

1 – HOW TO UPDATE FIRMWARE

1.1 Introduction

UNIFLOW-200 firmware is permanently improved, new features, new calculation methods are implemented, bugs are fixed if they discovered.

This document describes how to update the firmware in UNIFLOW-200 flow computer.

1.2 Firmware compatibility

The procedures described in this document can be applied to any firmware version.

However, please note, if the existing firmware older than 220502, then the firmware update should be performed in 2 steps.

First update the existing firmware to 220502 version.

After the update to 220502 version successfully completed (the flow computer restarted) update the firmware to the latest version.

Please note also the firmware update is supported in “forward way” only, i.e., older firmware (having earlier release date) can be updated with newer firmware (having later release date).

It is not supported to downgrade newer firmware to older one. Downloading older firmware may lead to unpredictable behavior of the flow computer.

Never downgrade the firmware. If it is unavoidable contact the manufacturer.

1.3 Getting new firmware file

The latest firmware file is available at the Process Control website.

To get access to the firmware file you must have account at the website.

If you already have account, go to the Customer Login menu:

<https://www.processcontrol.hu/en/user/login> and enter your user name and password.

If you have no account, register at our website: <https://www.processcontrol.hu/en/user/register>

Set the “Account type” to “I’m already a customer”.

You will receive confirmation of your registration within 24 hours. After you received the confirmation, you can login to the website <https://www.processcontrol.hu/en/user/login> and go the firmware download section.

Please note there are 2 firmware versions available, one for Uniflow-200 with serial number 200-469 and below and the second one for Uniflow-200 with serial number 200-470 and above. Download the firmware file corresponding to the serial number of Uniflow-200 you want to update.

The firmware file is with .tar.gz extension. Save it to the hard drive of your PC as it, you should not extract (unzip) it in any way.

1.4 Requirements for firmware update

There are two methods for updating firmware in Uniflow-200:

- update with U200ToolBox software suit via Ethernet port;

- update with flash drive via USB port.

In both cases at certain stage of the update process an update code will be required. Update code can be generated at Process Control website, after you created your account.

Go to the Support, Update Code menu: <https://www.processcontrol.hu/en/generate-update-code>.

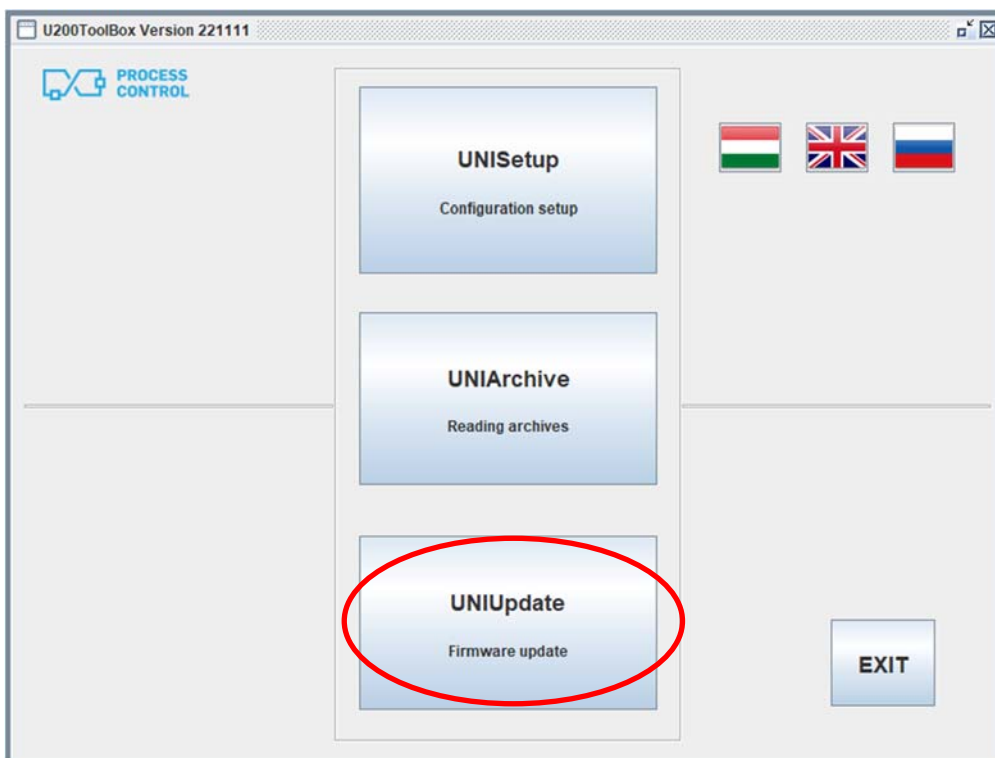
Enter the last 3 digits of the Uniflow-200 serial number, enter the date when you want to make the update and press the “Generate update code” button. The update code is displayed and it is sent to you by email to the email address you gave during your registration.

The update code is valid for the day given and for the particular Uniflow-200 with the given serial number.

