

Remote-I/O-System u-remote Web server manual



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1 About this documentation

1.1 Symbols and notes



The safety notices in this documentation are designed according to the severity of the danger.

	WARNING
	Possible danger to life! Notes with the signal word "Warning" warn you of situations which may result in serious injury or death if you do not follow the instructions given in this manual.

ATTENTION
Material damage! Notes with the signal word "Attention" warn you of hazards which may result in material damage.

	Text next to this arrow are notes which are not relevant to safety, but provide important information about proper and effective work procedures.
---	---

The situation-dependent safety notices may contain the following warning symbols:

Symbol	Meaning
	Warning against explosive atmospheres
	Instruction: observe the documentation

- All instructions can be identified by the black triangle next to the text.
- Lists are marked with a tick.

1.2 Complete documentation



- This manual describes how to use the **web server** application (Version 2.2.0 or higher).
- Please also observe the manual **u-remote I/O-System**.
- When using safe I/O modules, please also observe the manual **Modules for functional safety**.



All documents are available to download from the [Weidmüller website](#).

2 Safety

This section includes general safety instructions for handling the web server. Specific warning notices for specific tasks and situations are given at the appropriate places in the documentation. Failure to observe the safety and warning notices can result in damage to persons and material.



- Please also observe the manual **u-remote I/O-System**.
- When using safe I/O modules, please also observe the manual **Modules for functional safety**.

All documents are available to download from the [Weidmüller website](#).

Use in a potentially explosive atmosphere

Access to the web server requires the connection of a computer to the u-remote station. Connecting and disconnecting **must not** be done in a potentially explosive atmosphere!

Earthing

Before connecting to a computer, a proper grounding of the u-remote station must be ensured.

Force mode

In force mode, the system may be manipulated to such an extent that can result in life-threatening personal injury and damage to materials. The force mode may therefore only be used by persons who are fully aware of the connected equipment and the consequences of forcing.

3 Product description and requirements

3.1 Product description

With the web server, the u-remote station is displayed on a connected PC. This allows you to carry out the following tasks e.g. for testing purposes, during commissioning or service:

- Simulate the operation of the u-remote station
- Query the status of each coupler and module
- Display the parameters of couplers and modules, and change them for testing purposes
- Access diagnostic information
- Save and load the configuration file
- Operate the station in force mode for testing purposes
- Update the firmware

3.2 Requirements

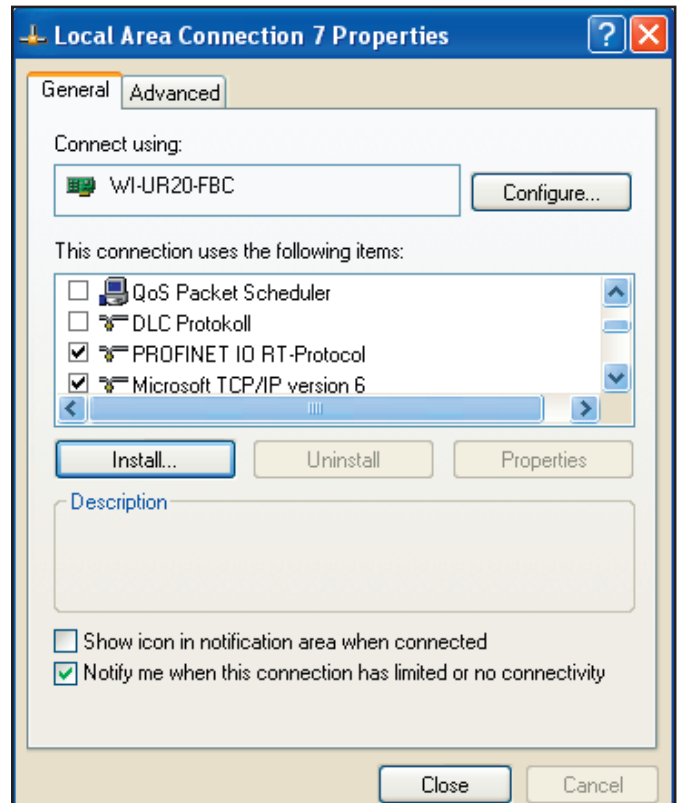
Operating system

The u-remote web server can be used with the following operating systems:

- Windows XP®
- Windows 7®
- Windows Vista®
- Windows 10®



For operation with Windows XP: if you installed the Siemens Primary Setup Tool, the DLC (data link control) protocol was also installed. To access the web server, you must deactivate the DLC protocol on the USB interface (LAN connection with WI-UR20-FBC).



Deactivating the DLC protocol (only Windows XP®)

Webbrowser

The u-remote web server can be used with the following browsers:


- Mozilla Firefox 20.0 or higher
- Google Chrome 20.0 or higher
- Opera 10.61 or higher
- Microsoft Internet Explorer 10 or higher
- Microsoft Edge

Screen resolution

When using the web server we recommend a screen resolution 1280 x 800 or higher, at least 1024 x 768. The user interface is displayed optimally with the browser window maximised.

4 Connecting and starting the web server

4.1 Installing the web server via USB

	WARNING
	Explosion risk! ► Prior to starting work, make sure that there is not a potentially explosive atmosphere!

ATTENTION
Risk of severe damage! ► Prior to connecting a PC, make sure that the u-remote station has been earthed properly!

First access to the web server has to be via the USB interface of the coupler (see section 4.2). With couplers designed for the use with ethernet based bus systems – recognisable by the RJ45 sockets – the web server can be accessed alternatively via Ethernet (see section 5.7).



The USB port acts as an virtual DHCP Server. Please do not assign any IP addresses to other devices within the same subnet of the USB port (default 192.168.1.202, UR20-FBC-EIP: 192.168.5.202), otherwise network failure might occur.



The USB cable can be a maximum of 2 m in length (Type USB-A to USB Micro-B e.g. Weidmüller Order No. 1487980000). Extension cables must not be used.

Installing USB device drivers

The driver file is available on the [Weidmüller website](#).

- Download the USB driver for the web server.
- Unpack the ZIP file.

Windows 10®

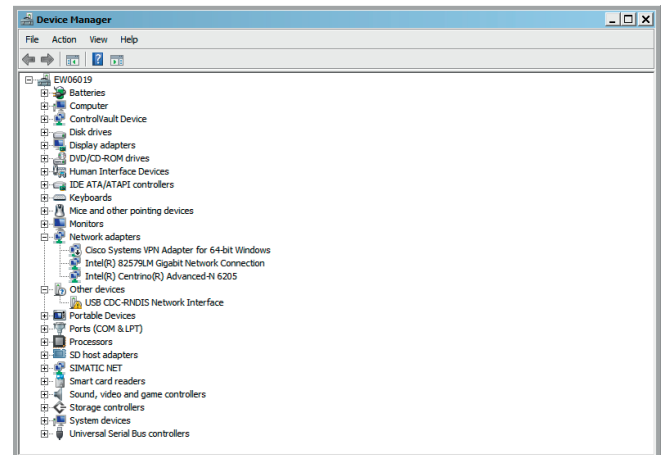
- Right-click on the **usb8023.inf** file and select **Install**.
- Confirm the dialogue with **Yes**.
- Right-click on the **rndis.inf** file and select **Install**.
- Confirm the dialogue with **Yes**.

The driver is being installed.

After successful installation, a **WI-UR20-FBC** network adapter is displayed in the Device Manager.

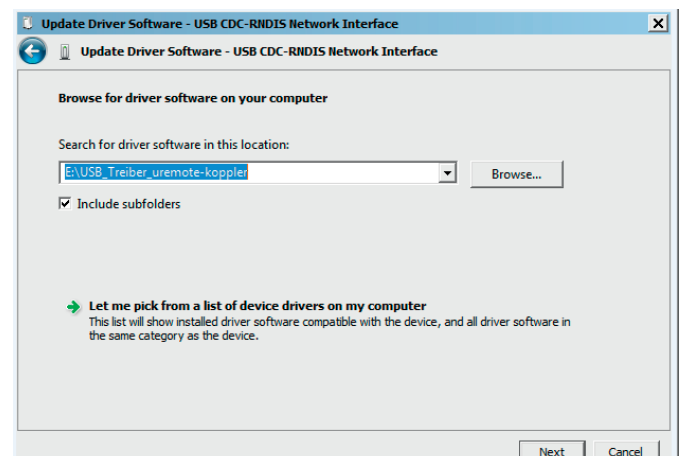
Windows 7® or older

- To install the driver manually, open the Device Manager. Under **Other devices** the **USB CDC-RNDIS Network Interface** interface is displayed.



New USB interface in the Device Manager

- Right-click on the interface and select **Update driver software**. You will be asked how you would like to search for the driver software.
- Select the option **Search for driver software on this computer**.



Searching for installation files on the computer

- Click **Browse** and navigate to the folder in which you have stored both .inf files.
- There could possibly be a security enquiry because the driver software does not have a signature. Nonetheless, continue with the installation.

- Follow the rest of the steps in the installation routine until the successful installation is confirmed.

The driver is displayed in the Device Manager under **Network adapters**.

- Close the Device Manager.

4.2 Starting the web server

The u-remote station must be completely assembled and supplied with voltage.

- Connect the PC to the coupler using a USB cable. The USB socket at the coupler can be found behind the service flap on the front side.
- Open one of the browsers listed in section 3.2.
- In the address line, enter the IP address of the coupler (default: 192.168.1.202, UR20-FBC-EIP: 192.168.5.202).

The web server is started. The connected station is displayed with all of its active modules.

In the event that the web server will not start, please check the IP address (see section 11.2).

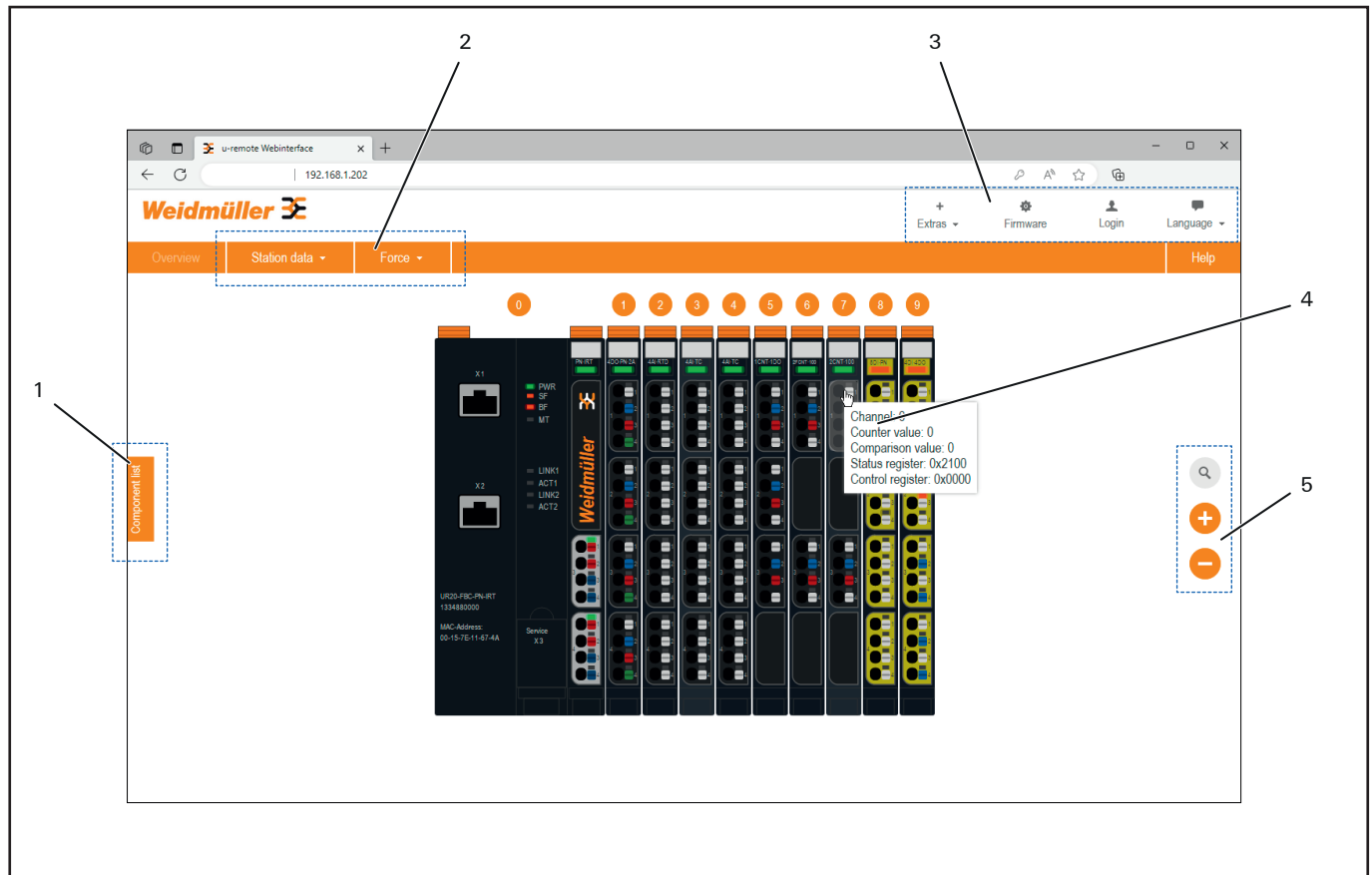


You can also open the web server via HTTPS (see section 5.8).

5 Getting to know and arranging the web server

5.1 Station view

The station view is displayed on every start up of the web server.



Station view

- 1 Switch over to the component list (by mouseover)
- 2 Access to the web server functions
- 3 Menu bar
- 4 Detail view of module/channel (by mouseover)
Switch over to the component view (by mouse click)
- 5 Scaling the view up or down



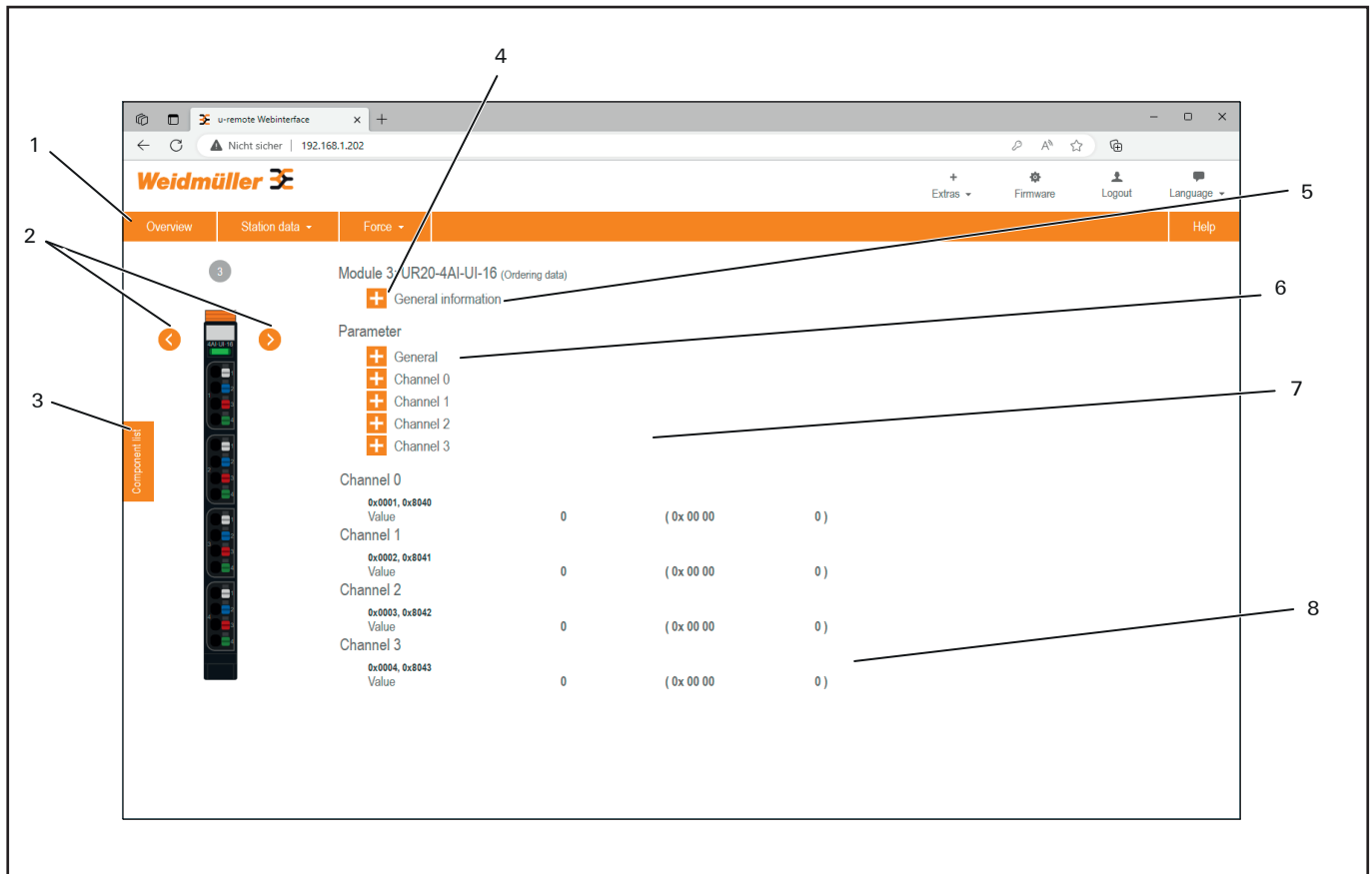
The web server only registers modules that can communicate on the system bus. Empty slot modules and other passive modules (e.g. AUX modules) are not registered by the web server and thus are not displayed in the screen view. The numbering of the modules in the web server view may therefore deviate from the count in the actual station!



Component list faded in

5.2 Component view

The component view is opened after clicking on a component or the component list.



Component view of a module

- 1 Switch over to the station view
- 2 Select the next component left/right (by mouse click)
- 3 Fade in the component list (by mouseover)
- 4 Show/hide details (by mouse click)
- 5 Component-related information
- 6 Component-related parameters
- 7 Channel-related parameters
- 8 Channel-related information



Component view of a coupler

5.3 Navigation

There are several options how to display the station or certain components (coupler or modules):

Station view

This view shows all components and you can display details via mouseover. You can open the station view with a click on **Overview**.

Component view

This view shows a single component (coupler or module) with its information and parameter settings. Using the arrow keys you can navigate to the subsequent components in the station. You can open the component view by clicking on the component – either in the station view or the component list.

Station data

This view shows the current process data or diagnostic data of the entire station. Both views are accessible at any time.


When using a smaller view you can scale up single components by a mouseover.




Scaling up details

5.4 Operation notes

Single mouse clicks (left mouse key) are sufficient when using the web server. Some areas of the user interface are mouse sensitive, which means, they will change whenever you move the cursor in this area without clicking (mouseover).

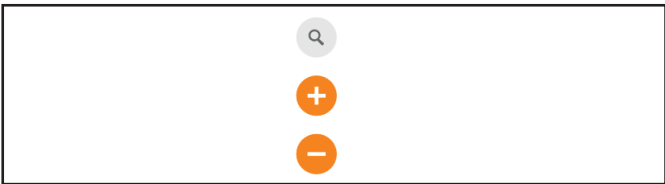
- 

A mouse click is expected whenever the cursor changes to this shape.
- 

You can move the surface while pressing the left mouse key whenever the cursor changes to this shape

Scaling the station view up and down

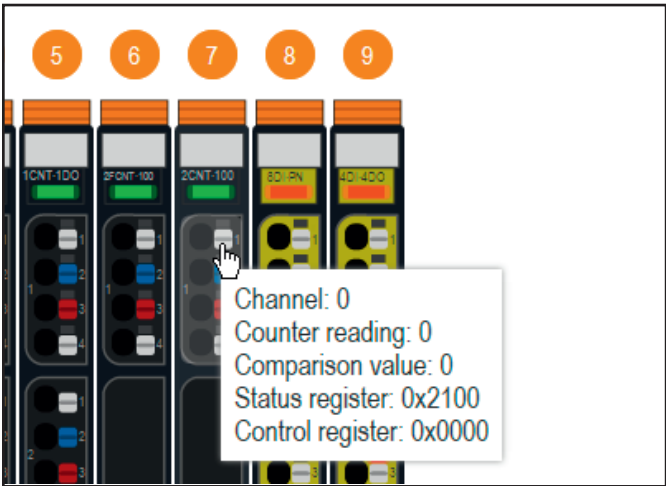
- ▶ To reduce the size of the station view, click on the minus symbol to the right of the station overview.
- ▶ To enlarge the station view, click on the plus symbol to the right of the station overview.



Scaling the view

Displaying channel values

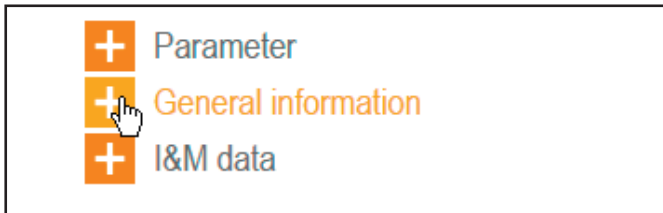
- ▶ Move the cursor slowly over the station without clicking. All values of the channel above which the cursor is presently situated are displayed.



Displaying channel values

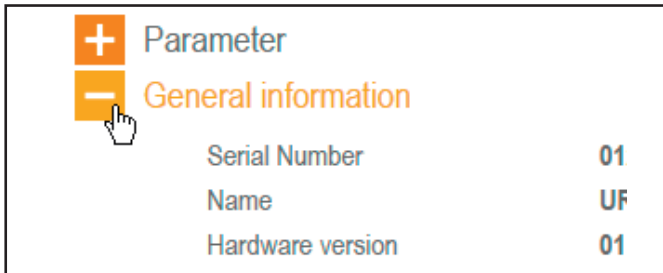
Showing or hiding contents

- To display the contents of an entry, click on the plus symbol.



Showing contents

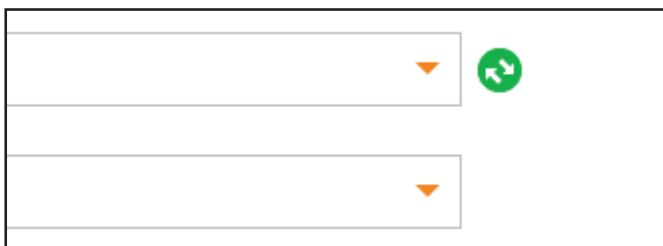
- To hide the contents again, click on the minus symbol.



Hiding contents

Applying or resetting changes

When you change settings, they are marked with a green symbol.



Changes marked

In this state you can reset every single change.

- To reset all changes at a time, click **Restore**.
 - To apply all changes at a time, click **Apply changes**.
- The markings will be eliminated as soon as you apply or reset the changes.

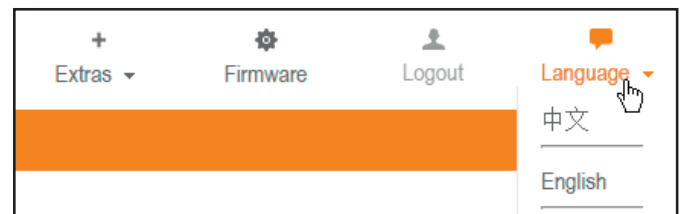
5.5 Setting the language

The web server starts with the language setting of your browser. If this language is not supported, it starts with the setting **English**.

Three language files for the web server are included in each coupler. On delivery, the languages German, English and Chinese are included. Further language files are available on the [Weidmüller website](#).

Changing the language

- To change the language, click on **Language** in the menu bar and select the desired setting.



Changing the language

Replacing a language



You need the password for this function.

After loading a new language, the web server is restarted.

- Download the language files.
- Unpack the ZIP file.
- Click **Language/More ...** in the menu bar of the web server.



Replacing a language

- Select the language you want to replace.
- Click **Select language file**.
- Navigate to the desired language file on your PC and click **Open**.
- Click **Update now**.

The new language is transferred to the coupler. After a re-start of the coupler, you can select the new language in the **Language** menu.

5.6 Login data and password protection

Password protection restricts the access to the following functions:

- Change parameters
- Operate the station in force mode
- Load firmware updates
- Resetting the web server
- Replacing a language
- Reset to factory settings
- Changing login data

Users without a user ID will only have read-only rights. Write access is blocked for them, which means that they cannot use the listed functions. If you deactivate password protection (**No login data**), all web server functions are accessible to every user at all times.



In order to prevent unauthorised access you should change the login data immediately. Observe the individual data security regulations of your company.

The following login data apply upon delivery:

Username: admin
Password: Detmold

Change login data

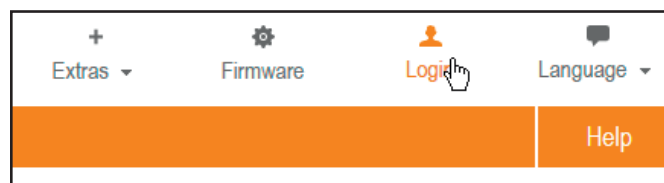
- Open the coupler component view.
- Click **Change login**.

Changing login data

- Enter the username and password.
- To change the login data, enter the new username and the new password, repeat the password and click **Apply**.

If you have changed the login data, you must log in again afterwards.

- Click **Login** in the menu bar.



Opening the login dialogue

Deactivating password protection

- Open the coupler component view.
- Click **Change login**.

Change login data

Current login
 User name:
 Password:

New login
 New user name:
 New password:
 Repeat new password:

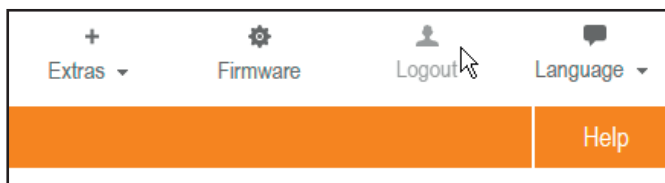
The Password has to be:
 • at least 8 characters in length.
 • repeated correctly.
 • different from the user name.

Additionally the password has to contain three of the following four characters:
 • small letter
 • capital letter
 • number
 • special character

Deactivating password protection

- Enter the username and password.
- To deactivate password protection, click **No login data**.

In the menu bar, the button for logging in and out is now inactive. The inactive button indicates that there is no password protection set for the web server.



Login/logout button inactive

5.7 Setting up the Ethernet port

Couplers for ethernet based bus systems are equipped with RJ45 sockets. With this, the web server can alternatively be controlled via Ethernet.

If you want to use the web server via Ethernet you have to set up the ethernet connection first.

- Connect the PC with the coupler (or a switch within the network) using a LAN cable.
- Click on the coupler in the station view and then on **Parameter**.
- Enter the desired IP address, subnet mask and gateway.
- Make sure, that the parameter **Webserver over Ethernet** is enabled.

Coupler: UR20-FBC-MOD-TCP-V2 (Ordering data)

Modbus DHCP timeout s

0x114B Additional TCP port

0x114C Modbus Dual LAN Mode

0x114D Modbus transport protocol

0x114E IP address USB port

0x114F Webserver via Ethernet

0x112B Modbus watchdog *10 ms

0x1131 Modbus connection timeout s

Setting up the ethernet port

- Click **Apply changes**.
- Remove the USB cable between coupler and PC.
- Restart the coupler.

Any change of IP settings of USB or Ethernet port will only take effect after restarting the coupler.

5.8 HTTPS

With HTTPS, the web server and client communicate encrypted on the transport layer. This ensures the authenticity of the server as well as the integrity and confidentiality of the data transmitted.

The following u-remote couplers support HTTPS:

Best.-Nr.	Coupler	Firmware version	Hardware version
1334910000	UR20-FBC-EC	00.06.01	02.00.00 or higher
2476450000	UR20-FBC-MOD-TCP-V2	00.03.02	-
1334920000	UR20-FBC-EIP	00.03.02	02.00.00 or higher
1334940000	UR20-FBC-PL	01.03.00	-
2614380000	UR20-FBC-PB-DP-V2	01.07.00	-
2566380000	UR20-FBC-PN-IRT-V2	01.08.00	-
2661310000	UR20-FBC-IEC61162-450	01.00.00	-
2625010000	UR20-FBC-CC	01.00.00	-
2659680000	UR20-FBC-PN-ECO	01.00.00	-
2659690000	UR20-FBC-EC-ECO	01.00.00	-
2659700000	UR20-FBC-MOD-TCP-ECO	01.00.00	-

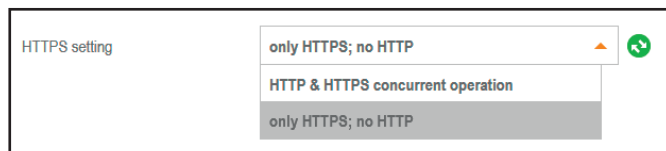


The couplers require FSBL version 01.02.00 or later. You can download the latest FSBL version from the [Weidmüller website](#).

You can view the FSBL version in the coupler component view under **General information/Firmware version/FSBL version**. You can update the FSBL just like the firmware. The FSBL can be updated independently of the firmware.

These couplers have a u-remote standard certificate. The certificate is self-signed and valid until 2038. The certificate cannot be deleted and is always active if no user-defined certificate is used.

The **HTTPS setting** coupler parameter determines whether the web server can be addressed via HTTPS and HTTP or only via HTTPS.

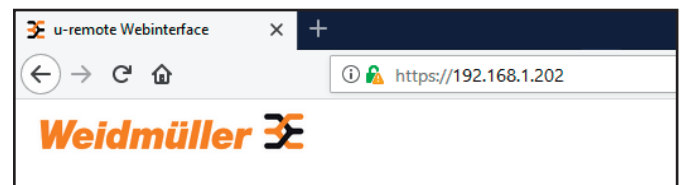


HTTPS setting parameter

Opening the web server via HTTPS

Preconditions:

- The computer must be connected with the u-remote station.
 - The u-remote station must be assembled in full and powered up.
- Open one of the browsers listed in section 3.2.
- In the address line, enter **https://** and the IP address of the coupler (default: 192.168.1.202, UR20-FBC-EIP: 192.168.5.202).



Call up the web server via HTTPS

As your browser does not know the self-signed u-remote standard certificate, it warns you that the connection is not trustworthy.

This warning also appears:

- after changing the IP address of the coupler.
 - after changing the certificate.
- Add an exception rule for this IP address in order to start the web server application.



Only add the exception rule once you are sure that you are connected with the right coupler. Also observe the local data security regulations. We recommend addressing the coupler via the USB port if you add the exception rule.



You can avoid this warning by using a user-defined certificate that has been signed by a trusted certificate authority.

Exchanging the TLS/SSL certificate

You can replace the u-remote standard certificate with your own certificate. Optionally, you can have your certificate signed by a trusted certificate authority (CA) and also load the CA certificate to the coupler.



Only transmit certificates and private keys via trusted connections.
We recommend transmitting certificates and private keys via the USB port of the coupler.

The web server supports:

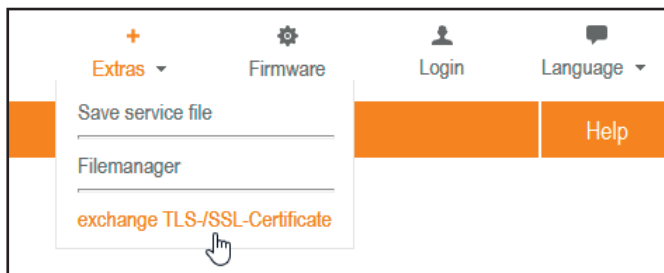
- Encryption with TLS 1.1 and TLS 1.2.
- Key lengths up to 2048 bit.
- PEM-coded keys and certificates (.pem).

- Generate a private key and an appropriate certificate for it, e.g. with OpenSSL.

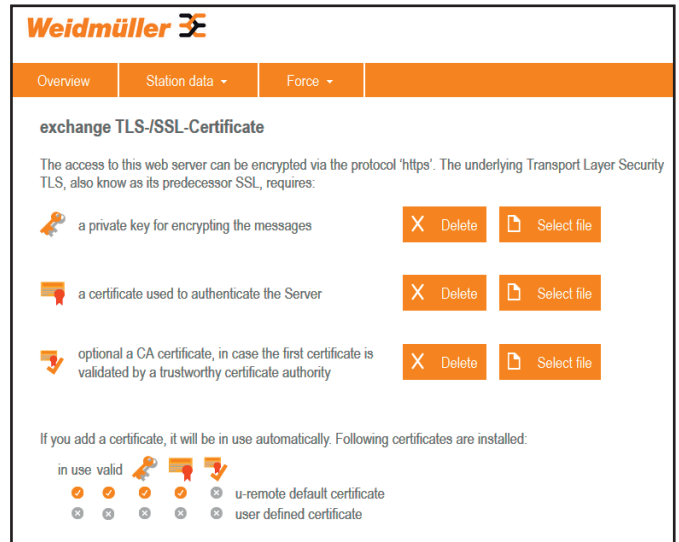


Do not encrypt the private key with a pass phrase. The web server cannot read the key in this case and identifies it as invalid.

- Start the web server.
- Log in with your username and password.
- In the menu bar, click **Extras** and then **exchange TLS/SSL certificate**.



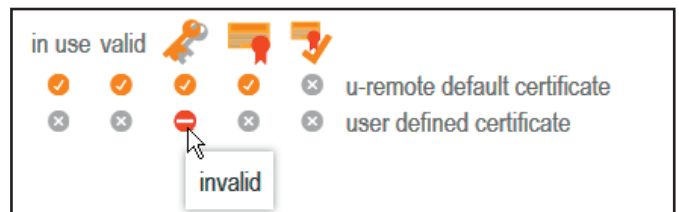
Exchange TLS/SSL certificate menu



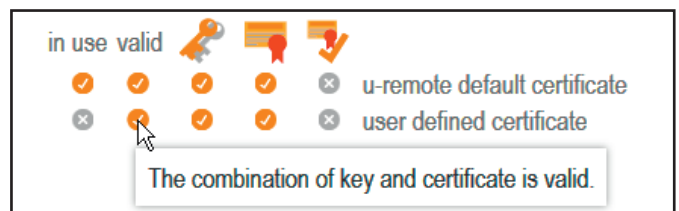
Exchange TLS/SSL certificate

- To delete any old keys and certificates, click **Delete**.
- To load the key and the certificates onto the coupler, click **Select file** and navigate to the desired file on your computer.

Keys and certificates are automatically checked. The result is displayed in the web server. You can move the mouse over the icons to display the results as text.



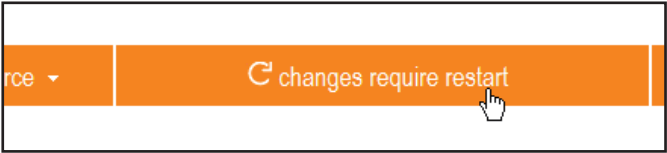
Automatic check: Key invalid



Automatic checking successful

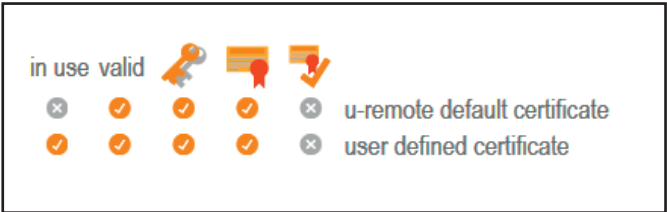
After successful checking, the web server has to be restarted to activate the user-defined certificate.

- Click **Changes require restart**.



Restart the web server

The web server is restarted. After the restart, the user-defined certificate is activated.



User-defined certificate successfully activated

6 Coupler settings

- Open the coupler component view.



Coupler component view

Here you can:

- Access and change the coupler parameters
- Query diagnoses
- Query general information about the coupler
- Type in I&M data (Identification & Maintenance)
- Change the login data and set up password protection (see section 5.6).
- Restart the coupler and reset any changes that have been made (Reset)
- Reset the coupler and the modules to factory settings
- Access the datasheet of the coupler (link **Ordering data**)



The coupler settings are only accessible when force mode is not active.



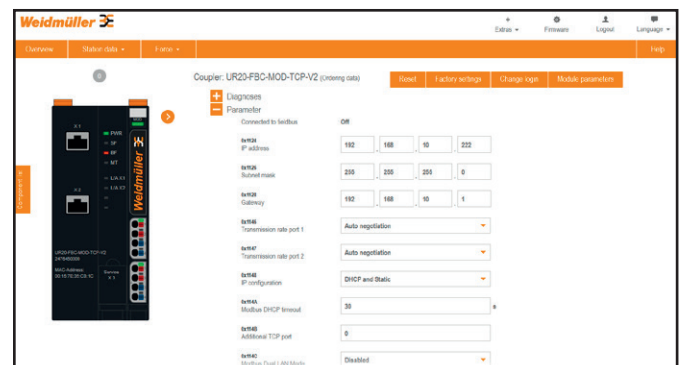
The status data can be displayed at all time, regardless of the state of the field bus connection. Setup changes can only be stored while the field bus is not active.

6.1 Displaying and changing parameters

- Open the coupler component view.
- Click **Parameter**.

The parameters are displayed.

For parameters that can be edited, you can enter the changes in the entry fields or choose alternative settings from a drop-down list.



Displaying and changing the coupler settings

- Enter the desired changes.

Each change is marked with a green symbol until it will be applied. All changes will only be saved after you click **Apply changes**. All changes will be undone after you click **Restore**.

- After making your changes, click **Apply changes**. Changes will be transferred to the coupler, the green markings will be removed.

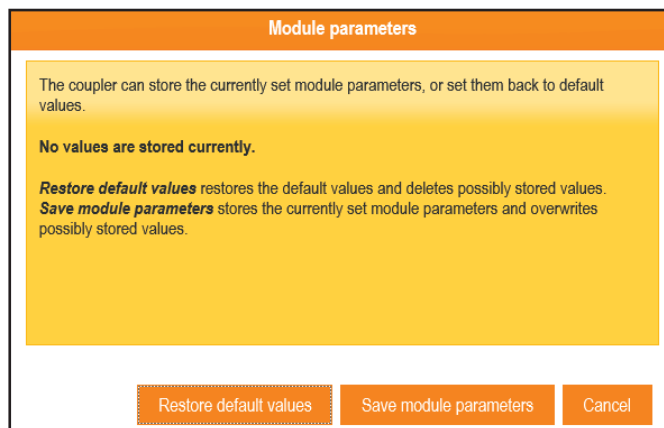
6.2 Saving or restoring module parameters in the coupler

You can save the parameters of the connected modules in the coupler or restore them to the default values.

- Click **Module parameters**.



