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Manual
Connection of UNIGATE® for PROFINET to S7 and TIA-Portal

Deutschmann Automation GmbH & Co. KG
www.deutschmann.com | wiki.deutschmann.de

Disclaimer of liability

We have checked the contents of the document for conformity with the hardware and software described. Nevertheless, we are unable to preclude the possibility of deviations so that we are unable to assume warranty for full compliance. The information given in the publication is, however, reviewed regularly. Necessary amendments are incorporated in the following editions. We would be pleased to receive any improvement proposals which you may have.

1 General introduction

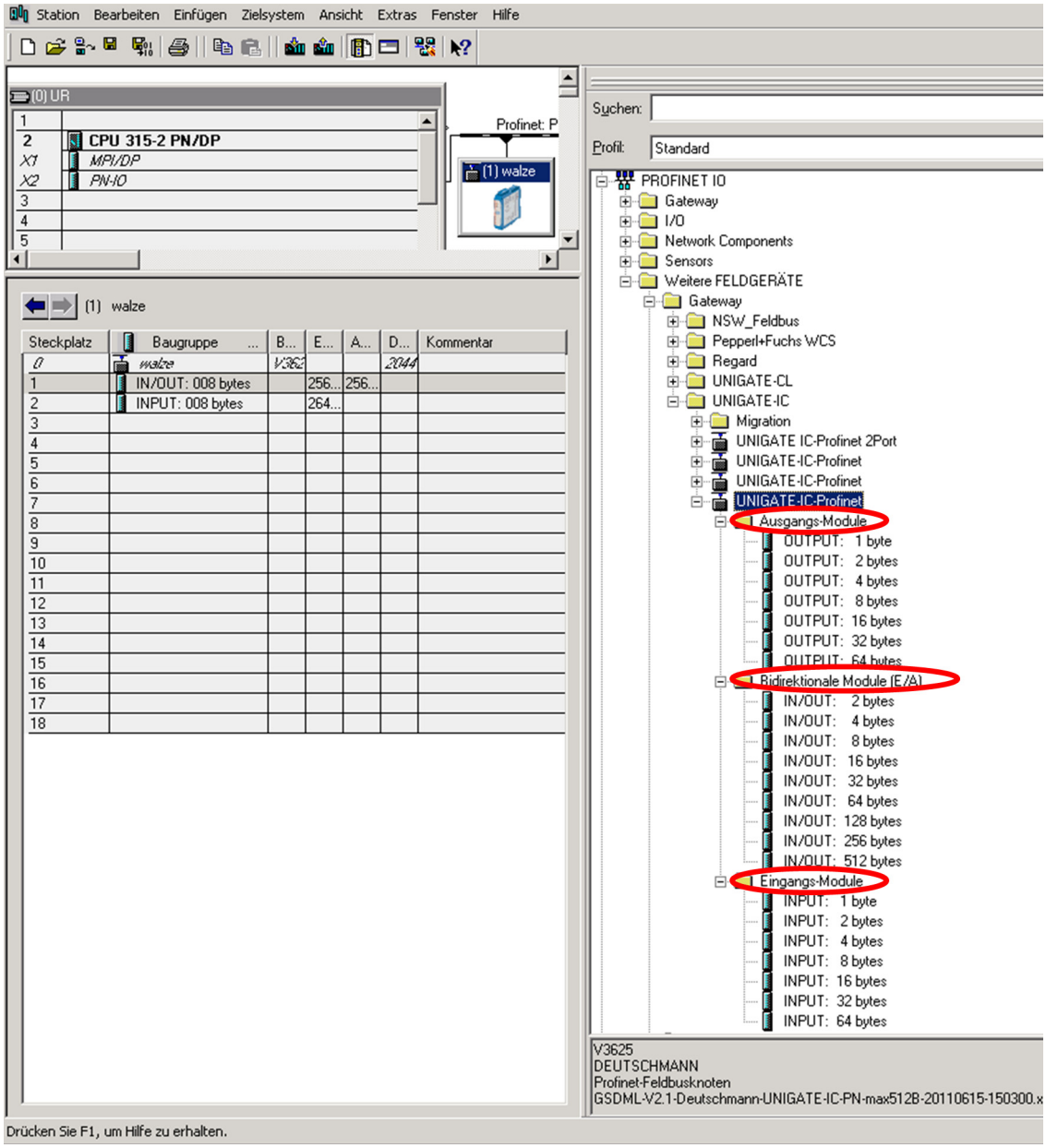
This manual describes the connection of a UNIGATE® for PROFINET to a Siemens® S7 control and to the TIA portal from Siemens® .

