

TFTP FIRMWARE UPDATE

Firmware update for devices supporting a TFTP firmware update

AUTOMATION

Application note
7090_en_01

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1 Description

In this application note you will find the description for a firmware update via TFTP protocol.

Factory Manager 2.2

The procedure is illustrated using an FL PN/IBS as an example. However, the following description is valid for all devices supporting the firmware update via TFTP.

The example screenshots given have been created using the Factory Manager 2.2 software under Windows 2000.

Factory Manager 2.3

The procedure is illustrated using an IL PN BK DI8 DO4-PAC bus coupler as an example. However, the following description is valid for all devices supporting the firmware update via TFTP.

The example screenshots given have been created using the Factory Manager 2.3 software under Windows XP.

2 Device requirements

The device **must** have **valid** IP parameters so that the firmware can be updated.



It is not possible to update the firmware using the default settings upon delivery. Start-up this device and set valid IP parameters.



To make sure that no settings are lost during the update, please store the device settings before using appropriate measures.



This description does **not** replace the module-specific data sheets and manuals. In addition to this application note, all module-specific documents still need to be observed.



Make sure you always use the latest documentation. It can be downloaded at www.phoenixcontact.com.



Windows 2000 and Windows XP are trademarks of the Microsoft Corporation.

3 Factory Manager requirements

Please use Factory Manager version 2.2 or later or the corresponding demo version. The Factory Manager must be installed in accordance with the hardware and software requirements (see Setup Menu).

Make the new firmware version available in the "download" directory. For a standard installation, please refer to "C:\Programme\Phoenix Contact\Factory Manager\Version x.y\download".

The update can only be executed if the firmware file is stored in the "download" directory. It is not possible to start the update from another directory.



Please make sure that the IP address of your PC as well as the IP address of the device for which you will execute the firmware update are in the same address area as the Factory Manager.

4 Factory Manager 2.2 Example: FL PN/IBS

- Select "Device, Add..." in the menu bar.

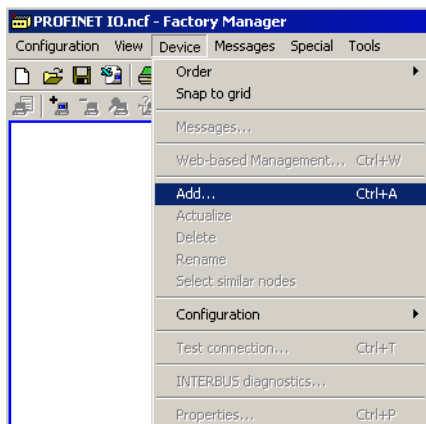


Figure 1 "Device, Add.." in the Factory Manager

- Enter the required device data in the following window.
- Under "Description", enter any device name.
- Under "Type" select your existing device. If your device is not listed under "Type", always select the "FL IBS SC/I-T" device.



Irrespective of the PROFINET IO device type for which you would like to execute a firmware update, we recommend always selecting the "FL IBS SC/I-T" device. Otherwise the "Firmware Update" function might not be available anymore.

- Enter the required data in the corresponding fields under TCP/IP.

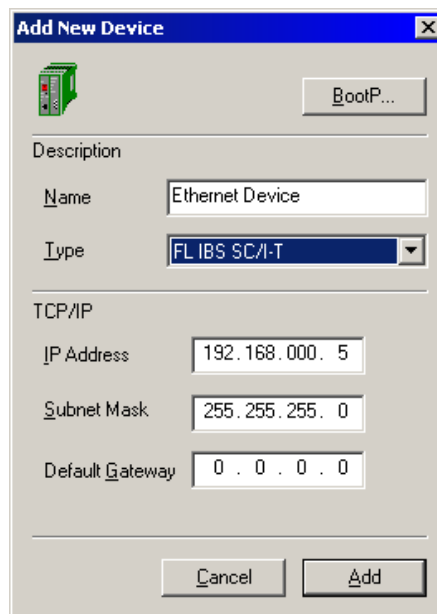


Figure 2 "Add New Device" window

- Confirm your selection with "Add".

