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Firmware-Download-Tool (FDT)
Firmware Update for UNIGATE® devices

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

Manual Art.-No. V4120E

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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.

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1 Introduction

The "Firmware Download Tool (FDT)" software lets you load or update the firmware of a Deutschmann UNIGATE® device.

2 Connection UNIGATE® - PC

For the wiring between the UNIGATE® and the PC COM-Port pay attention to the following pin assignment:

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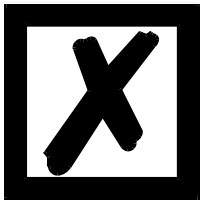
UNIGATE® RS232 Application Interface	PC COM-Port (9pol. D-Sub Connector)
Rx	COM-Port Pin 3 = Tx
Tx	COM-Port Pin 2 = Rx
GND	COM-Port Pin 5 = GND



Attention: The Connection of GND is mandatory!

Note: Do not connect anything to the UNIGATE® besides the power supply and if necessary the Ethernet cable for updating the firmware.

Note: For UNIGATE® RS and UNIGATE® SC the application interface has to be set to RS232 via the slide switch.

3 Firmware update

Always use the latest version of the firmare download tool (FDT).
The latest version can be found in the download section of www.deutschmann.de.

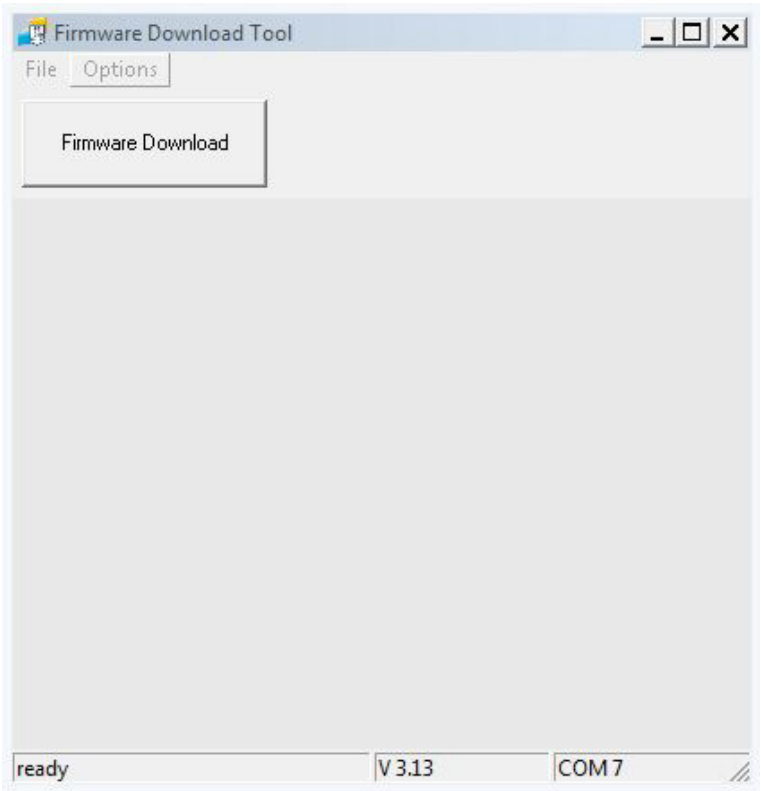
The firmware update is carried out depending on the file format. If the file extension is (*.hex), the firmware can only be loaded and updated via the RS232-interface. If the file extension is (*.bin) the firmware can only be loaded or updated via the Ethernet interface.

Note for UNIGATE® EL: The needed Ethernet interface is not the Ethernet interface port on top of the UNIGATE® (view from installation position).

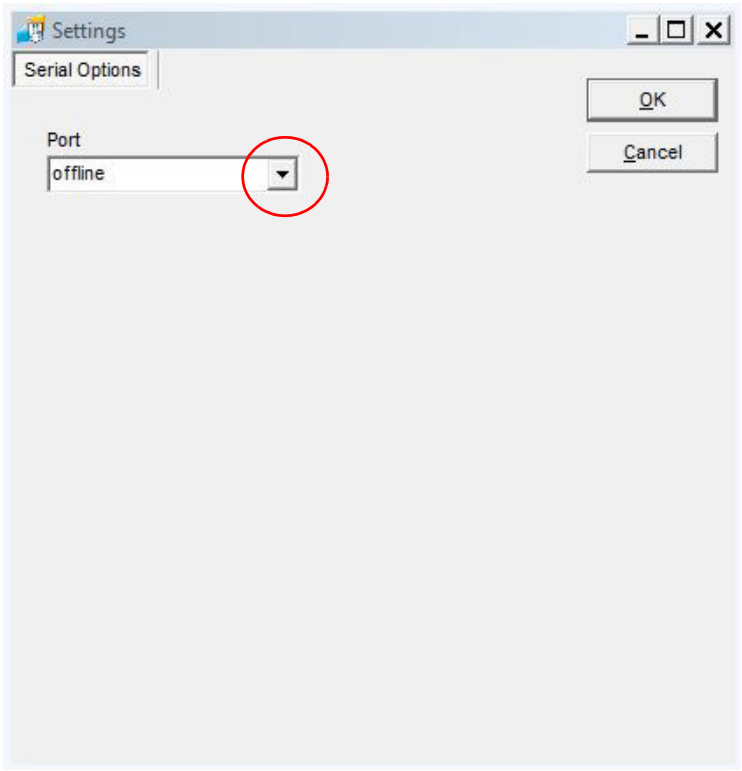
Note for UNIGATE® CX: If the firmware update is carried out via the RS232 interface, the cover plate of the UNIGATE® CX has to be removed first. (view from installation position).
The UNIGATE® CX is essentially two connected UNIGATE® CL, so the device whose firmware should not be updated must to be started in data exchange mode.