2 Connection of UNIGATE® for PROFINET to S7 control

2.1 Insert UNIGATE®devices

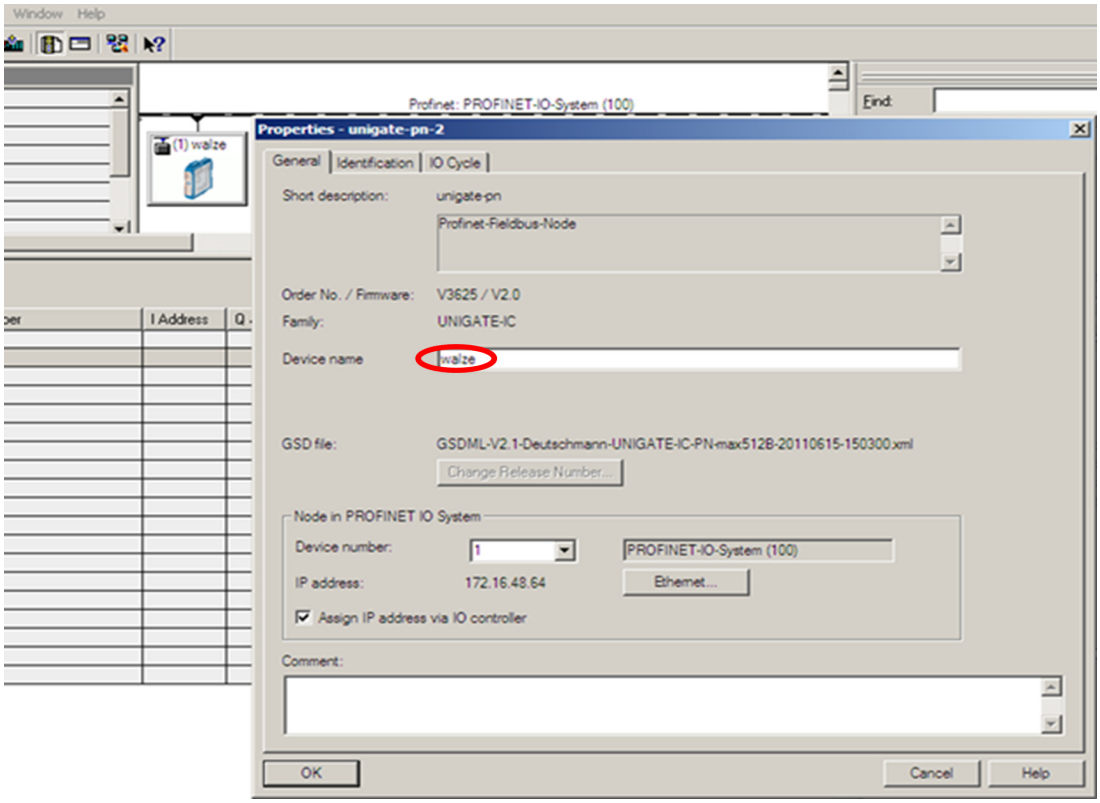
First, the device (UNIGATE® PROFINET) has to be inserted via the hardware configuration.

If the corresponding device (UNIGATE® PROFINET) is marked, corresponding IN/OUT or INPUT or OUTPUT modules can be inserted.



2.2 Device name for inserted UNIGATE®-Geräte

Double-click on the inserted device (UNIGATE® PROFINET) to access its properties. Among other things, the device name can be changed here.



After the device has been inserted into the project, the device name must be stored. This must match the current device name that was entered in the properties window. Only then can the device be recognized by the master.

2.3 PROFINET device name

Note:
In the delivery state, the gateway does not yet have a device name!
The device name is assigned to the gateway via the configuration software. Alternatively, the device name can also be changed via FTP (file “devname.txt”).
The following rules apply to the device name under the Profinet specification:

- It consists of one or more name parts separated by a period.
- The total length is 1 to 240 characters.
- The length of a name part is 1 to 63 characters.
- A name part consists exclusively of lowercase letters, numbers and the hyphen.
- Neither the first nor the last character of a name part is a hyphen
- The first part of the name does not begin with "port-xyz" or "port-xyz-abcde", where a, b, c, d, e, x, y and z are digits.
- It is not of the form "k.l.m.n", where k, l, m and n are numbers between 0 and 999.