Now your device is marked as accessible in the Factory Manager device window.



Do not refresh the Factory Manager view. Otherwise the Firmware Update option will not be available anymore.

However, if you have already refreshed the Factory Manager view, simply set back the type to "FL IBS SC/I-T" under "Properties" (context menu of the device).

- Select "Configuration, Firmware Update..." in the context menu. The firmware update window opens.

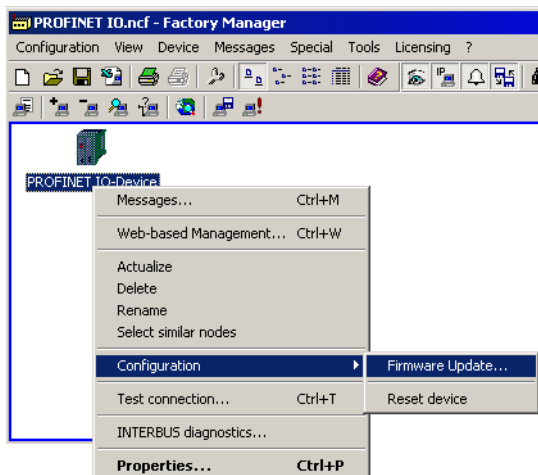


Figure 3 Firmware update context menu

- Select the new firmware with the "Select..." button.
- Select the TFTP server address under "Change...". The default address is the IP address of the PC on which the factory manager is installed.

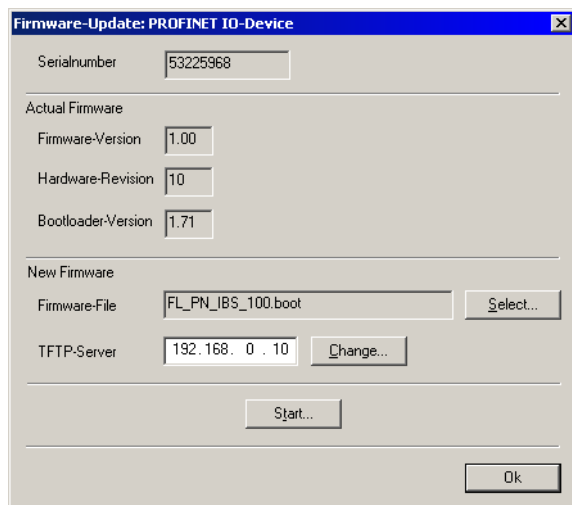


Figure 4 Selecting the address of the TFTP server

- Click on "Start...".
- Enter the password. It is case-sensitive. The default password is "private".

You can observe the transmission process of the firmware file in the Factory Manager message window.



The firmware update can take several minutes. Never disconnect the supply voltage during the firmware update process. The update is finished as soon as the device has rebooted.

If the device is a PROFINET IO device,

- rename the device and reset the IP parameter after the update and
- check whether configuration settings and parameterization are correct.

5 Factory Manager 2.3 Example: IL PN BK D18 DO4-PAC

- Select "Device, Add..." in the menu bar.

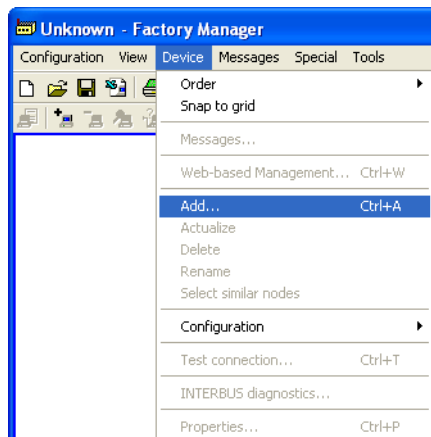


Figure 5 "Device, Add.." in the Factory Manager

- Enter the required device data in the following window.
- Under "Description", enter any device name.
- Under "Type" select your existing device. If your device is not listed under "Type", select a similar device (in the example: "FL IL BK").

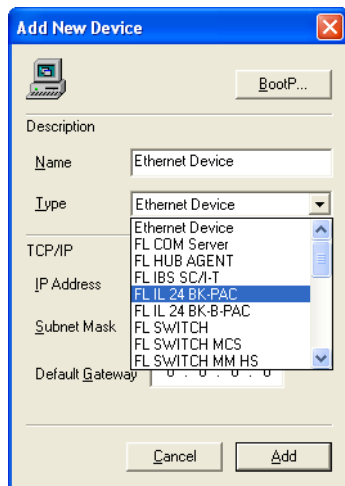


Figure 6 Selecting the device type

- Enter the required data in the corresponding fields under TCP/IP.

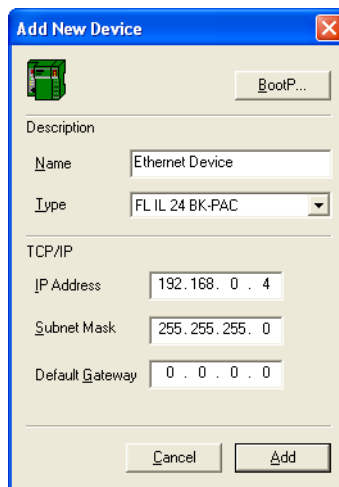


Figure 7 "Add New Device" window

- Confirm your selection with "Add".
- Now your device has been added to the Factory Manager device window.

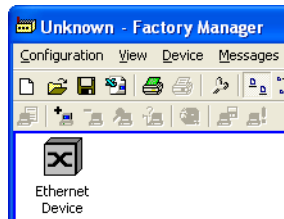


Figure 8 Device inserted

The device cannot yet be accessed if it is displayed as shown in Figure 8.

- In the context menu select the "Properties..." menu item.

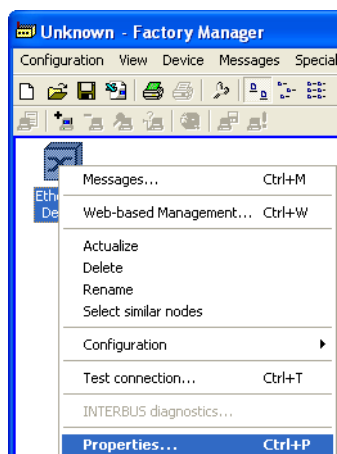


Figure 9 Device properties

- Select the device type again.

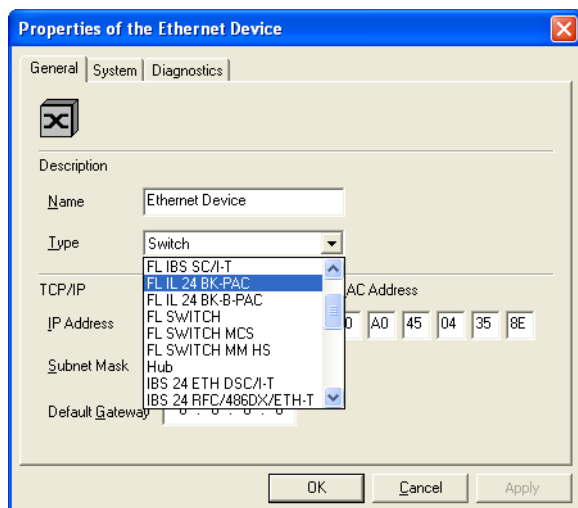


Figure 10 Selecting the device type again

- Confirm your selection with "Apply" and "OK".

Now your device is marked as accessible in the Factory Manager device window.