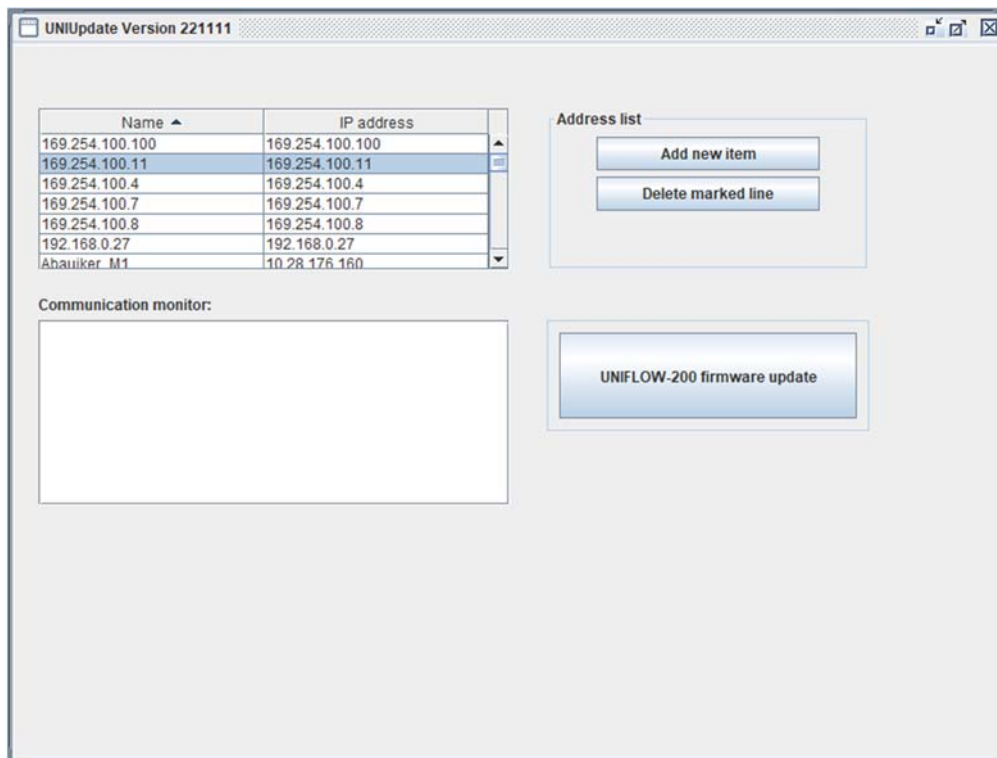
Process Control will send you the update code if you don't prefer generate it at our website. Send an email to info@processcontrol.hu indicating the serial number of Uniflow-200 and the date you want to make the update.

1.5 Firmware update with U200ToolBox software suit via Ethernet port

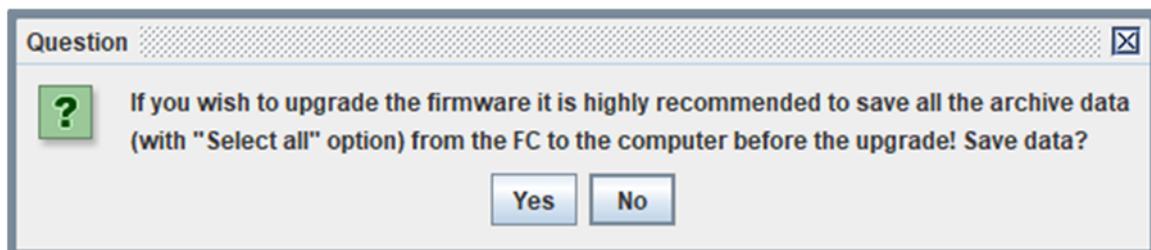
Run the U200ToolBox software and click UNIUpdate button on the start page.



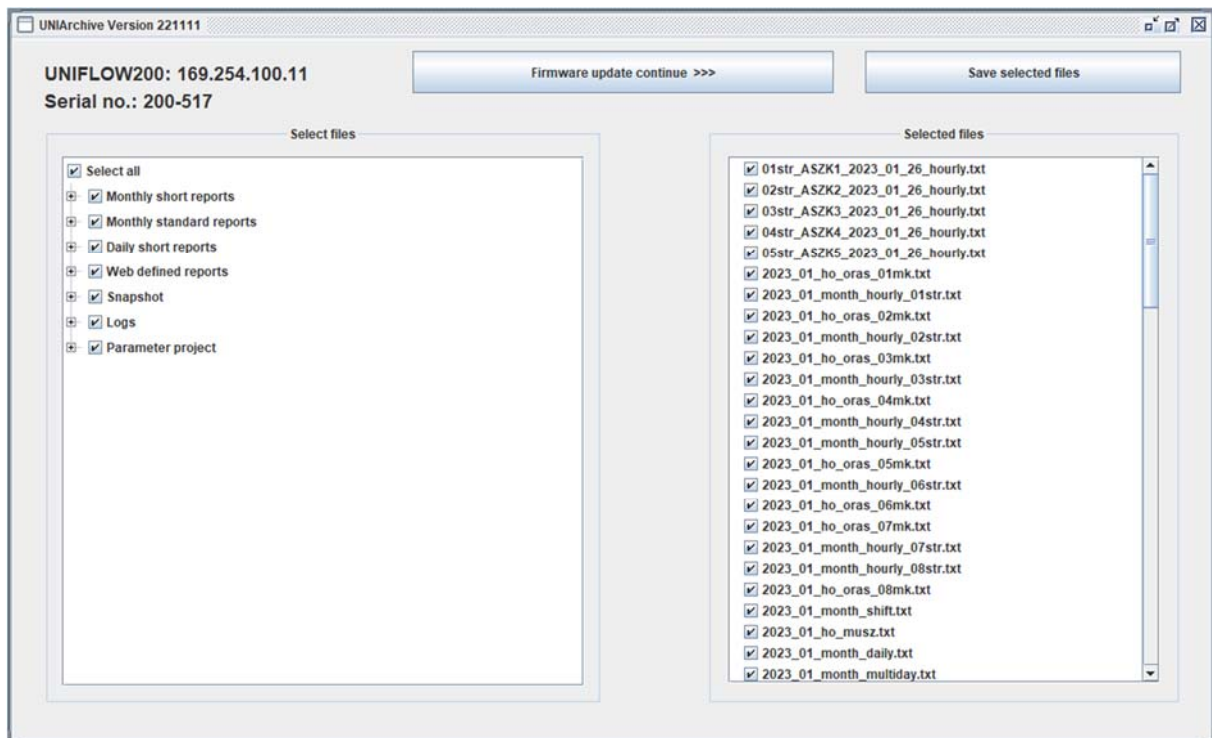
Select the name/IP address of the Uniflow-200 you want to update and click UNIFLOW-200 firmware update button. If the list is empty or the name/IP address of Uniflow-200 to be updated is not listed click Add new item button and enter the name and the IP address of the flow computer.