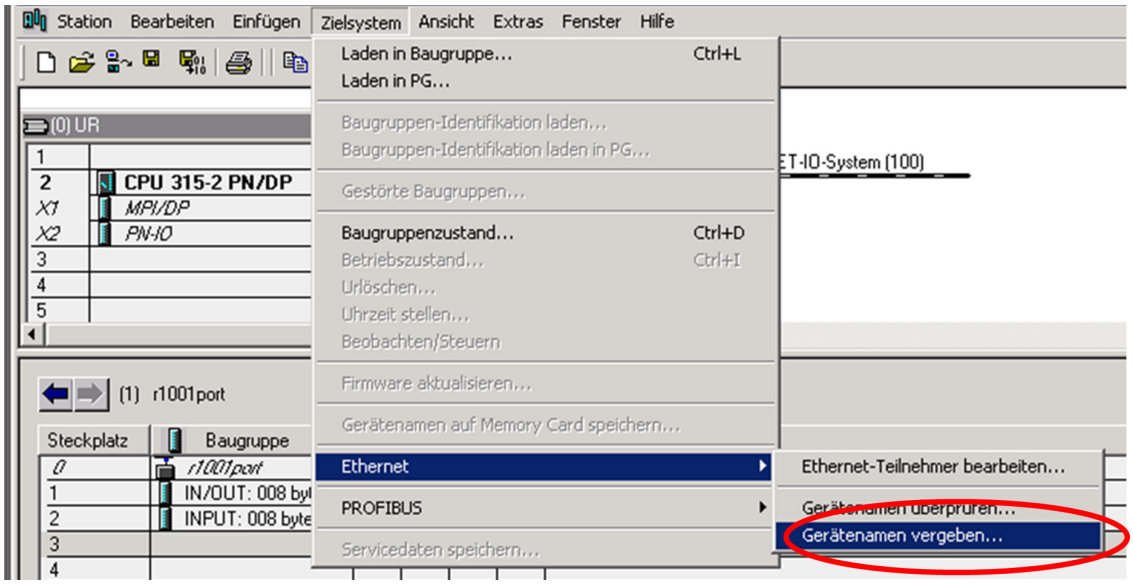
3 Assign device name to the respective UNIGATE®device

There are two possibilities for the device name of the corresponding device (UNIGATE® PROFINET). The device name can be assigned via the hardware configuration or via the project view.

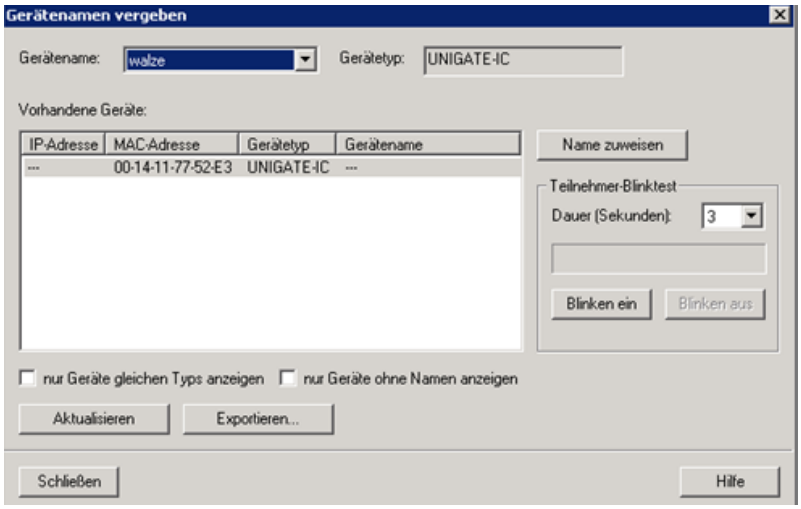
3.1 Assign via the hardware configuration

First, the device (UNIGATE® PROFINET) has to be marked in the hardware configuration.

Then select the item **"Assign device name"** via the menu item **"Target system"** under Ethernet.

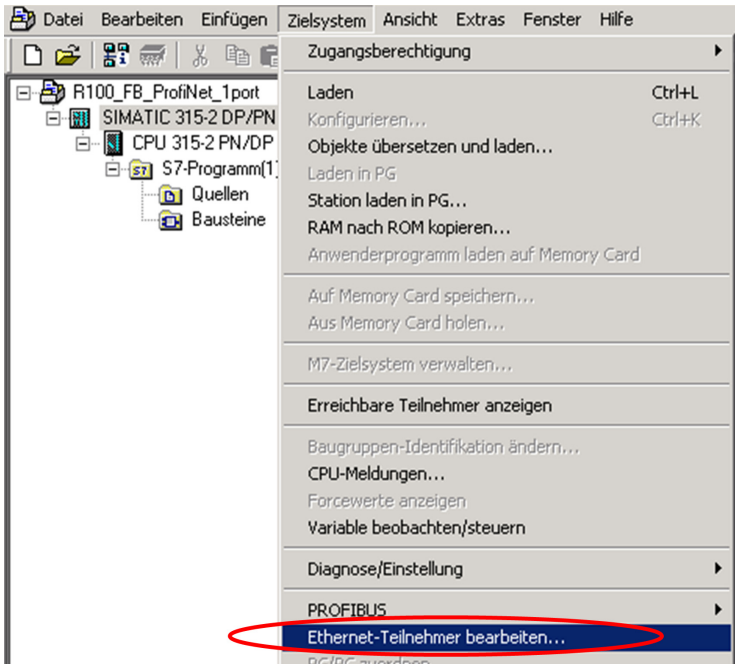


In the next window, the desired device name can be selected using the drop-down menu and then assigned using the **"Assign name"** button.

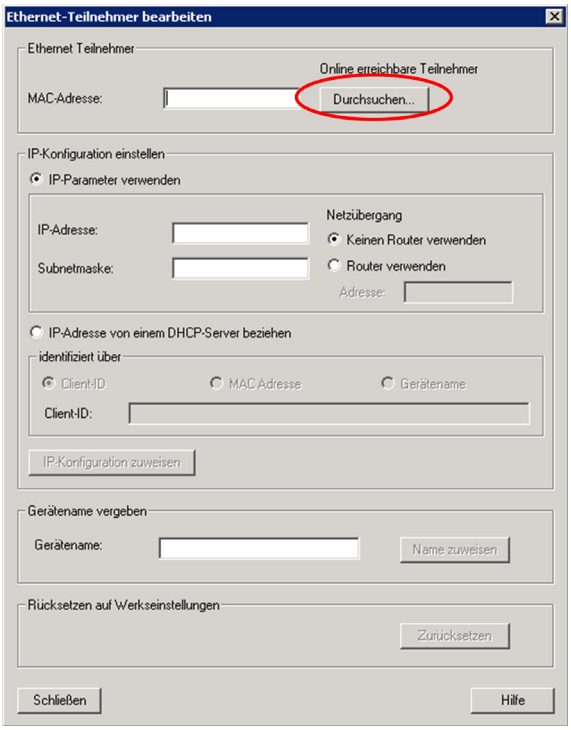


3.2 Assign via the project view

In the project view, select **"Target system"** and select the item **"Edit Ethernet participants ..."**.

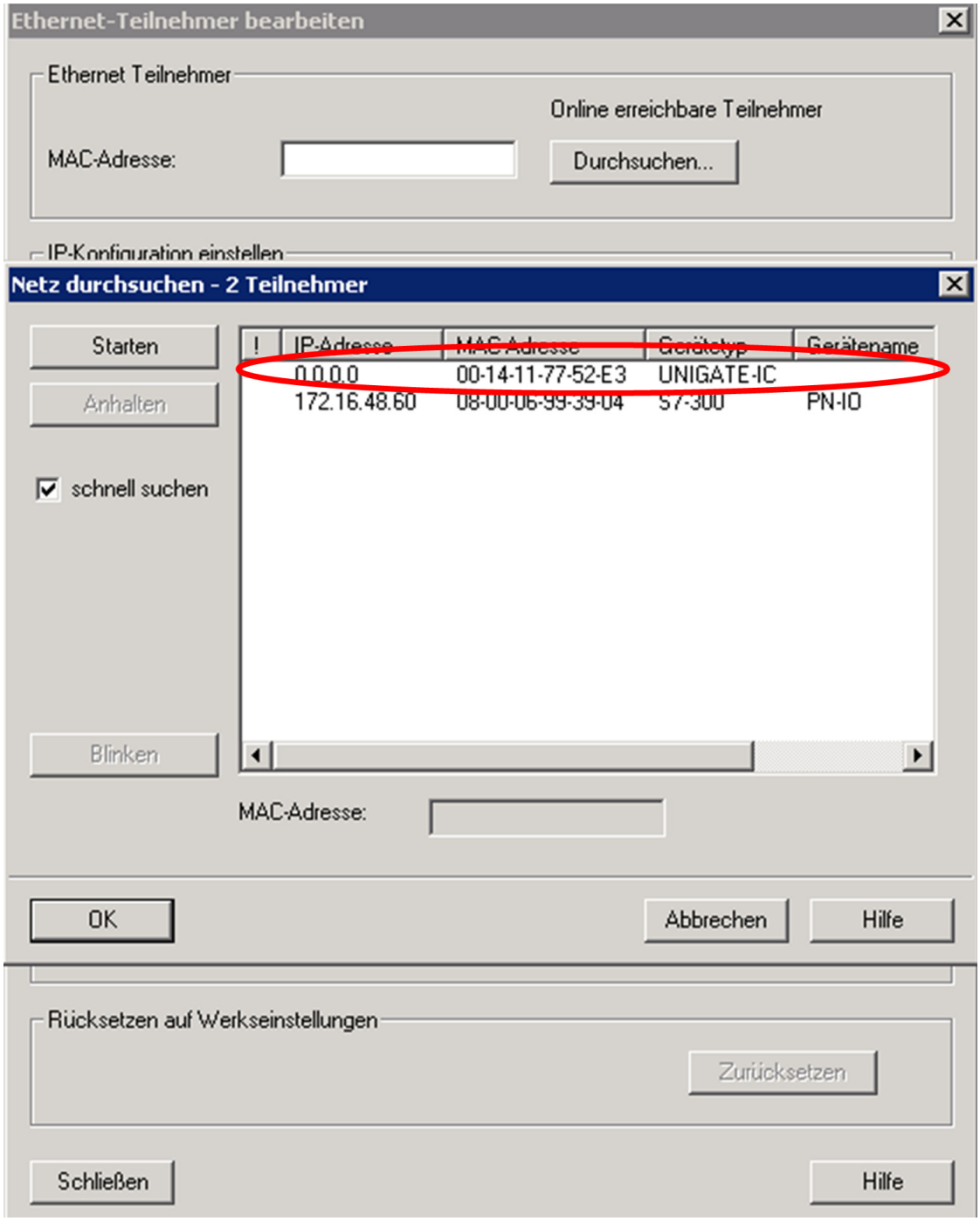


In the following window, click on the **"Search"** button to display all the PROFINET participants on the bus that can be reached.



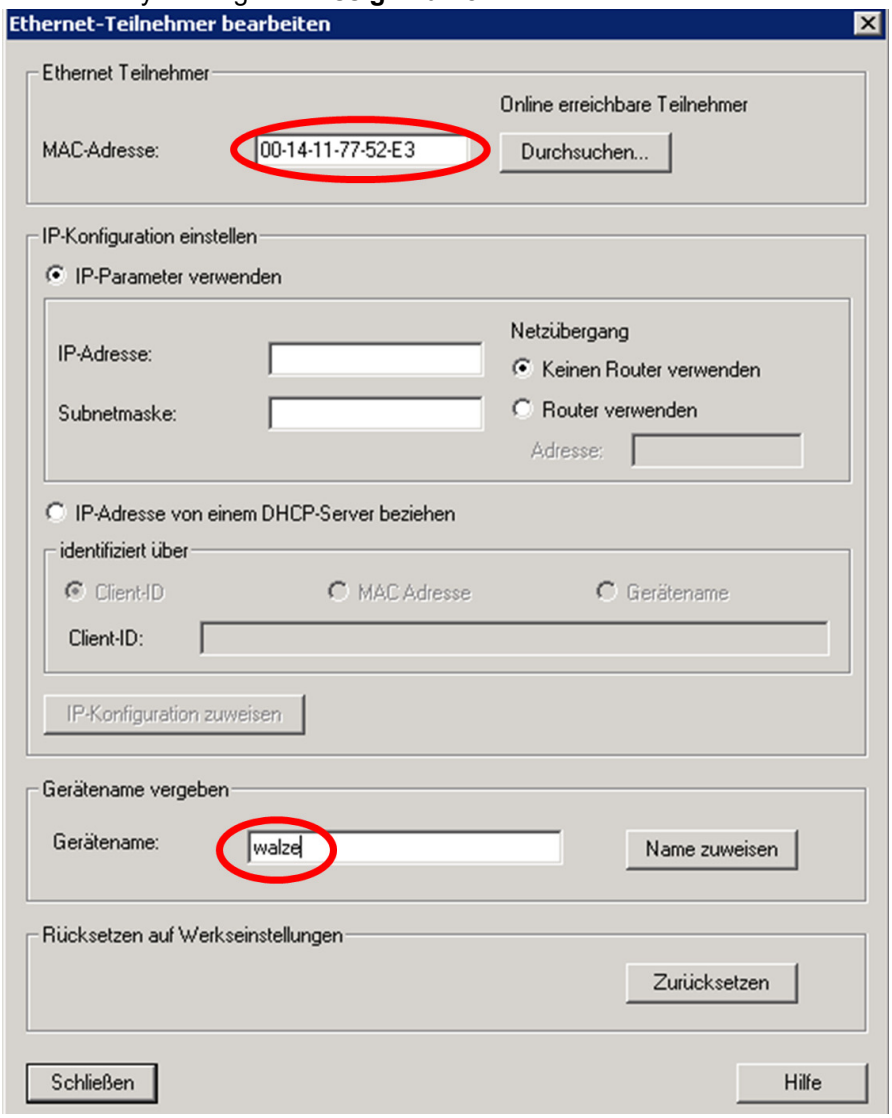
The desired device can now be selected from the list of found participants via the displayed MAC addresses, marked and confirmed with the **"OK"** button.

The MAC address of the device can be found on the nameplate.

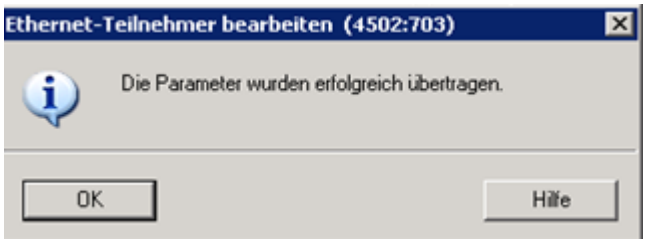


The MAC address of the selected device is now displayed in the following window. Enter the device name that was previously assigned in the properties under **"Assign device name"**.

Transfer it by clicking the **"Assign name"** button.

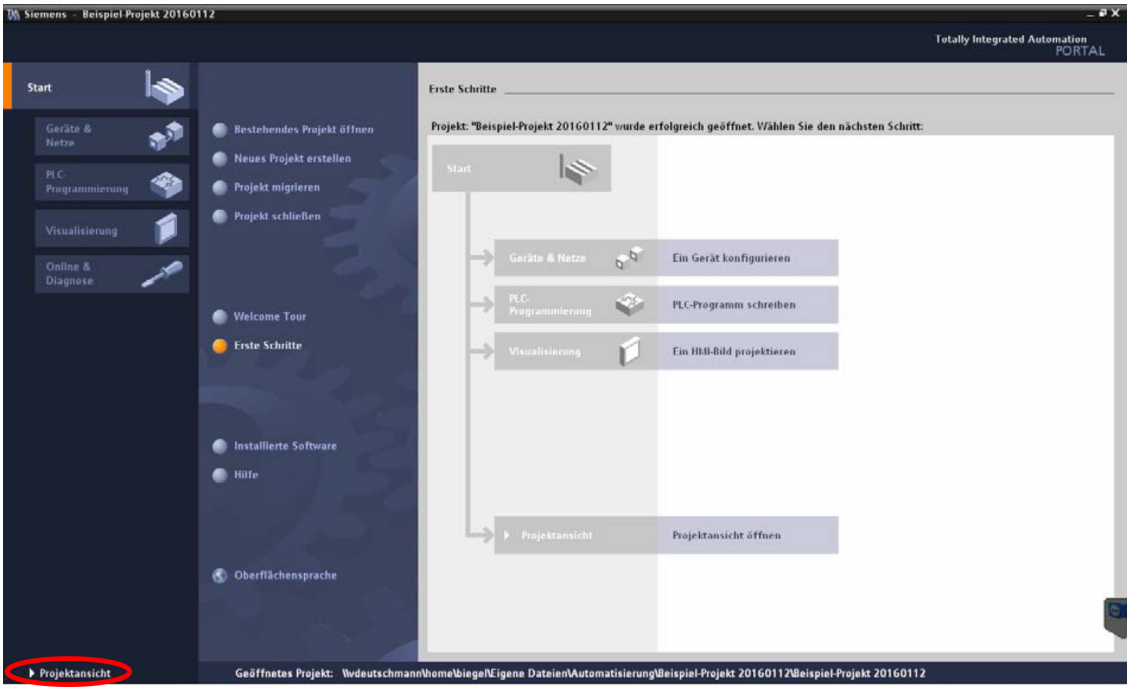


Finally, an information window appears that the parameters have been transferred successfully.

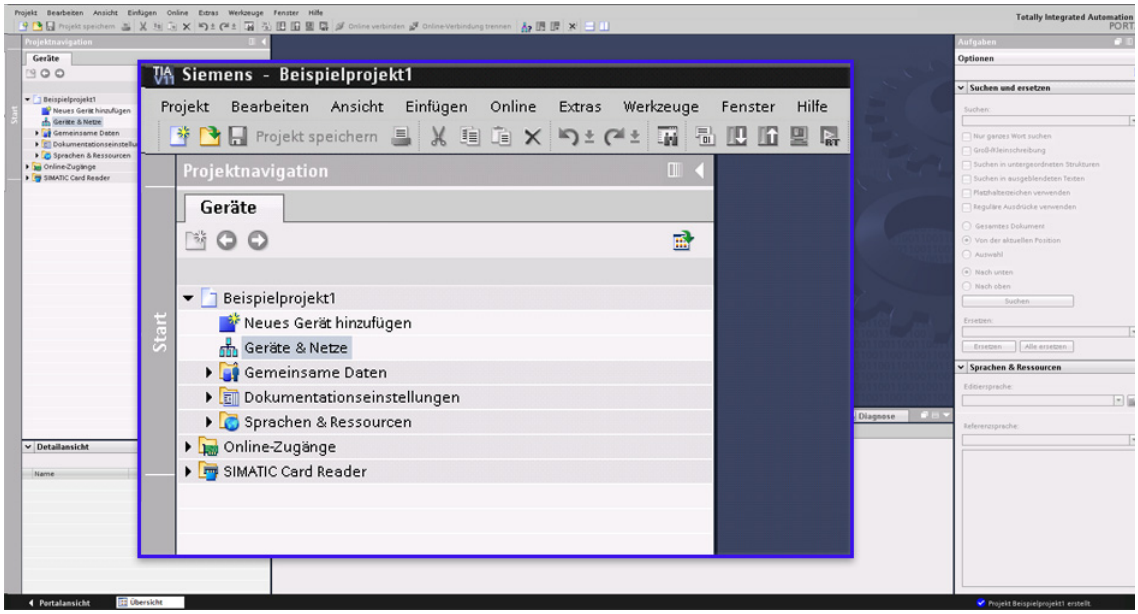


4 Connection of UNIGATE® for PROFINET to TIA portal

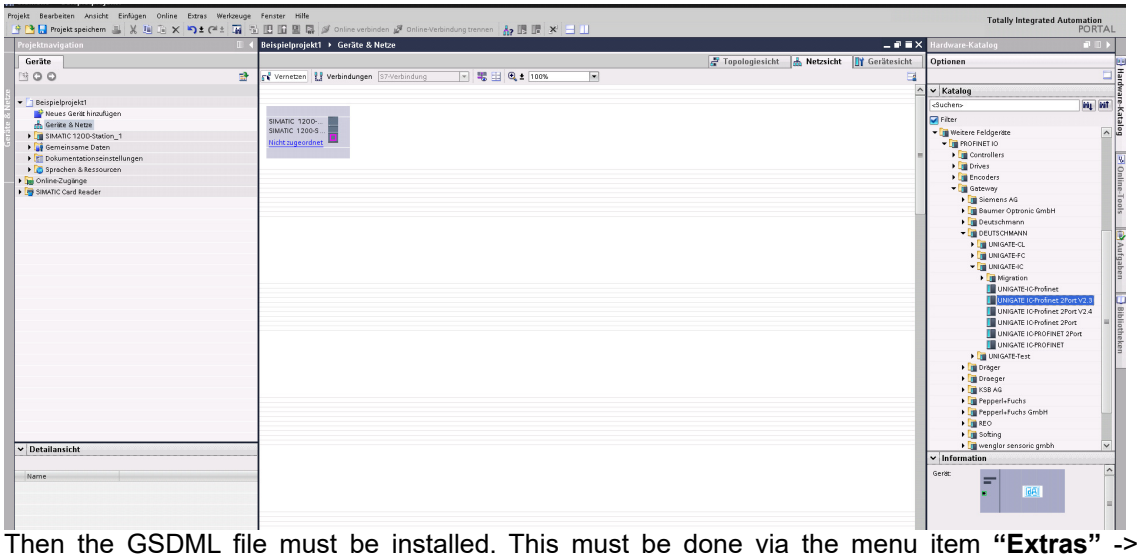
Start the TIA Portal. Then create a new project or open an existing project. The project view can then be opened using the **"Project view"** button.



Open the **"Devices & Networks"** item in the project navigation by double-clicking.



In the following **"network view"** there may already be a controller and other PROFINET devices.

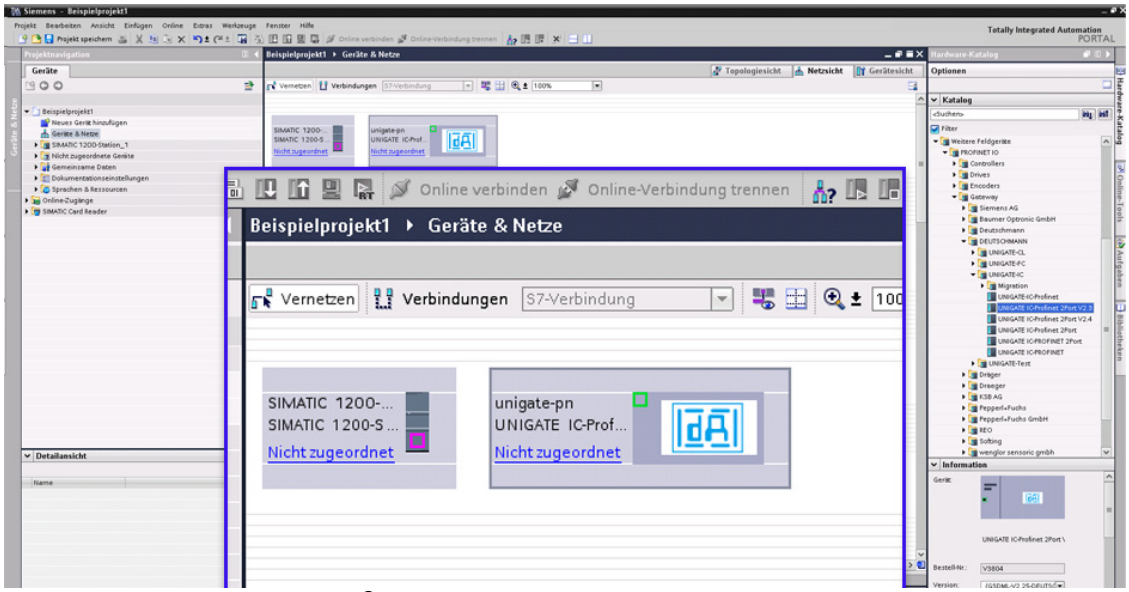


Then the GSDML file must be installed. This must be done via the menu item **“Extras”** -> **“Install GSD file”**.

The TIA portal must be closed and restarted. Only then is the GSDML file accepted.