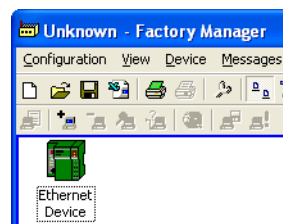


Figure 11 Device is accessible



Do not refresh the Factory Manager view. Otherwise the Firmware Update option will not be available anymore.

However, if you have already refreshed the Factory Manager view, set the type under "Properties" again (context menu of the device). If the "Firmware Update" function is still not available, select another device type (independent of the actual PROFINET IO device type).

- Select "Configuration, Firmware Update..." in the context menu. The firmware update window opens.

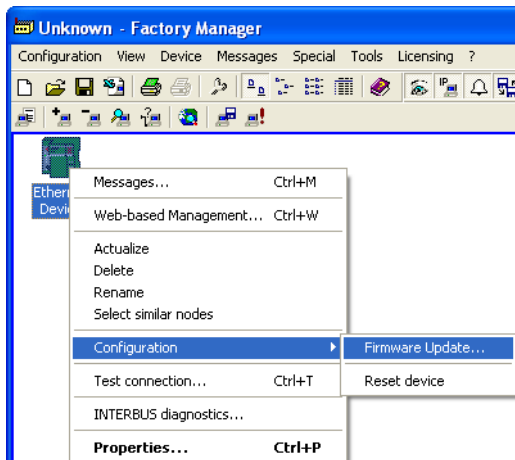


Figure 12 Firmware update context menu

- Select the new firmware with the "Select" button. The file type "Boot files (*.bin)" is preset in the window for the file selection that opens. If you file for the firmware update uses a different file type set the selection to "All files (*.*)".
- For the IL PN BK DI8 DO4-PAC bus coupler, for example, select the *2703994.fw* file.

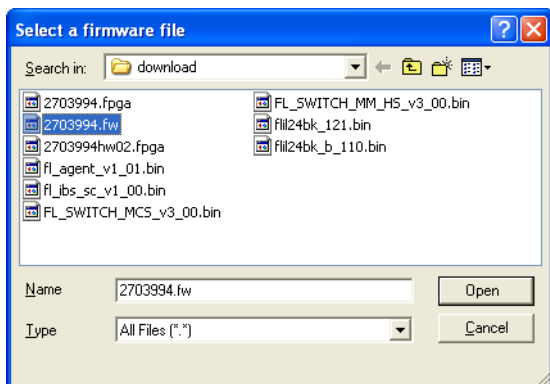


Figure 13 Selecting the file for the firmware update

- Select the TFTP server address under "Change...". The IP address of the PC on which the Factory Manager is installed is also listed.

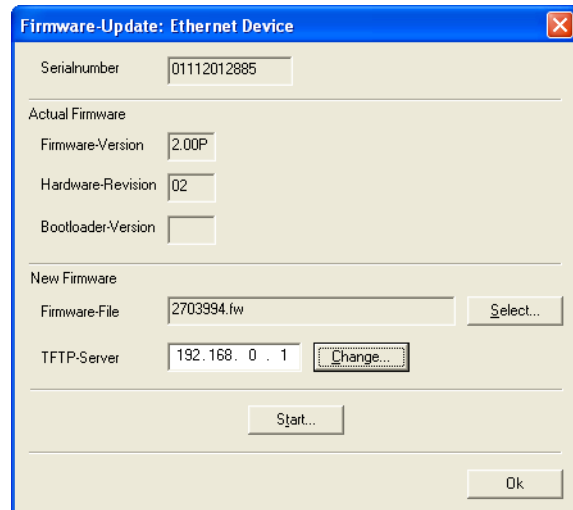


Figure 14 Selecting the address of the TFTP server

- Click on "Start...".
- Enter the password. It is case-sensitive. The default password is "private".

You can observe the transmission process of the firmware file in the Factory Manager message window.

In the example for the IL PN BK DI8 DO4-PAC bus coupler, the *2703994hw02.fpga* file is automatically transferred after the *2703994.fw* file.



The firmware update can take several minutes. