USER MANUAL

# ControlPlex® CPC20
# BUS CONTROLLER
## Firmware Update Manual

E-T-A®
ENGINEERING TECHNOLOGY

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# 1. GENERAL INFORMATION

**SAFETY INSTRUCTIONS**
This operating manual provides information on possible hazards for your personal safety and the prevention of property damage. The following safety symbols are intended to draw the reader's attention to the safety instructions of this operating manual.

**DANGER!**
There is danger for life and health unless the following safety instructions are observed.

**WARNING!**
There is danger for machinery, materials or the environment unless the following safety instructions are observed.

**COMMENTS**
This provides more detailed information for a better understanding.

**CAUTION!**
Electrostatic discharge (ESD).
Devices may only be opened by the manufacturer.

**DISPOSAL GUIDELINES**
Packaging can be recycled and should generally be brought to re-use.

**QUALIFIED PERSONNEL**
This operating manual must exclusively be used by qualified personnel, who are able - based on their training and experience - to realise occurring problems when handling the product and to avoid related hazards. These persons must ensure that the use of the product described here meets the safety requirements as well as the requirements of the presently valid directives, standards and laws.

**USE**
This product is subject to a continuous enhancement process. Therefore, there might be deviations between the product in hand and this documentation. These deviations will be remedied by a regular review and resulting corrections in future editions. We reserve the right to make revisions without prior notice. Errors or omissions are excepted.

**CONDITION AS DELIVERED**
This product is supplied with a defined hardware and software configuration. Any changes in excess of the documented options are not permitted and lead to liability exclusion.

# 2. GENERAL DESCRIPTION

## CPC20

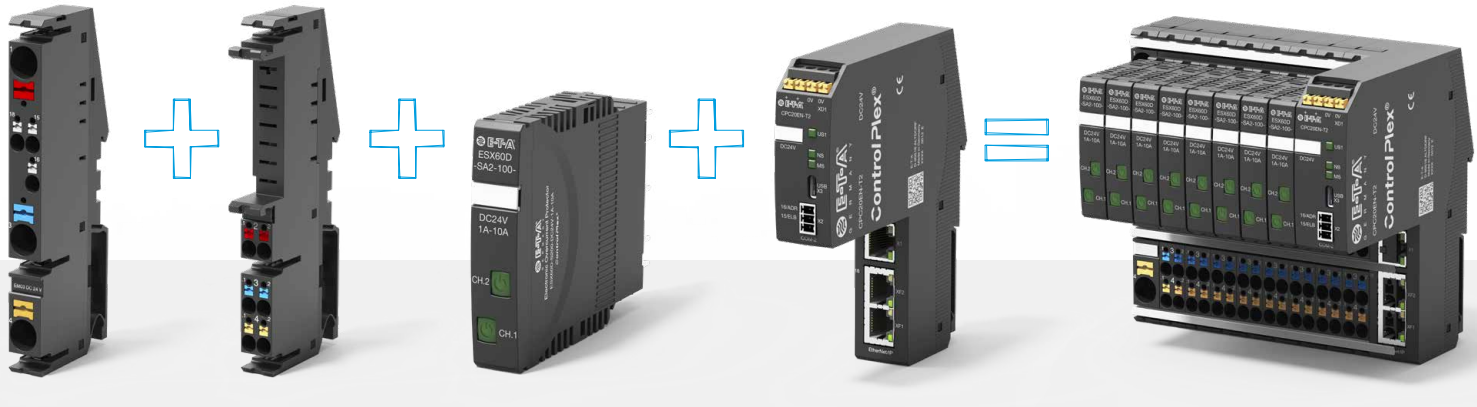
The intelligent CPC20 ***ControlPlex®*** System protects your DC 24V power distribution against overload and short circuit. It is based on the modular 18plus terminal block system. The ESX60D electronic circuit protector continuously records the load current and the load voltage of the system. The measuring values are bundled by the CPC20 bus controller and transmitted to the connected control systems. The system operator can permanently monitor the system's power distribution and detect changes or deviations at an early state. The ***ControlPlex®*** System prevents nuisance downtimes, increases transparency, provides a stable production process, increases the product quality and significantly increases system availability.

