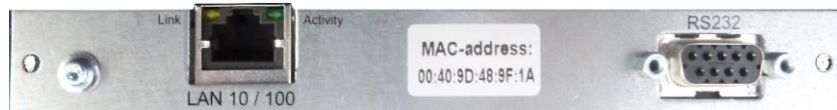


TC.ETHERNET Manual

**Ethernet driver installation Version
4.5.372.0**



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General information

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1. TC-Ethernet option



Fig. 1 TCEthernet interface -1- in combination with RS-232 REAR interface -2-.

1.1. Installation of the interfaces

The interface is built into the rear side of the device. It can be already installed in a device on delivery or retrofitted.

Combination with other interfaces

- It is not possible to operate an active TCEthernet interface and the RS-232 interface at the same time.
- Combination with other interfaces is not possible.

Technical characteristics

- Type of bus connection: socket, RJ45

1.2. Conditions for the Ethernet interface

Standard configuration of the interface card

- DHCP server: the card is configured for the allocation of IP addresses by a DHCP server.
- APIPA: If an address is not allocated by a DHCP server in a specific time window, the card automatically assigns itself an IP address (APIPA). Visible on the IP address: 169.254.xxx.xxx.

Crossover cable

The Ethernet interface card cannot switch automatically between a crossover cable and an uncrossed network cable. If the other end does not support Auto-MDI(x), you will need a crossover cable for the installation.

1.3. User level

| Necessary user level for installation | |
|---------------------------------------|---|
| Software TopControl | User: „Advanced User“ Password: „kilowatt“ |
| Webinterface of the card | User: „administrator“ Password: „kilowatt“ |

Table 1 User rights for TCEthernet installation.

2. Installation of the device driver

2.1. Preparation

First integrate all network devices in your company's network before you run the driver setup on the PC with the TopControl application. Make a note of the MAC addresses and the device name along with its location. You will find the MAC address on the panel on the interface card.

You can then search for specific devices later.

Procedure for a static IP address or dynamic IP address on the TopCon power supply

- For procedure for a static IP address see section 2.3, page 5.
- For procedure for a dynamic IP address see section 2.4, page 6.

2.2. Using the APIPA function

Preparation

- It is best to contact your system administrator prior to installation.
- The Ethernet interface card cannot switch automatically between a crossover cable and an uncrossed network cable. If the other end does not support Auto-MDI(x), you will need a crossover cable for the installation.

Procedure

- Connect the Ethernet interface of the PC with the installed software TopControl directly with the Ethernet interface of the power supply.
- Switch on both devices.
 - ↳ Both Ethernet interfaces assign themselves a IP address. Visible on the IP addresses: 169.254.xxx.xxx.
- Start the software TopControl to assign a static IP address. For further information refer to section 2.3, page 5.

2.3. Procedure for assigning a static IP address to the power supplies

You will find further information on the various buttons on the subsequent “TCEthernet interface” submenu in chapter 5, page 13.

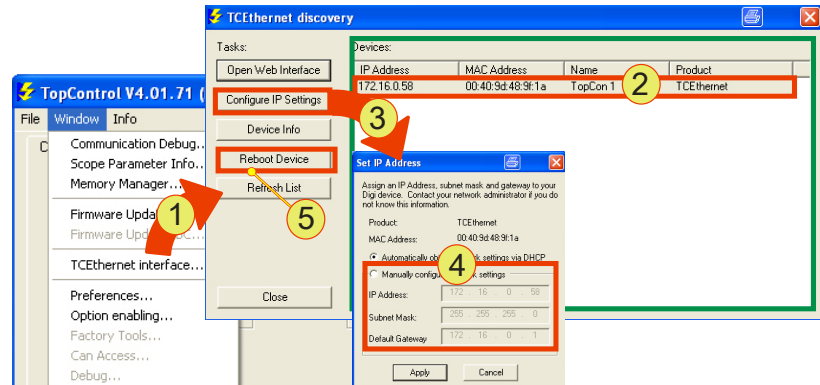


Fig. 2 Sequence in the TopControl application

Procedure

- It is best to contact your system administrator prior to installation.

In case of allocating a IP address via DHCP server:

- First integrate all TopCon power supplies in the company’s network. The best method is to assign the IP addresses using a DHCP server. For further information refer to section 2.4, page 6.

In case of allocating a IP via APIPA

- Direct Ethernet connection between PC and TopCon power supply. For further information refer to section 2.2, page 4.

Allocating a static IP address

- Start the TopControl application and in the “Window” menu item select the “TCEthernet interface...” -1- submenu item.
 - ↳ The “TCEthernet discovery” windows opens.
- Mark the required TopCon power supply -2- in the list.
- Click the “Configure IP Settings” -3- button.
 - ↳ The “Set IP Address” windows opens.
- Activate “Manually configure network Settings” -4-
 - ↳ The boxes for the static IP address assignment can then be edited.
- Enter your network settings and click the “Reboot Device” -5- button so that the new settings are applied by the network card.
- Repeat this procedure for all TopCon power supplies.
- Make a note of the IP and MAC address allocated, after you have refreshed the list.

- Undertake the driver setup for each power supply using the static IP addresses in the network, as per chapter 2, page 6.
- You have completed the setup of the static IP addresses.
- Optionally you can rename the interfaces in the Device Manager or assign a new host name via the web interface.

2.4. Procedure of allocation a dynamic IP address

Preparation

The interface card of the power supply is configured for using the DHCP function at the delivery.

The company's Ethernet network has to be prepared for using an dynamic IP address allocation:

- It is best to contact your system administrator prior to installation for defining a IP address range in the DHCP server.
- Sometime an automatic allocation of IP addresses is bound to the MAC address of the Ethernet card.
Tell the MAC address to the system administrator, which can be found on the Ethernet card.
- The PC with the installed software TopControl is connected with the company's network.

Procedure

- Connect the Ethernet card of the TopCon device to the company's network.
- Switch on the TopCon device
- Wait for a moment, the Ethernet card will allocated a IP address automatically.
- Check the IP address of TopCon device via the software TopControl, see section 5, page 13.
- Allocation a Com port for the according IP address.
For further information refer to section 2.5, page 7.

Procedure in case of a failed assigning of a dynamic IP address

- ↳ The APIPA function of the Ethernet card has started.
Visible on the IP address: 169.255.xxx.xxx
- ↳ Contact the system administrator
- ↳ The system administrator can check the DHCP configuration.
- ↳ The system administrator can check the Ethernet cables.
- ↳ The system administrator can check the right management of the company's network.
- Use the APIPA function
For further information refer to section 2.2, page 4.

2.5. Driver installation with allocation of IP address and COM port

Start the setup program “Setup.exe” on the installation CD supplied.