3.1 Installation

1. Install and start Firmware Download Tool (FDT).



2. Select the COM-Port via menu point „Options“ -> „Serial Options“. If there is no real COM-Port, a USB-RS232 converter is needed.

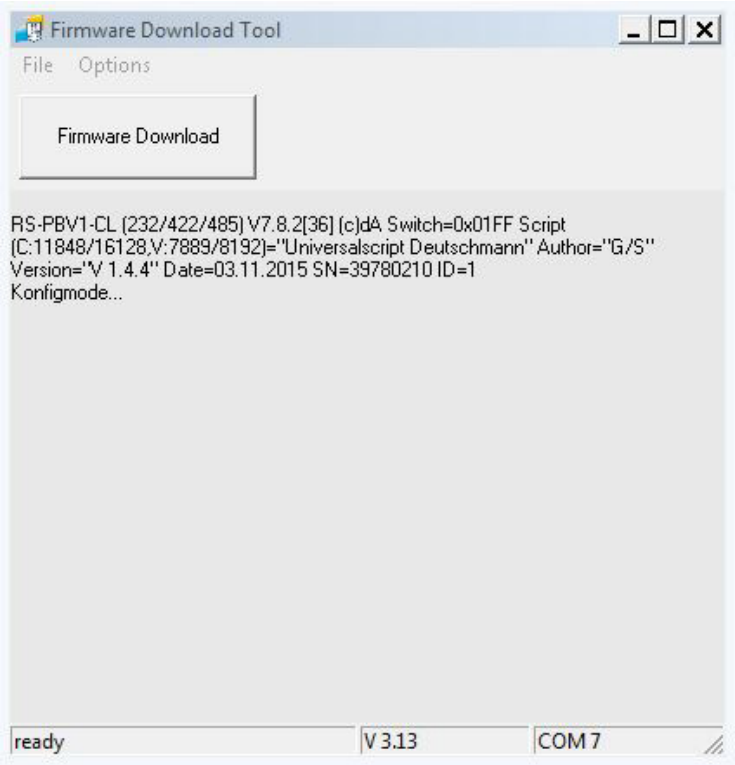


3.2 RS232-interface

1. Connect the UNIGATE® via the application interface (RS232) and start in config mode. The FDT displays the start-up message of the UNIGATE®.

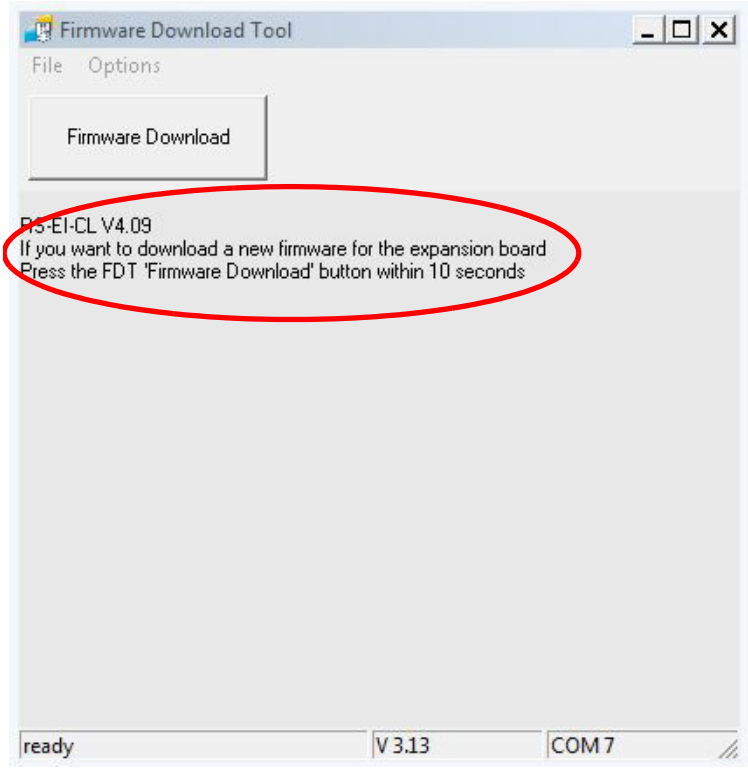
Note: The start-up message in the picture below is an example of a UNIGATE® CL-PBDPV1.

Use the "Firmware Download" button to open the window "Select File" (see item 2).