### INCREASED SYSTEM AVAILABILITY BY DATA LOGGING AND TRANSMISSION

The CPC20 bus controller is the brain of the entire system, providing the ideal connection to the superordinate systems via its interfaces. On the field level, it connects the power distribution system with the connected CPUs and HMIs via PROFINET or EtherNet/IP interface and allows the required data exchange. Measuring values and status information can be displayed for both the system operator and for the service staff.

### QUICK ACCESS VIA INTEGRAL WEB SERVER

The bus controller has an integral web server, which allows direct access to the DC 24 V power distribution data. This means, all measuring values and status information can be requested even without fieldbus interface. This is particularly beneficial for the service staff, as information is quickly available in case of first commissioning and system downtimes.



# 3. GENERAL DESCRIPTION

## *ControlPlex*® Views

The requirements of the modern automation technology are becoming increasingly complex and demanding. The focus is no longer only on the control, but monitoring the components and processes is becoming more and more important. This exactly is the application area for the intelligent and bus capable ***ControlPlex***® power distribution system. It protects, monitors and controls industrial applications.

***ControlPlex***® *Views software interface*

The ***ControlPlex***® Views software establishes a connection to the CPC10 and CPC20 systems via the respective USB service interface.

The CPC10 bus controller is provided with a functionality to allow direct access to the electronic circuit protectors. This allows transmission of the device conditions, of measuring values and device information of the connected components as well as changes of the product-specific parameters such as current ratings and the performance of actions, e.g. ON and OFF switching.

The CPC20 bus controller provides high transparency of the system and enables extension of the functionalities in the machine and system area. Possible firmware updates of the bus controllers are realised via the USB interface and the ***ControlPlex***® Views software.

During a device's typical life, changes or system extensions may occur. This may affect the firmware of the device, requiring a firmware update.

# 4. INSTALLATION
## *ControlPlex*® Views

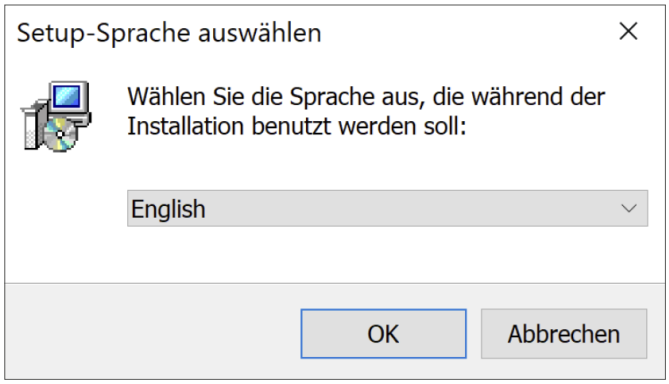
In order to carry out a firmware update for the CPC20, you need to install the ***ControlPlex***® Views user interface on your service computer.

For this purpose, please download the „***ControlPlex***® Views“ software tool via the ***ControlPlex***® Systems download portal on the E-T-A homepage.

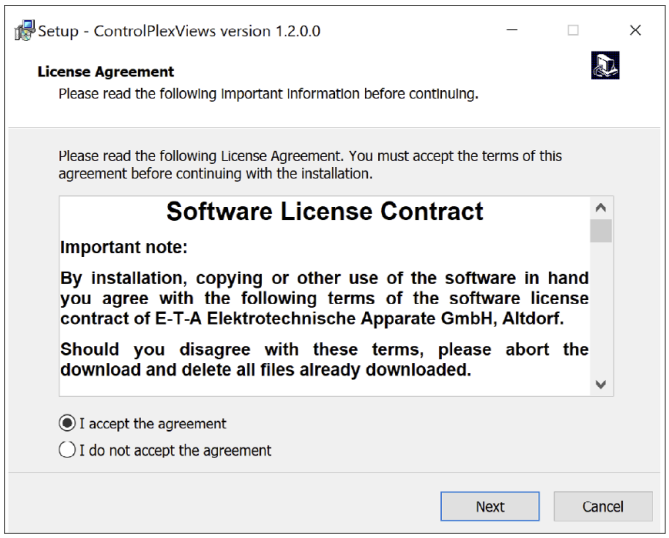
Follow this link to get to the portal:

After registration and/or login to the download portal you can download the installation package under the „***ControlPlex***® Views“ tab and carry it out. The installation must be started on a suitable service computer and completed successfully.

