

Name: Line 1 Station 1

Device: HMI_RT_1

RT Version: 19.0.0.0

Project path: /media/simatic/X61/Simatic.HMI/RT_Projects/HMI_RT_1[Line 1 Station 1] - Full 2023-11-22 - 11.11.11.zip

Project ID: fc949e4a-aaf1-493d-8d6e-01e9883052ae

Date created: 22/11/2023 11:11:11

Size: 4419 Kbs

Compatibility: Compatible

- "Name": Name of the project.
- "Device": Name of the HMI device in the project.
- "RT Version": Runtime version of the project.
- "Project path": Path of the project on the external storage medium.
- "Project ID": Unique identification of the runtime project is equivalent to the "Runtime ID" of the project in WinCC (TIA Portal).
- "Date created": Date on which the project in WinCC (TIA Portal) was saved to a storage medium.
- "Size": Size of the project on the storage medium.
- "Compatibility": A message about the compatibility of the project and the HMI device is displayed in this output field. Depending on the degree of compatibility, the message is highlighted in color.

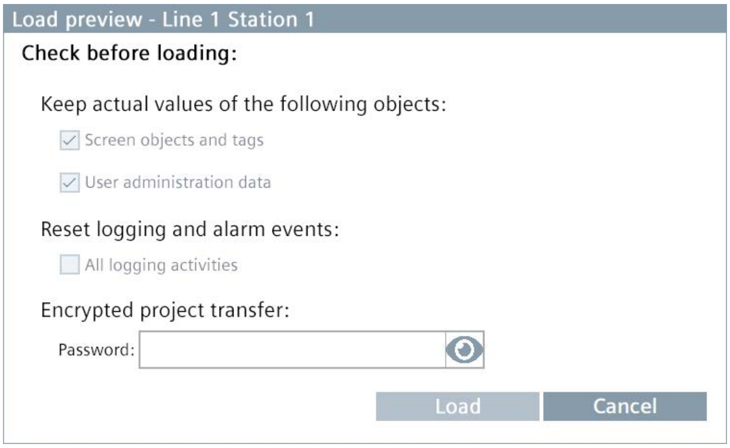
The following messages can be displayed in the "Compatibility" output field:

- The message "Compatible": Project and HMI device are compatible, the project can be loaded without any problem.
- Messages of the "Warning" type highlighted in orange: Firmware and/or runtime version of project and HMI device differ. The versions are compatible, an "Upgrade" or "Downgrade" is optional. The project can be loaded.
- Messages of the "Error" type highlighted in red: The project cannot be loaded for one of the following reasons.
  - Project and device type are incompatible, i.e. the project was created for a different device type. To load the project, replace the device in WinCC.
  - Firmware and/or Runtime version of project and HMI device are incompatible, an "Upgrade" or "Downgrade" is required. To load the project, update the operating system of the HMI device.

You can find information on updating the operating system at the end of this section and under "See also".

Load project

The "Load preview" dialog is displayed via the "Load project" button.



Load preview - Line 1 Station 1

Check before loading:

Keep actual values of the following objects:

☑ Screen objects and tags

☑ User administration data

Reset logging and alarm events:

□ All logging activities

Encrypted project transfer:

Password:

- Under "Keep actual values of the following objects", you specify whether the process values of the following objects are to be retained:
  - "Screen objects and tags": Option for keeping the process values of screen objects and tags on the HMI device.
  - "User administration data": Option for keeping the user management on the HMI device.

  Under "Reset logging and alarm events", you specify whether data in logs and alarm events are to be deleted:
  - "All logging activities": Option for deleting all logs and alarm events.

  The "Encrypted project transfer" area is displayed when encrypted transfer is enabled for the selected project. In this case, enter the password that was set in WinCC for the encrypted transfer.
- The "Load" button loads the project into the HMI device, taking the selected settings into account.

  After the loading process, you can start the project via the "Start Runtime" function on the HMI device.

Activation of the options that are currently grayed out is envisaged in a later firmware version.

See also

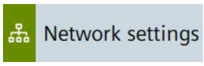
Update OS (Page 10)

Networks and Internet 4

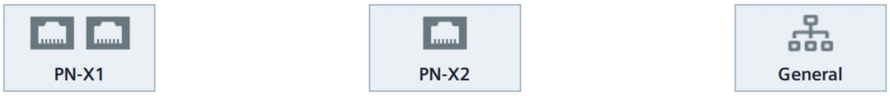
4.1 Network settings

4.1.1 Overview

Under "Network settings", you change settings for the network and for the network interfaces X1 and X2. Both interfaces support PROFINET basic services.



The following buttons take you to the corresponding settings.



- "PN-X1": Settings for X1 interface (Page 25)
- "PN-X2": Settings for X2 interface (Page 27)
- "General": General settings (Page 29)

The settings under "Network settings" are retained after a restart or update of the operating system.

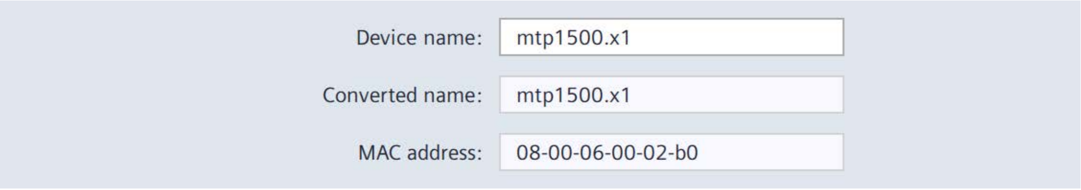
In the following cases, the settings under "Network settings" are not retained:

- If the HMI device is reset to factory settings, all settings will be reset to their default values.
- When a project with changed network settings is loaded to the HMI device, the values from the project are applied.

4.1.2 PN-X1

Under "PN-X1" you define the parameters for the X1 interface and both X1P1 and X1P2 connections.

PROFINET

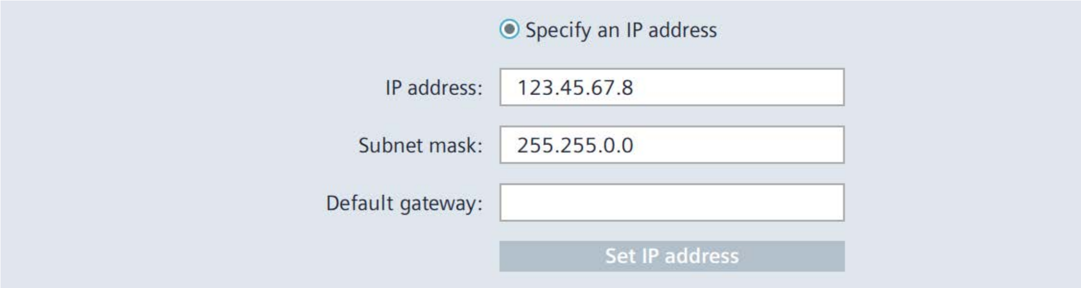


Device name:	mtp1500.x1
Converted name:	mtp1500.x1
MAC address:	08-00-06-00-02-b0

- "Device name": PROFINET name of the interface may not contain any spaces and must be unique in the local network.

- "Converted name": Display field with the PROFINET name of the interface, contains the entry under "Device name", automatically converted according to PROFINET naming conventions.
- "MAC address": Display field with the MAC address of X1 interface of the HMI device.

IP address



● Specify an IP address

IP address: 123.45.67.8

Subnet mask: 255.255.0.0

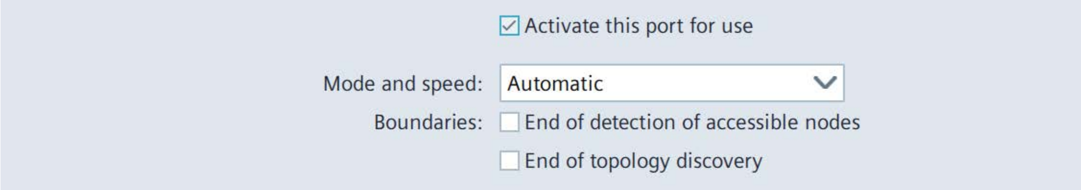
Default gateway:

- "Specify an IP address": Option to manually assign the IP address.
- "IP address": IP address of X1 interface for the X1P1 and X1P2 ports.

  The IP address must be unique in the local network. If this is not the case, the IP address of the HMI device is automatically set to the value "0.0.0.0". The IP addresses of X1 and X2 interfaces must be located in different subnets.

  Regardless of whether SIMATIC Edge has been activated on the HMI device unit or not, the IP subnet 172.17.0.0/16 is reserved for SIMATIC Edge communication. This IP address area must not be used for general network communication.
- "Subnet mask": Subnet mask for the IP address of X1 interface.
- "Default gateway": IP address of the gateway (router) if several different local networks are used.
- "Set IP address": Button for saving the specified IP address parameters.

Ethernet parameters Port 1, Ethernet Parameters Port 2



☑ Activate this port for use

Mode and speed: Automatic

Boundaries: □ End of detection of accessible nodes

□ End of topology discovery

- "Activate this port for use": Option to activate or deactivate the X1P1 or X1P2 ports. The default setting is "Activated".
- "Mode and speed": List for selecting the transmission type and transmission rate for the interface; selection options: "Automatic" (default setting) or "100Mbps / FDX" (100 Mbps, full-duplex). Use the default setting "Automatic" preferably.

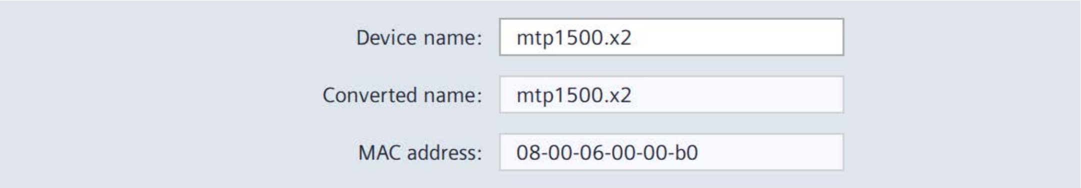
- "Boundaries":
  - "End of detection of accessible nodes": DCP frames for detecting accessible nodes are not forwarded. Nodes located beyond this interface are no longer accessible.
  - "End of topology discovery": LLDP frames for topology discovery are not forwarded.

Changes under "Ethernet parameters Port 1" and "Ethernet parameters Port 2" require a restart, the "PROFINET Port Settings" dialog box is displayed. Restart the system using the "Restart" button.

4.1.3 PN-X2

Under "PN-X2" you define the parameters for the X2 interface.

PROFINET



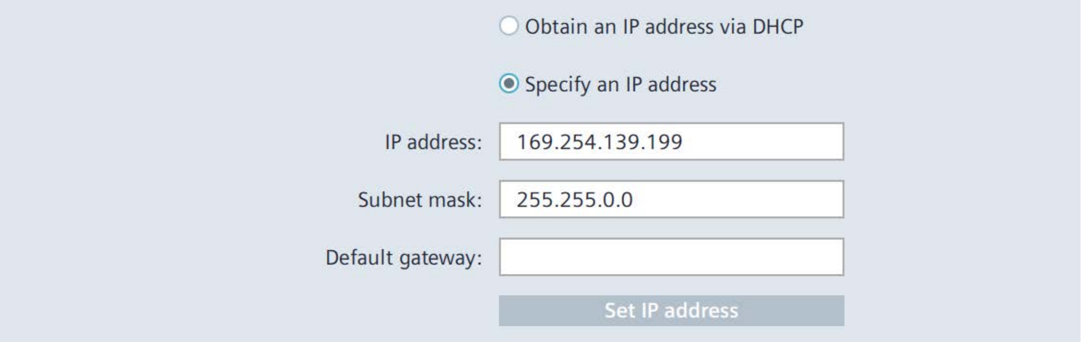
Device name: mtp1500.x2

Converted name: mtp1500.x2

MAC address: 08-00-06-00-00-b0

- "Device name": PROFINET name of the interface may not contain any spaces and must be unique in the local network.
- "Converted name": Display field with the PROFINET name of the interface, contains the entry under "Device name", automatically converted according to PROFINET naming conventions.
- "MAC address": Display field with the MAC address of X2 interface of the HMI device.

IP address



○ Obtain an IP address via DHCP

● Specify an IP address

IP address: 169.254.139.199

Subnet mask: 255.255.0.0

Default gateway:

- "Obtain an IP address via DHCP" (default setting): Option to automatically assign the IP address via the DHCP server.
- "Specify an IP address": Option to manually assign the IP address.
- "IP address": IP address of the X2 interface.

The IP address must be unique in the local network. The IP addresses of X2 and X1 interfaces must be located in different subnets.

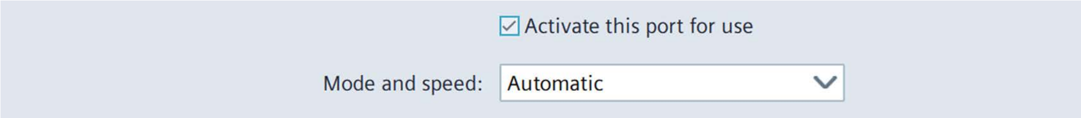
Regardless of whether SIMATIC Edge has been activated on the HMI device unit or not, the IP subnet 172.17.0.0/16 is reserved for SIMATIC Edge communication. This IP address area must not be used for general network communication.

- "Subnet mask": Subnet mask for the IP address of X2 interface.
- "Default gateway": IP address of the gateway (router) if several different local networks are used.
- "Set IP address": Button for saving the specified IP address parameters.

Note

When you select the option "Specify an IP address via DHCP", this setting is not overwritten when the project is loaded. When you select the option "Specifiy an IP address", you can also configure the network address in the WinCC device configuration and load it to the HMI device together with the project.

Ethernet parameters Port



☑ Activate this port for use

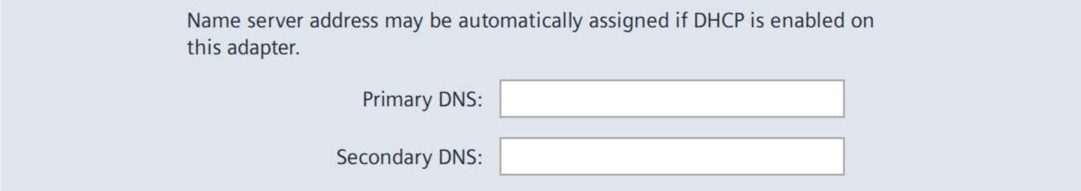
Mode and speed: Automatic

- "Activate this port for use": Option to enable or disable the port. The default setting is "Activated".
- "Mode and speed": List for selecting the transmission type and transmission rate for the port.

  Selection options:
  - "Automatic" (default setting)
  - "10Mbps / HDX" (10 Mbps, half duplex)
  - "10Mbps / FDX" (10 Mbps, full duplex)
  - "100Mbps / HDX" (100 Mbps, half duplex)
  - "100Mbps / FDX" (100 Mbps, full duplex)

  Use the default setting "Automatic" preferably.

Name servers



Name server address may be automatically assigned if DHCP is enabled on this adapter.

Primary DNS:

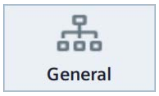
Secondary DNS:

- "Primary DNS": Address of the DNS server.
- "Secondary DNS": Address of the secondary DNS server.

If you have activated the "Obtain an IP address via DHCP" option under "IP address", the specifications under "Name servers"are optional.

4.1.4 General

You define the general network parameters under "General" .



General network settings

☑ Enable simple network management protocol (SNMP)

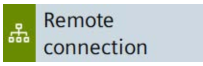
- "Enable simple network management protocol (SNMP)": Option to enable or disable the Simple Network Management Protocol for data transmission. The default setting is "enabled".

Note

Disabling this option increases the information security because less information is exchanged with other devices in the network.

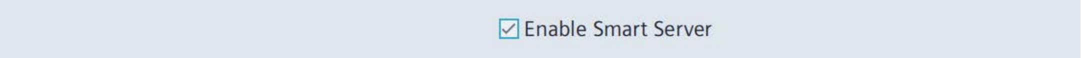
4.2 Remote connection

Change the settings for remote access to the HMI device under "Remote connection". You can define two passwords for remote access, for example, a password for the "Operate" right and a password for the "Monitor" right. Operator control in the Control Panel or in runtime is synchronous, that is, the display content of the server changes at the same time as the display content of the client.



Change the settings under "Remote connection" only if no client is connected to the SmartServer, because changing the settings disconnects all client connections.

Smart Server


☑ Enable Smart Server

"Enable Smart Server": Option to activate or deactivate the SmartServer on the HMI device. The default setting is "deactivated". This option can only be activated if two different passwords have been set under "Users".

If the SmartServer is started on an HMI device, you can access the HMI device via the SmartClient application or a VNC client, such as Tigervnc. Depending on the settings under "Users", the client can operate or monitor the server device.

Note

Access via the SmartClient Mobile application is not possible.

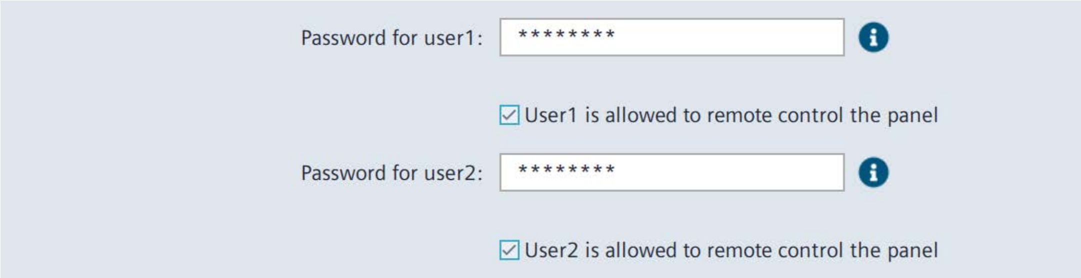
Note

Depending on the bandwidth of the connection and the number of connected clients, the performance on the clients may be different than the performance on the SmartServer.

Each client that connects to the SmartServer and operates or monitors the runtime project, uses resources on the SmartServer device. For high performance and low consumption of resources, you should have as few clients as possible connected to the SmartServer at the same time.

Recommendation: Connect a maximum of three clients to the SmartServer.

Users



Password for user1: ********

☑ User1 is allowed to remote control the panel

Password for user2: ********

☑ User2 is allowed to remote control the panel

In this area you define the passwords and access rights for two users. The passwords of the two users must not be identical. Several users can access the SmartServer simultaneously via one password.

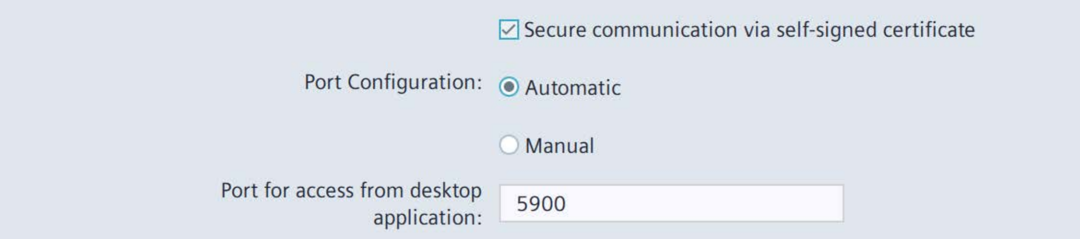
- "Password for user1": First password for access to the HMI device. Default setting: "empty".
  - "User1 is allowed to remote control the panel": Option to activate the "Operate" right for a user who logs in with password 1. The default setting is "deactivated".
- "Password for user2": Second password for access to the HMI device. The password must be different from the "Password for user1". Default setting: "empty".
  - "User2 is allowed to remote control the panel": Option to activate the "Operate" right for a user who logs in with password 2. The default setting is "deactivated".

Password guidelines for the SmartServer

The passwords under "Users" must have a length of **exactly 8 characters** and include the following characters:

- At least one capital letter (A - Z)
- At least one lowercase letter (a - z)
- At least one number (0 - 9)
- At least one special character (**! $ % & ( ) * + , - . / : ; < = > ? @ [\ ] _ { | } ~ ^**)

Communication



☑ Secure communication via self-signed certificate

Port Configuration: ● Automatic

○ Manual

Port for access from desktop application: 5900

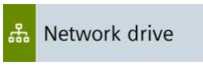
- "Secure communication via self-signed certificate": Option to enable secure communications via SSL encryption. Default setting: "activated".

  Client access is only possible if the client application supports SSL encryption.

  For access via the SmartClient application, this option must be cleared.
- "Port Configuration"
  - "Automatic" (default setting): Option to enable automatic port assignment. The default value "5900" for the port number remains unchanged.
  - "Manual": Option to enable manual port assignment.
- "Port for access from desktop application": Port number for access via the SmartClient application. Default value is "5900".

4.3 Network drive

Under "Network drive", you manage a network drive that can be accessed by the HMI device.



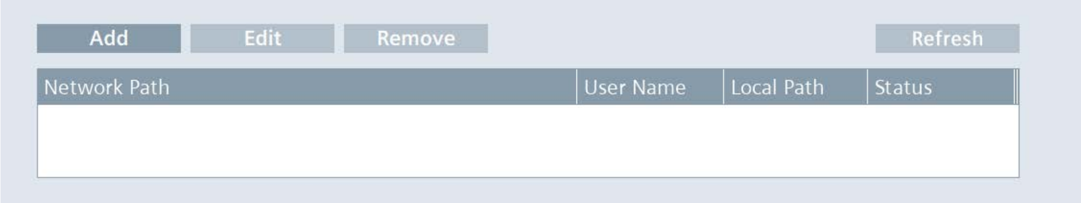
The network drive must be on a server PC in the subnet of the HMI device and be enabled for access. The operating system of the server PC must support the network protocol SMB 3.0.

You can use a network drive only for the data exchange between the server PC and HMI device.

This means that a network drive **cannot** for example, be used for the following functions:

- Updating, backing up and restoring the operating system
- Transferring a project
- Importing user management from a file or exporting it to a file
- Runtime functions such as logging or reporting
- Importing certificates

Network Drive



- The following buttons with the following functions are located above the list:
  - "Add": Add network drive

    The "Add" button is disabled as soon as a network drive is entered in the list.
  - "Edit": Edit the properties of a network drive
  - "Remove": Disconnect network drive
  - "Refresh": Refresh the status of the network drive

    The entries in the "Status" column are displayed for about 60 seconds. By using the "Refresh" function you import the latest status information again.
- The following properties of the network drive are displayed in the list:
  - "Network Path": Path of the network drive
  - "User Name": User name used to connect to the network drive
  - "Local Path": Local path for accessing the network drive, for example, "/net/mount"
  - "Status": Information on the connection status of the network drive, see paragraph "Status alarms" at the end of the section.

Note

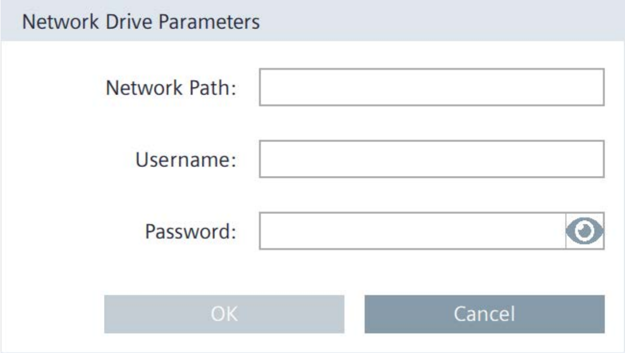
"Reboot" and "Update OS"

The network drive remains in the list after a restart of the HMI device.

When updating the operating system, the entries under "Network Path" are retained, the credentials "Username" and "Password" must be entered again for security reasons.

Add network drive

1. Press "Add" to open the "Network Drive Parameters" dialog.

   The maximum permissible number of characters in the three input fields is 255.

   The input fields "Network Path" and "Username" are mandatory fields; the following characters are permitted in these input fields:

   – Capital letters (A - Z)
   – Lowercase letters (a - z)
   – Numbers (0 - 9)
   – Special characters (**_ . -**)

   The special character **/** is permitted for the input field "Network Path".

   The special character \ is permitted for the input field "Username".

   The input field "Password" does not have any character restrictions.

2. Under "Network Path", enter the path to an enabled network drive in the subnet of the HMI device.

   Syntax: "*//<IP address of the server PC>/<Enable name of the network drive>*"

   Example: "//169.254.139.190/mounttest"

   Always use the IP address; specification of the computer name is not supported.

3. Under "Username" and "Password", enter the credentials of a user who has access to the network drive.

   Use the following button to make the password visible for the display duration of the dialog:

   👁

4. Confirm your entries with "OK".

   The "Network Drive Parameters" dialog box closes.

When the connection was set up successfully, the "Connected" information is displayed in the "Status" column of the "Network Drive" list.

When the connection could not be set up, the "Failed" information is displayed under "Status". In this case, check the connection to the server PC and the enable properties of the network drive.

Status messages

The following table shows the status messages, their meaning and the possible remedy in case of errors.

Status message	Meaning	Remedy
Connecting	The connection to the network drive is being established.	-
Connected	The network drive was successfully connected.	-
No such file or directory	The path specified under "Network Path" does not exist.	Make sure that the specified network path exists and check the spelling in the input field "Network Path".
Authentication failed	The credentials are incorrect.	Make sure that the specified user has access to the network drive. Check the spelling in the input fields "Username" and "Password".
Input/Output error	Unable to connect the network drive.	Check the connection between PC and HMI device. Establish the connection to the network drive again.
Timeout	There are synchronization problems with the added network drive.	Check the connection between PC and HMI device. Try to connect the network again with "Edit" and "OK".

Security 5

5.1 User management

A convenient user management is available to you under "User management". The user management is configured in WinCC, transferred to the HMI device and managed on the HMI device.

Web access is also available for user management, see "Web access to the HMI device (Page 76)". Note that the functions for RFID assignment are not available via web access.

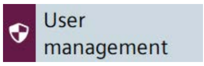
Note

Important information on the configuration and project transfer

- If you do not assign a user a role or a role and no function right in the configuration, the user or the role is not loaded to the device.

  In WinCC, configure all roles required on the HMI device with all function rights required on the HMI device. Assign each role required on the HMI device to at least one user.
- To transfer the user management from WinCC to the HMI device, the option "Keep current user management data in runtime" must be **deactivated** in the "Load preview" dialog during project transfer.

You can find detailed information on configuration in the TIA Portal Help under "Visualizing processes (RT Unified) > Configuring users and roles (RT Unified)".



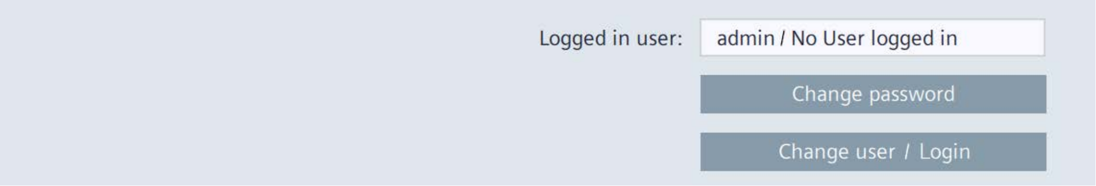
The complete user list is only visible and editable for users who have been assigned the "User management" function right in the configuration.

Users with other function rights see their own entry in the user list and can only use the buttons in the "Current user" area.

When password protection is enabled for the Control Panel, only users with the "Control Panel access" function right can access the Control Panel.

The password guidelines are specified during configuration. The function rights of a user are valid for the Control Panel as well as for the runtime software.

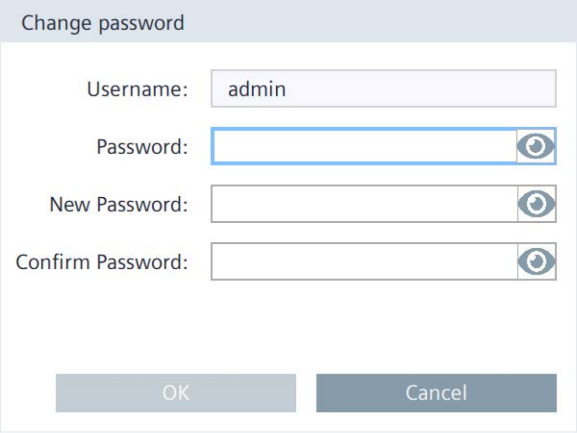
Current user



Logged in user: admin / No User logged in

- "Logged in user": Displays the login name of the user currently logged in. If no user is logged in yet, then "No User logged in" is displayed.

- "Change password": Button to change the password for the user currently logged in. After pressing the button, the "Change password" dialog is displayed.



Change password

Username: admin

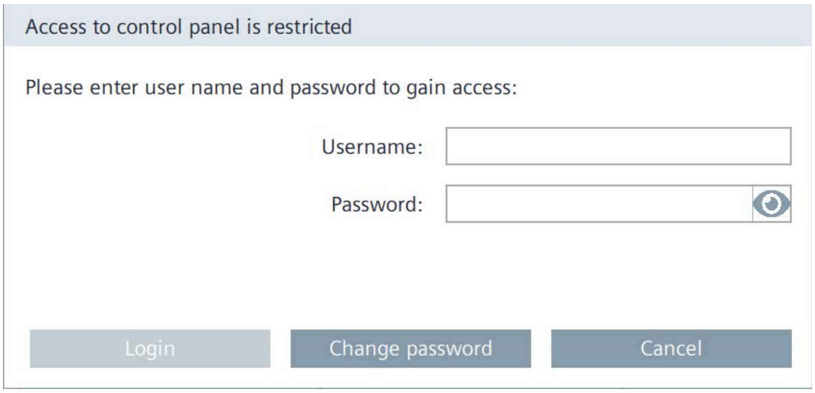
Enter the previous password once and the new password twice. The following button can be used to make the passwords visible for the display duration of the dialog box:

👁

- "Change user": Button for changing the current user.

  "Login": Button for logging in a user.

  After pressing the button, the "User Login" dialog is displayed.



Access to control panel is restricted

Please enter user name and password to gain access:

Enter the desired login name with the associated password and log in using the "Login" button.

Note

Number of login attempts

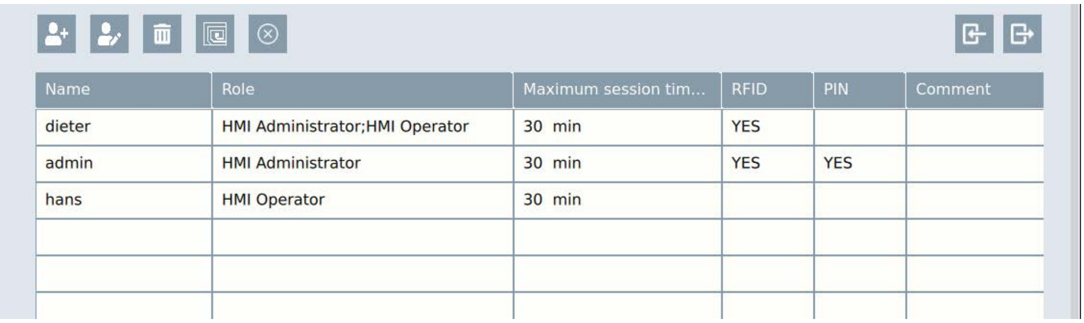
The number of attempts for the correct entry of the login credentials can be configured in WinCC under "Runtime settings > Security".

If the login credentials are entered incorrectly one more time, the user involved is locked. The user must be deleted and recreated, or you must reload the User Management into the HMI device.

Ensure you enter the login credentials correctly.

Alternatively, you can log in via an RFID card if your user has been assigned an RFID login. Hold the RFID card just in front of the RFID reader and input your PIN if required.

Users



Name	Role	Maximum session tim...	RFID	PIN	Comment
dieter	HMI Administrator;HMI Operator	30 min	YES		
admin	HMI Administrator	30 min	YES	YES	
hans	HMI Operator	30 min			

- Above the user list are the following buttons with the following functions for users with the "User management" function right:

👤+	Create a new user.
👤✎	Edit data of the user currently selected in the list.
🗑	Delete the user currently selected in the list.
▣	Assign an RFID login to the user currently selected in the list.
ⓧ	Delete the RFID assignment for the user currently selected in the list.
⇦	Import complete user management from a ".json" file on an external storage medium. [1] Note: Import completely overwrites the user management on the HMI device.
⇨	Export complete user management to a ".json" file on an external storage medium. [1]

[1] For importing and exporting the user management, the "User management" function right is required; the "Import and export users" function right, which can be configured in WinCC, is not required.

- The user list displays the users available on the HMI device with the following user characteristics:
  - "Name": Login name of the user.
  - "Role": Roles assigned to the user.
  - "Maximum session timeout": This value indicates the number of minutes after which the user is automatically logged off if they no longer perform any operator action.

    Value range: 0 to 600 minutes (0 = automatic logout disabled).
  - "RFID": Information whether the user has been assigned an RFID card. "YES" means: RFID card assigned.
  - "PIN": Information on whether a PIN has been assigned to the user for the RFID login. "YES" means: PIN assigned.
  - "Comment": Comment text for the user.

Note

You cannot edit or delete yourself as a user.

To ensure that at least one user with the "User management" function right remains on the HMI device, users cannot edit or delete themselves. A second user with the "User management" function right is required for this purpose.

Note

Maximum session timeout

In the Engineering System, you can configure a maximum session duration for a role as well as for a user. If these values differ, only the smaller of the two values is transferred to the Panel during loading.

Creating or editing users

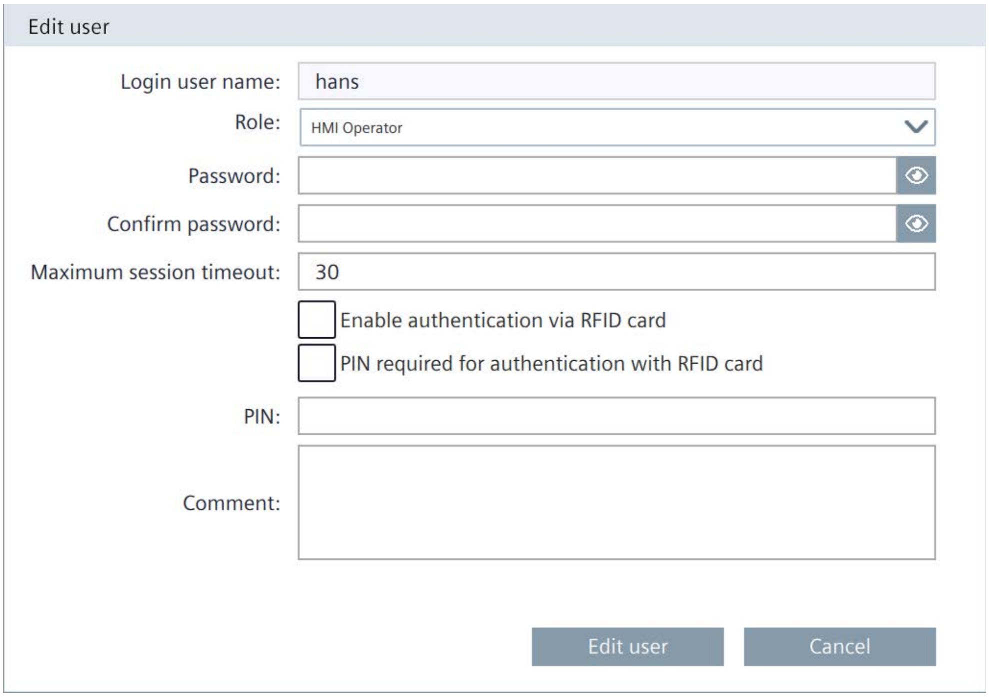
The editing functions are only available for users who have been assigned the "User management" function right in the configuration.