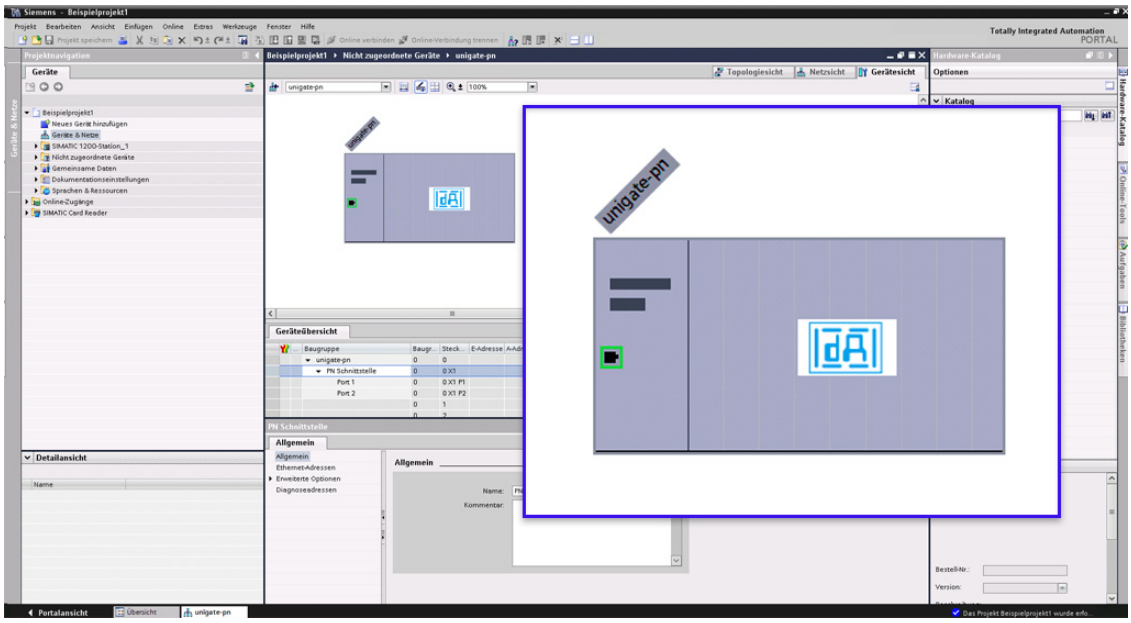
The corresponding device must be selected via the **"Catalog"** (e.g. via the **"Additional field devices"** folder) and added to the project or automatically added by double-clicking.

For the added UNIGATE® device click on **"not assigned"** and connect the device to the control.



Depending on the UNIGATE® device, I/O modules may have to be added. For this, the UNIGATE® device must first be marked with a double click so that the "device overview" is opened.

I/O modules can then be added automatically via the catalog by double-clicking.



Now the device name can be assigned if it is not yet stored in the UNIGATE® device.

The device name can be changed in the project by double-clicking on the UNIGATE® device.

With a right-click on the UNIGATE® device, the device name can be assigned to the UNIGATE® device.

A dialogue window opens. The LED blink test must be carried out in this dialogue window. To do this, the UNIGATE® device found must first be selected in the table. The ERROR LED flashes.

Assign the device name now. Scan the network again and check whether the device name has been accepted.

Where required, save the project and then compile the project in the toolbar next to the **"Load"** arrows. Select the UNIGATE® device again and load the project into the control.

"Load" must also be selected in the following window and **"Start all"** must be checked.

Finally, click on **"Finish"**.
The status LED on the UNIGATE® device must change to static.

Finished.

5 Topology detection

If the topology of a UNIGATE® PROFINET device is saved in an S7 control, a UNIGATE® PROFINET device can be replaced directly in the event of exchange and the S7 control automatically assigns the device name and the corresponding IP address. However, the following must also be observed:

The UNIGATE® PROFINET device must be in the "delivery-status". This means that no device name or IP address may yet have been assigned. In addition, the UNIGATE® PROFINET devices must also have the corresponding script in the device.

If this topology detection is not available, the device name must be assigned to the new UNIGATE® PROFINET device. There are several options available for this, depending on the control.

6 Servicing

Should questions arise that are not covered in this manual you can find further information in our

- FAQ/Wiki area on our homepage www.deutschmann.com or directly in our Wiki on www.wiki.deutschmann.de

If your questions are still unanswered please contact us directly.

Please note down the following information before calling:
- Device designation
- Serial number (S/N)
- Article number
- Error number and error description

Your request will be recorded in the Support center and will be processed by our Support Team as quickly as possible (Usually in 1 working day, rarely more than 3 working days.).

Technical Support hours are as follows:
Monday to Thursday from 8 am to midday and from 1 pm to 4 pm, Friday from 8 am to midday (CET).

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6.1 Returning a device

If you return a device, we require as comprehensive a fault/error description as possible. We require the following information in particular:

- What error number was displayed?
- What is the supply voltage (±0.5 V) with Gateway connected?
- What were you last doing or what last happened on the device (programming, error on power-up, ...)?

The more precise information a fault/error description you provide, the more exactly we will be able to pinpoint the possible causes.

6.2 Downloading PC software

You can download current information and software free of charge from our Internet server.