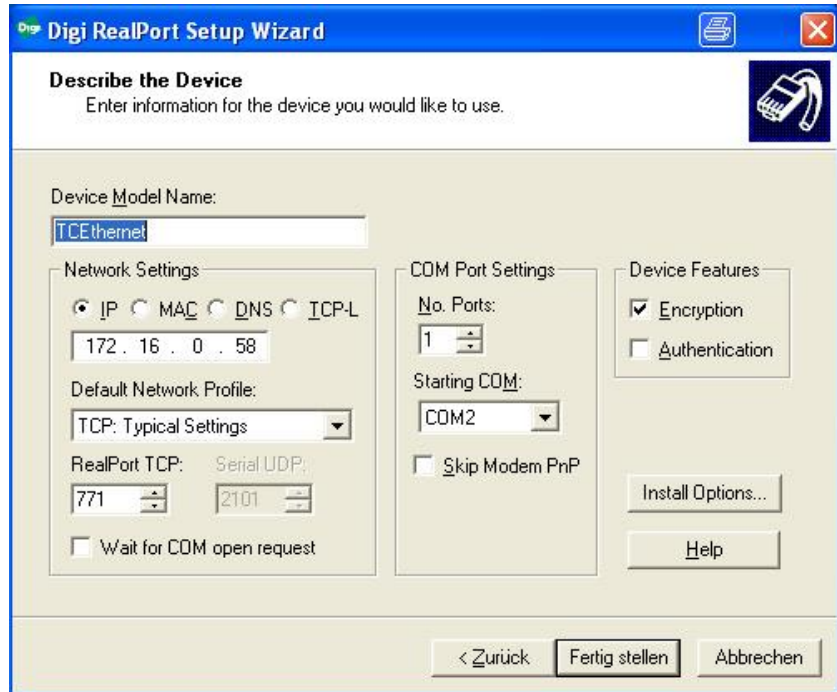


- Click the <Next> button
- ↳ The “Select Device” window opens



- Click the “Refresh” button so that all devices are displayed

- Select a device (TCEthernet interface) (marked in blue).
- ↳ All interface parameters for the setup process are automatically applied.
- Click the <NEXT> button
- ↳ The “Describe the Device” windows opens.



- Click the <Finish> button
Do not change any parameters!
- The installation starts.
The installation process takes some time until it is completed.

3. Indication of the Ethernet card in the Device Manager in the operating system

- Open the Device Manager.
 - 1- Allocation of the Com port via your IP address for the interface
 - 2- Indication of the interface card in “Mehrfachadapter (seriell)”

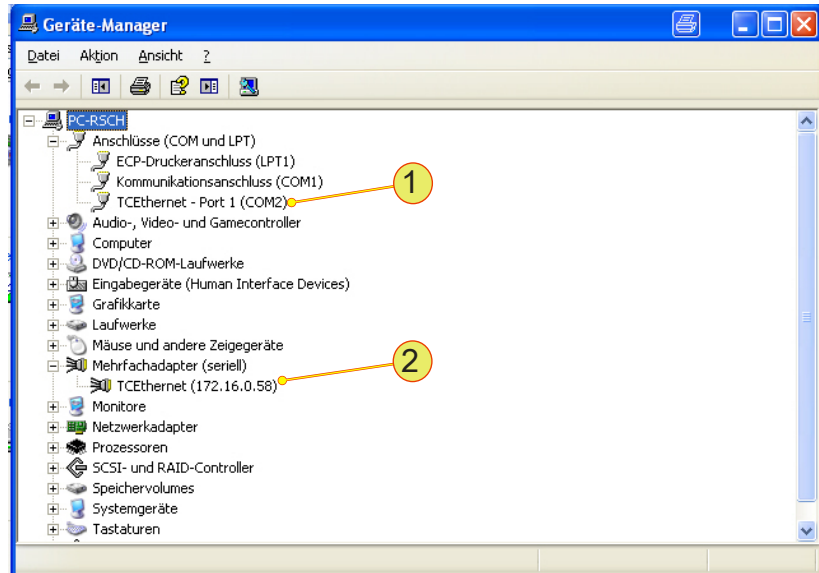


Fig. 3

Changing the name in the Device Manager

CAUTION If the IP address is changed (e.g. by a DHCP server) the allocation of the device and COM port is lost. The following entries must be entered again in case of a new IP address.

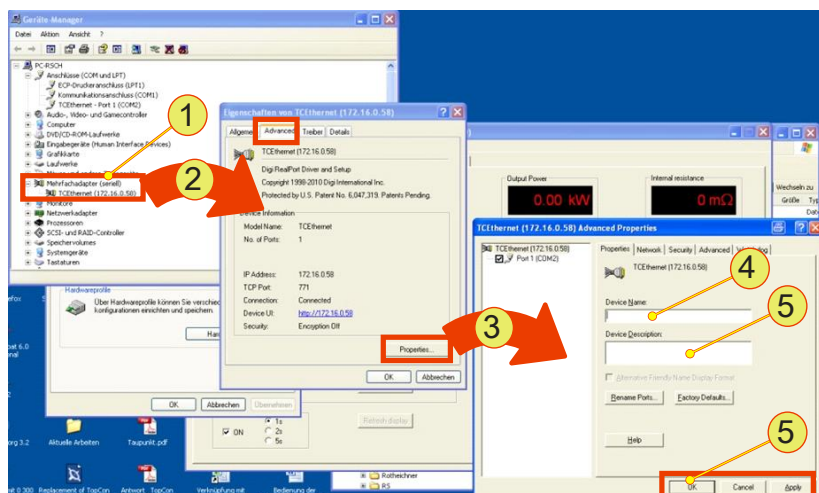


Fig. 4

Procedure

- Open the Device Manager.
- Click the required device under “Multiple adapter (seriell)”
 - 1- using the left mouse button
 - Click with the right mouse button “Properties” on the context menu
- ↳ The “Eigenschaften von TCEthernet....”
 - 2- window opens
- Select the <Advanced> tab
- Click the <Properties> -3- button
- Select the <Properties> tab in the “Advanced Properties” window
- Type the name -4- and description -5-
- Accept your changes using “Apply” or “OK” -6-

4. Adding a new COM port driver and removing an old COM port driver

4.1. Adding a new device

- Start the driver setup program on the driver CD supplied.
- Select “Add a New Device” -1- in the start window.



Fig. 5

- Proceed as in “Installation of a device driver”, see chapter 2, page 6.

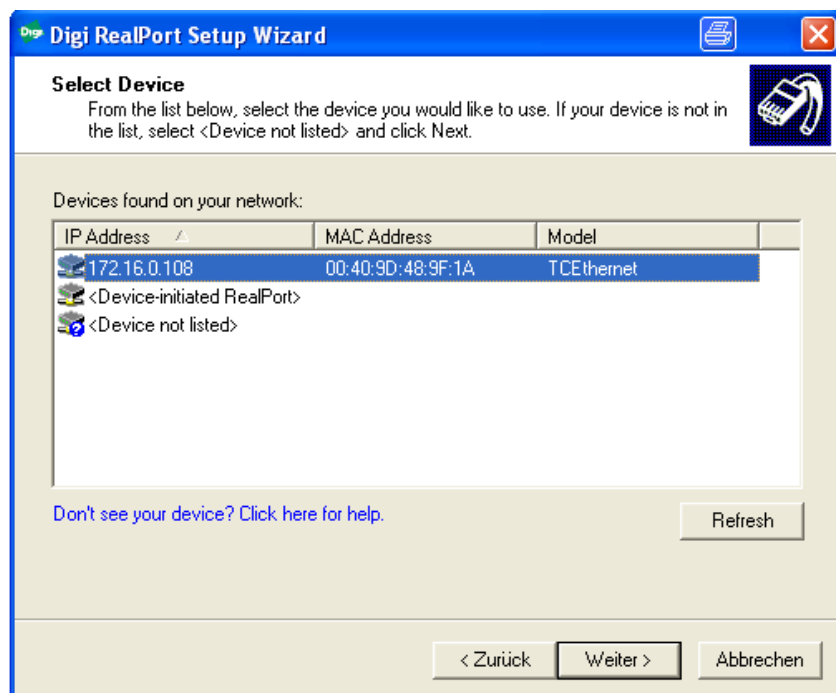
4.2. Removing a COM port driver

Uninstall the IP addresses and Com ports shown in the Device Manager that have become superfluous in the “Ports” group.

- Start the setup program setup.exe on the installation CD supplied.
- ↳ The setup program detects device drivers already installed
- Select “Remove Existing Device” -2- and accept your selection using “Next”.



↳ A window for selecting from the device drivers installed opens.



- Select the required driver and accept your selection using the “Next” button
- ↳ The selected driver is uninstalled.
- ↳ The entries are removed from the system Device Manager.
- ↳ The entries are no longer available for the automatic establishment of a connection in TopControl.