A warning message will be displayed suggesting to save all the archive data from Uniflow-200 before proceeding with the update.

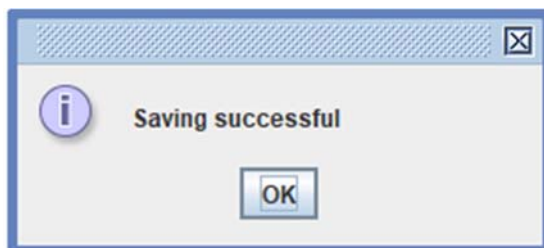


Clicking Yes button the UNIArchive software is started and all the archive files are selected for saving by default.

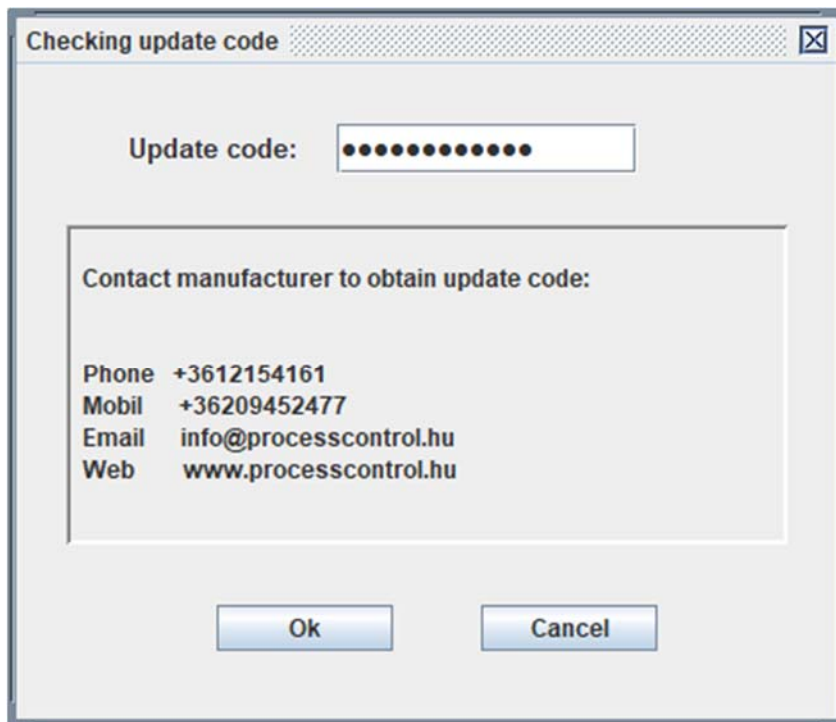


Click Save selected file button. Select the directory of your PC in the file browser window where the files to be saved and click OK. Progress bar shows you as the files are transferred.

Click OK when the saving finished and click the Firmware update continue button on the UNIArchive window.

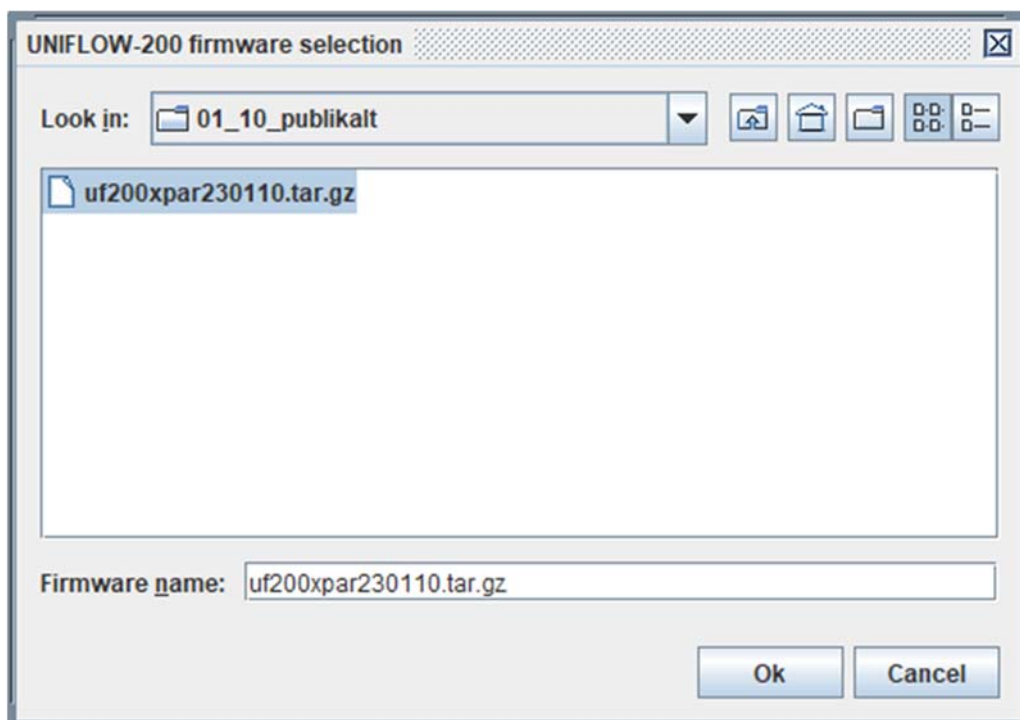


The UNIUpdate program resumes and a message box will appear with entry box, requiring enter the update code.

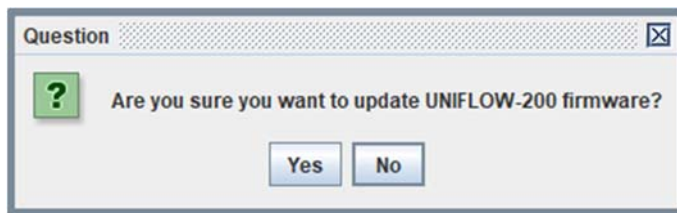


Enter the update code generated at the Process Control web site or provided by Process Control some other way.