If no modules are connected to the coupler, the button is inactive.



Saving module parameters or restoring default values

- To save the currently set module parameters, click **Save module parameters**.
Previously saved module parameters are overwritten.
The saved module parameters are sent to the modules again when the coupler is restarted.
- To restore all module parameters to their default values, click **Restore default values**.
Previously saved module parameters are deleted.
Subsequent changes to the module parameters are possible, but will be lost again when the coupler is restarted.

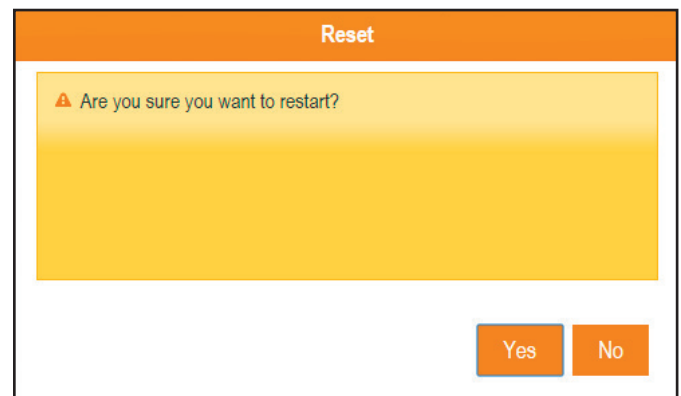
6.3 Restarting the web server (Reset)

With a reset, you can undo all the changes that have been made since the last time that the web server was started.



After a reset, the coupler is restarted.
All data which is not protected against power failure is reset.

- Open the coupler component view.
- Click **Reset** and then **Yes**.



Restarting web server and coupler

The coupler as well as the web server are restarted.

6.4 Resetting the coupler to factory settings

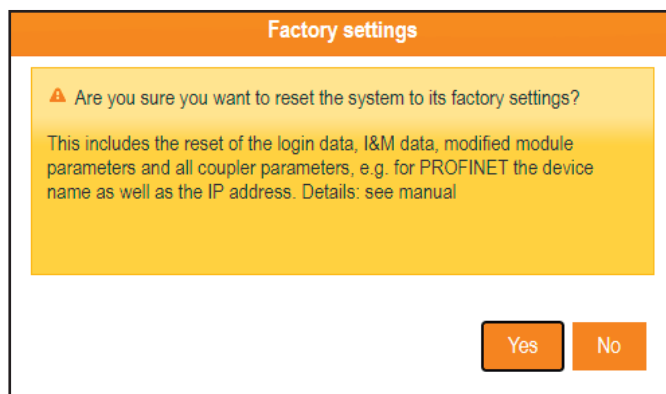
This function allows you to set up the coupler in its original state as at delivery. This includes the reset of the following data:

- All coupler parameters
- Login data and password protection
- I&M data
- Modified module parameters that are saved in the coupler



During a reset, the coupler is restarted.

- Open the coupler component view.
- Click **Factory settings** and then **Yes**.



Resetting the coupler to factory settings

The coupler as well as the web server are restarted. The coupler is in the same state as at delivery.

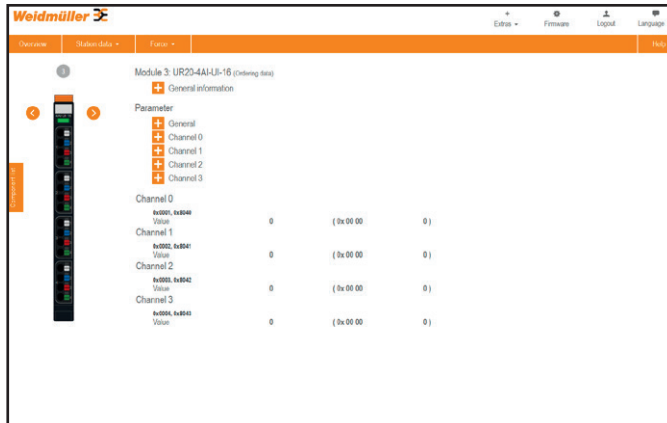
6.5 Displaying the data sheet

- To display the data sheet, click the **Ordering data** link next to the module designation.

A connection to the Weidmüller website is established in a new browser window and the data sheet is displayed as a PDF file.

7 Module settings

- Open the module component view.



Module component view

Here you can:

- Display general information about the module
- Access and change the module parameters
- Display information about certain channels
- Access the data sheet of the module (link **Ordering data**)



The module settings are only accessible when force mode is not active.



Parameters can only be written when the field bus is not active.



Displaying and editing module parameters

- Enter the desired modifications.

Each change is marked with a green symbol until it will be applied. All changes will only be saved after you click **Apply changes**. All changes will be undone after you click **Restore**.

- After making your changes, click **Apply changes**.

Changes will be transferred to the coupler, the green markings will be removed.

7.1 Displaying and editing parameters

- Open the module component view.
- Open the Parameters you want to change.

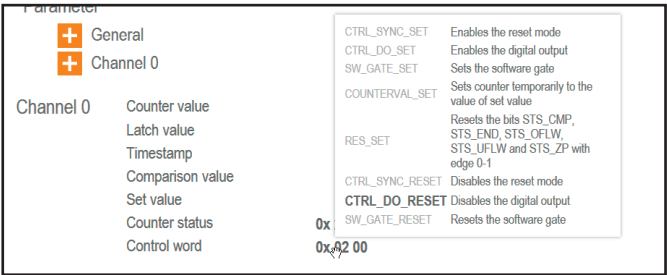
The parameters are displayed.

For parameters that can be edited, you can enter the changes in the entry fields or choose alternative settings from a drop-down list.

7.2 Displaying register settings

For modules with registers (e.g. counter modules and PWM modules), the register settings can be displayed in a tool tip.

- Open the module component view.
- Move the cursor over the value of the register you want to see.



Displaying the register settings

The registers displayed in bold are set, all others are not set.

7.3 Displaying the data sheet

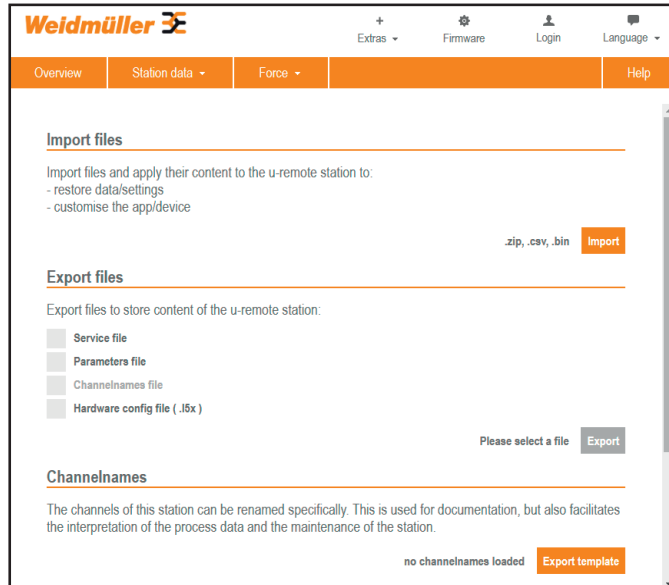
- To display the data sheet, click the **Ordering data** link next to the module designation.

A connection to the Weidmüller website is established in a new browser window and the data sheet is displayed as a PDF file.

8 Configuration and station data

8.1 Filemanager

In the **filemanager**, you can import and upload individual files and ZIP archives or export files.



Filemanager

Import files

You can import the following files:

- Parameters file, see section 8.2
- Channelnames file, see section 8.3
- Coupler firmware

When importing several files in a ZIP file, you can choose whether the files are uploaded individually or together into the coupler.

Export files

You can export the following files:

- Service file, see section 11.3
- Parameters file, see section 8.2
- Channelnames file, see section 8.3
- For Ethernet-IP couplers: Hardware config file (.I5x), see section 8.4



A channelnames file can only be exported after channels have been renamed, see section 8.3.

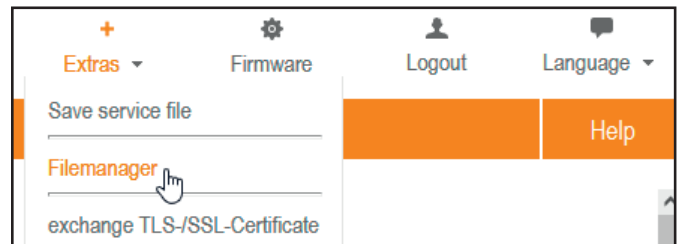
If you select several files, the files are automatically packed into a ZIP file during the export.

Channelnames

Here you can export a template for the channelnames file. After you have renamed channels, you can also restore the channel names to factory settings.

Opening the filemanager

► In the menu bar, click **Extras/Filemanager**.



Opening the filemanager

8.2 Exporting or importing station parameters



This function is password protected.

In a parameters file, you can export the current configuration of the u-remote station or import and upload an existing configuration into the coupler. This makes arranging several stations of identical setup very easy.



A saved configuration can only be loaded into the coupler, if the u-remote stations are physically identical (number, sequence and type of modules that are registered by the web server, see section 5.1)



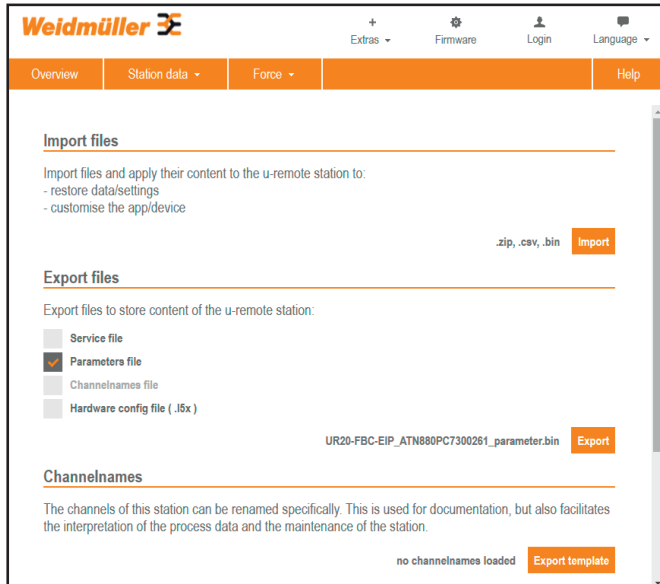
The following information will **not** be saved by the **stations parameters** function:

- IP address
- Gateway
- Subnet mask



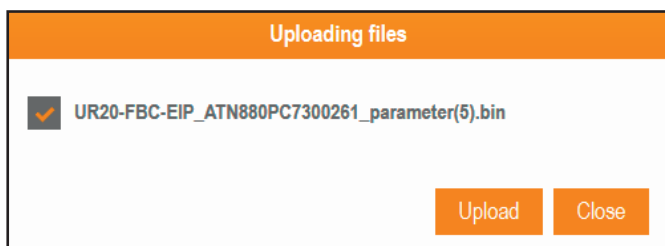
For Modbus-TCP coupler only: The IP address will be set to 0.0.0.0 when loading a configuration into the coupler.

► Open the **Filemanager**.



Exporting or importing station parameters

- To export the configuration, select **Parameters file**.
- Click **Export**.
- Save the **parameter.bin** file on your PC.
- To import a configuration, click **Import**.
- Choose the desired configuration file and click **Open**.
A file dialogue is opened.



Uploading a parameters file

- Click **Upload**.
- ➡ When using PROFINET or PROFIBUS you can continue working.
- With all other fieldbus protocols you have to restart the coupler.

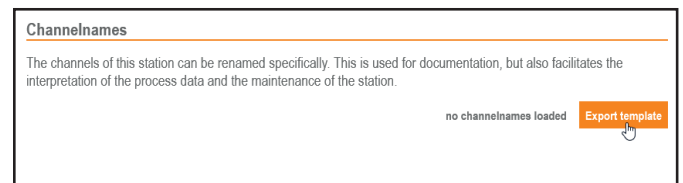
8.3 Renaming channels

In a channelnames file, you can define individual names for the channels of each module. You can transfer the channelnames file to other stations of identical structure to use the same channelnames on all stations. The user-defined channelnames can be reset to default at any time.

- Open the **Filemanager**.

Exporting a template

First you need to export a template file which represents the entire station with all modules and channels.



Exporting a template

- Click **Export template**.
- The file **channelnames_template.csv** is generated.
You can open the file or save it on your computer.



Observe the following notes when editing the template:

- The structure of modules and channels may not be changed in this file, otherwise it will no longer be compatible with the station.
- Do not use commas or semicolons for channel names, since these are interpreted as separators in a CSV file.
- If you use mutated vowels or special characters, make sure to save the CSV file UTF-8-encoded.

Editing the CSV-file using Microsoft® Office Excel®

	A	B	C	D	E	F	G	H
1		1 ch0	ch1	ch2	ch3			
2		2 ch0	ch1	ch2	ch3			
3		3 ch0	ch1	ch2	ch3			
4		4 ch0	ch1	ch2	ch3	ch4	ch5	ch6
5		5 ch0	ch1	ch2	ch3	ch4	ch5	ch6
6		6 ch0	ch1	ch2	ch3			
7		7 ch0	ch1	ch2	ch3			

Template file with placeholders for tag names (view in Excel)

The structure of columns and rows must not be changed.

Editing the CSV-file using a text editor

```
1;ch0;ch1;ch2;ch3;;;;;;;;;;
2;ch0;ch1;ch2;ch3;;;;;;;;;;
3;ch0;ch1;ch2;ch3;;;;;;;;;;
4;ch0;ch1;ch2;ch3;ch4;ch5;ch6;ch7;ch8;ch9;ch10;ch11;ch12;ch13;
ch14;ch15
5;ch0;ch1;ch2;ch3;ch4;ch5;ch6;ch7;ch8;ch9;ch10;ch11;ch12;ch13;|
ch14;ch15
6;ch0;ch1;ch2;ch3;;;;;;;;;;
7;ch0;ch1;ch2;ch3;;;;;;;;;;
```

Template file with placeholders for tag names (view in a text editor)

The separating characters (semicolons) must not be changed or deleted.

- Overwrite the place holders with the desired channel names.
- If you want no tag name for a certain channel, delete the respective place holder.
- After you have changed all names as desired, save the file on the computer using a proper file name.

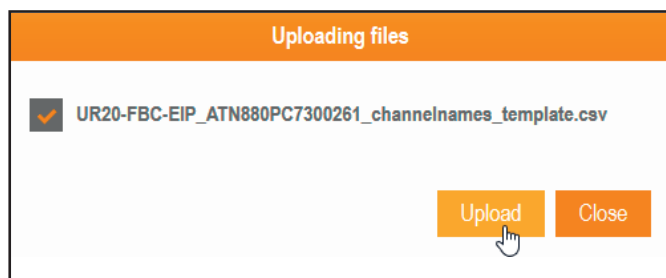
The new channel names will be displayed in the webserver after the file has been imported and uploaded to the coupler.

Importing and uploading a channelnames file



This function is password protected.

- In the **filemanager**, click **Import**.
- Choose the desired file and click **Open**.
A file dialogue is opened.



Uploading a channelnames file

- Click **Upload**.
- Sign in with your username and password.

The file is loaded into the coupler. The current channel names are now displayed in the web server. The **Restore default** button is displayed.

Exporting a channelnames file

If you have renamed the channels of a station or saved the channel names, you can export the channel names to a file.

- In the **filemanager**, click **Channelnames file**.
- Click **Export**.
- Save the **channelnames.csv** file on your PC.

In the file, the station is recorded with all channels and their names.

Deleting user defined channel names

- To delete all user-defined channel names, click **Restore default**.

All channel names are reset to factory settings.

8.4 Saving a L5X file



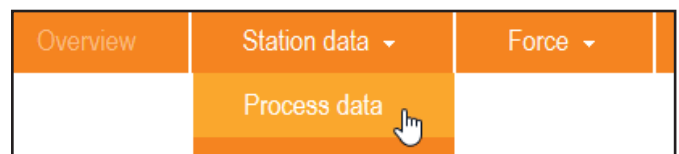
This function is only available for the UR20-FBC-EIP coupler.

You can export the module configuration of the u-remote station to a device configuration file (.l5x). You can then import the file as a routine into the **Studio 5000** Rockwell software.

- Open the **Filemanager**.
- Select **Hardware config file (.l5x)**.
- Click **Export**.
- Save the file on your PC.

8.5 Displaying process data

- Click **Station data/Process data**.



Menu Station data/Process data

The overview displays the channels of all modules each with its first value.



+ Extras Firmware Login Language

Overview	Station data	Force						Help
----------	--------------	-------	--	--	--	--	--	------

Process data

Channel details [Show all](#) [Hide all](#)

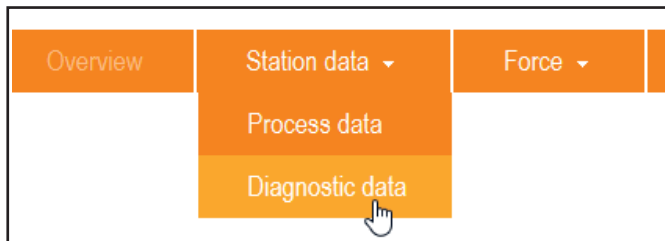
Channels	1 4COM-IO-LINK	2 4DO-P	3 1SM-50W-6DIZDO-P	4 2PWM-PN-6.5A	5 4DO-N-2A	6 16DI-P-PLC-INT	7 8AI-16-HE
0	Error IO-Link port 0	0	State DI Low	Pulse duration: 0 x 20.83 ns	0	0	0.000
1	Error IO-Link port 0	0	State DI Low	Pulse duration: 0 x 20.83 ns	0	0	0.000
2	Error IO-Link port 0	0	State DI Low		0	0	0.000
3	Error IO-Link port 0	0	State DI Low		0	0	0.000
4			State DI Low			0	0.000
5			State DI Low			0	0.000
6			State DO Low			0	0.000
7			State DO Low			0	0.000
8			Current position: 0 Steps			0	

Display of process data

► Click **Show all** to see the entire overview with all values. The values are continuously updated.


8.6 Displaying diagnostic data

► Click **Station data** and then **Diagnostic data**.



Menu Station data/Diagnostic data

The overview displays all current diagnostic messages. Components without diagnostic message are not displayed.



+ Extras Firmware Login Language

Overview	Station data	Force						Help
----------	--------------	-------	--	--	--	--	--	------


Diagnostic data

0	FBC-EIP	No connection No connection established No IP address Operational
3	1SM-50W-6DIZDO-P	Power supply fault
6		Error

Display of diagnostic data

9 Web server in force mode

9.1 Activating the force mode



WARNING!

Manipulation of the control unit!

In force mode, the system may be manipulated to such an extent that can result in life-threatening personal injury and damage to materials.

Only use force if you are very familiar with the connected system and know at all times the consequences that your actions will have!



If the force mode is activated during an established field bus connection a diagnose alarm is generated. Depending on parametrised alarm behaviour the PLC can continue to transmit output process data and the u-remote station will process them for all unforced output channels. However, forced output channels will ignore any process data and behave according to forced values.

Input process data are transferred all the time, independently whether they are simulated by forcing or read via the physical inputs.




If the force mode is activated without an established field bus connection the fieldbus interface will be deactivated for the duration of forcing. Another fieldbus connection can only be established after the force mode has been deactivated.




Safety related modules (safe I/O modules and safe power-feed modules) can not be forced.