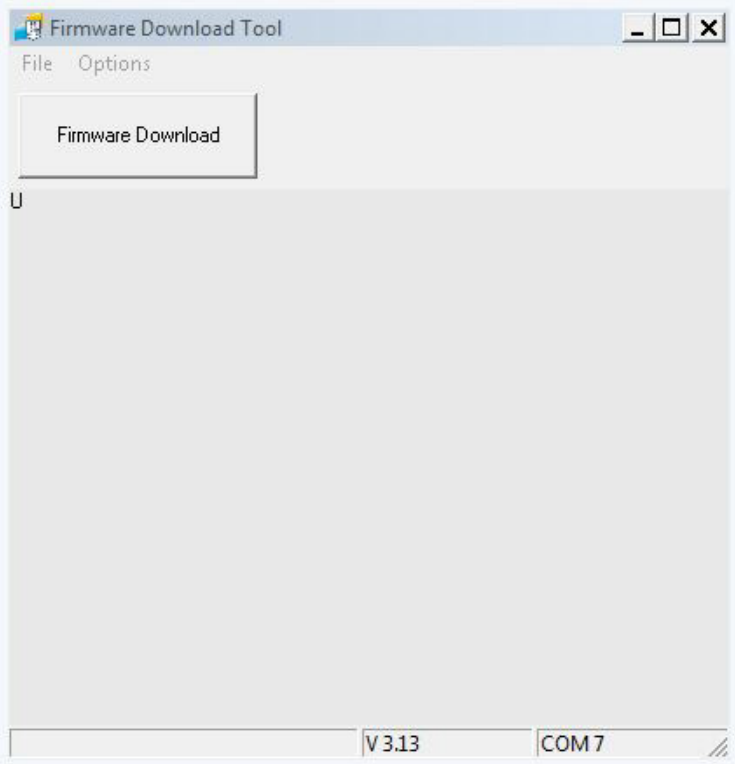


Note: If no power-up message is displayed by the UNIGATE®, it is either in "boot mode" or in an "undefined state".

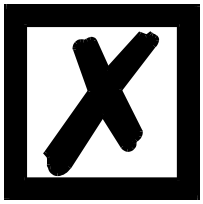
Exception: To update the firmware of an extension board (Ext.-Board), e.g. for a UNIGATE® CM or a UNIGATE® EL, both rotary coding switches S4 and S5 have to be set to "DD". Then the FDT shows the message „If you want to download a new firmware for the expansion board, press the FDT, Firmware Download‘ button within 10 seconds”. To update the firmware, the button “Firmware Download” must be confirmed within this time frame. If the time elapsed without taking action, the UNIGATE® has to be restarted.



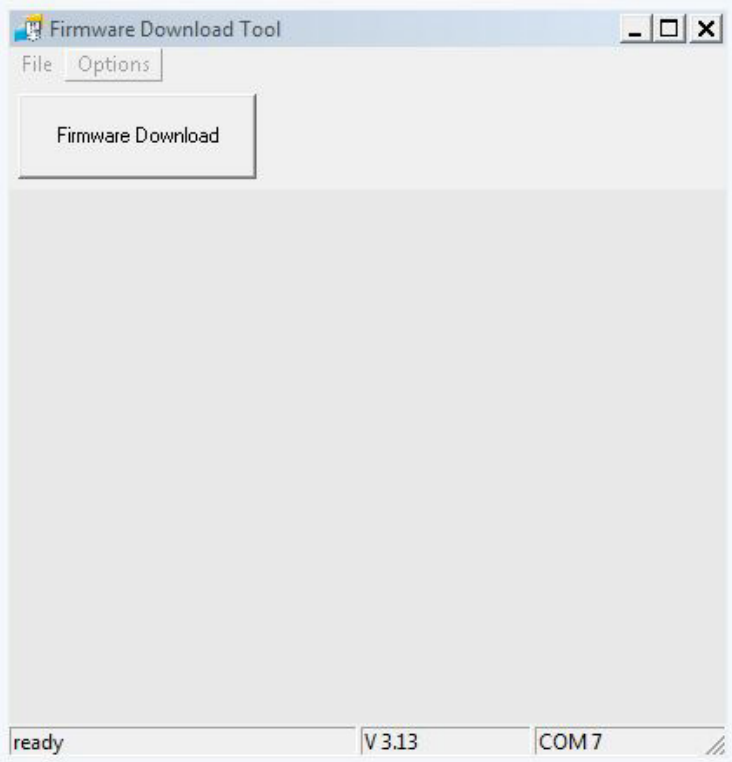
1.1 **Boot mode:** To check if the UNIGATE® is in boot mode, click into the FDT, so that the cursor is blinking there. Enter a capital "U" via the keyboard. If the capital "U" appears, the UNIGATE® is in "boot mode". After that the UNIGATE® must be restarted, then the updating of the firmware can be continued.



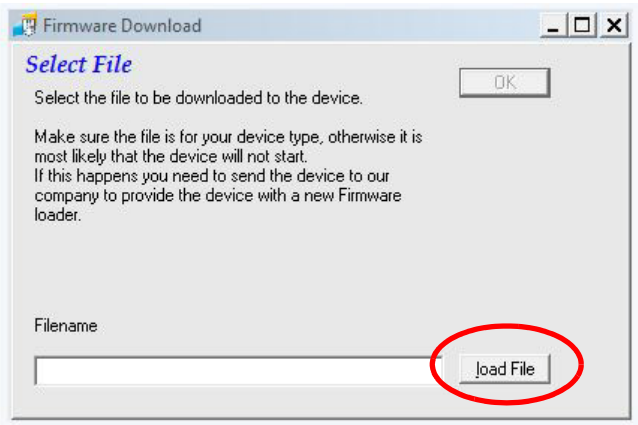
1.2 **Undefined state:** If no capital "U" appears the UNIGATE® is in an undefined state and needs to be returned for repair.