Use the following button to create a new user:

With the following button you edit the data of a user:

After pressing one of the two buttons, the dialog "Add user" or the dialog "Edit user" is displayed. Both dialog boxes are identical in content.

The following figure shows an example of the "Edit user" dialog box.



Edit user

Login user name:	hans
Role:	HMI Operator
Password:	
Confirm password:	
Maximum session timeout:	30
	□ Enable authentication via RFID card
	□ PIN required for authentication with RFID card
PIN:	
Comment:	

- "Login user name": Display field with the login name of the user.

- "Role": Drop-down list for assigning the user to one or more roles. The roles are defined in the WinCC project for the HMI device and assigned the corresponding function rights.

  The following system-defined roles are always transferred to the HMI device:

Role designation	Authorization in the Control Panel	Authorization in Runtime
HMI Operator	-	Web access, Operate, Monitor
HMI Monitor	-	Web access, Monitor
HMI Monitor Client	-	Web access, monitoring without influencing the processes in the controller
HMI Administrator	User management, Import and export users, Control panel access	Remote access, Monitor, Operate, Web access

  The drop-down list also contains the configured roles that were transferred from the WinCC project to the HMI device.

  Note

  The HMI role "HMI Monitor Client" is superior to all other roles and their function rights. A user to whom the role "HMI Monitor Client" is assigned gets the function rights of only that role. Any superior function rights of other roles that are assigned to the user will be lost.

  You can find detailed information on users, roles, and function rights in the TIA Portal Help.

- "Password": Text box for the password of the user. If you do not enter anything, the user's existing password remains unchanged.
- "Confirm password": Text box for confirming the password.
- "Maximum session timeout": This value indicates the number of minutes after which the user is automatically logged off if they no longer perform any operator action.

  Value range: 0 to 600 minutes (0 = automatic logout disabled).
- "Enable authentication via RFID card": Option to enable the RFID login for the user.
- "PIN required for authentication with RFID card": Option for activating 2-factor authentication with PIN for RFID login.
- "PIN": Text box for the PIN. Only digits are allowed, the maximum length is 6 digits.
- "Comment": Note on changing the user.
- "Edit user" or "Add user" Button for saving the user.
- "Cancel": Button for discarding the changes.

Peculiarities with RFID login

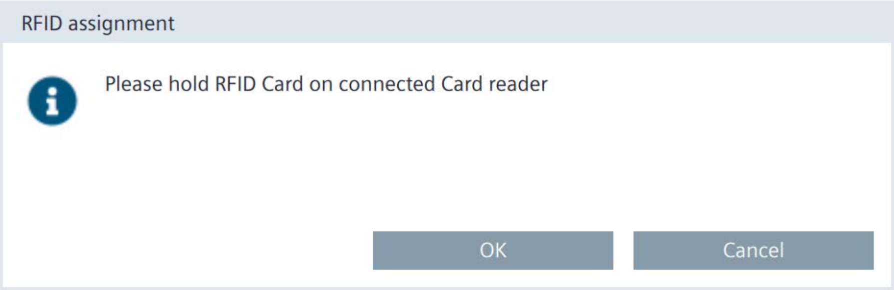
Take into consideration the following notes in conjunction with the RFID login:

- The RFID login only works with an RFID reader that is directly connected to the HMI device.
- You can use the RFID login both in Control Panel as well as in Runtime.
- The RFID assignments remain in place even after the operating system has been updated, provided that the currently existing users are transferred to the HMI device when the project is loaded.

RFID assignment in the "Add new user" dialog

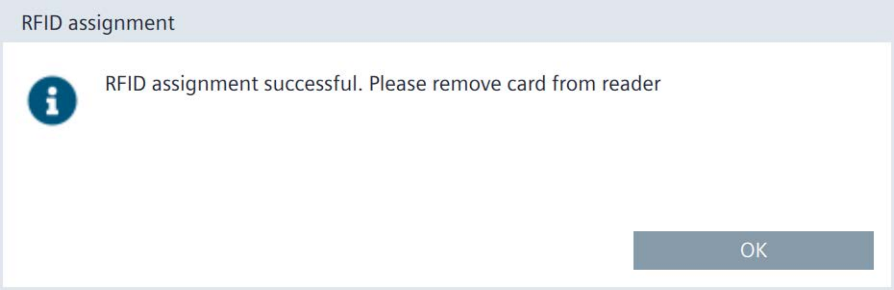
1. Ensure that you are logged in as a user with the "User management" function rights in the Control Panel.
2. Press the "Create user" button.
3. Enter a user name under "Login user name".
4. Under "Role", select the desired authorizations for the user from the list.
5. Enter the password for the user login under "Password" and "Confirm password".
6. If necessary, change the value under "Maximum session timeout".
7. Select the "Enable authentication via RFID card" option.
8. To use the RFID login without a PIN, leave the "PIN required for authentication with RFID card" option disabled.

   For 2-factor authentication, enable the "PIN required for authentication with RFID card" option and enter a code with 1 to 6 digits under "PIN".
9. Select "OK". The following dialog is displayed:

   Please hold RFID Card on connected Card reader
10. Select "OK". The "OK" button is shown with a colored background.

11. Take an RFID card that is not yet assigned to a user.
12. Hold the RFID card in front of the RFID reader until the following dialog is displayed:

   RFID assignment successful. Please remove card from reader
13. Remove the RFID card from the reader and select "OK".

A new user has been created and an RFID login has been assigned to the user. The user can log in by holding their RFID card briefly in front of the RFID reader.

Change the RFID assignment using the "Edit user" dialog

To change the RFID assignment of a user from the user list, follow the steps below:

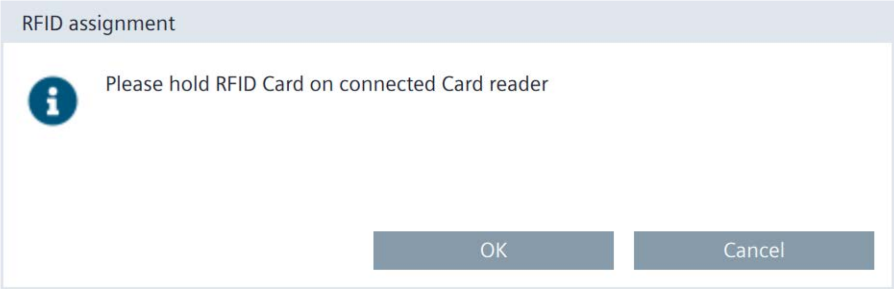
1. Ensure that you are logged in as a user with the "User management" function rights in the Control Panel.
2. Select a user in the user list.
3. Press the "Edit user" button.
4. Enable or disable the "Enable authentication via RFID card" option.
5. If you have enabled the "Enable authentication via RFID card" option and want to use the RFID login without a PIN, leave the "PIN required for authentication with RFID card" option disabled. For 2-factor authentication, enable the "PIN required for authentication with RFID card" option and enter a code with 1 to 6 digits under "PIN".

Note

Changing the PIN

You can also use the "PIN" text box to change the existing PIN of the user.

6. Select "Edit user". The following dialog is displayed:



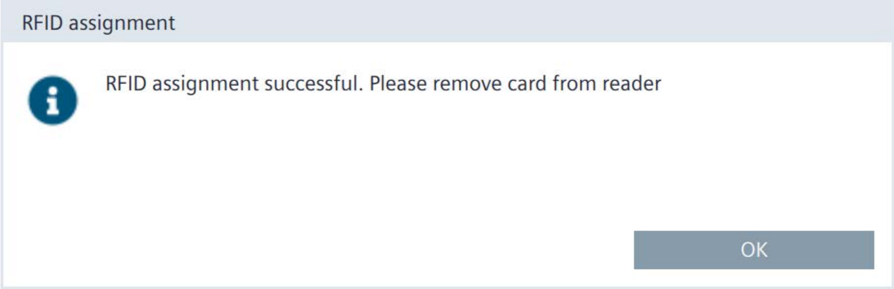
RFID assignment

Please hold RFID Card on connected Card reader

7. Select "OK". The "OK" button is shown with a colored background.

8. If the user has not yet been assigned an RFID login, take an RFID card that has not yet been assigned to a user.

   If the user has already been assigned an RFID login, take the previous RFID card of this user.
9. Hold the RFID card in front of the RFID reader until the following dialog is displayed:



RFID assignment

RFID assignment successful. Please remove card from reader

10. Remove the RFID card from the reader and select "OK".

The RFID assignment of the user has been changed.

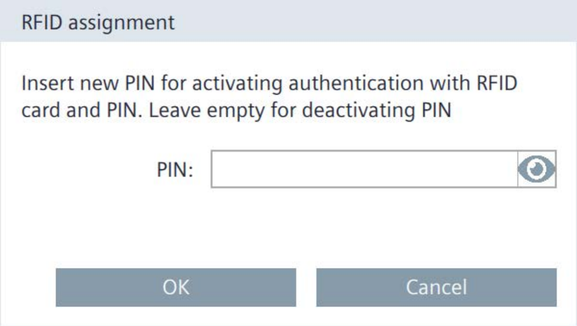
The "Assign RFID login" button

You can also use the "Assign RFID login" button for the RFID assignment. The button only works for users who have not yet been assigned an RFID login.

Proceed as follows:

1. Ensure that you are logged in as a user with the "User management" function rights in the Control Panel.
2. Select a user in the user list to whom an RFID login has not yet been assigned.
3. Press the "Assign RFID login" button.

   The "RFID assignment" dialog is displayed.

   RFID assignment

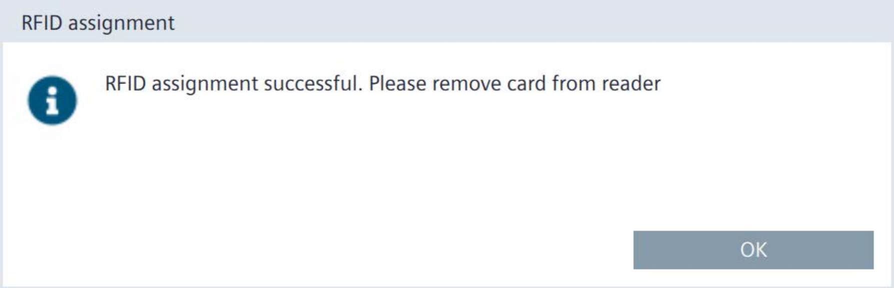
   Insert new PIN for activating authentication with RFID card and PIN. Leave empty for deactivating PIN

   PIN:

4. To use the RFID login without a PIN, leave the "PIN" text box blank.

   For 2-factor authentication, enter a code with 1 to 6 digits under "PIN".
5. Select "OK". The "OK" button is shown with a colored background.

6. Take an RFID card that is not yet assigned to a user.
7. Hold the RFID card in front of the RFID reader until the following dialog is displayed:

   RFID assignment

   RFID assignment successful. Please remove card from reader

8. Select "OK".

The RFID login has been assigned to the user. The user can log in by holding their RFID card briefly in front of the RFID reader.

The "Delete RFID assignment" button

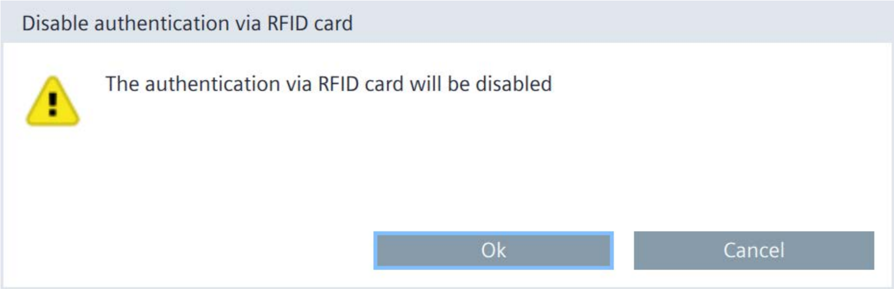
You can also use the "Delete RFID login" button to remove the RFID assignment. The button only works for users to whom an RFID login has been assigned.

Proceed as follows:

1. Ensure that you are logged in as a user with the "User management" function rights in the Control Panel.
2. Select a user in the user list to whom an RFID login has been assigned.
3. Press the "Delete RFID assignment" button.

   ⊗

   The "Disable authentication via RFID card" dialog box is displayed.

   Disable authentication via RFID card

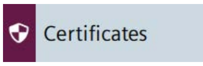
   The authentication via RFID card will be disabled

4. Select "OK".

The user can no longer log in with the RFID card.

5.2 Certificates

You can use this function to import, display and delete certificates and certificate revocation lists.

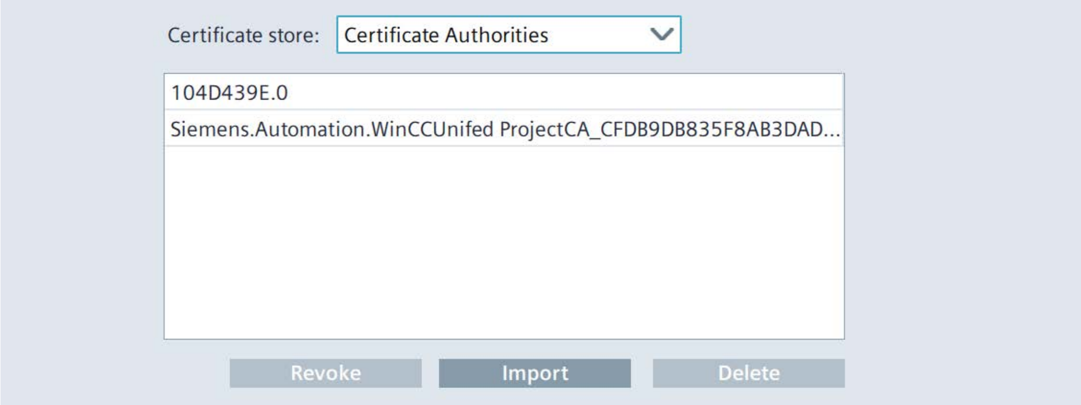


A digital certificate consists of structured data, which confirms ownership and other properties of a public key.

When handling certificates, note the information on Industrial Security (Page 75).

The documentation of the "Certificate Manager" for generating certificates can be found in the TIA information system under "Visualizing processes (RT Unified) > Runtime and Simulation (RT Unified)".

Certificates on the device


Certificate store: Certificate Authorities

104D439E.0
Siemens.Automation.WinCCUnifed ProjectCA_CFDB9DB835F8AB3DAD...

- "Certificate store": Drop-down list for the following certificate categories:
  - "Certificate Authorities": Trusted root certificate authorities and intermediate certificate authorities.
  - "My Certificates": Certificates of HMI device applications, mostly server certificates, such as OPC UA server.
  - "Other Certificates": Self-signed end entity certificates and trusted end entity certificates.
  - "Certificate Revocation Lists" for certificate revocation lists.
- The certificate list displays the certificates of the selected category.

  If you select an entry in the list, then the "Certificate details" for certificates or the "CRL details" for certificate revocation lists are displayed below the list.
- "Revoke": Button to mark a certificate as not trustworthy. This function is only available in the "Other Certificates" certificate category.

  "Trust": Button to mark a certificate as trustworthy. This function is only available in the "Other Certificates" certificate category.
- "Import": Button for importing one or more certificates from a data storage medium.

Note

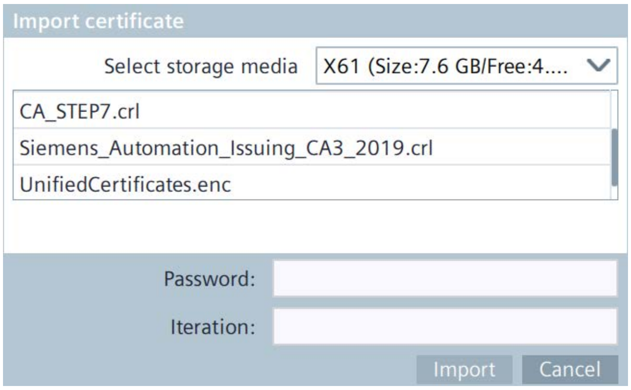
Supported file formats for certificates

The import function supports certificate files of type ".enc", ".der", ".crl" and ".pem".

Files of type ".enc" are exported from the "WinCC Unified Certificate Manager" and contain a collection of keys, certificates and CRLs.

If you want to import an individual cryptographic file, the supported formats for CER and CRL files end in ".pem" and ".der". The individual file should have a CA certificate or a CRL with extension ".der", ".crl" or ".pem".

The "Import certificate" dialog is displayed after the "Import" button has been pressed.


Import certificate

Select storage media: X61 (Size:7.6 GB/Free:4....

CA_STEP7.crl
Siemens_Automation_Issuing_CA3_2019.crl
UnifiedCertificates.enc

Password:

Iteration:

Select the storage medium and certificate file and import the certificate file using the "Import" button.

When you import an encrypted certificate with the ".enc" file extension, enter the following additional data:

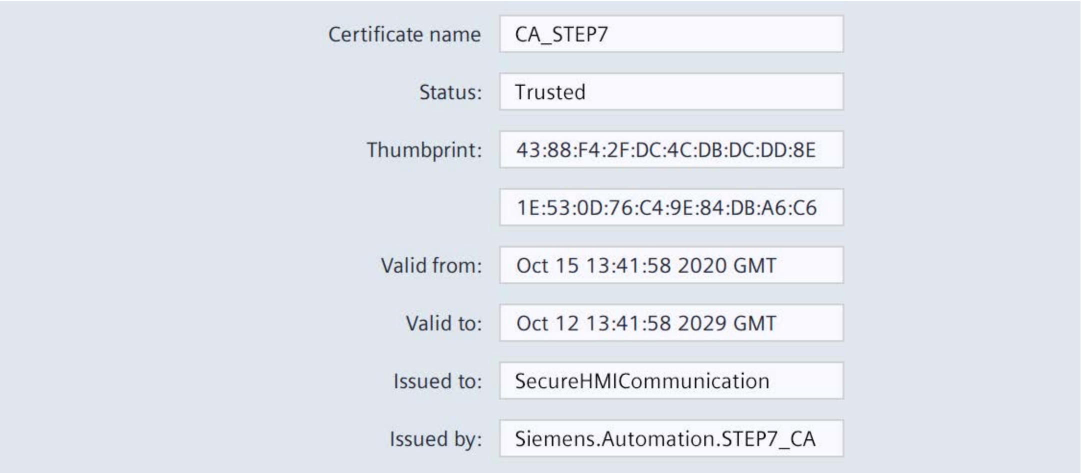
- "Password": The encryption password that was specified when the certificate was generated.
- "Iteration": The iteration count that was specified when the certificate was created.

- "Delete": Button to delete the currently selected certificate in the certificate list.

Note

The selected certificate is deleted immediately without prompt.

Certificate details

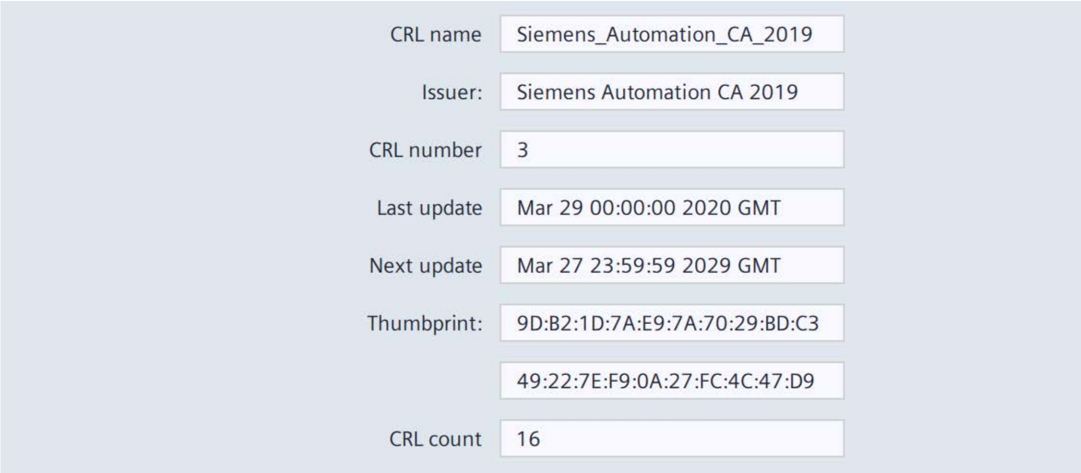


Certificate name	CA_STEP7
Status:	Trusted
Thumbprint:	43:88:F4:2F:DC:4C:DB:DC:DD:8E
	1E:53:0D:76:C4:9E:84:DB:A6:C6
Valid from:	Oct 15 13:41:58 2020 GMT
Valid to:	Oct 12 13:41:58 2029 GMT
Issued to:	SecureHMICommunication
Issued by:	Siemens.Automation.STEP7_CA

- "Certificate name": Name of the certificate.
- "Status": Status of the certificate on the HMI device ("Trusted" or "Revoked"). This display field is only available in the certificate category "Other Certificates".
- "Thumbprint": Character string to prove the authenticity of the certificate.
- "Valid from": Start of the validity of the certificate.

- "Valid to": End of the validity of the certificate.
- "Issued to": Recipient of the certificate.
- "Issued by": Issuer of the certificate.

CRL details

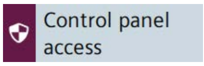


CRL name	Siemens_Automation_CA_2019
Issuer:	Siemens Automation CA 2019
CRL number	3
Last update	Mar 29 00:00:00 2020 GMT
Next update	Mar 27 23:59:59 2029 GMT
Thumbprint:	9D:B2:1D:7A:E9:7A:70:29:BD:C3
	49:22:7E:F9:0A:27:FC:4C:47:D9
CRL count	16

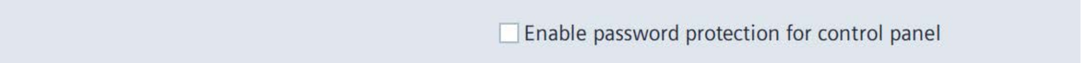
- "CRL name": Designation of the certificate revocation list.
- "Issuer": Issuer of the certificate revocation list.
- "CRL number": Consecutive version number of the certificate revocation list.
- "Last update": Time of creation of this certificate revocation list.
- "Next update": Time of creation of the next certificate revocation list.
- "Thumbprint": Character string to prove the authenticity of the certificate revocation list.
- "CRL count": Number of entries in the certificate revocation list.

5.3 Control panel access

Under "Control panel access" you can protect access with a password on the Control Panel. Only users who have been assigned the "Control Panel access" function right in the configuration can change the password protection.



Control panel access

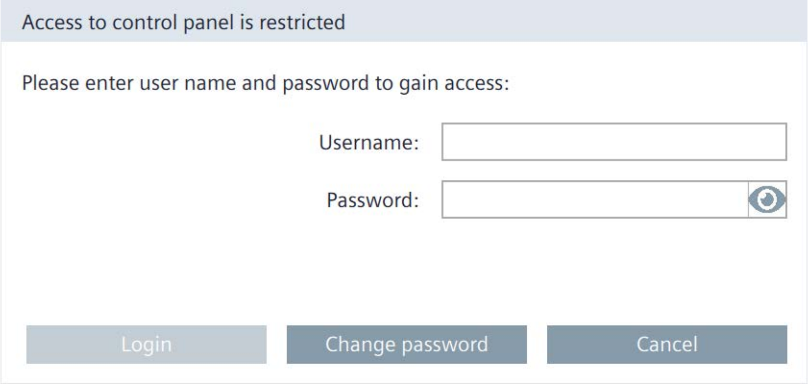


□ Enable password protection for control panel

- "Enable password protection for control panel": Option to enable password protection for the Control Panel.

  The password protection can only be activated or deactivated by users who have been assigned the "Control Panel access" function right in the configuration.

  If you are not yet logged in as a user with the "Control Panel access" function right and enable the option "Enable password protection for control panel", the "Access to control panel is restricted" dialog is displayed.



Access to control panel is restricted

Please enter user name and password to gain access:

Username:

Password:

Log in as a user with the "Control Panel access" function right to activate the password protection for the Control Panel. Use the following button to make the password visible for the display duration of the dialog:

Note

Number of login attempts

The number of attempts for the correct entry of the login credentials can be configured in WinCC under "Runtime settings > Security".

If the login credentials are entered incorrectly one more time, the user involved is locked. The user must be deleted and recreated, or you must reload the User Management into the HMI device.

Ensure you enter the login credentials correctly.

Alternatively, you can log in via an RFID card if an RFID card has been assigned to your user. Hold the RFID card just in front of the RFID reader and input your PIN if required.

Note

Password protection of the Control Panel and project transfer

When access to the Control Panel is protected, you must ensure that the user management has been configured correctly in the TIA Portal before transferring a project again. This means:

- A user with "Control Panel access" right has been configured.
- When central user management is being used, all data for accessing the UMC server has been entered correctly.

Recommendation:

- Before loading again, disable the "Enable password protection for control panel" option.
- After loading, verify that the user with the "Control Panel access" right can log in. If this is not the case, correct the configuration of the user management.
- Enable the "Enable password protection for control panel" option again.

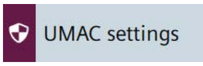
If you are logged in as a user with the "Control Panel access" functional right, the "Access to control panel is restricted" dialog is no longer displayed when accessing the Control Panel.

If you are not logged in or do not have the "Control Panel access" function right, the "Access to control panel is restricted" dialog is displayed when accessing the Control Panel.

Access to the Control Panel can be triggered directly in the Control Panel or via a system function of the Runtime software.

5.4 UMAC settings

Under "UMAC settings", you can see whether local or central user management is used on the HMI device.



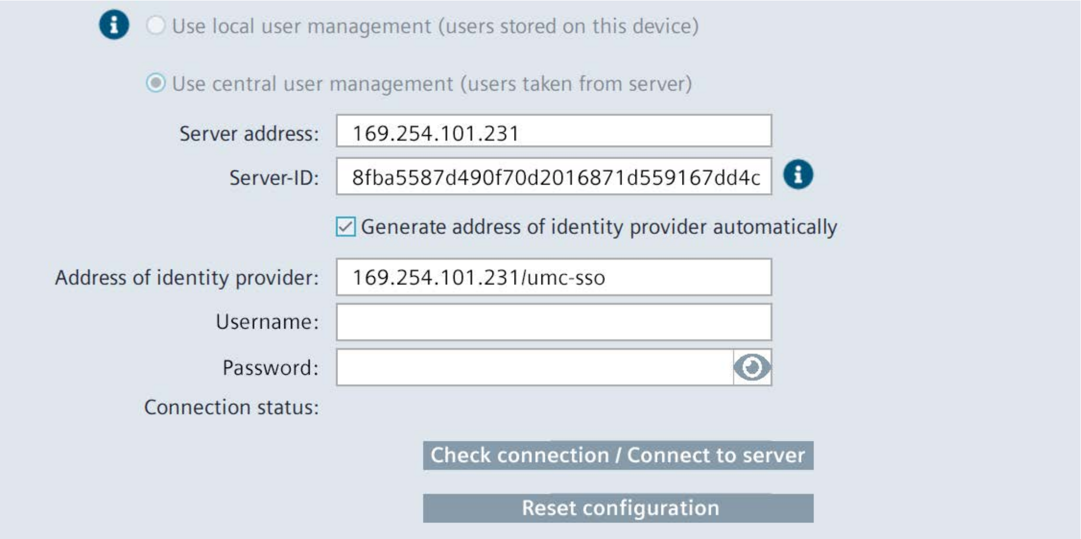
The local or central user management is configured in WinCC and transferred to the HMI with the download.

Note

You can only switch between local and central user management in WinCC.

When loading the central user management, all local users on the HMI device are deleted.

Configuration of user management



○ Use local user management (users stored on this device)

● Use central user management (users taken from server)

Server address: 169.254.101.231

Server-ID: 8fba5587d490f70d2016871d559167dd4c

☑ Generate address of identity provider automatically

Address of identity provider: 169.254.101.231/umc-sso

Username:

Password:

Connection status:

- "Use local user management (users stored on this device)": Information that local user management is used. The data in this window cannot be edited; the users are managed locally under "Security" > "User management".
- "Use central user management (users taken from server)": Information that central user management is used. The connection settings are configured in WinCC and transferred to the device during loading. The settings on the HMI device can be adjusted, if required.

Meaning of the connection settings for central user management:

- "Server address": IP address or device name of the UMC server.
- "Server-ID": Unique string for identification of the UMC server. You can enter the server ID manually or have it determined automatically during connection setup.
- "Generate address of identitiy provider automatically": Option for automatic generation of the address of the ID provider on the UMC server. The default setting is "enabled". Disable this option if you do not want to use the UMC server but a different server as ID provider. This may be necessary when using a server farm, for example.
- "Address of identity provider": Address of the ID provider either generated automatically via the option "Generate address of identitiy provider automatically" or entered manually, if necessary.
- "Username"/"Password": User name and password of an administrator in the UMC server database. This information is only required if RFID login is used on the HMI device. In this case, specify the login data of a user who is assigned the "Administrator" role in the UMC server database.
- "Connection status": Connection status to the UMC server, possible values:
  - <empty>: The connection to the UMC server has not been tested yet.
  - "Connected": The connection to the UMC server has been established and tested.
  - "Not connected" - <error message>: There is no connection to the UMC server. The <error message> provides information about the possible cause.
  - "Connection not possible" - <error message>: The connection to the UMC server could not be set up. The <error message> provides information about the possible cause.
- "Check connection": Button to check the connection to the UMC server.
- "Connect to server": Button to set up the connection to the UMC server.
- "Reset configuration": Button to delete the connection settings.

Establishing a connection to the central user management

When all connection settings have been configured correctly and transferred with the project to the HMI device, the HMI device is automatically connected to the central user management. No value is specified under "Connection status" because the connection has not been checked yet. Press the "Check connection" button to check the connection.

When the central user management has not been configured completely or is incorrect, you can adjust the settings on the HMI device. Press the "Connect to Server" button to connect the device to the central user management.

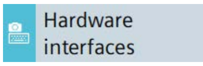
When the connection was set up successfully, the "Connected" information is displayed under "Connection status". The "Connect to server" button turns into "Check connection".

You can find more information in the TIA Portal Help under "Visualizing processes (RT Unified) > Configuring users and roles (RT Unified)".

External Devices and Input 6

6.1 Hardware interfaces

Under "Hardware interfaces", change the settings for accessing the storage media interfaces.

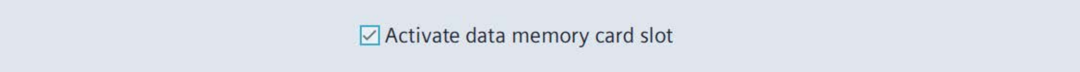


Hardware interfaces

You can deactivate one or more interfaces to protect the HMI device from unauthorized external access.

The system memory card interface cannot be deactivated.

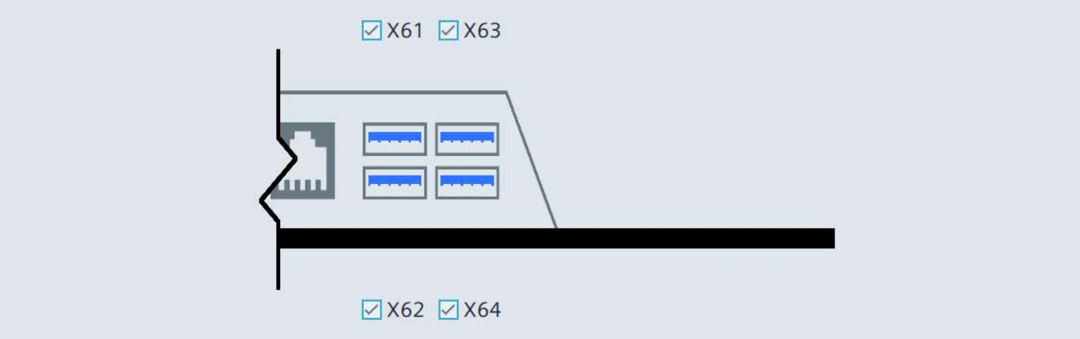
Data memory card slot



☑ Activate data memory card slot

- "Activate data memory card slot": Option to enable or disable the interface for the data memory card. The default setting is "Activated".

Activate USB ports



☑ X61 ☑ X63

☑ X62 ☑ X64

- "X61": Option to activate or deactivate the USB port X61.
- "X62": Option to activate or deactivate the USB port X62.
- "X63": Option to activate or deactivate the USB port X63.
- "X64": Option to activate or deactivate the USB port X64.

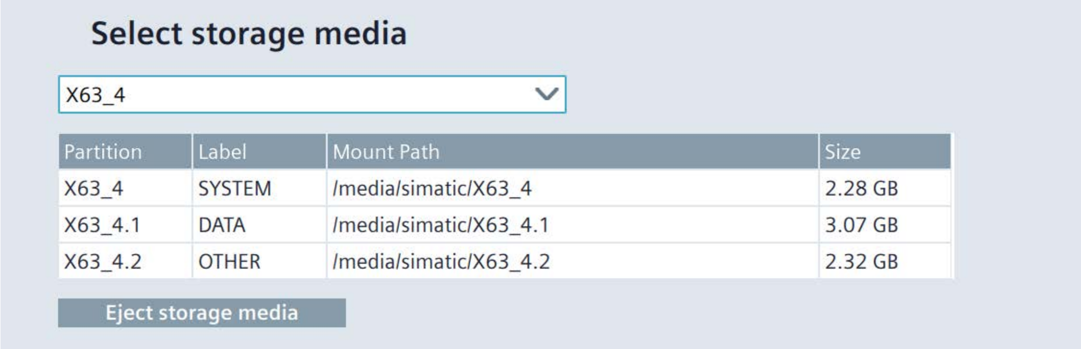
Default setting for all USB ports is "activated".

6.2 Connected devices

Under "Connected devices" you can show information on the storage media that are connected to the HMI device.

Connected devices

Select storage media



Select storage media

X63_4

Partition	Label	Mount Path	Size
X63_4	SYSTEM	/media/simatic/X63_4	2.28 GB
X63_4.1	DATA	/media/simatic/X63_4.1	3.07 GB
X63_4.2	OTHER	/media/simatic/X63_4.2	2.32 GB

The drop-down list box shows all the storage media at the interfaces of the HMI device.

Storage media connected to the HMI device via a hub is displayed according to the following syntax:

*<Control Panel interface>*_*<Number of the hub interface>*

Example: X63_4 is a USB storage medium on the 4th interface of a hub, which is connected to interface X63 of the HMI device.

Select an entry to display detailed information on a storage medium in the partition list.

- This partition list contains the following information:
  - "Partition": Name of the partition. The first partition carries the designation of the interface to which the storage medium is connected, for example "X63".

    If more partitions are present on the storage medium, they are numbered successively and shown delimited by a period below the first partition, for example, "X63.1".
  - "Label": Designation of the partition that was selected at the time of formatting.
  - "Mount Path": Path via which the HMI device accesses the partition.
  - "Size": Size of the partition.

  The unpartitioned area of a storage medium is not displayed.
- "Eject storage media": Button for securely removing the selected storage medium.

Note

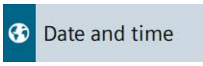
Behavior of the "Eject storage media" function

- If data is still being accessed on the storage medium, the storage medium cannot be removed reliably. A corresponding error message is displayed. Confirm the error message with "OK" and execute the function again when the data access has ended.
- After secure removal, the HMI device cannot access the storage medium. For renewed access, the HMI device must be restarted or the storage medium plugged in again. A corresponding warning is displayed. Confirm with "OK" or cancel the action with "Cancel".
- After secure removal, the storage medium is not present in the selection list any more, and all the relevant entries in the partition list are removed.

Language, Region and Formats 7

7.1 Date and time

Under "Date and time", set the date, time, and time zone for the HMI device manually or via a time server on the network.

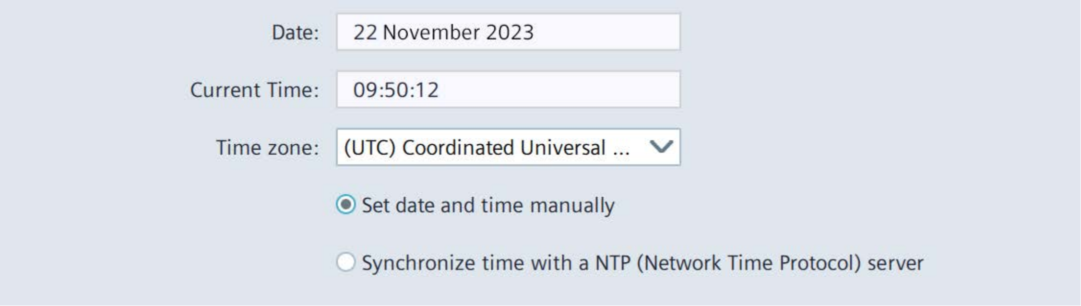


Date and time

NOTICE
Setting the date and time correctly When the date and time are not set correctly, malfunctions may occur in the plant. To prevent malfunctions, set the date and time of the HMI device and all controllers connected to the HMI device to the correct values or use an NTP server for time synchronization. Check the correct settings for date and time after every update of the operating system.

NOTICE
Time synchronization required for time-dependent reactions A malfunction may occur in the plant if the date and time are not synchronized and time-dependent reactions are triggered in the plant via the HMI device. To avoid malfunctions, use automatic time synchronization via one or more NTP servers.

Date and time



Date: 22 November 2023

Current Time: 09:50:12

Time zone: (UTC) Coordinated Universal ...

● Set date and time manually

○ Synchronize time with a NTP (Network Time Protocol) server

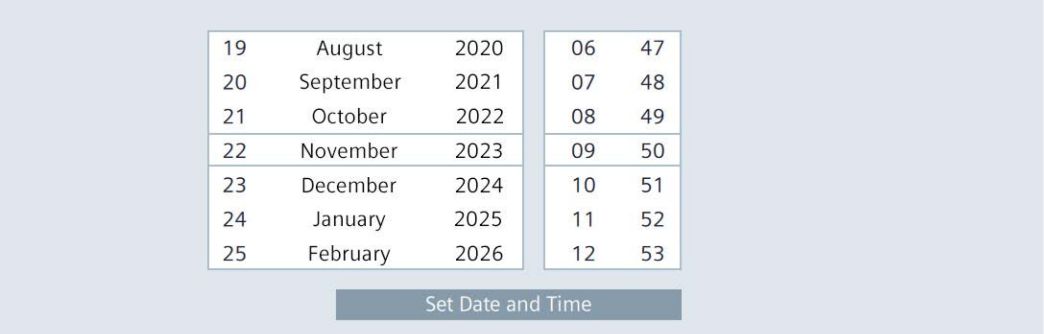
- "Date": Display field with the current date.
- "Current Time": Display field with the current clock time.
- "Time zone": Selection list for the desired time zone.

Note

Automatic daylight saving/standard time switchover

If you select a time zone in which there is a switchover between daylight saving and standard time, the switchover takes place automatically on the relevant date.

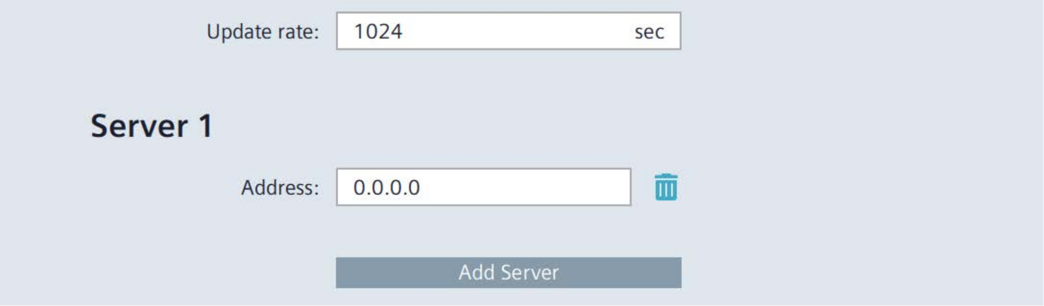
- "Set date and time manually" (default setting): Option for manual time setting on the HMI device. If you select this option, the following list is displayed below the options:



19	August	2020	06	47
20	September	2021	07	48
21	October	2022	08	49
22	November	2023	09	50
23	December	2024	10	51
24	January	2025	11	52
25	February	2026	12	53

Set the day, month, year and time by scrolling the respective list column so that the desired date and time are displayed in the framed line in the middle of the list. The "Set Date and Time" button is used to save the setting.

- "Synchronize time with a NTP (Network Time Protocol) server": Option for automatic time synchronization via an NTP server. If you select this option, the following parameters for specifying time synchronization via NTP servers are displayed below the options:



Update rate: 1024 sec

Server 1

Address: 0.0.0.0

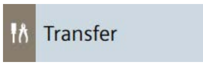
Enter the desired synchronization interval under "Update rate", value range 10 to 86400 seconds (1 day). After the input, the value is rounded to the nearest power of two based on the internal format.

Add at least one and a maximum of four NTP servers using the "Add Server" button. Specify the IP address for each NTP server and make sure that the device is set up as an NTP server.

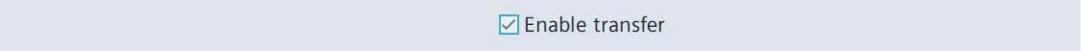
Service and Commissioning 8

8.1 Transfer

Under "Transfer" you define whether and how data is transferred from a configuration PC to the HMI device.



Transfer mode

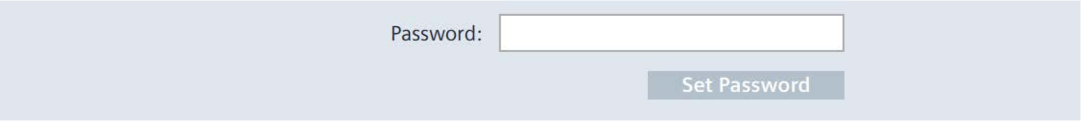


☑ Enable transfer

- "Enable transfer": Option to enable or disable data transfer to the HMI device. The default setting is "enabled".

  If you disable the transfer, you protect the HMI device against unintended update of the operating system and overwriting the project data.

Encrypted project transfer



- "Password": Password for the encrypted transfer of the project. The password must match the password that was specified in the configuration under the runtime settings of the HMI device.

  To enter the password, tap the entry field.
- "Set Password": Button to save the password for the encrypted project transfer.

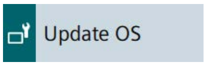
As an alternative, you can transfer the password unencrypted during the initial loading of the project.

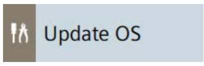
8.2 Update OS

The firmware and operating system version of the HMI device must be compatible with the firmware and operating system version of the installed WinCC software. If this is not the case, then you must update the operating system.

Use "Update OS" to update the operating system of the HMI device. The operating system is contained in several firmware files. The master file has the extension ".fwf". The number of additional files varies; these files have the file name of the master file and a sequential number (".0", ".1", ".2", etc.) as an extension.

The "Update OS" function is available under both "System Properties" and "Service and Commissioning".





NOTICE

Updating the operating system deletes data on the HMI device

Project, parameter sets and user administration will be deleted when you update the operating system on the HMI device.

Before updating the operating system, backup the data on the HMI device, if necessary.

All settings, except the following settings which you changed in the Control Panel before updating the operating system, are retained even after the update of the operating system:

- The external interfaces become activated again (default setting), see section "Hardware interfaces (Page 51)".
- The time zone is reset to the default setting "(UTC) Coordinated Universal Time", see section "Date and time (Page 53)".
- The credentials for connected network drives must be entered again, see section "Network drive (Page 31)".

NOTICE

Automatic backup and updating the operating system

When the "Automatic backup" function is activated while the operating system is being updated, the HMI device may not start up again correctly.

If you want to update the operating system of the HMI device and have activated the "Automatic backup" function, follow these steps:

1. Deactivate the "Automatic backup" function.
2. Update the operating system.
3. Activate the "Automatic backup" function.

Leave the system memory card in the HMI device before and during the entire update.

Use a SIMATIC SD memory card with 32 GB or more or an industrial USB flash drive to load the firmware.

Firmware files for the HMI devices can be downloaded from the Internet (https://support.industry.siemens.com/cs/ww/en/view/109746530). Observe the documentation included with the download.

Note

Do not rename firmware files

If you change the name of the firmware files, the operating system can no longer be updated with these firmware files. The firmware files become unusable. Leave the name of the firmware files unchanged.

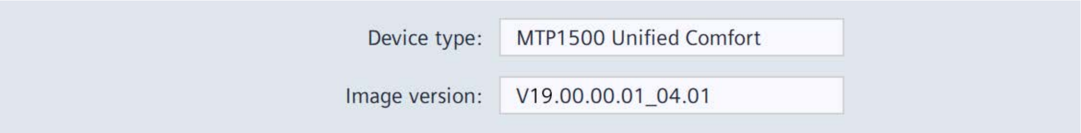
Note

Copy firmware files completely

If you copy the firmware files, be sure to also copy the master file ".fwf" together with all associated firmware files (".0", ".1", ".2", etc.).
If one of the files is missing, the operating system cannot be loaded.

Alternatively to the "Update OS" function in the Control Panel, you can use the "Update OS" function in WinCC.

Panel Information

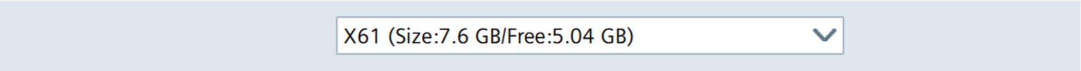


Device type: MTP1500 Unified Comfort

Image version: V19.00.00.01_04.01

- "Device type": HMI device type designation.
- "Image version": Version of the firmware and operating system.

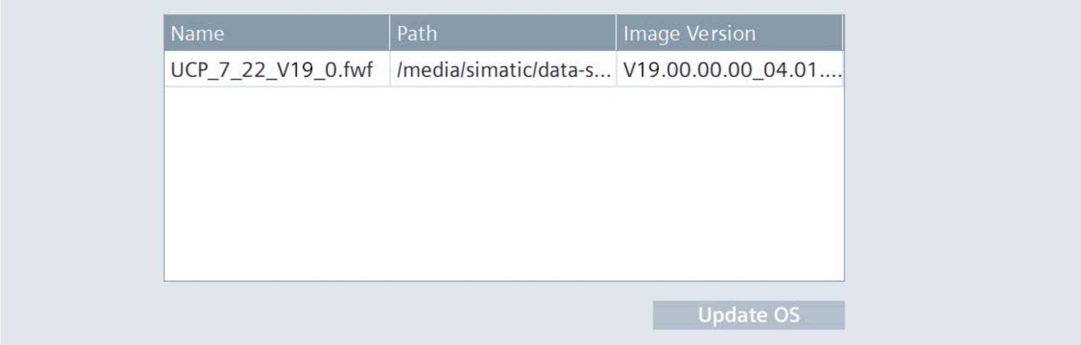
Select storage media for OS update



X61 (Size:7.6 GB/Free:5.04 GB)

Use the selection list to select the storage medium on which the firmware file is located.

Firmware files on external storage



Name	Path	Image Version
UCP_7_22_V19_0.fwf	/media/simatic/data-s...	V19.00.00.00_04.01....

- The list shows all firmware files that can be loaded into the HMI device.

  Select the desired firmware master file (.fwf) from the list.
- "Update OS": Button for starting the loading process.

  The HMI device restarts after the "Update OS" button is pressed. The loading process then begins.

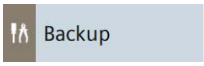
  A dialog with a progress bar is displayed on the HMI device for each firmware file.

  The HMI device is restarted again after the completion of the loading process.

  The main window of the Control Panel is displayed after the restart. The operating system on the HMI device is updated.

8.3 Backup

Under "Backup" you can back up the operating system, applications and data from the flash memory of the HMI device to an external storage medium.



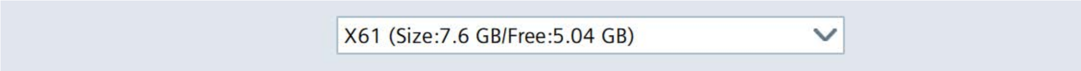
Use a SIMATIC SD memory card ≥ 32 GB or an industrial grade USB stick as storage medium.

Depending on the amount of data on the HMI device, a backup may require up to 20 GB of memory. Make sure that the storage medium has sufficient free space. Recommendation: At least 5 GB of free space on the storage medium.

Remote access to the HMI device is not possible during the backup process.

Do not turn off the HMI device during the backup process.

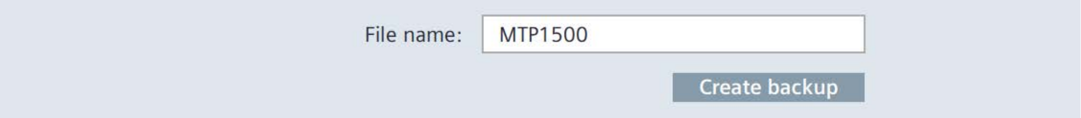
Select storage media



X61 (Size:7.6 GB/Free:5.04 GB)

Select the storage medium on which you want to back up the data.

Complete backup file



- "File name": Name of the backup. Select a name that best identifies the backup.
  A backup includes multiple files. The master file has the extension ".brf". The number of additional files varies; these files have the file name of the master file and a sequential number (".0", ".1", ".2", etc.) as an extension.
- "Create backup": Button to start the backup process.

  After the "Create backup" button has been pressed, the system checks whether a backup with the name specified under "File name" already exists on the storage medium. If yes, then a warning is displayed. Select "OK" to overwrite the backup or "Cancel" to specify a different name for the backup.

  The backup process starts with a restart of the HMI device, followed by the data backup.

  During the data backup, a folder with the name of the backup is created in the root directory of the selected storage medium. The backup files are saved in this folder. A dialog with a progress bar is displayed for each backup file.

  The HMI device is restarted again after the completion of the backup process.

  The main window of the Control Panel is displayed after the restart.

The data of the HMI device are saved on the storage medium.

Note

Do not rename backup files on the data storage medium

If you change the name of the backup files on the data storage medium, these backup files can no longer be loaded into the HMI device using the "Restore" function.

Leave the name of the backup files on the data storage medium unchanged.

Note

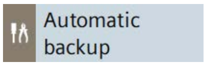
Copy backup files completely

If you copy the backup files, be sure to also copy the master file ".brf" together with all associated backup files (".0", ".1", ".2", etc.).

If one of the files is missing, the backup cannot be loaded.

8.4 Automatic backup

Under "Automatic backup" you can activate or deactivate the "Automatic backup" function.



If the "Automatic backup" function is activated the data of the HMI device is automatically backed up to the system memory card during operation in form of a backup including firmware. The data on the system memory card are permanently synchronized with the data of the HMI device. You can insert the system memory card into any HMI device of the same type. After data is copied and a restart has been performed, the HMI device of the same type is operational.

Note

Only use SIMATIC SD memory card ≥ 32 GB as system memory card

Only the SIMATIC SD memory card ≥ 32 GB is permitted for use as a system memory card. Other memory cards are not recognized as system memory card by the HMI device.

Note

System memory card in a device of a different type

If you use the system memory card of an HMI device in an HMI device of a different type, an error message is displayed.
When servicing, use a system memory card only in HMI devices of the same type.

NOTICE

Do not remove the system memory card for "automatic backup" during operation

If the "Automatic backup" function is activated, the system memory card may only be removed when the HMI device is switched off.

NOTICE

Automatic backup and updating the operating system

When the "Automatic backup" function is activated while the operating system is being updated, the HMI device may not start up again correctly.

If you want to update the operating system of the HMI device and have activated the "Automatic backup" function, follow these steps:

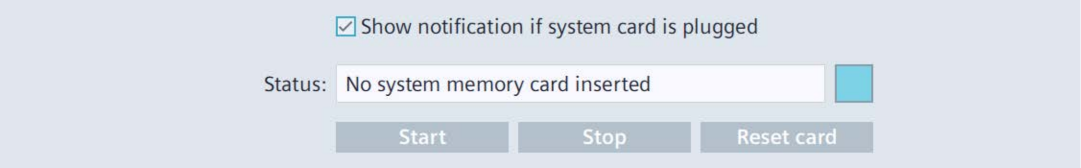
1. Deactivate the "Automatic backup" function.
2. Update the operating system.
3. Activate the "Automatic backup" function.

Leave the system memory card in the HMI device before and during the entire update.

In the delivery state of the device, the function "Automatic backup" is disabled.

The "System memory card plugged" dialog box is displayed as soon as you insert a memory card into the system memory card slot. To go to the Control Panel, click "OK". There you can activate a new system memory card or restore data from a prepared system memory card.

Automatic backup



☑ Show notification if system card is plugged

Status: No system memory card inserted

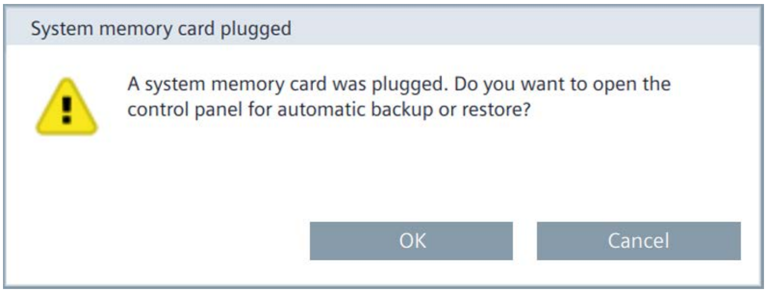
- "Show notification if system card is plugged": Option to enable or disable the automatic message "System memory card plugged".
- "Status": Status information on the system memory card in slot X50.
  - "No system memory card inserted": There is no system memory card in slot X50.
  - "System memory card is invalid": There is an unsupported or incorrectly formatted system memory card in slot X50.
  - "Backup on system memory card is not device compatible": The system memory card of a non-identical HMI device or an HMI device with different HMI device image is located in slot X50.
  - "Ready for automatic backup": There is a correctly formatted SIMATIC SD memory card in slot X50.
  - "Starting automatic backup": Status message after pressing the button "Start", the system memory card is being prepared.
  - "Synchronizing data": Status message during preparation of the system memory card.
  - "Automatic backup active": Status message when preparation of the system memory card has been completed, the "Automatic backup" function was successfully activated.
  - "Resetting system memory card": The system memory card is formatted.
- "Start": Button to activate the "Automatic backup" function.
- "Stop": Button to deactivate the "Automatic backup" function.
- "Reset card": Button for formatting the system memory card.

Use cases

We differentiate between the following use cases, depending on whether the system memory card was previously used for automatic backup.

Activating automatic backup for an empty system memory card

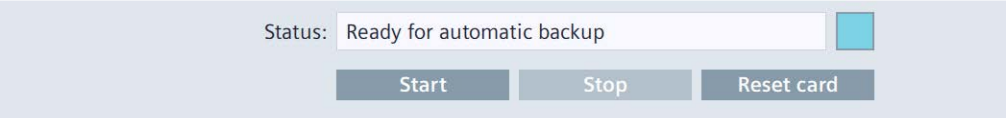
1. Insert the SIMATIC SD memory card without automatically saved data into slot X50.
   The "System memory card plugged" dialog box is displayed.



System memory card plugged

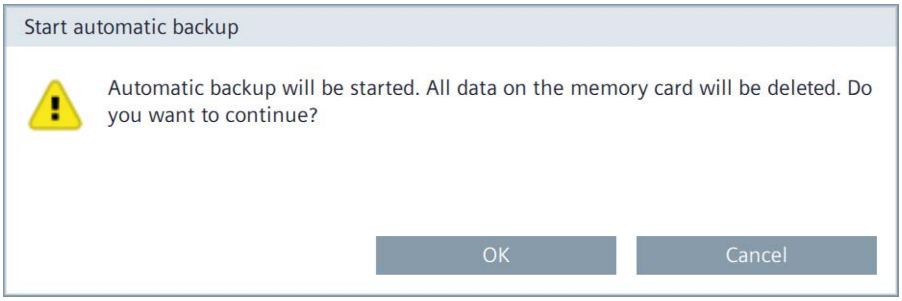
A system memory card was plugged. Do you want to open the control panel for automatic backup or restore?

2. Press "OK".
   The window "Service and Commissioning" > "Automatic backup" opens in the Control Panel.
   "Ready for automatic backup" is displayed in the "Status" field.



Status: Ready for automatic backup

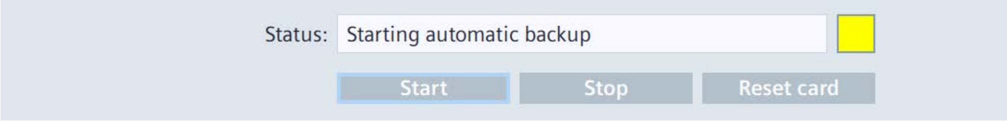
3. Press the "Start" button.
   The "Start automatic backup" dialog box is displayed.



Start automatic backup

Automatic backup will be started. All data on the memory card will be deleted. Do you want to continue?

4. Press "OK".
   The status message "Starting automatic backup" is displayed. The system memory card is being prepared.



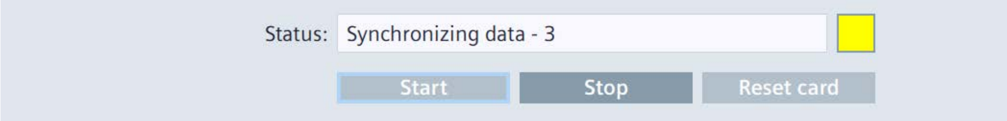
Status: Starting automatic backup

Note

Do not remove the system memory card during the preparation.

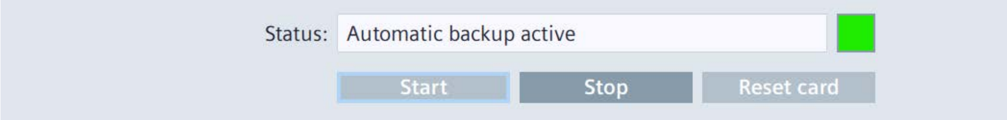
If you remove the system memory card from the HMI device during the preparation, the system memory card cannot be used for automatic backup. Leave the system memory card in its slot during the preparation process.

The status message "Synchronizing data" is displayed during the preparation.



Status: Synchronizing data - 3

When the preparation is complete, the status message "Automatic backup active" is displayed.



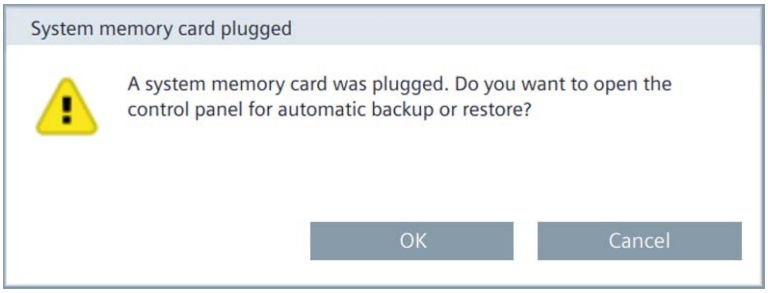
Status: Automatic backup active

You have successfully activated the "Automatic backup" function.

Using automatic backup of a system memory card

If a system memory card already contains automatically backed-up data, the corresponding backup must first be loaded. Automatic backup can then be continued.

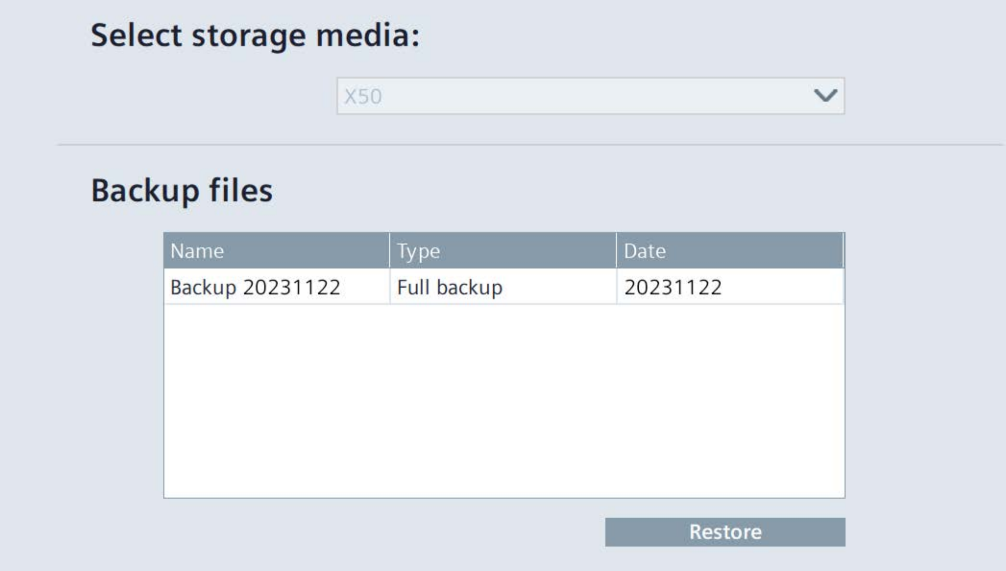
1. Insert the SIMATIC SD memory card with automatically backed-up data in slot X50.
   The "System memory card plugged" dialog box is displayed.



System memory card plugged

A system memory card was plugged. Do you want to open the control panel for automatic backup or restore?

2. Press the "OK" button.
   The window "Service and Commissioning" > "Restore" opens in the Control Panel.



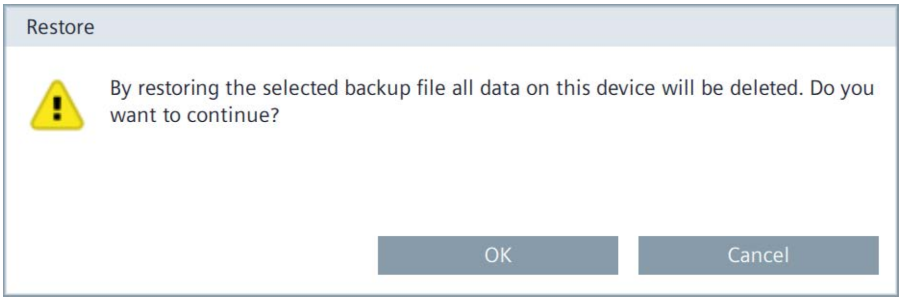
Select storage media:

X50

Backup files

Name	Type	Date
Backup 20231122	Full backup	20231122

3. Select a backup file and press the "Restore" button.
   The following dialog box indicates that all data on the device will be overwritten.



Restore

By restoring the selected backup file all data on this device will be deleted. Do you want to continue?

4. Start the restore process via the "OK" button or cancel the process via the "Cancel" button.

   The HMI device restarts after the "OK" button is pressed. The restore process then begins.

   During the restore process, the "Automatic backup restore" dialog box is displayed with a progress bar.

   The HMI device is restarted again after the completion of the restore process.

   The main window of the Control Panel is displayed after the restart.

After the data transfer, the state of the HMI device is the same as that of the HMI device used to generate the automatic backup.

To continue the automatic backup on the HMI device, reactivate the "Automatic backup" function under "Service and Commissioning" > "Automatic backup" in the Control Panel.

See also

Backup (Page 58)

8.5 Restore

Under "Restore", you can restore the backup of an HMI device from a storage medium.

Remote access to the HMI device is not possible during the restore process.

A restore operation deletes the flash memory of the HMI device on confirmation. The data backed up on the storage medium is then transferred.

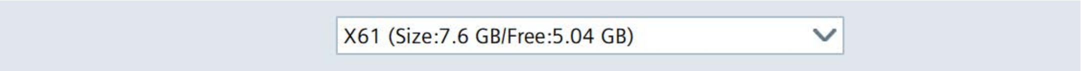
NOTICE

Data loss

All data on the HMI device, including the project and HMI device password, is deleted during a restore operation. License keys are only deleted after a security prompt.

Back up your data before the restore operation, if necessary.

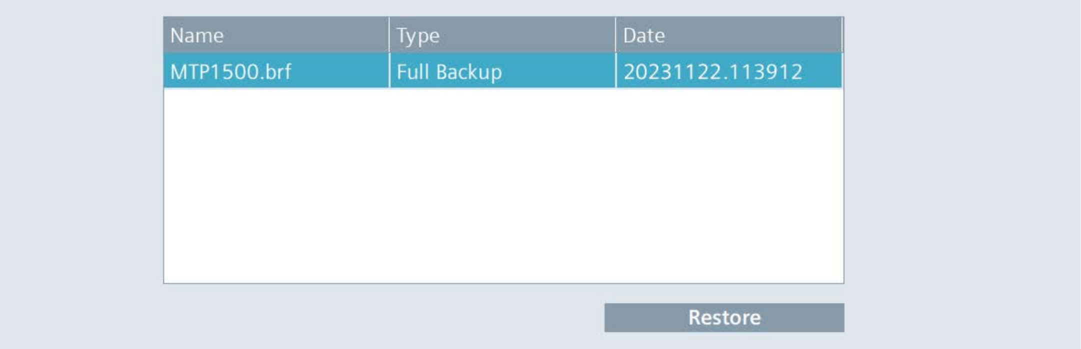
Select storage media



X61 (Size:7.6 GB/Free:5.04 GB)

Select the storage medium on which the backed-up data is stored.

Backup files



Name	Type	Date
MTP1500.brf	Full Backup	20231122.113912

- The list shows all backups that can be loaded to the HMI device.

  Select the desired backup from the list.
- "Restore": Button to start the restore process.

  The HMI device restarts after the "Restore" button is pressed. The restore process then begins.

  Do **not** switch off the HMI device during the restore process and do **not** disconnect the data source from the HMI device.

  During the restore process, a dialog with a progress bar is displayed for each backup file loaded.

  The HMI device is restarted again after the completion of the restore process.

  The main window of the Control Panel is displayed after the restart.

The data from the storage medium is now restored on the HMI device.

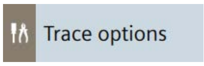
Note

System behavior when the process is interrupted

If the restore process cannot be completed due to a power failure or an interrupted data connection, for example, the HMI device starts in maintenance mode and the factory settings must be restored.

8.6 Trace options

You specify whether or not trace outputs are displayed and backed up on an external storage medium under "Trace options".

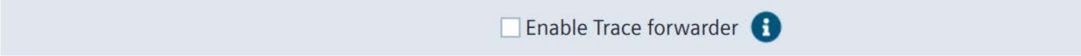


Trace options

Note

The settings of the "Trace options", i.e. the settings for "Trace forwarder" and "Trace logger", are retained after restarting the HMI device or updating the operating system.

Trace forwarder

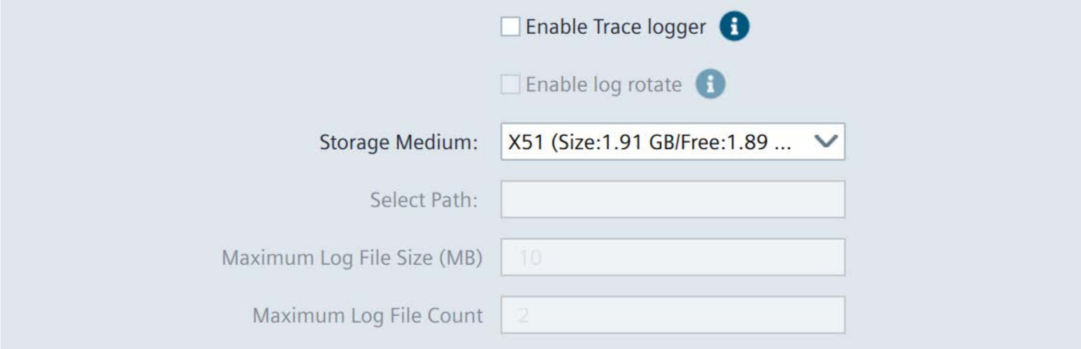


□ Enable Trace forwarder

- "Enable Trace forwarder": Option to enable or disable the "tracing" service. The default setting is "deactivated".