The force mode allows you to carry out functional tests or preconfigure the station prior to commissioning, even if sensors have not yet been connected. To do so, you must change the operating mode of the web server.

► Click **Force/Enable**.

Overview	Station data ▾	Force ▾
		Enable 
		Disable
		Station

Menu Force/Enable

 **Force mode**

You are going to start the force mode.

In this mode, any manipulations of the application are possible, which can lead to severe personal injury and damage to property!

Use the force mode only when you know the connected equipment very accurate and you always know the consequences of your actions.


You can deactivate the force mode anytime with 'Force → Disable'.

Start force mode
Cancel


Starting the force mode

► Click **Start force mode**.

The web server is now in force mode, recognisable by the signal red bar above the station view. Forced channels are marked with a red border line.

 **Force Mode**

0123456789



Display of the station in force mode



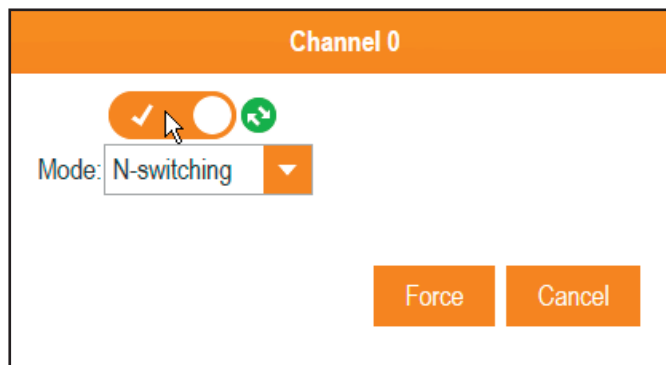
If the connection between web server and coupler is interrupted, the force mode is stopped immediately.

9.2 Forcing via the station view

- Click on the channel to be forced.

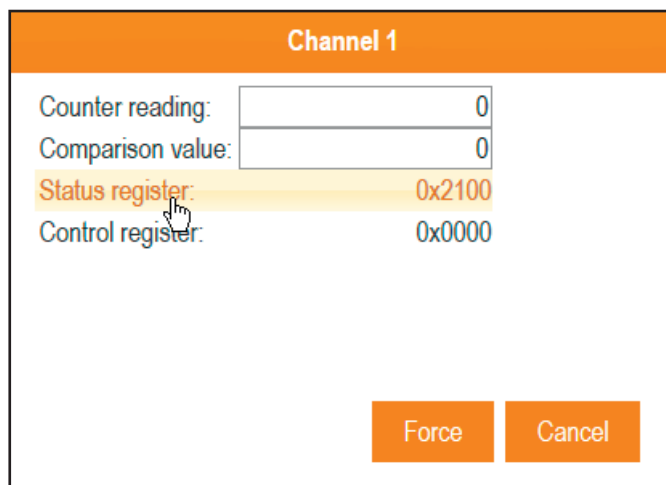
Dependent on the module type there are different options:

- To switch an output, click the switch and then **Force**.



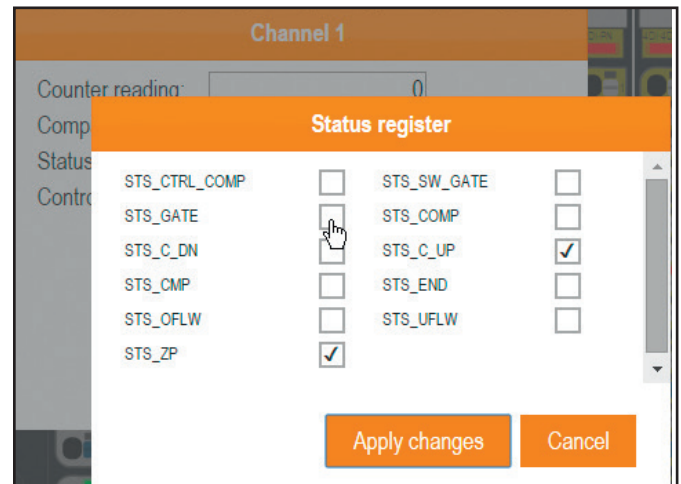
Forcing an output

- To force counter readings, type in the force values and click **Force**.



Forcing of modules with registers

- To force status or control registers (e.g. with counter modules or PWM modules), click on the corresponding entry.



Forcing registers

- Set or remove the check mark for each register to be forced and click **Apply changes**.

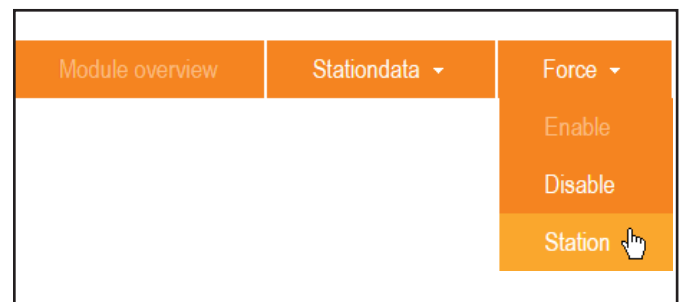
- Click **Force**.

The changes are transferred to the coupler.

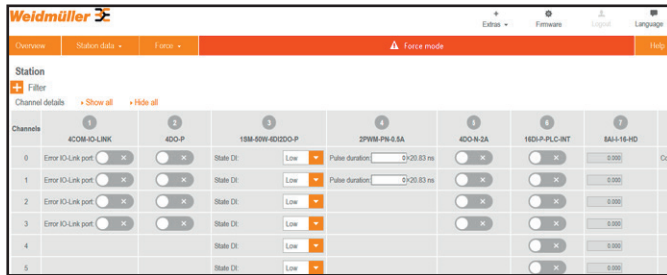
9.3 Forcing via the detail view

For a better survey change to the detail view. In this view modules can be shown and hidden, which is helpful, especially when working with larger stations.

- Click **Force/Station**.



Switching to detail view in force mode



Detail view of the station in force mode

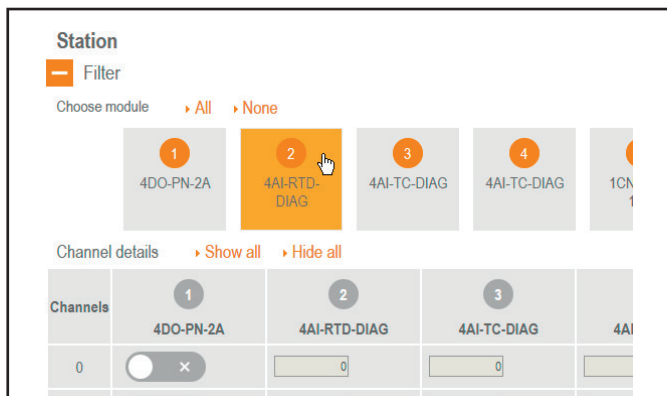
All active modules are displayed in the detail view. The switchable channels are provided with a switch.

- To see all channel details, click **Show all**.
- To see only the first value of each channel, click **Hide all**.

Filtering the module view

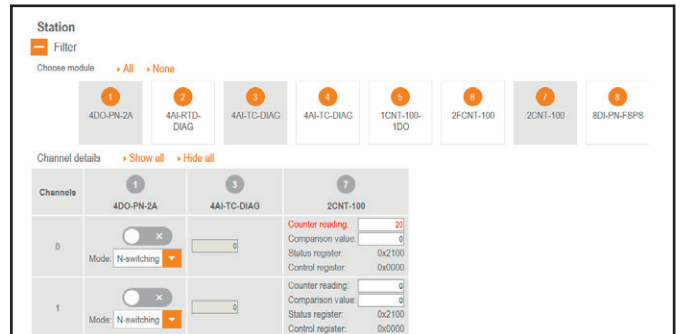
If you only want to see the modules that you would like to force, use the filter function.

- Click **Filter**.
- To show or hide a module in the overview, click the respective module in the filter bar.



Filtering the displayed modules

Displayed modules are highlighted grey in the filter bar, while hidden modules are displayed in white.



Display with filter set

Resetting filters

- To display all modules again, click **All**.
- To hide all modules, click **None**.

Forcing channels

Depending on the module type you can force channels directly either by clicking on the switch or typing in a value.

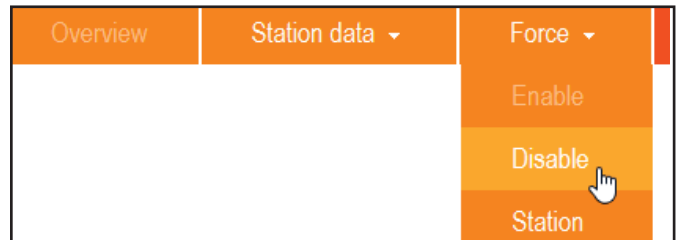
- Enter the desired changes.

Each change is marked with a green symbol until it is applied. All changes will only be saved after you click **Apply changes**. All changes will be undone after you click **Restore**.

- After entering your changes, click **Apply changes** to start forcing.
- Changes are transferred to the coupler, the green markings are removed.

9.4 Deactivating the force mode

- To deactivate the force mode, click **Force/Disable**.



Deactivating force mode

The station is reset to the state it had before the force mode was started.

10 Updating the firmware

- Download the latest firmware for each component you want to update from the [Weidmüller website](#).

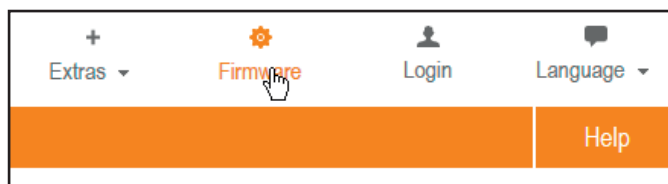
Firmware files for fieldbus couplers have the extension **.bsc**. For PROFINET couplers, for instance, the file might be named FBC-PN-IRT-00XX.bsc. The compatibility is checked during uploading the coupler firmware. Thus it is not possible to load an incompatible coupler firmware.

Firmware files for modules have the extension **.bsm**. You can determine for each individual module of a station whether an update is to be carried out.



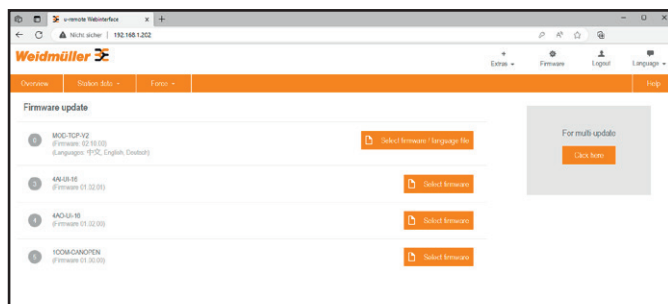
- A firmware update cannot be undone. The old firmware in the coupler/module is overwritten.
- While uploading the firmware files you cannot access the station via the web server.
- Make sure, that while uploading the firmware files
 - the power supply will not be interrupted,
 - no modifications are carried out on the u-remote station.

- To carry out a firmware update, click **Firmware** on the menu bar.



Menu firmware update

All components with a firmware are displayed with their version status.



Updating the firmware

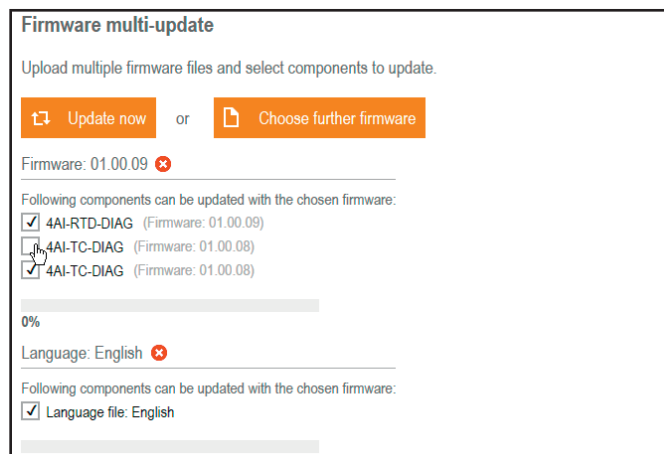
Single update

- If you want to update the firmware of a single component (e.g. only the coupler), click **Select firmware** beside this component.
 - Select the firmware file from the storage location on your PC and click **Open**.
 - Click **Update now**.
- The firmware is updated. As long as the update is running, the **BF** LED on the coupler flashes red. Once the data has been transferred, you are asked to restart the coupler.
- Click **Reset**.
 - Wait until the coupler has been restarted and the station view is displayed in the web server.

Multiple update

If you want to update several components, use the multiple update.

- Click **Click here** below **For multi-update** and then **Select firmware/language file**.
 - Select the firmware files from the storage location on your PC and click **Open**.
- The firmware files are displayed in the **Firmware multi-update** dialogue.
- Checkmark all files you want to update.



Checkmarking firmware files for multiple update

- You can deselect single components by clicking on the checkmark. These components will not be updated.
- You can delete each single file in the overview by clicking on the red and white cross.
- After selecting all desired files and the components, click **Update now**.

The firmware is updated. As long as the update is running, the **BF** LED on the coupler flashes red. Once the data has been transferred, you are asked to restart the coupler.

- ▶ Click **Reset**.
- ▶ Wait until the coupler has been restarted and the station view is displayed in the web server.



In case the web server does not restart, please act as follows:

- ▶ Clear the temporary browser data (cache).
Deleting the browser protocol is not sufficient.
- ▶ Start the web server again.

11 Help and FAQ

11.1 The web server cannot be loaded

- Are coupler and PC properly connected via an USB cable?
- Is the IP address for the USB port set correctly (see section 11.2)
- Clear the temporary browser data (empty cache, deleting the browser protocol is not sufficient) and reload the web server.
- If you call up the web server via HTTP, try calling up the web server via HTTPS.
- Check whether your IT security guidelines allow access via HTTPS, if the server certificate has not been signed by a trusted certificate authority.

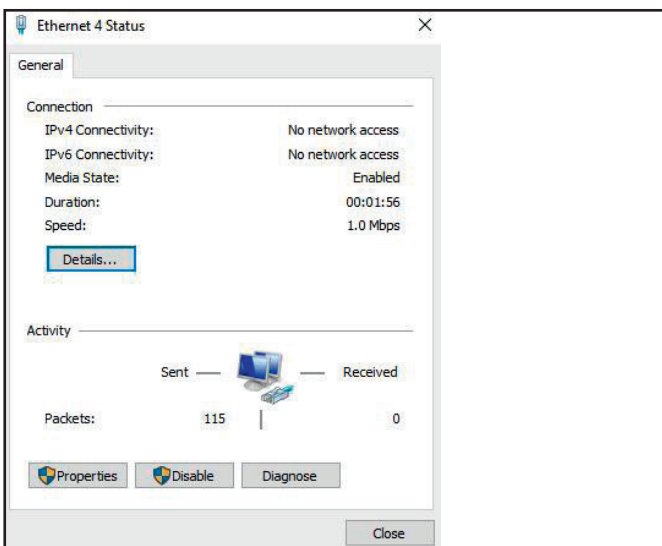
11.2 Identifying the IP address of the USB port

The following addresses can be used for the USB port: 192.168.1.202 (default), 192.168.2.202, 192.168.3.202, 192.168.4.202, 192.168.5.202 (default with UR20-FBC-EIP).

You can identify the IP address in the Network and Sharing Center via the Windows control panel.

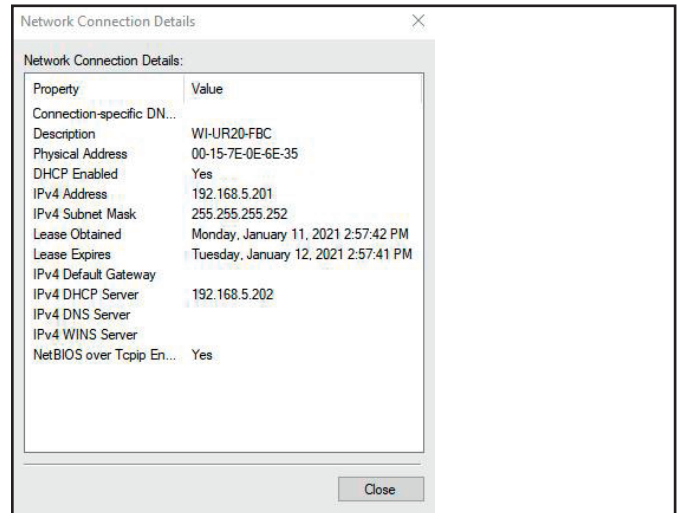
- Click the name of the connection that is displayed as **Unidentified network** (in the following example **Ethernet 4**).

The **Ethernet 4 Status** window is opened.



Ethernet 4 Status

- Click **Details...**
The **Network Connection Details** window is opened.



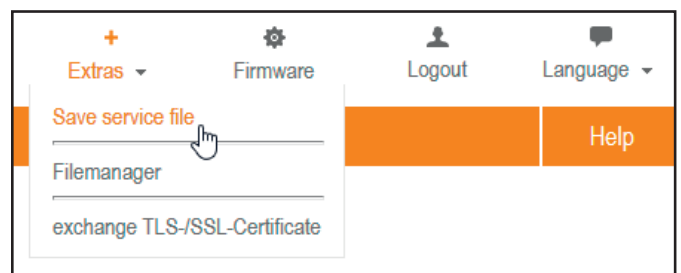
Network Connection Details

The IP address of the virtual LAN port (USB connection) is displayed next to **IPv4 DHCP server**. The standard IP address of the fieldbus coupler is: 192.168.1.202.

11.3 Saving a service file

In the event of problems and service cases, it may be helpful to save the current log data for the u-remote station. This data can provide service technicians with important information in the event of malfunctions.

- In the menu bar, click **Extras/Save service file**.

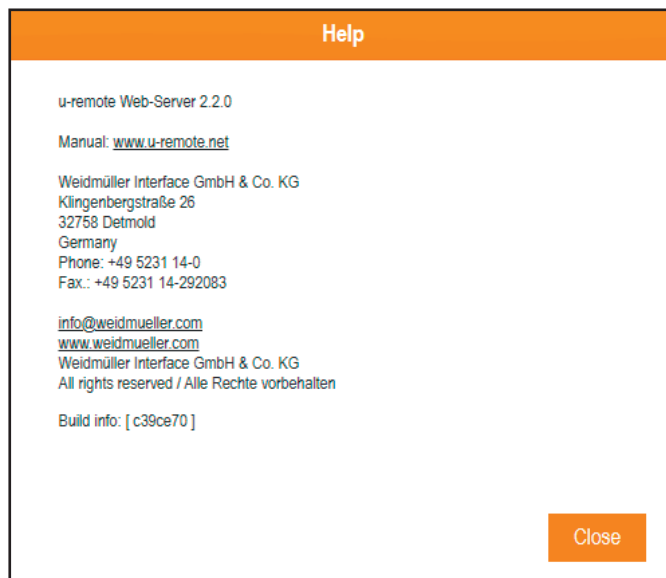


Menu Extras/Save service file

- Select a storage location on your PC for the service file (**logdata.wmi**) and click **Save**.

11.4 Documentation

- Click **Help**.



Help dialogue

- To open the manuals for the u-remote station and the webserver, click on the link.
- A connection to the Weidmüller website is established in a new browser window.

Weidmüller – Your Partner in Industrial Connectivity

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

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Personal support can
be found on our website:
www.weidmueller.com/contact

Order number: 2112220000/07/10.2023