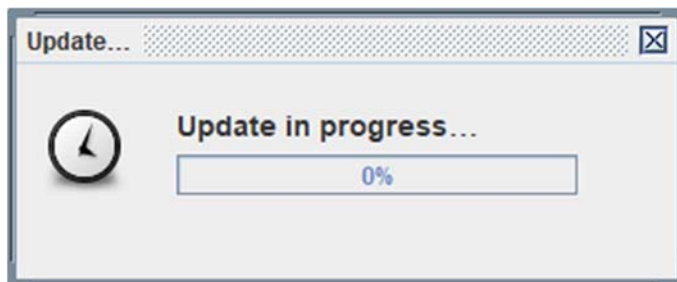
After pressing OK browse the firmware file on your PC in the file browser window opened.



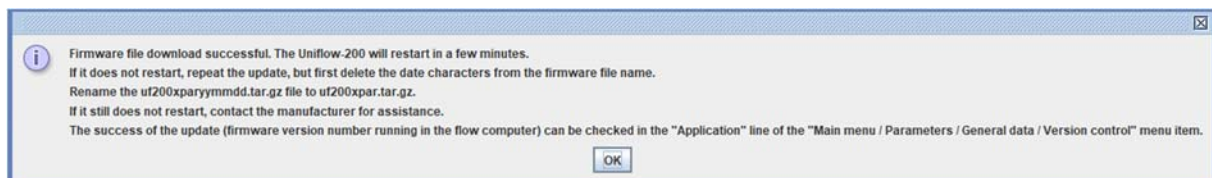
Select the new firmware file and click OK. Confirmation message will appear.



After confirmation your selection by pressing Yes you will see the progress bar.

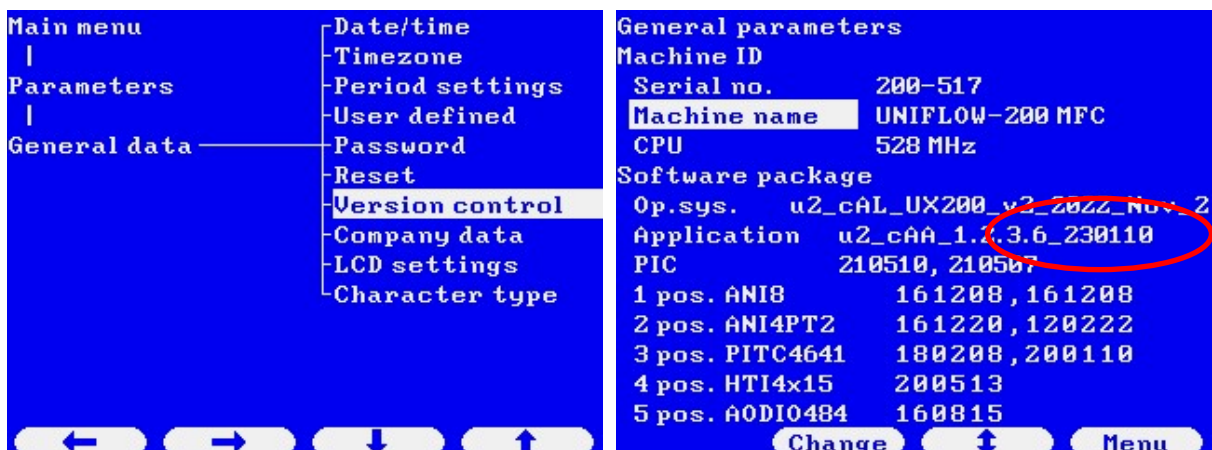


A message box appears when the download completed.



Click OK and wait until Uniflow-200 restarts. Be patient it may take 2-3 minutes.

After Uniflow-200 restarted go to the parameter page "Version control" and check the current application version number. It must be the same as selected on the firmware selection page.

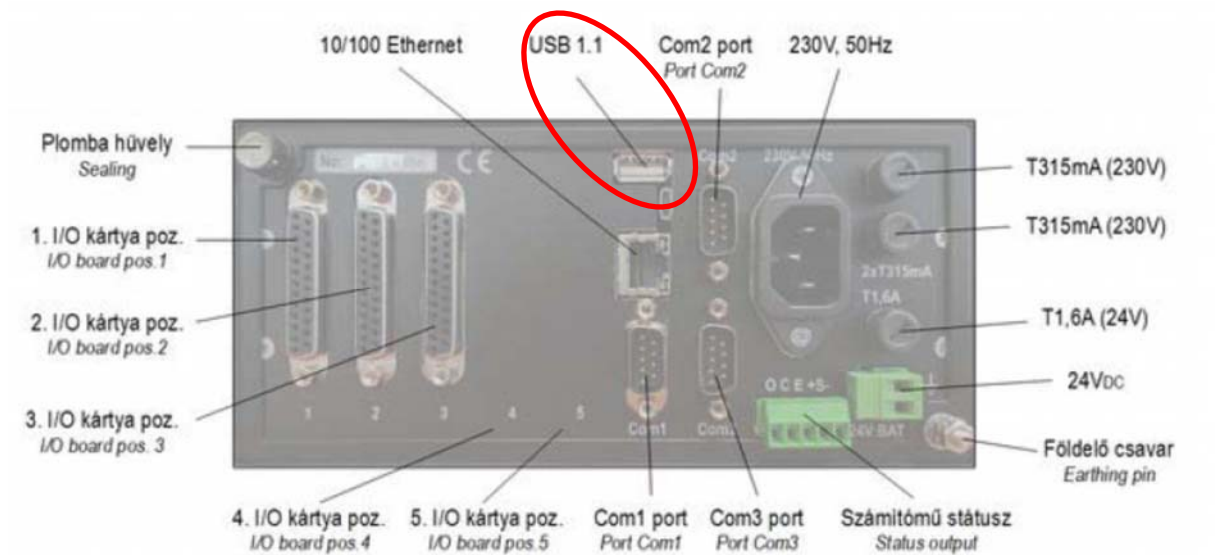


1.6 Firmware update with flash drive via USB port

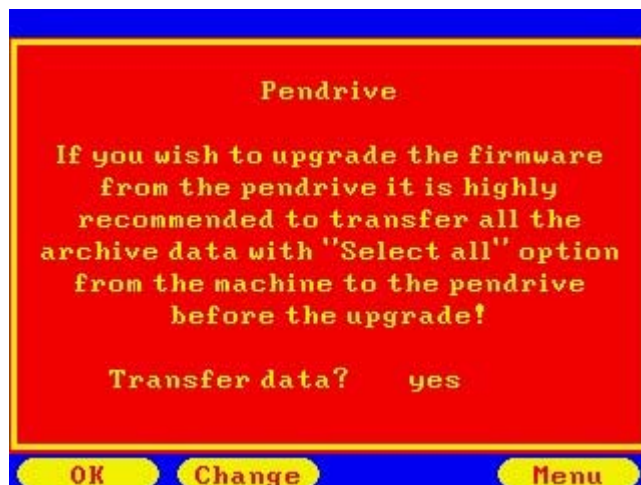
The flash drive used for firmware update shall be formatted for FAT32 file system.

Copy the new firmware file into the root directory of the flash drive.

Insert the flash drive into the USB socket at the backplane of Uniflow-200.



After few seconds a message will be displayed on the display:



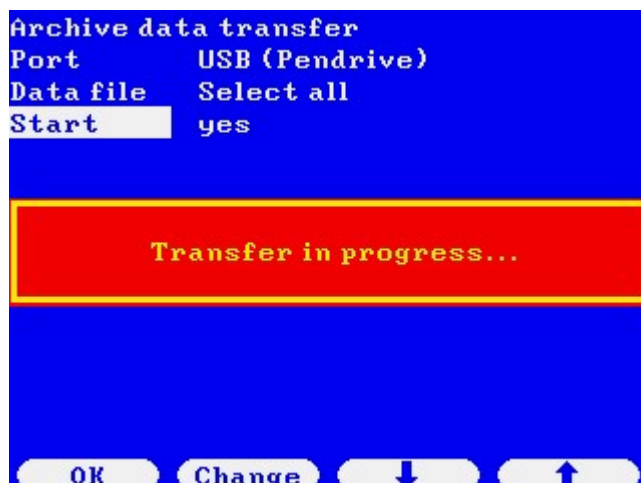
Select the answer "yes" by pressing the Change button and press OK.

Archive data transfer page will be displayed. Leave every selection at its default value as indicated on the picture below then change start command to "yes" and press Ok button.



Message “Transfer in progress” will be displayed while all the archive files are copied to flash drive. The name of the directory the files are copied to is “200-*nnn*” where *nnn* is the last 3 digits of the serial number of Uniflow-200. The parameter project is copied to directory “200-*nnn*-PARAM”

Be patient, copying may take few minutes, depending of the number and size of the archive files.



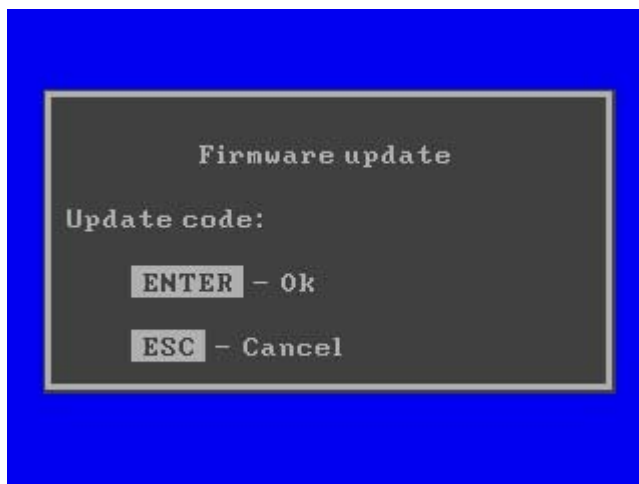
After the copying is completed, new message will appear on the display:



After selecting “no” and pressing OK button this time, message will be displayed as follows:

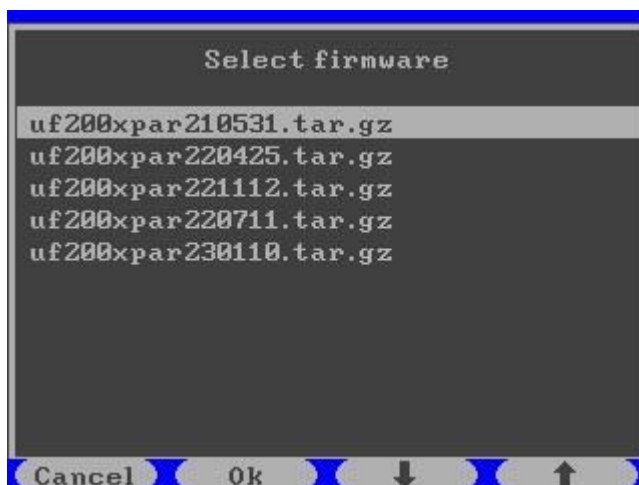


Set the Firmware command to “yes” pressing Change button and press OK button. Firmware update code shall be entered on the next display.