  Enable "Tracing" for diagnostics and service purposes, e.g. to display trace outputs from scripts. If you start the HMI device in maintenance mode, the "Tracing" function is automatically enabled. You can find additional information in FAQ Entry 109777593 on the Internet (https://support.industry.siemens.com/cs/ww/en/view/109777593).

Trace logger



□ Enable Trace logger

□ Enable log rotate

Storage Medium: X51 (Size:1.91 GB/Free:1.89 ...

Select Path:

Maximum Log File Size (MB) 10

Maximum Log File Count 2

- "Enable Trace logger": Option to back up "tracing" information on an external storage medium. The default setting is "deactivated".

- "Enable log rotate": Option for activating the "Log rotate" function. The default setting is "deactivated". This option can only be activated in conjunction with "Enable Trace logger".

  If "Log rotate" is activated, then the "tracing" information is successively saved in several files with a specified size ("Maximum Log File Size") on the selected storage medium. If the maximum size of the first log file is reached, then another log file is automatically created, which is written to. When the maximum size of the last log file ("Maximum Log File Count") has been reached, the oldest log file at that time will be deleted and a new log file will be created to back up the further "tracing" information.
- "Storage Medium": Storage medium on which the "tracing" information is to be backed up.
- "Select Path" (optional): Path to location where the "tracing" information is to be backed up. The name of the path must begin with "**/**" and may contain only Latin characters and **none** of the following special characters: **! # $ % & ( ) * + , : ; < = > ? @ [ ] _ { | } ~ ^**

  Log files on the selected storage medium

  The log files with the "tracing" information are always saved in a subdirectory "/TraceLogs" on the selected storage medium.

  If no path is specified, you can find the log files in the "/TraceLogs" directory.

  If a path is specified, you can find the log files here "/<path>/TraceLogs" directory.

  In the figure above, the path "/traces" is given as an example. You can find the relevant log files under "/traces/TraceLogs".

  Names of the log files

  The log files are named, with the date and time, according to the following syntax:
  `TraceLogs-YYYY-MM-DD-T_HH_MM_SS.log`
- "Maximum Log File Size (MB)": Maximum size of a log file in megabytes. Permitted range: 10 MB to 2000 MB. Default setting: 10 MB.
- "Maximum Log File Count": Maximum number of log files that can be created.
  - Minimum value: 2 (default setting).
  - The maximum value results from the size of the free storage space on the selected storage medium.

  If the product of the values specified under "Maximum Log File Size (MB)" and "Maximum Log File Count" exceeds the size of the available storage space on the selected storage medium, then the values are marked as incorrect and must be corrected.

See also

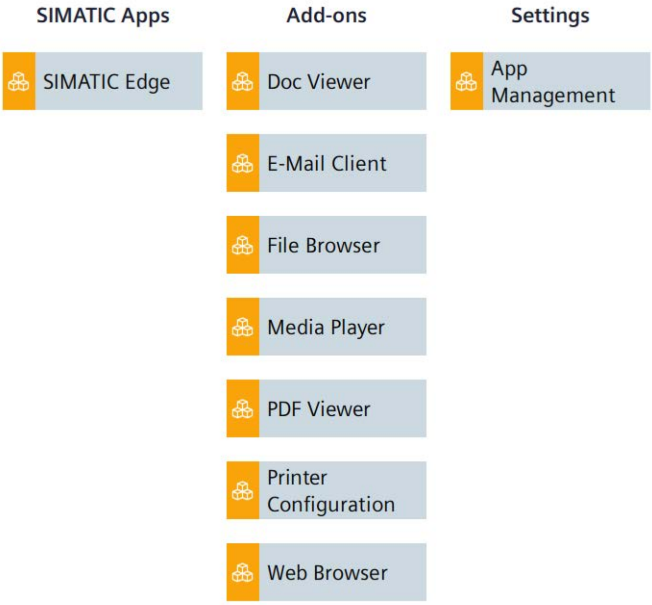
Event Logger (Page 16)

Apps 9

The following options are available for managing apps on the HMI device under "Apps":

- Start apps that were especially developed for SIMATIC under "SIMATIC Apps" or adjust their settings.
- Start pre-installed apps under "Add-ons" or adjust their settings.
- Uninstall and start pre-installed apps via the "App management" under "Settings" or change their settings.

The following figure shows an example of the delivery state of an HMI device.



To open an app, to change the settings of an app or to uninstall an app, select an entry under the category "SIMATIC Apps", "Add-ons" or "Settings".

The entries under the categories are described in the following sections:

- **SIMATIC Apps** (Page 69)
- **Add-ons** (Page 71)
- **Settings** (Page 74)

Note

Best performance

Each app takes up a specific amount of work memory. The greater the number of apps and tabs open in the "Web Browser" app, the smaller the amount of available work memory.

To obtain the best possible performance of your HMI device, note the following recommendations:

- Keep the number of apps that are open simultaneously as small as possible.
- Close any apps that you no longer need.
- If possible, open only one tab in the "Web Browser" app.

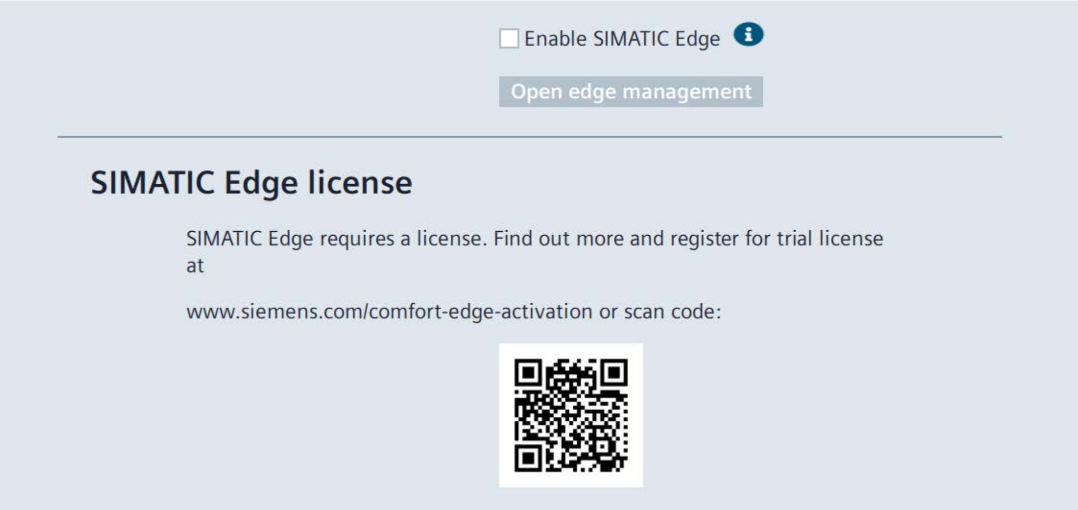
9.1 SIMATIC Apps

Under "SIMATIC Apps", you can find apps that were specifically developed for the SIMATIC environment, such as "SIMATIC Edge".

SIMATIC Edge

If the screen keyboard does not open automatically during data input on the web page of a SIMATIC app, open the screen keyboard using the following icon in the taskbar.

SIMATIC Edge



□ Enable SIMATIC Edge

SIMATIC Edge license

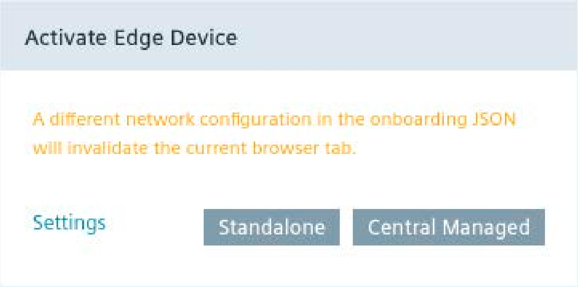
SIMATIC Edge requires a license. Find out more and register for trial license at

www.siemens.com/comfort-edge-activation or scan code:

- "Enable SIMATIC Edge": Option to enable or disable the Edge Management. The default setting is "disabled". Observe section "Notes on operation (Page 76)".

- "Open edge management": Button to open the Edge Management web page in the "Web Browser" app on the HMI device.

  The first time you click the button, the "Activate Edge Device" dialog is displayed. In this dialog you decide whether you want to use the local Edge Management or central Edge Management in the future.

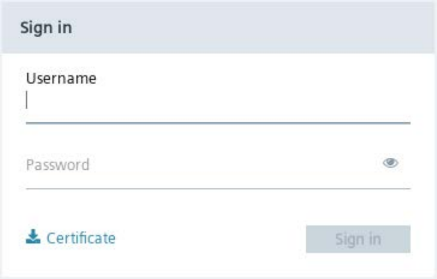
  A different network configuration in the onboarding JSON will invalidate the current browser tab.

  Select "Standalone" for local Edge Management or "Central Managed" for central Edge Management IEM.

  Under "Settings" you can make network settings for the Edge Management, if necessary.

Once you have decided whether you want to use the local Edge Management or central Edge Management, the "Activate Edge Device" dialog is no longer displayed in the future.

The "Sign in" dialog is displayed for logging in to the Edge Management.



Log in to the Edge Management as a user with the required authorizations.

The Edge Management website is opened in the "Web Browser" app.

Alternatively, you can open "SIMATIC Edge" via web access, see "Web access to the HMI device (Page 76)".

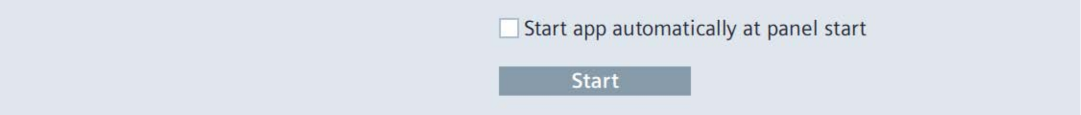
You can find detailed information about the Edge Management for Unified Comfort Panels in the following document: Operating manual "Unified Comfort Panels Industrial Edge Device - Operation" (https://support.industry.siemens.com/cs/ww/en/view/109804671)

9.2 Add-ons

Under "Add-ons" you will find pre-installed apps such as "Doc Viewer", "E-Mail Client", "File Browser", "Media Player", "PDF Viewer", "Printer Configuration" and "Web Browser". The following figure shows the symbol of the "Doc Viewer" as an example.

All preinstalled apps under "Add-ons" have a "Start" button; the "Autostart" function is also available for most apps.

<App name>



- "Start app automatically at panel start": Option to activate or deactivate the "Autostart" function for the respective app, not available for all apps. If this option is selected, the app starts immediately after the start of the Control Panel. The app is displayed in the foreground of the Control Panel.
- "Start": Button for manually starting the respective app.

The following table shows a short description of the pre-installed apps.

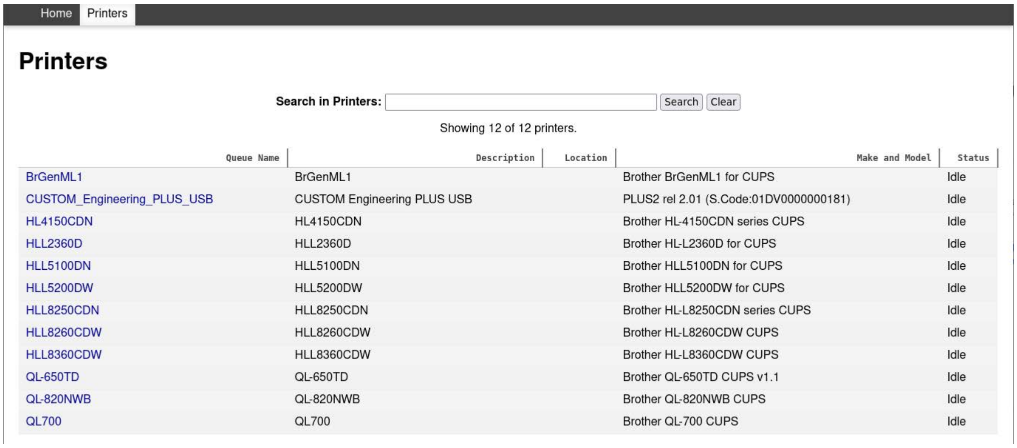
App	Description	"Autostart" available
Doc Viewer	With the "Doc Viewer" you can view and edit documents such as text or Word files. Note: Do **not** use the "Doc Viewer" to edit files that have been saved via the Runtime software or a system function. These files include, for example, parameter sets that were exported to a .tsv file. When printing to a file, leave the default setting "Portable Document Format" (.pdf) for the file type unchanged.	Yes
E-Mail Client	With the "E-Mail Client" you can connect to your e-mail accounts, receive e-mails, send e-mails and import mail files from other applications. The first time the "E-Mail Client" is called, a configuration wizard is started. During configuration, enable SSL encryption for sending and receiving e-mail.	Yes
File Browser	With the "File Browser", you can find and manage files in the internal memory and on storage media of the HMI device. Note: The function "Eject storage medium" is not supported in the "File Browser". Instead, use the "EjectStorageMedium" system function in Runtime or the "Eject storage media" function in the Control Panel (Page 51) .	Yes
Media Player	You can use the "Media Player" to play audio and video files.	Yes
PDF Viewer	You can use the "PDF Viewer" to view PDF documents.	Yes
Printer Configuration	You open the local web page "CUPS" for the printer management via the "Printer Configuration".	No
Web Browser	The "Web Browser" provides you with access to the Internet. The download directory of the browser is "home/industrial/download".	Yes

Managing printers

The printer settings of the HMI device are managed via the local web page "CUPS" (Common Unix Printing System) under "localhost:631".

To open the printer administration, proceed as follows:

1. Open the printer management via "Apps" > "Printer Configuration" > "Start".
2. In the header, select "Printers".



Printers

Search in Printers:

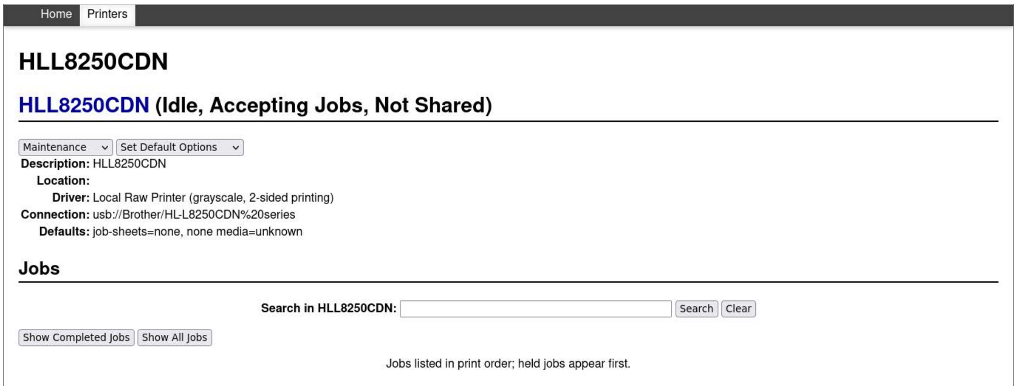
Showing 12 of 12 printers.

Queue Name	Description	Location	Make and Model	Status
BrGenML1	BrGenML1		Brother BrGenML1 for CUPS	Idle
CUSTOM_Engineering_PLUS_USB	CUSTOM Engineering PLUS USB		PLUS2 rel 2.01 (S.Code:01DV0000000181)	Idle
HL4150CDN	HL4150CDN		Brother HL-4150CDN series CUPS	Idle
HLL2360D	HLL2360D		Brother HL-L2360D for CUPS	Idle
HLL5100DN	HLL5100DN		Brother HLL5100DN for CUPS	Idle
HLL5200DW	HLL5200DW		Brother HLL5200DW for CUPS	Idle
HLL8250CDN	HLL8250CDN		Brother HL-L8250CDN series CUPS	Idle
HLL8260CDW	HLL8260CDW		Brother HL-L8260CDW CUPS	Idle
HLL8360CDW	HLL8360CDW		Brother HL-L8360CDW CUPS	Idle
QL-650TD	QL-650TD		Brother QL-650TD CUPS v1.1	Idle
QL-820NWB	QL-820NWB		Brother QL-820NWB CUPS	Idle
QL700	QL700		Brother QL-700 CUPS	Idle

The "Printers" page shows the pre-installed printers.

To change the properties of a printer or to display its print jobs, click on the printer name in the "Queue Name" column.

The figure below shows the properties of the "HLL8250CDN" printer.



HLL8250CDN

HLL8250CDN (Idle, Accepting Jobs, Not Shared)

Description: HLL8250CDN
Location:
Driver: Local Raw Printer (grayscale, 2-sided printing)
Connection: usb://Brother/HL-L8250CDN%20series
Defaults: job-sheets=none, none media=unknown

Jobs

Search in HLL8250CDN:

Jobs listed in print order; held jobs appear first.

The following functions are available in the following two selection lists:

- "Maintenance": Printing a test page, pausing the printer, canceling print jobs, canceling all print jobs
- "Administration":
  - "Set Default Options": Specifying settings for the printout
  - "Set As Server Default": Defining the printer as the default printer

The "Jobs" list displays the print jobs.

Starting pre-installed apps from the project

However, you can also start the pre-installed apps via an operating element in the project. To do this, use the "StartProgram" system function in your configuration.

Enter the following command under "Program name": "/opt/siemens/App_Restriction/<*Name of start script*>"

Depending on the desired app, use of the following scripts for the "<*Name of start script*>":

App to be started	Associated start script
Doc Viewer	runLibreoffice.sh
E-Mail Client	runEvolution.sh
File Browser	runFileBrowser.sh
Media Player	runVLC.sh
PDF Viewer	runEvince.sh
Web Browser	runFirefox.sh

Under "Program parameters", you can specify all parameters permitted for calling the app, for example, which file is to be opened. You can find the permitted parameters on the Internet by searching for the name of the app specified under "Help" > "About ...".

Examples

1. Open the "MyPDFfile.pdf" from a USB stick connected to interface X61:
   - "Program name": "/opt/siemens/App_Restriction/runEvince.sh"
   - "Parameter": "/media/simatic/X61/MyPDFfile.pdf"
2. Print ".odt" files to PDF files from Runtime using the "Doc Viewer" app

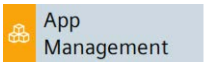
   To print all ".odt" files in the /home/industrial folder to PDF files using the "Doc Viewer", use the "StartProgram" system function with the following values:
   - "Program name": `/opt/siemens/App_Restriction/runLibreoffice.sh`
   - "Program parameters": `--convert-to pdf --outdir /home/industrial /home/industrial/*.odt -headless`

See also

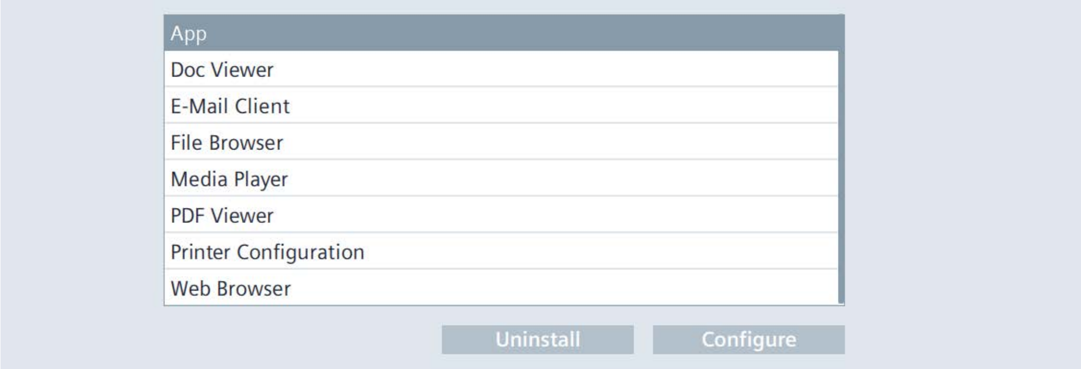
App Management (Page 74)

9.3 App Management

You can uninstall pre-installed apps or change their settings under "App Management".



Manage Apps



App
Doc Viewer
E-Mail Client
File Browser
Media Player
PDF Viewer
Printer Configuration
Web Browser

- The list shows all apps installed under "Add-ons".
- "Uninstall": Button to uninstall the selected app. Recommendation: Uninstall apps that you do not need.

Note

Uninstallation cannot be undone

An uninstalled app cannot be installed again. To get back all apps pre-installed in the delivery state, you must restore the factory settings of the HMI device.

- "Configure": Button to change the settings of the selected app, see section "Add-ons (Page 71)".

Appendix A

A.1 Industrial Security

Industrial Security

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit (https://www.siemens.com/industrialsecurity).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under (https://www.siemens.com/industrialsecurity).

Disclaimer for third-party software updates

This product includes third-party software. Siemens Aktiengesellschaft only provides a warranty for updates/patches for the third-party software if such updates/patches have been distributed as part of a Siemens software update service contract or officially released by Siemens Aktiengesellschaft. Otherwise, updates/patches are undertaken at your own risk. You can find more information about our Software Update Service offer on the Internet at Software Update Service (https://support.industry.siemens.com/cs/ww/en/view/109759444).

Notes on protecting administrator accounts

A user with administrator privileges has extensive access and manipulation options in the system.

Therefore, ensure there are adequate safeguards for protecting the administrator accounts to prevent unauthorized changes. To do this, use secure passwords and a standard user account for normal operation. Other measures, such as the use of security policies, should be applied as needed.

A.2 Notes on operation

Storage media

Note

Storage media displayed multiple times

The operating system of the HMI device supports multiple mount points. This means that USB and SD storage media may be displayed multiple times in file browser dialogs. This does not affect the functionality of the HMI device and the apps.

Note

Directory for storage media in Runtime and in apps

In file browser dialogs of the Runtime software and in apps that use the same file browser dialogs, you can find the storage media under "/media".

SIMATIC Edge

Note

Activating SIMATIC Edge

The option "Apps" > "SIMATIC Apps" > "SIMATIC Edge" > "Enable SIMATIC Edge" can only be activated upon the first start of the HMI device when the start process has been completed. After starting the HMI device for the first time, wait for approx. 1-2 minutes. Then you can activate the option "Enable SIMATIC Edge".

A.3 Web access to the HMI device

As an alternative to direct operation on the device, you can access the following applications of the HMI device via a browser:

- The runtime project
- The user management
- The local "SIMATIC Edge" edge management

Requirement

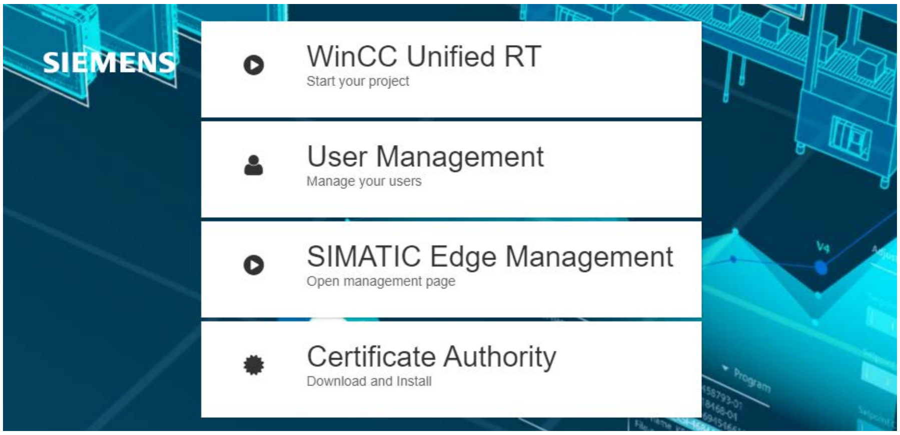
- The device on which the browser is running is connected to the HMI device in the same subnet.
- The browser used supports HTML5 and accepts self-signed certificates.
- The following applies depending on the application you want to access:
  - "WinCC Unified RT": Web access to the runtime project is activated, see section "Web client (Page 21)". The runtime software has been started.
  - "User Management": The settings for the user management were loaded to the HMI device, see sections "User management (Page 35)" and "UMAC settings (Page 49)".
  - "SIMATIC Edge Management": The associated service is activated in the Control Panel of the HMI device, see section "SIMATIC Apps (Page 69)".

Opening applications via the homepage

The HMI device has a convenient homepage for applications with web access.

To open the homepage, enter the following URL in the browser: **"https://<ip>"**

Use the IP address of the HMI device instead of the placeholder "<ip>". When you use a browser that runs directly on the HMI device, you can also use "localhost" instead of the IP address.



- "WinCC Unified RT": Button for opening the "Sign in" dialog for runtime.
- "User Management": Button for opening the "Sign in" dialog for the user management.

  You can find detailed information on web-based user management via a browser in the TIA Portal Help under "Visualizing processes (RT Unified) > Configuring users and roles (RT Unified) > Using the user management on the Unified Comfort Panel > Managing local users > Managing local users in runtime".
- "SIMATIC Edge Management": Button for opening the "Sign in" dialog for the "SIMATIC Edge" application.
- "Certificate Authority": Button for downloading the HMI device certificate for a secure connection.

Opening applications without the homepage

Use the following URLs to open the "Sign in" dialog in the respective application without the homepage.

- "WinCC Unified RT": "https://<ip>/device/WebRH", note the uppercase/lowercase spelling.
- "User Management": "https://<ip>/umc"
- "SIMATIC Edge Management": "https://<ip>/device/edge"

Use the IP address of the HMI device instead of the placeholder "<ip>". When you use a browser that runs directly on the HMI device, you can also use "localhost" instead of the IP address.

Installing a certificate

The following applies when you open an application with web access for the first time via a browser: To set up a secure connection between browser and application, you must download the certificate of the application and install it in your browser as "trusted".

NOTICE

Use CA certificates generated via the WinCC Unified Certificate Manager

If you use a self-signed certificate from a non-trustworthy source, the data transfer is not protected from attacks.

For web access to the HMI device, use CA-certificates that were generated via the WinCC Unified Certificate Manager. To do so, proceed as follows:

1. Generate a CA certificate with the WinCC Unified Certificate Manager .
2. Copy the CA certificate to a USB flash drive.
3. Import the CA certificate in the Control Panel via "Security">"Certificates" as "Trusted Certificate Authority".
4. Install the certificate in your browser as described in the following sections.

Download certificate

You have the following options to download the certificate:

- Using the "Certificate Authority" button on the homepage.
- Using the "Certificate" link in the "Sign in" dialog of the "SIMATIC Edge" application.
- By clicking on the icon or the "Not secure" message in the address bar of the browser.

Installing the certificate as "trusted" in the "Web Browser"

Follow the instructions in the browser documentation to import the application certificate and classify it as "trusted".

A secure connection to the website is now established with the trusted certificate.

Note

Certificate is valid for all applications with web access

For a secure connection to the applications with web access, the HMI device certificate must only be downloaded once and classified as "trusted".

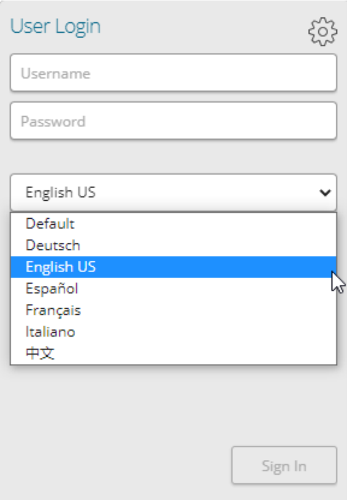
Sign in using the "Sign in" dialog

You use the "Sign in" dialog to sign in to an application with web access.

"Sign in" dialog **for runtime-related applications**

The following figure shows the "Sign in" dialog for the following applications.

- "WinCC Unified RT"
- "User Management"



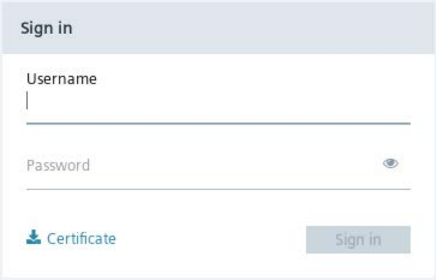
Procedure:

1. Select the required runtime language.
2. Enter the user name and password.
3. Click "Sign in".

If the selected language is not available in the runtime project, the default language is used.

"Sign in" dialog for "SIMATIC Apps"

The following figure shows the "Sign in" dialog for the "SIMATIC Edge Management".



Procedure:

1. If not done yet, download the certificate of the application using the "Certificate" button and install the certificate in your browser, see the "Installing a certificate" subsection in this section.
2. Enter the user name and password.
3. Click "Sign in".

Notes on web access

After signing in, read the following notes on web access in the various applications:

"WinCC Unified RT"

After successful login, a user session is active. Note the following for user sessions:

- A maximum of three user sessions are permitted on one HMI device.
- User management is used in a user session when signing in. Changes to the user management of the HMI device have no effect on the session in progress.
- You have the following options to completely close a user session:
  - Configure an operating element with the system function "Log off".
  - Close all instances, that is, all open browser windows.

You can find more information on remote access via "Web client" in the TIA Portal Help under: "Visualizing processes (RT Unified) > Configuring remote access > Web client".

"User Management"

- The user list is only visible and editable for users who have been assigned the "User Management" function right.
- You can find detailed information on web-based access to the user management in the TIA Portal Help under "Visualizing processes (RT Unified) > Configuring users and roles (RT Unified) > Using the user management on the Unified Comfort Panel > Managing local users > Managing local users in runtime".

"SIMATIC Edge Management"

- Access to the application requires a user with the "HMI Administrator" role.
- You can find detailed information on the local Edge Management on the Edge Management website in the programming and operating manual "Siemens Industrial Edge (https://support.industry.siemens.com/cs/ww/en/view/109773259)".

A.4 Resetting an HMI device to factory settings via ProSave

If the operating system on the HMI device is no longer functional, you must reset the HMI device to factory settings.

NOTICE
Do not switch off the HMI device during data transfer If you turn off HMI device while the HMI device is being reset to factory settings, the HMI device will not start. You must repeat the procedure. Do not turn off the HMI device during data transfer.

Procedure

To reset the HMI device to factory settings, follow these steps:

1. If a project is running on the HMI device, close the project.
2. Connect the HMI device to the configuration PC via the X2 interface.
3. In the Control Panel of the HMI device, select "Network and Internet".
   Ensure that the port selected for data transmission is activated for the interface used ("Activate this port for use").
4. In the Control Panel of the HMI device, select "System Properties" > "Reboot".
5. Press the "Reboot in maintenance mode" button. The HMI device starts. The "Maintenance Mode" dialog box is displayed for a period of 10 minutes. In this period you can connect the HMI device to a configuration PC and reset the HMI device to factory settings with the ProSave software. If the "Maintenance Mode" dialog is not displayed, start the HMI device while pressing the "Maintenance" button, see section "Using the maintenance mode (Page 82)".
6. Open the "ProSave" software on the configuration PC in the WinCC installation directory.
7. Enter the following data in the "General" tab:
   - "Device type": Select the type of your HMI device.
   - "Connection": Select "Ethernet".
   - "Connection parameters": Specify an IP address or computer name for the HMI device. The IP address must be located in the subnet of the configuration PC.
8. Enter the following data in the "OS Update" tab:
   - Under "Opening ...", select the path and file name of the firmware master file (.fwf) containing the desired operating system.
   - Select the option "Reset to factory settings".
   - Under "MAC", enter the MAC address which is shown at the top right of the HMI device display.
   - Use the "Device status" button to display information about the device and the selected firmware.

9. Click "Update OS". A dialog box with the warning that all data on the HMI device will be overwritten is displayed.

10.Confirm the dialog box.

The update of the operating system with "Reset to factory settings" is started. The progress of the update is displayed both in ProSave and on the HMI device. The update operation can take time, depending on the connection selected. The HMI device restarts at the end of the process.

Result

The operating system of the HMI device has been updated to the version of the selected firmware and the HMI device is reset to factory settings.

A.5 Using the maintenance mode

Maintenance mode is used to reset the HMI to the factory settings.

When the operating system starts and the Control Panel is displayed after the HMI device is switched on, you can start the HMI device in maintenance mode by clicking the "Reboot in maintenance mode" button. Follow the description in section "Resetting an HMI device to factory settings via ProSave (Page 81)".

If the HMI starts with the boot splash screen and detects the corrupt operating system, the HMI automatically switches to maintenance mode. The "Maintenance Mode" dialog box is displayed. In this case, follow the procedure from step 6 in section "Resetting an HMI device to factory settings via ProSave (Page 81)".

If the HMI device starts with the boot splash screen and does not detect the corrupt operating system, the HMI device does **not** switch to maintenance mode. The "Maintenance Mode" dialog is **not** displayed. You must reset the HMI device to the factory settings. In this case, start the HMI device while pressing the "Maintenance" button as described in this section.

NOTICE

The operating system must be updated in maintenance mode

If you start the HMI device while pressing the "Maintenance" button, the HMI device is in maintenance mode. In maintenance mode, the "Maintenance Mode" dialog is displayed. The operating system **must** be updated.

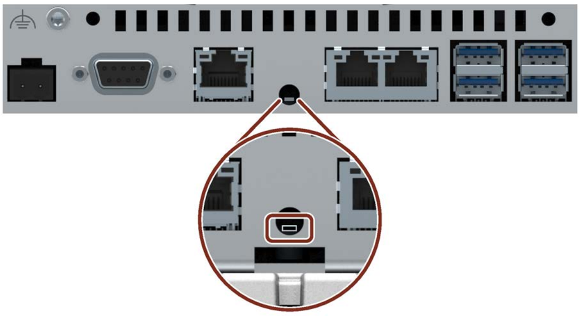
Only start the HMI device while pressing the "Maintenance" button if you are sure that you want to update the operating system.

Procedure

Proceed as follows:

1. Turn off the power supply of the HMI device.
2. Press the "Maintenance" button. Use a blunt, sufficiently sturdy tool made of non-conductive material, diameter approx. 5 mm.

   You will find the "Maintenance" button in the opening between the two interfaces X1 and X2.

   Be sure to hit the button accurately and do not slide the tool off the button.
3. Switch on the power supply of the HMI device and keep the "Maintenance" button pressed until the boot splash screen appears.

The HMI device restarts, the "Maintenance Mode" dialog box is displayed. Connect the HMI device to a configuration PC and reset the HMI device to the factory settings using the ProSave software. Follow the procedure from step 6 in the section "Resetting an HMI device to factory settings via ProSave (Page 81)".