After executing the installation file, the installation routine of the programme will start. A selection window appears for installation language selection.




You must accept the license agreement.

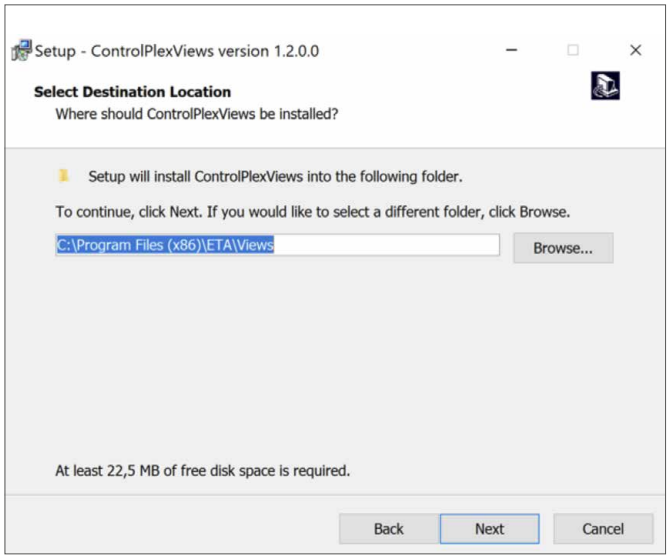



After selecting the installation directory and the name for the programme shortcut as well as the options for creating the shortcuts, the programme will be installed by clicking the „Install“ button.

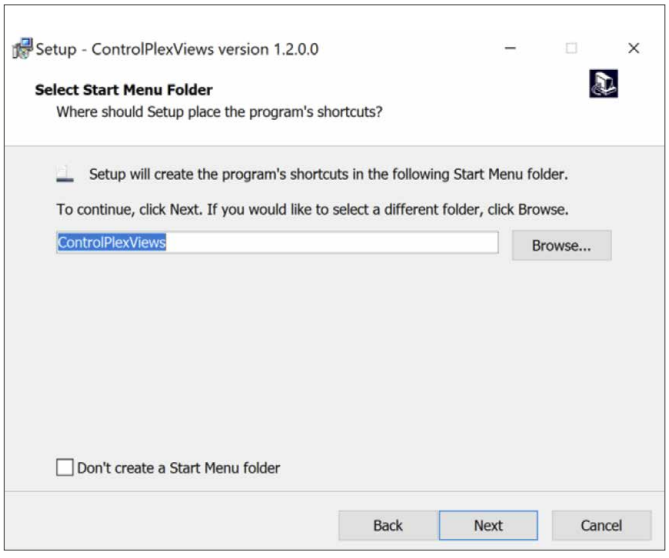
# 4. INSTALLATION

## *ControlPlex*® Views

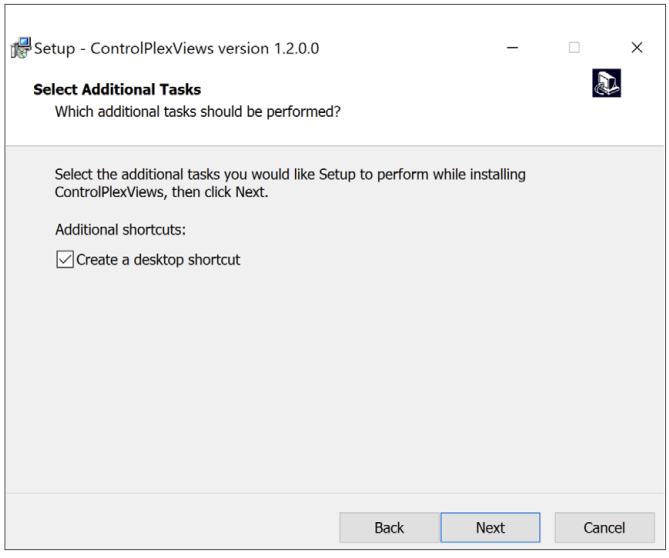
1.



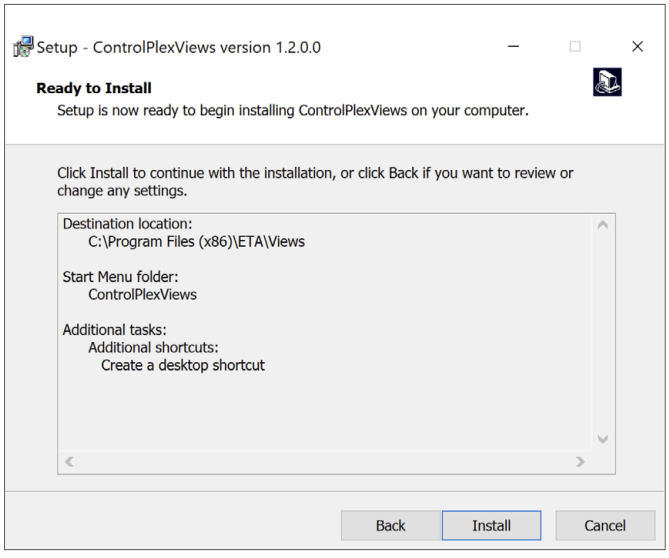

2.




3.

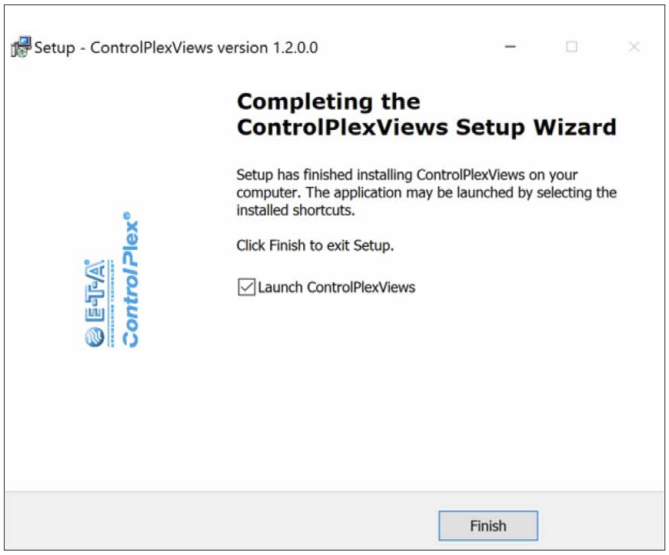



4.



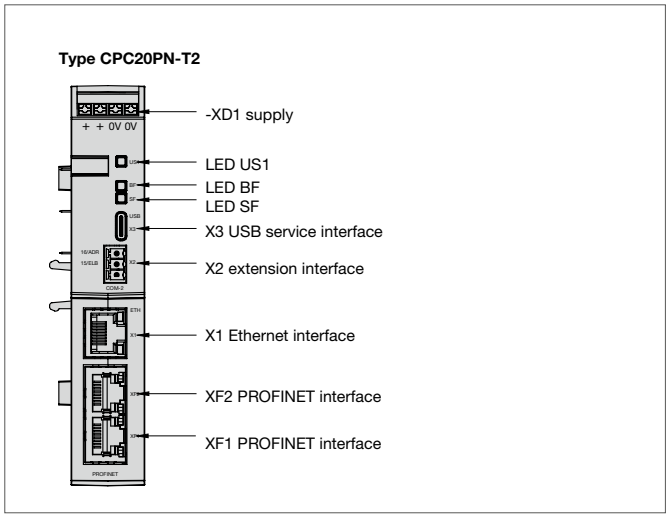
In addition, the drivers „FTDI CDM Drivers“ must be unpacked and installed.

After successful installation completion, the programme can be started directly.




# 5. CONNECTION
## via bus controller

As soon as the electrical installation of the ***ControlPlex***® System is completed and the ***ControlPlex***® Views tool is installed successfully, the service computer can be connected via USB to the X3 interface at the CPC20 bus controller. This requires a customary USB-C cable.

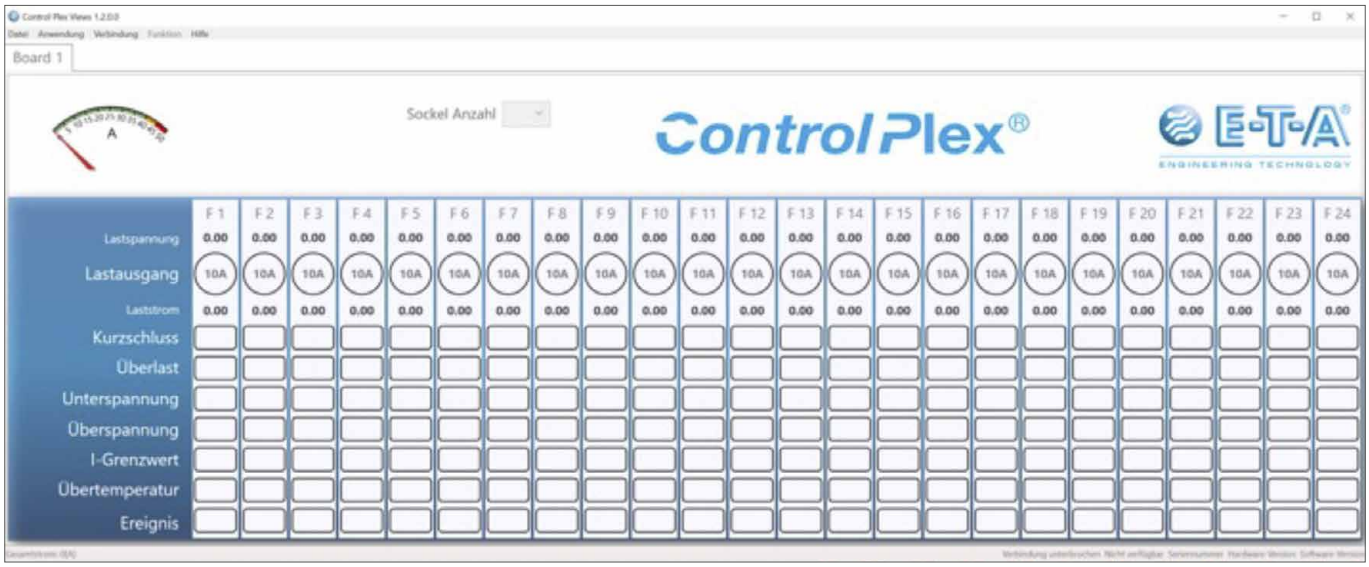


# 6. INTERFACE

## *ControlPlex*® Views

The following overview page is displayed after successful installation and opening of the ***ControlPlex***® Views programme.

Comments: This tool is used for updating the CPC20 firmware version, but also for process data visualisation of the predecessor CPC10 version.

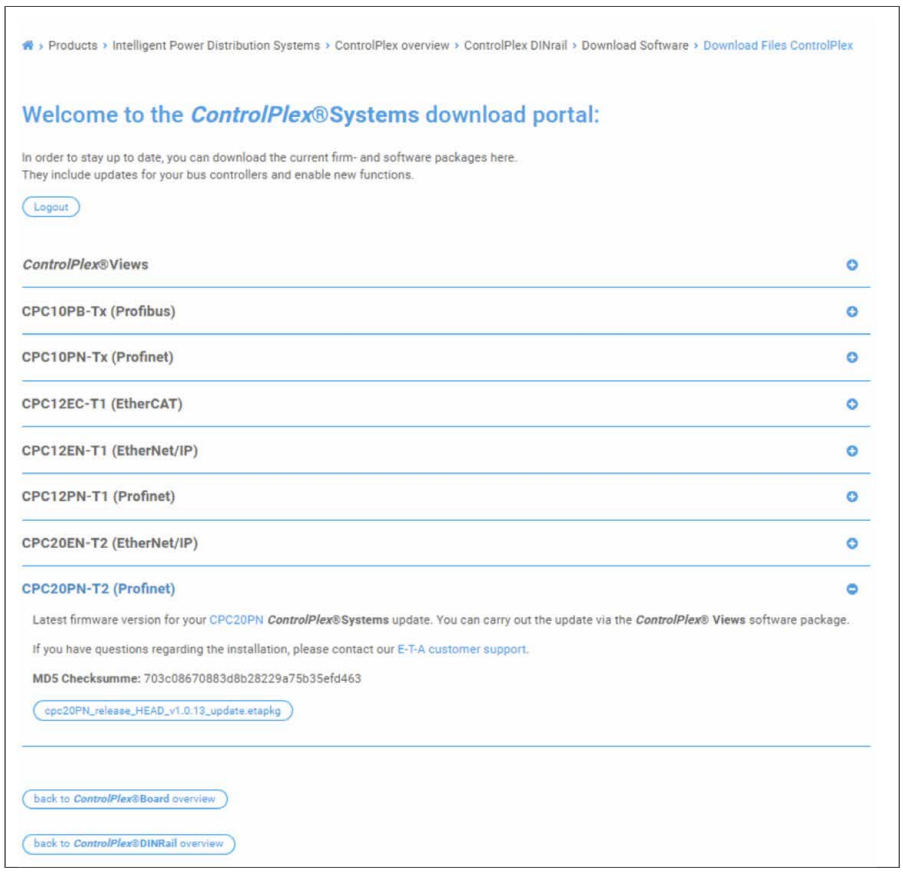


# 7. DOWNLOAD

## Firmware file

The current firmware files are available on the ***ControlPlex***® DINrail devices download portal.

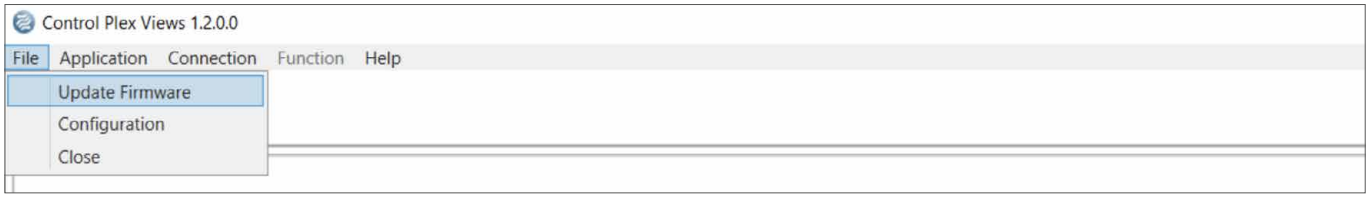
After successful login to the download portal the overview of available firmware updates for the different products appears. Select the CPC20 with the corresponding field bus interface (Profinet or Ethernet/IP) to enter the area and to download the applicable firmware file via the integrated button.



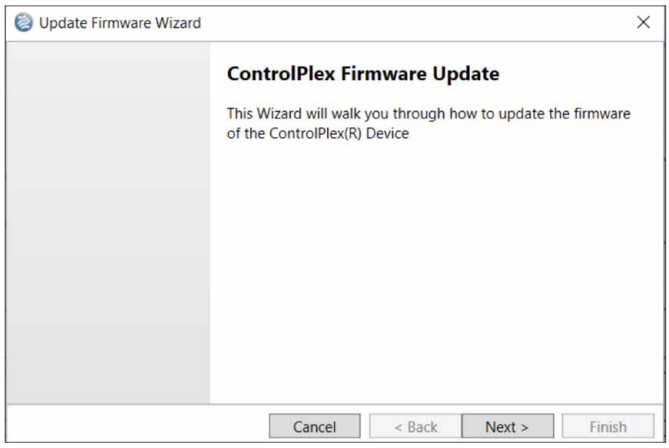
# 8. UPDATE

## CPC20 Firmware version

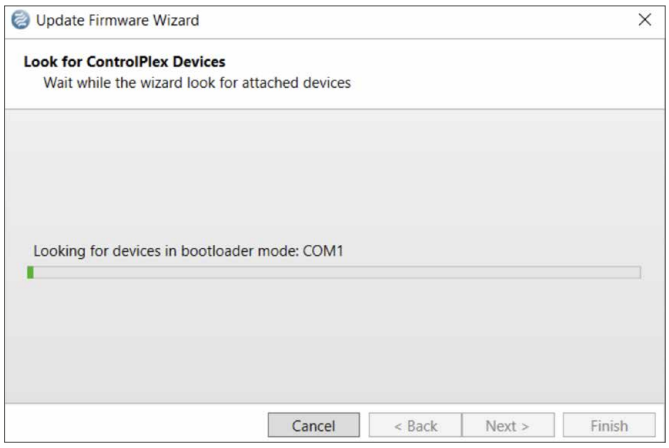
1. This will open a pop-up window to start the update wizard via click on the „Next“ button.



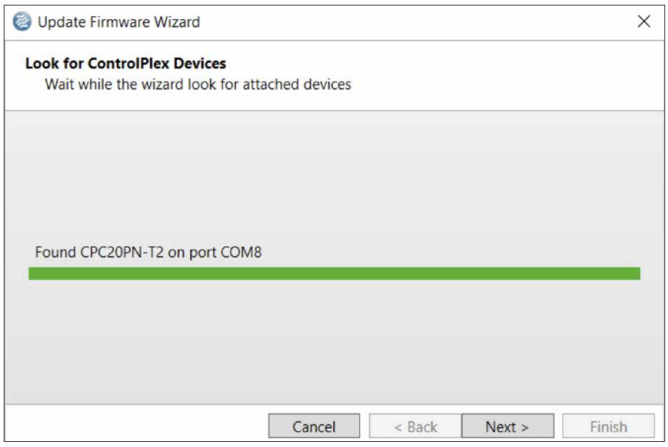

2. This will open a pop-up window to start the update wizard via click on the „Next“ button.



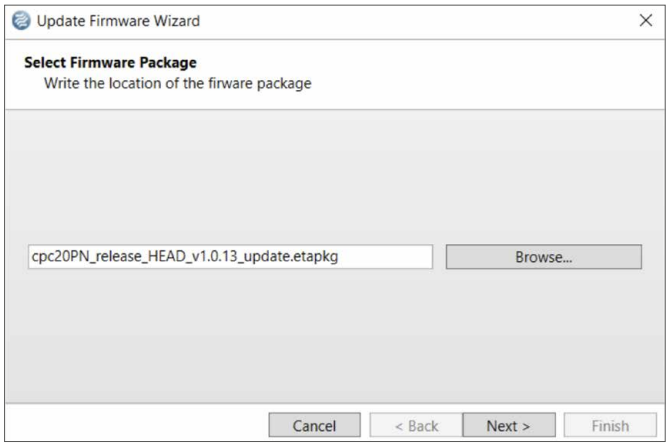

3. The update wizard starts the automatic device search.



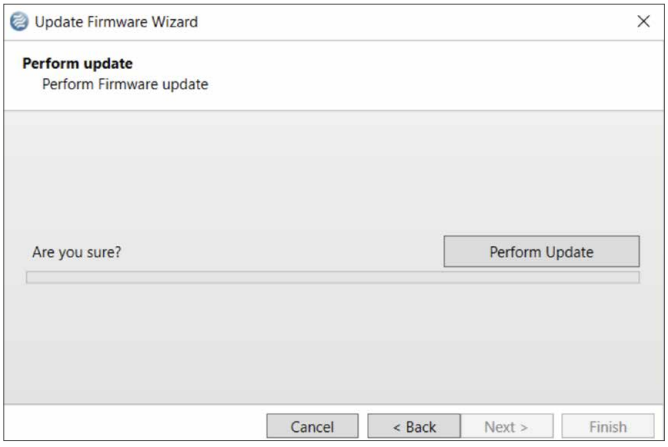
4. If a compatible device is found, this will be displayed as a text message including the applicable communication interface above the loading bar. By clicking on the „Next >“ button you get to the next step.



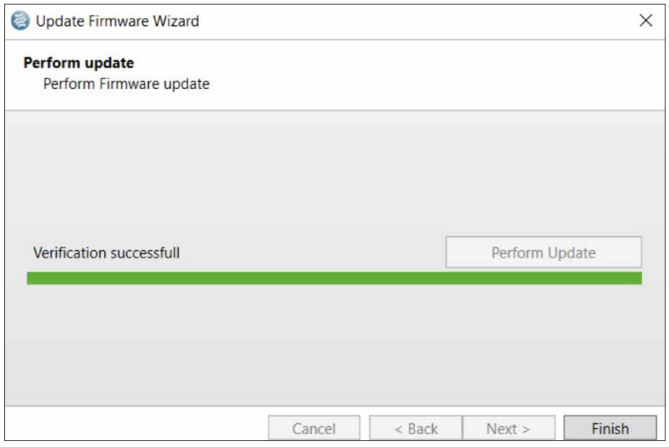

5. Now, the pop-up window allows selecting the download file. You can select the downloaded file via the „Browse“ button. Confirm this step with „Next >“ to start the update process. The device must not be disconnected from the voltage supply during this process.




6. Before the final update process is started, the user is requested to deliberately start the process. You can confirm this by clicking on the „Perform Update“ button or refuse this by clicking on the „Cancel“ or „< Back“ buttons.



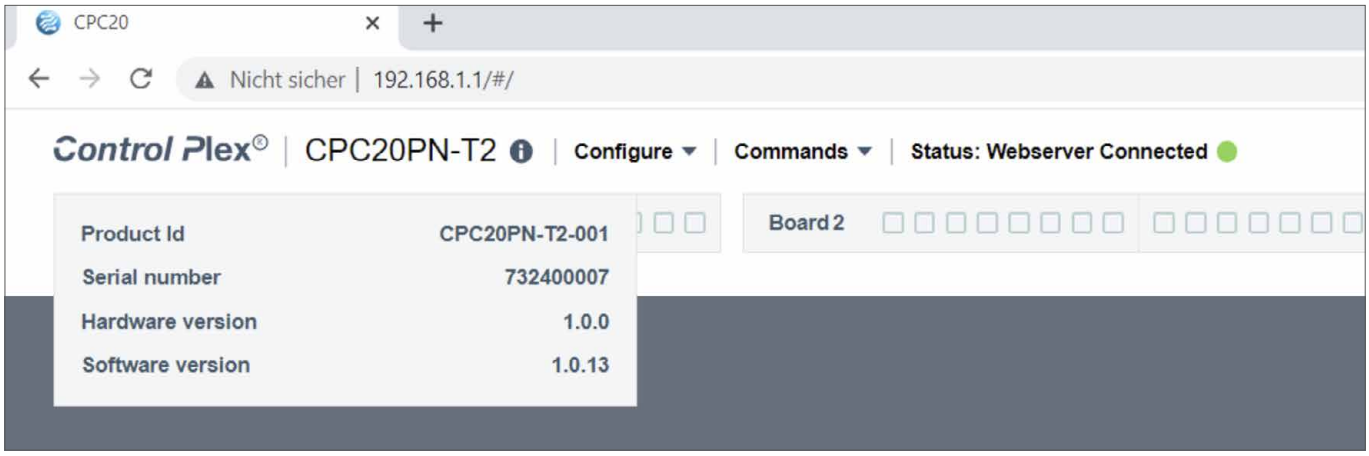

7. After the successful update the following message is displayed. You can complete the process by clicking on the „Finish“ button.



# 9. CHECK UP

## Firmware update

If you want to re-check the update you can request the software version via the round information logo in the left upper corner of the web server next to the device name.




You can also check the correct version via the non-cyclical data on the control unit. The corresponding information can be found in the chapter „CPC20 controller device information“.

| | byte | type | range | description |
|---|---|---|---|---|
| **software version (major.x.x)** | 16 | byte | 0…255 | holds the major software version of the installed product |
| **software version (x.minor.x)** | 17 | byte | 0…255 | holds the major software version of the installed product |
| **Softwareversion (x.x.build)** | 18 | byte | 0…255 | holds the build software version of the installed product |

# 10. NOTES

www.e-t-a.de/qr1047

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