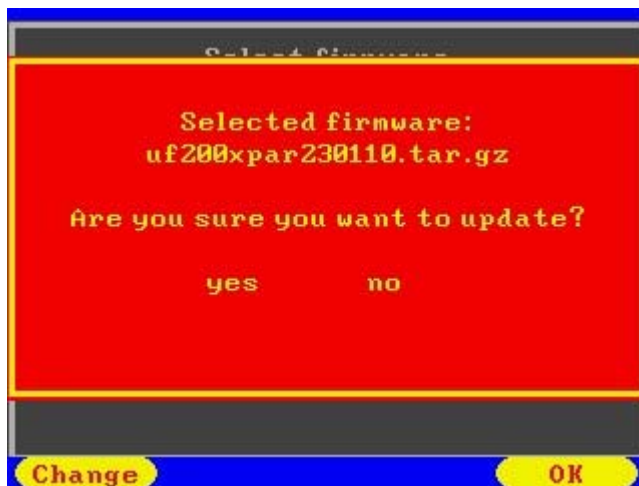


Enter the update code generated at the Process Control web site or provided by Process Control some other way.

List of firmware files on the flash drive will be displayed.



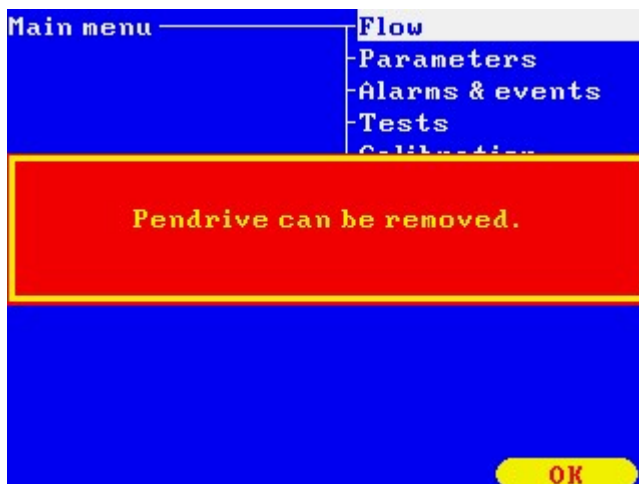
Highlight the firmware version name you want to download by pressing Up and Down arrow buttons and press OK button. Conformation page will appear.



Select "yes" and press OK button.

Firmware file will be copied from the flash drive into Uniflow-200.

Shortly you will see message on the display:



Then you will see the flow computer is restarting.



After Uniflow-200 restarted go to the parameter page "Version control" and check the current application version number. It must be the same as selected on the firmware selection page.



Note

Flash drives are different quality. In theory they are all compatible, but the level of compatibility might be different.

It might happen that Uniflow-200 does not recognize the flash drive.

In very rare cases Uniflow-200 may report “Firmware file copy error” and the firmware will not be updated.

In such a case remove the flash drive, wait one minute and insert it again. Repeat the procedure above.

If the update is not succeeded after 2-3 attempts, format the flash drive (not with quick format, but with full format), copy the firmware file again into the flash drive and repeat the procedure.

Or, take another flash drive from different manufacturer.

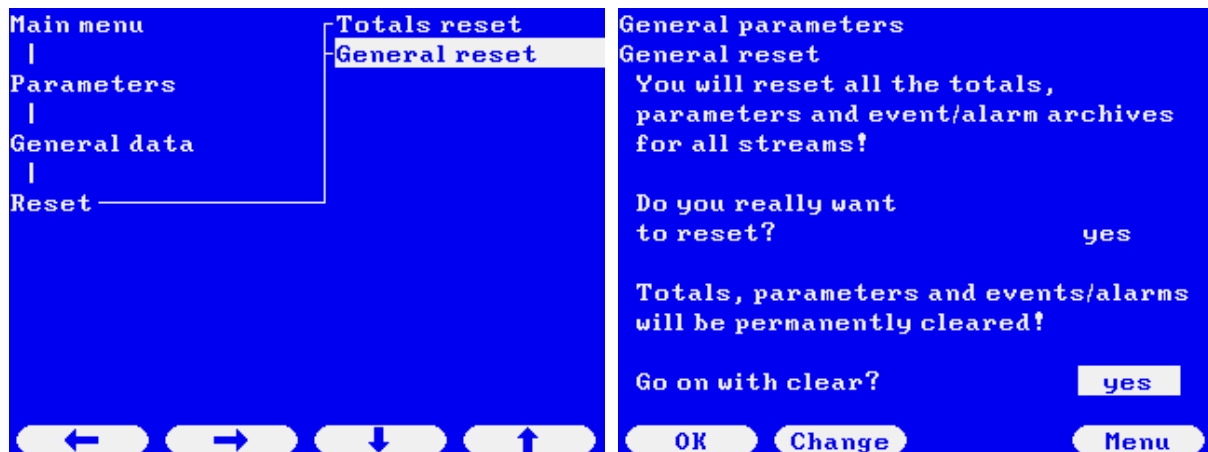
1.7 Deep restart after firmware update

Process Control make all precautions Uniflow-200 to continue to work after firmware update with the old parameters and to retain all archive data, cumulative and periodic totals.

In very rare case it might happen that the data base or parameter project become corrupted after firmware update and Uniflow-200 should undergo deep restart.

New firmware generally includes new features, new parameters. To be able to utilize these new features the parameter project shall also be converted to the latest format. See conversion details in “2 – HOW TO CONVERT PARAMETER PROJECT”. In case of downloading converted parameter project, it is recommended to perform deep restart after firmware update.

To initiate deep restart, go to the general reset page and confirm your intention for general reset twice, as required on the display.



You will see message "Clearing..." for few seconds, then another message "General reset done!" another few second then the main menu page will be displayed.

After performing general reset Uniflow-200 is ready for parameter set-up. There is no active stream in the flow computer after general reset.

The parameter set-up can be completed in one of the next ways:

- set-up the parameters via keypad and display manually;
- set-up the parameters in U200ToolBox/UNISetup software offline and download the parameter project with U200ToolBox/UNISetup software via Ethernet port;
- set-up the parameters in U200ToolBox/UNISetup software offline and download the parameter project from flash drive via USB port.