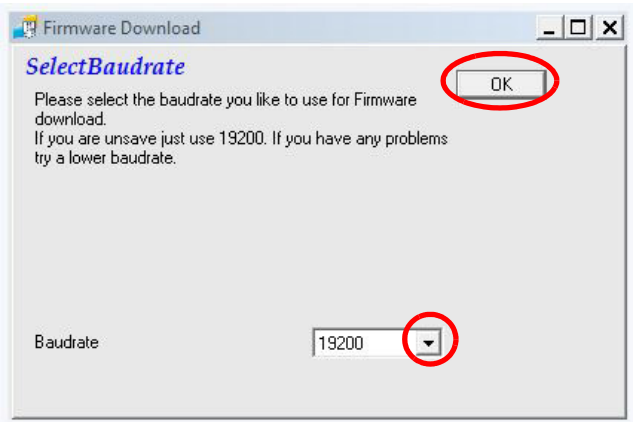
Attention: This does not apply for UNIGATE® FC and UNIGATE® IC. These can be set into boot mode by the customer. For more information please refer to the respective manual, chapter "Pinout". If updating the firmware is still not possible, the devices also have to be returned for repair.



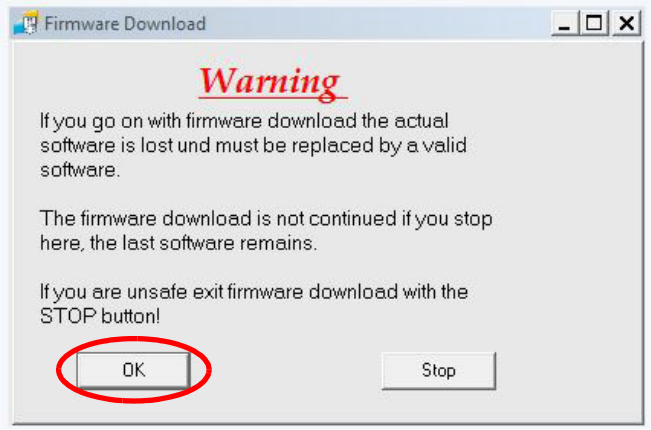
2. First, select the needed firmware (*.hex) via "load File" and then confirm with clicking "OK".



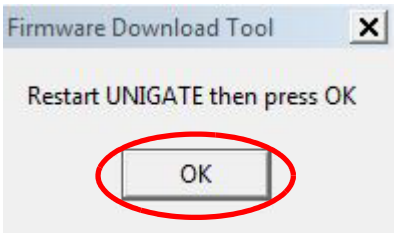
3. Afterwards the baud rate e.g.19200 is selected and confirmed via "OK".

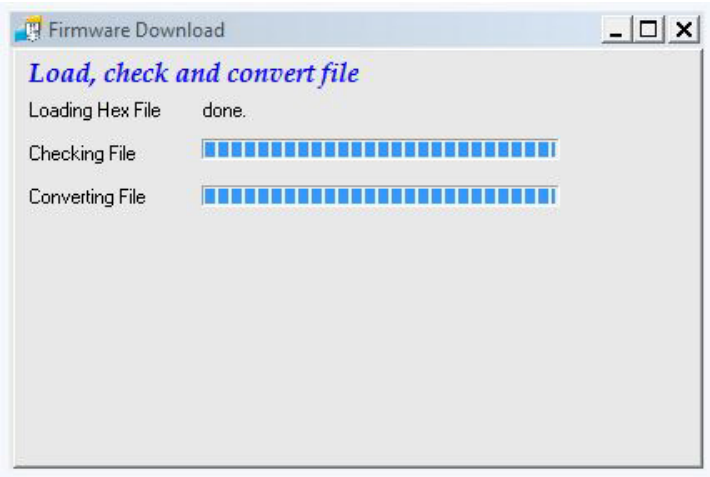


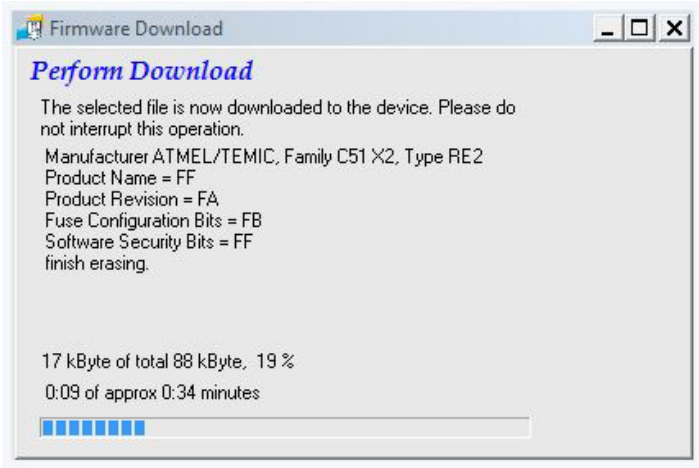
4. A warning appears. If you want to start the download of the firmware, confirm via "OK". Otherwise you can abort the process via "Stop".



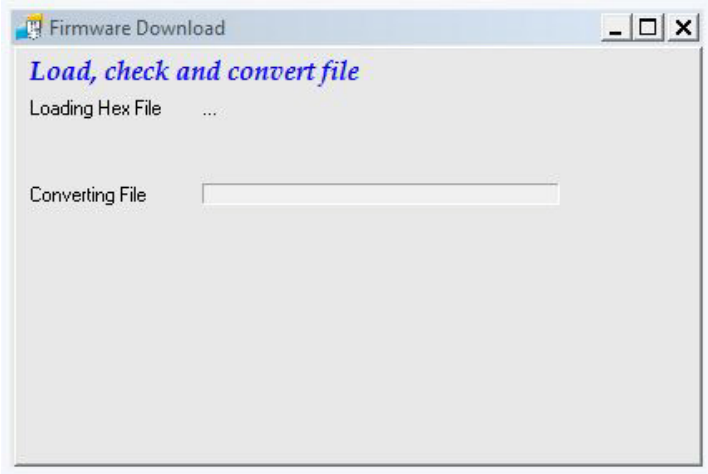
Attention: If the UNIGATE® is in boot mode another window appears with the following note: "Restart UNIGATE then press OK". The UNIGATE® has to be restarted. After restarting click "OK". Then the firmware is loaded.

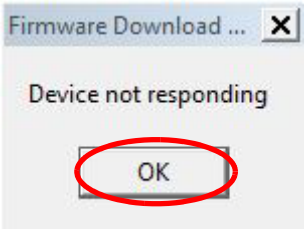


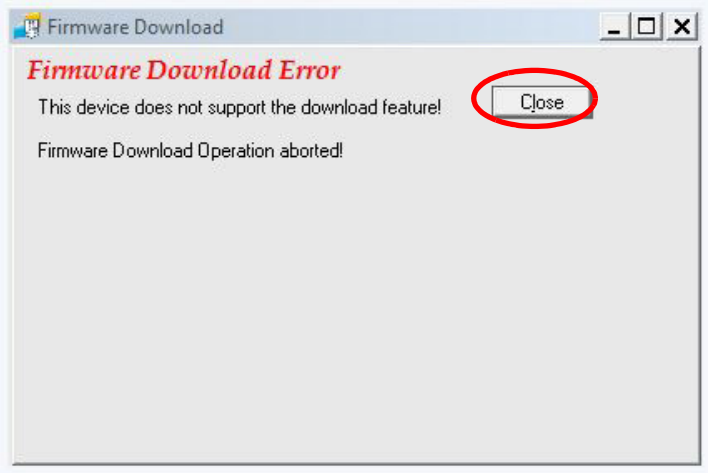




Attention: If the following message is popping up: "Device not responding", followed by a window with the note: "Firmware Download Error", the serial connection and the baud rate setting have to be checked and the process has to be started over.





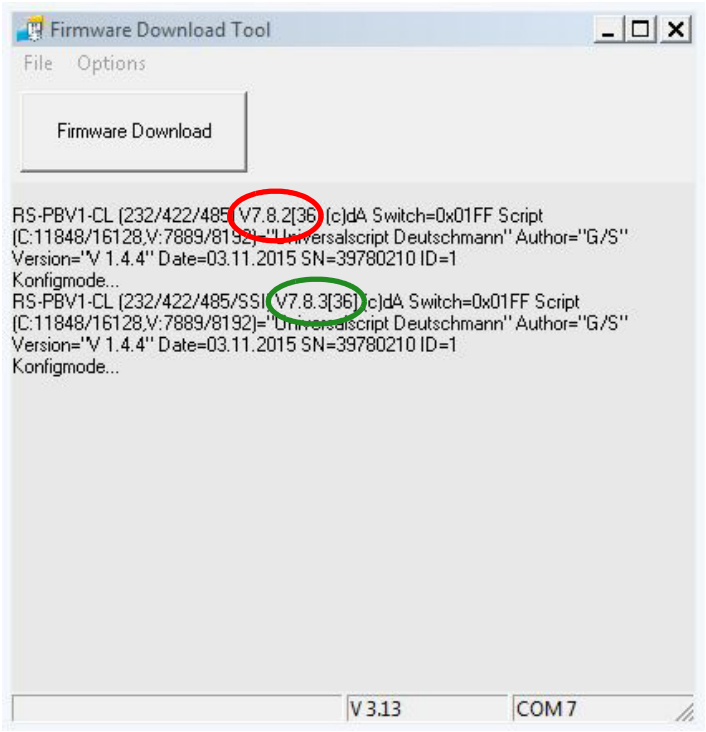


5. After the download of the firmware a „Verifying“ takes place.

6. Finally a window with the button "Finish" pops up. After confirming, the UNIGATE® can be restarted.

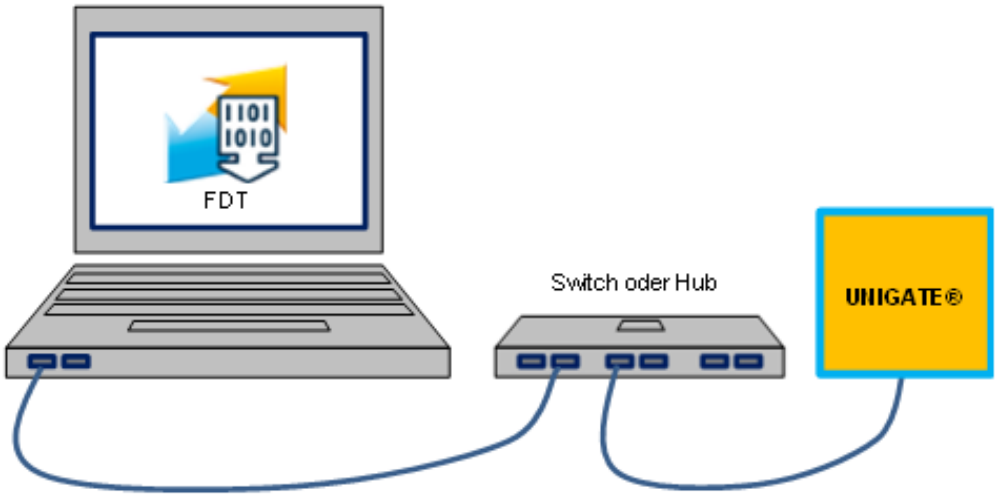
7. The FDT now shows a new start-up message.

Note: The new start-up message can differ in the version number, as well as in other parameters.



3.3 Ethernet interface

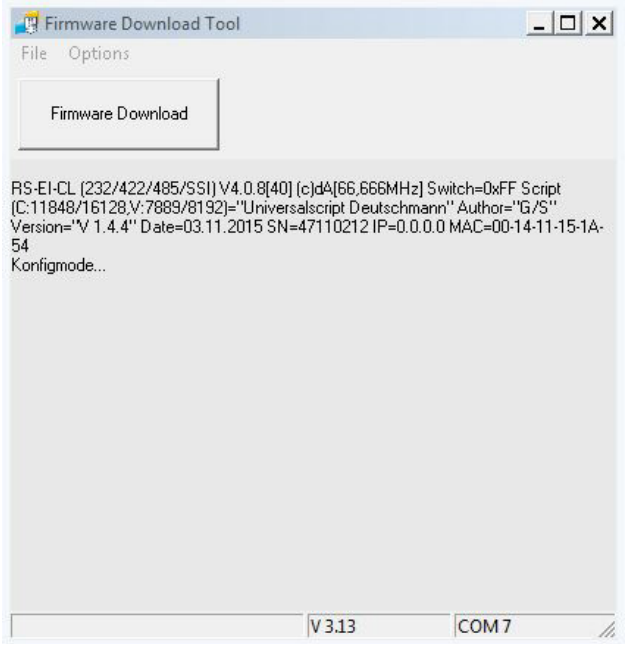
1. The UNIGATE® has to be connected to the PC via Switch or Hub.



2. After that the UNIGATE® must be connected via the application interface (RS232), started in configuration mode and connected with the PC via Ethernet. The FDT shows the start-up message.

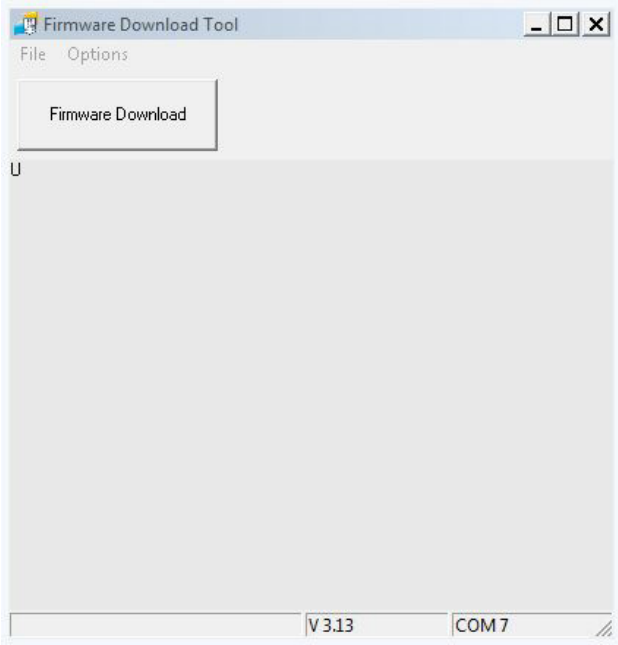
Note: The start-up message below shows an example of a UNIGATE® CL-EI.

Via "Firmware Download" the window "Select File" pops up (see ite m no. 5).



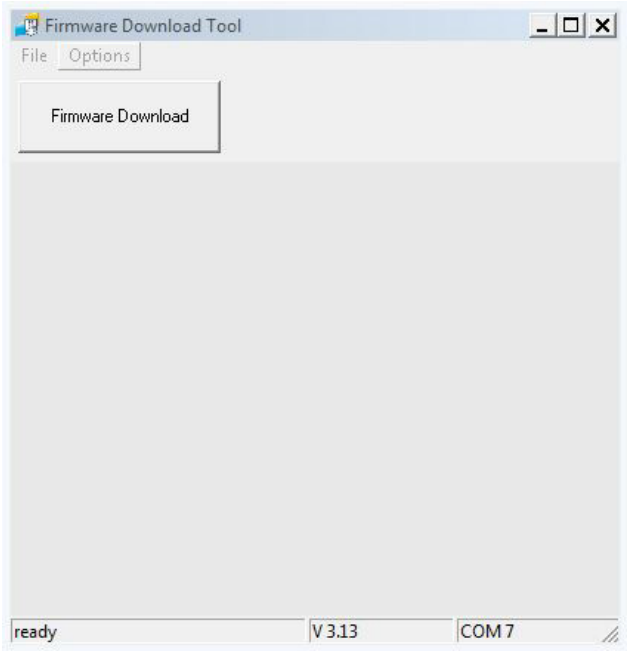
Note: If there is no start-up message, the UNIGATE® is either in "boot mode" or in an "undefined state".

2.1 **Boot mode:** To check if the UNIGATE is in boot mode, click your mouse cursor into FDT, make sure the cursor is blinking in the FDT. Now enter a capital "U" via your keyboard. The UNIGATE® is in boot mode if the entered U shows up in the FDT, it automatically assigns the IP address 10.10.10.10. Afterwards the UNIGATE® has to be restarted and the updating of the firmware can be resumed.

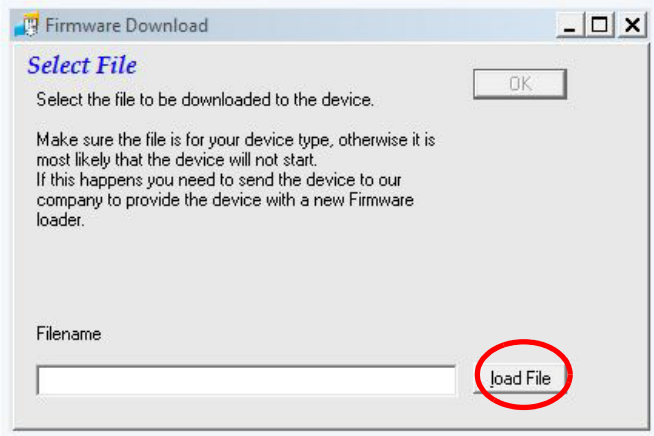


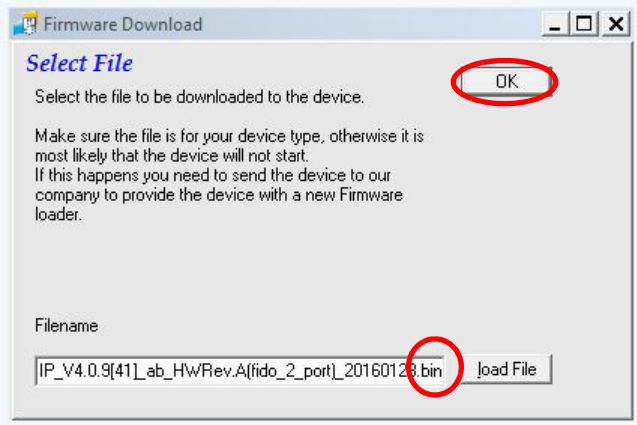
2.2 **Undefined state:** If no capital "U" shows up, the UNIGATE® is in an undefined state and has to be returned.

Attention: This does not apply for UNIGATE® FC and UNIGATE® IC. These devices can be set into boot mode by the customer. For more information please refer to the respective manual, chapter "Pinout". If updating the firmware is still not possible, these devices also have to be returned for repair.

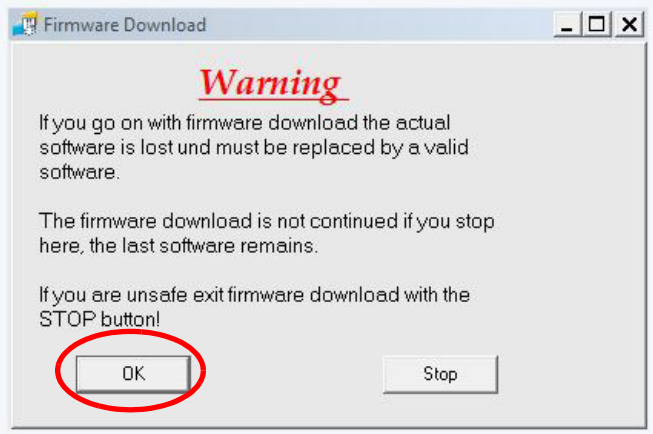


3. Select the needed firmware (*.bin) via "load File" and confirm via "OK".

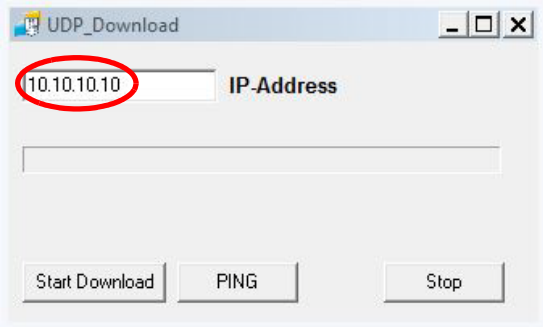




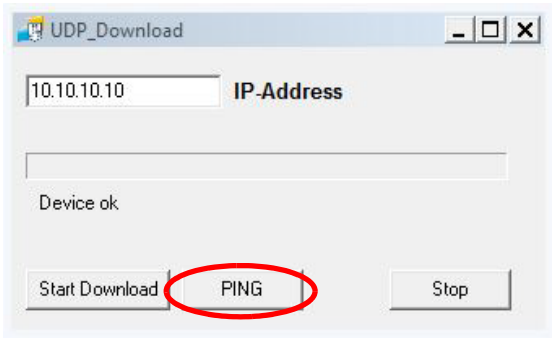
4. A warning appears. Click "OK" to start the download. Otherwise the process can be aborted via "Stop".



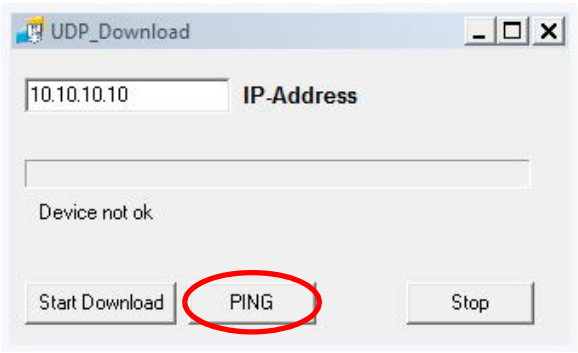
5. The window "UDP_Download" opens. Enter the IP-Address of the UNIGATE.



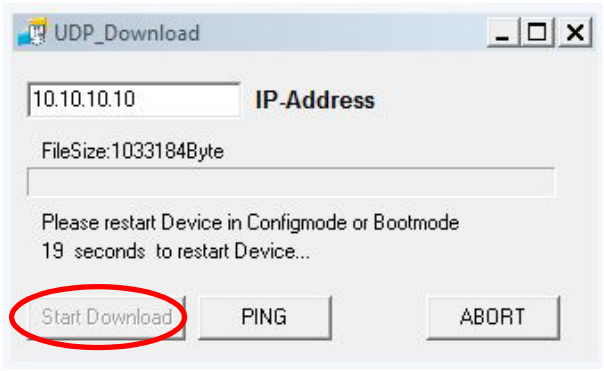
6. A ping can be send to the entered IP-address via "PING". If the address is correct and an Ethernet connection to the UNIGATE® has been established, the message "Device OK" appears.

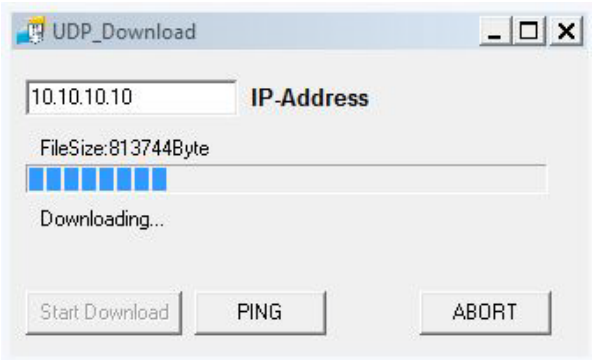


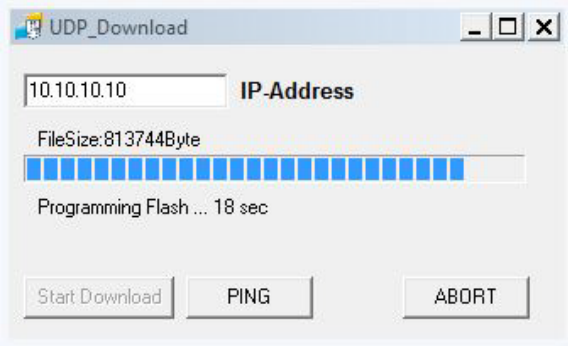
Attention: If the message "Device not OK" appears, please check the IP-address as well as the connection.



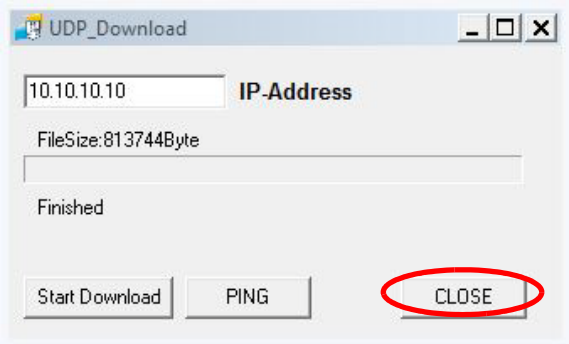
7. The firmware download can be started via "Start Download". A countdown begins and the UNIGATE® has to be restarted within the elapsed time. Only then the firmware download starts. The bar shows the progress of the download.





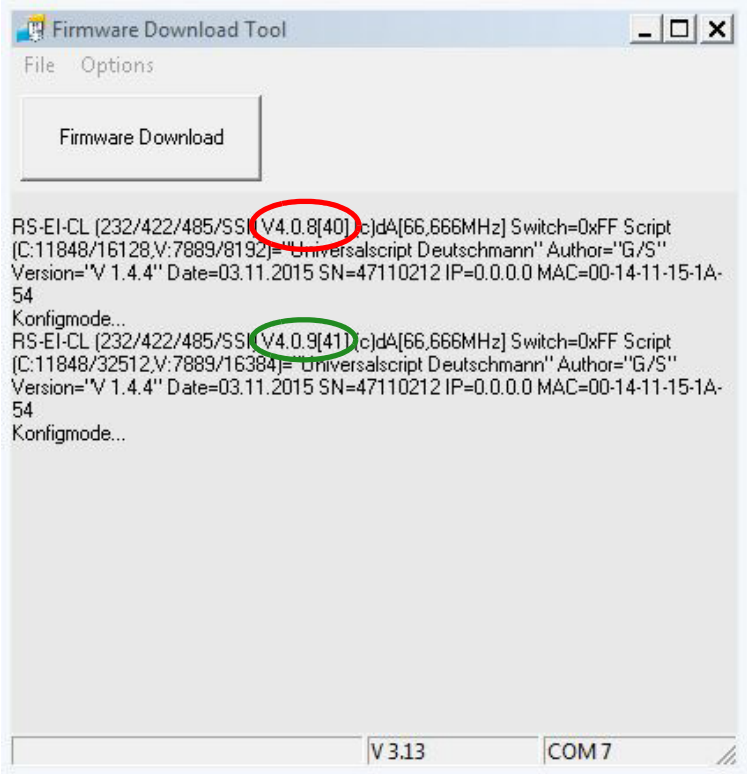


8. After the firmware download the message "Finished" appears. The window "UDP_Download" can be closed via „CLOSE“. Now the UNIGATE® can be restarted.



9. A new start-up message shows in the FDT.

Note: The new start-up message can differ in the version number as well as in other parameters.



4 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.).

You can reach us during hotline hours which 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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Carl-Zeiss-Straße 8 | 65520 Bad-Camberg | Germany

Central office and sales department	+49 6434 9433-0
Technical support	+49 6434 9433-33
Fax sales department	+49 6434 9433-40
Fax technical support	+49 6434 9433-44
E-mail technical support	support@deutschmann.de

5 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.

5.1 Downloading PC software

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

http://www.deutschmann.com