5. TopControl submenu - TCEthernet Interfaces

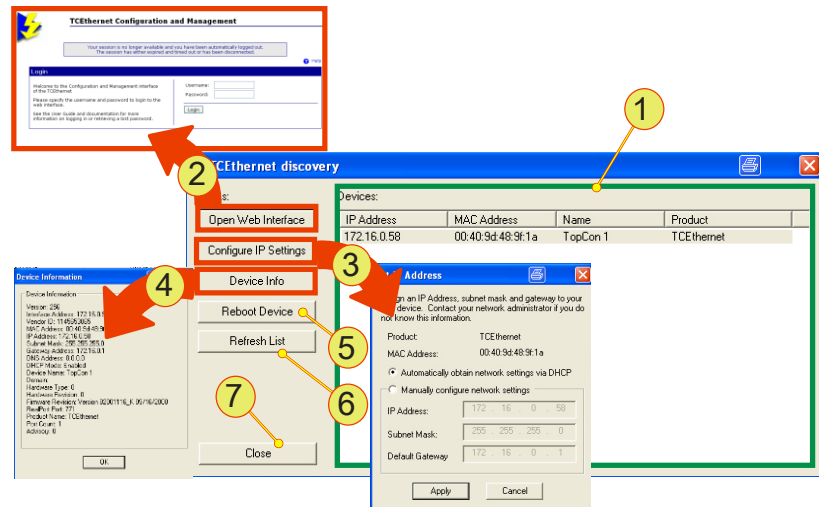
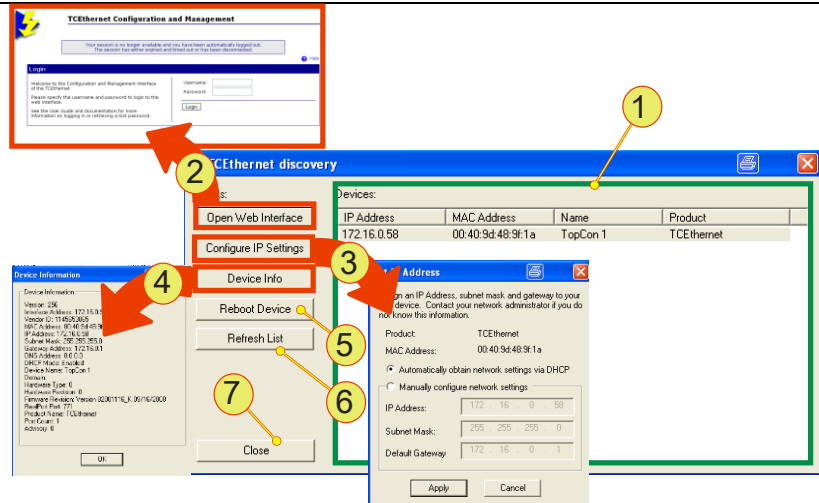


Fig. 6 Setting up the TCEthernet interface

| Entries on the TCEthernet Interfaces submenu | |
|--|--|
| 1 | <p>List</p> <p>Indication of the IP address, MAC address and the name (if one has been assigned). TCEthernet is the product name for the Ethernet card. Update the list using the button -6-. Selected power supplies (rows) can be edited in -2- and -3-.</p> |
| 2 | <p><Open Web interface>, button</p> <p>Opens in your web browser a configuration page from the Ethernet card manufacturer. You can obtain online help in English using the “Help” link. Access data: User: administrator Password: kilowatt</p> |
| 3 | <p>“Set IP Address”, dialog box</p> <p>Configuration of the Ethernet card selected in -1-. You can select between the manual and automatic allocation of an IP address. Please contact your system administrator before you make changes. To apply changes you must reboot the Ethernet card using -5-.</p> |
| 4 | <p>“Device Information”, window</p> <p>Network and software version information on the Ethernet interface card selected in -1-.</p> |

Continued on next page.



| Entries on the TCEthernet Interfaces submenu (continued) | |
|--|---|
| 5 | <Reboot Device> , button Reboots the Ethernet interface selected in -1-. The power supply is not rebooted! |
| 6 | <Refresh List> , button Refreshes the list -1- |
| 7 | <Close> , button for closing the window. |

Table 2 Parameters on the TCEthernet interface submenu

6. Connecting the power supply to TopControl

The TopControl application automatically connects to a power supply via the Ethernet after it is started.

Pay attention to the following points:

- The serial interface RS-232 is not allowed to be connected directly to a power supply.
- The power supply with the lowest COM port is selected automatically.

Connect a power supply to the TopControl application using the following console command:

```
'C:\Program Files\Regatron\TopControl\TopControl.exe /COMStart=5 /COMEnd=5'
```

In this example communication is with the device with COM port 5. "COMStart" defines the start of the COM port search range and "COMEnd" the end of the COM port search range.



You can create a desktop shortcut for each power supply with the related console command.

In this way you can access different power supplies with a click of the mouse.