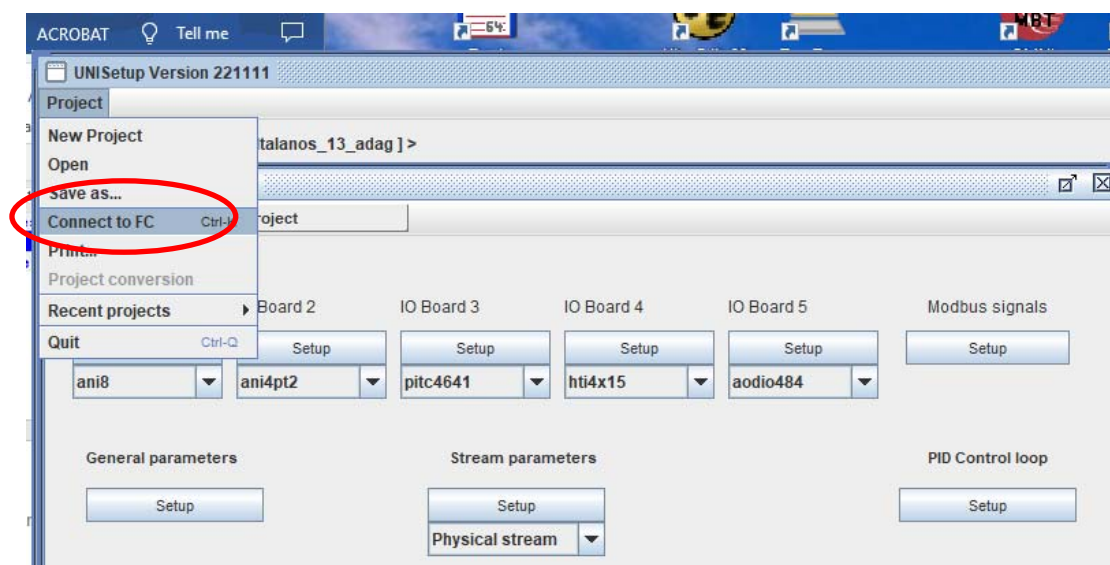
1.7.1 Parameter set-up via keypad and display

Consult UNIFLOW-200 MFC Instruction Manual.

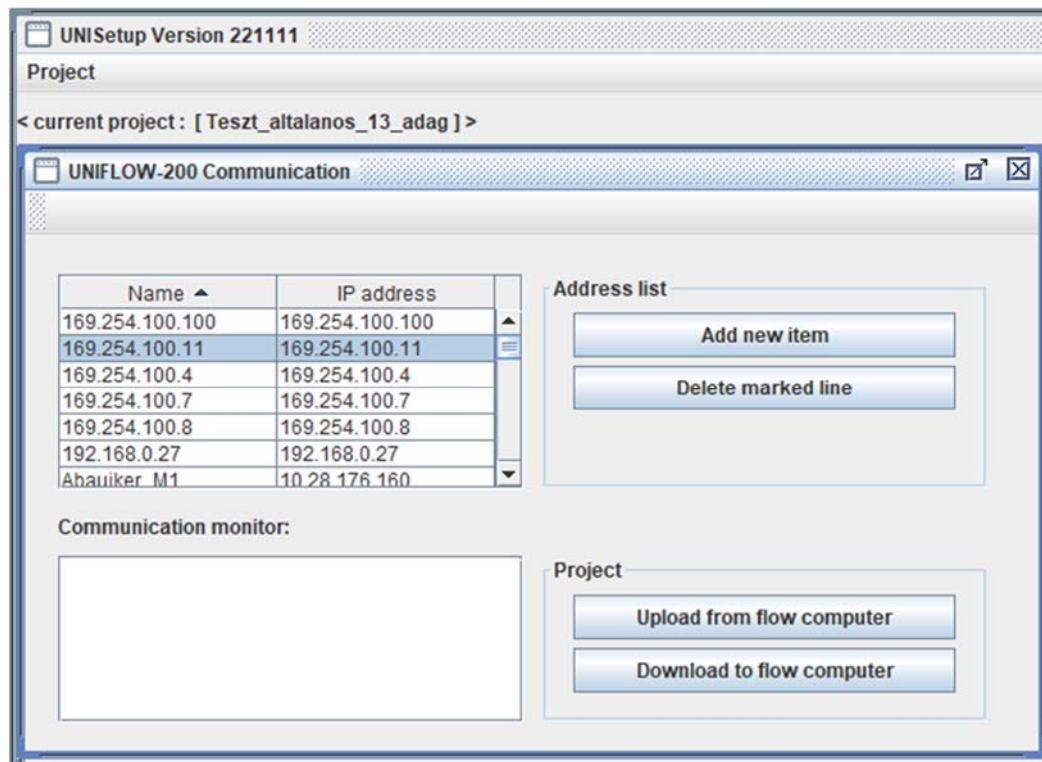
1.7.2 Parameter project download via Ethernet port

Prepare the parameter project in the UNISetup program.

Having the parameter project open go to the menu Project / Connect to FC



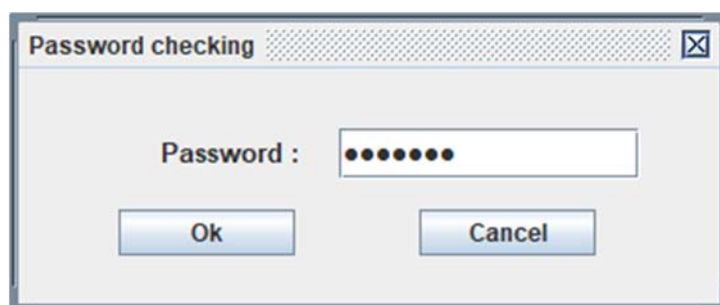
Communication window opens. Select the name/IP address of the flow computer and click Download to flow computer button.



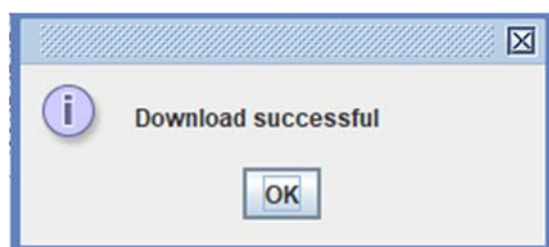
Password entry box appears. Enter the engineering level password and click OK.

Note, the password to be entered here is the engineering level password not the update code. update code is required for firmware update only.

The default value of the password is empty, i.e., you should press Enter key only.



You may see a progress bar then a message:



On the display of Uniflow-200 you will see message:



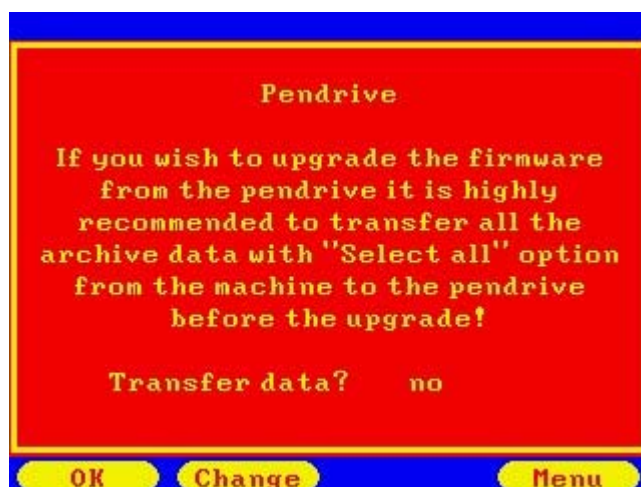
Uniflow-200 is prepared now to perform the measurement.

1.7.3 Parameter project download via USB port

Prepare the parameter project in the UNISetup program.

Copy the directory containing the parameter project from your PC to root directory of a flash drive.

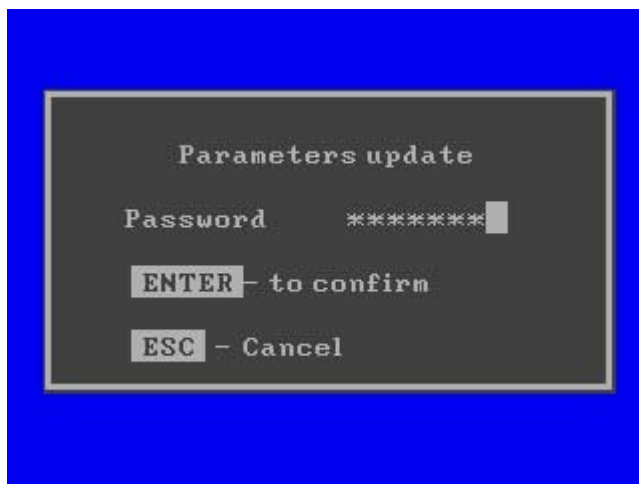
Insert the flash drive into the USB port of the Uniflow-200. After few seconds you will see message:



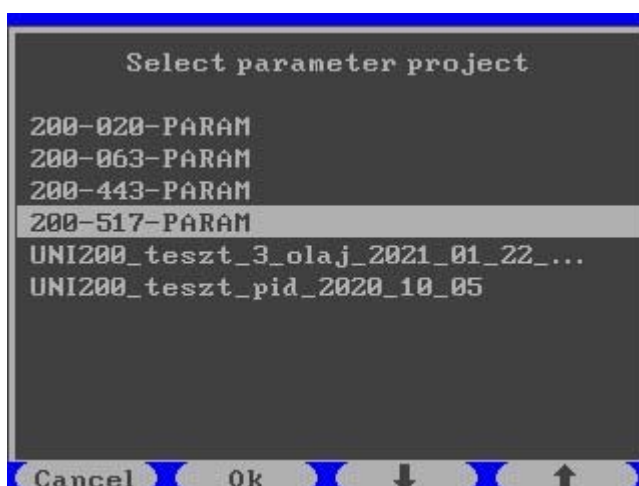
In case of parameter project update it is not necessary to save archive data so select command “no” this time and click OK. New message appears.



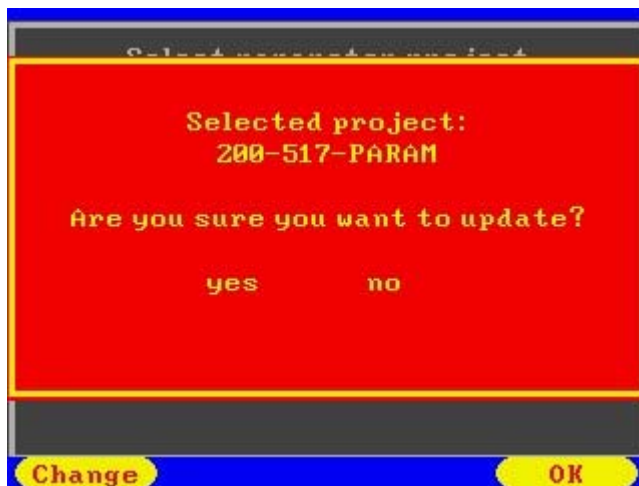
Select Parameters line by pressing Up and Down arrow key and set the command to "yes" pressing Change button then press OK. Message box appears requesting enter password.



Enter the engineering level password and press Enter key on the keyboard. List of parameter projects located on the flash drive will be displayed.



Highlight the parameter project you want to download by pressing Up and Down arrow key and press OK. Confirmation message appears.



Select command "yes" by pressing Change button and press OK.

You will see file names scrolling through the display then a message announcing completion of the parameter set-up.



Uniflow-200 automatically starts measurement.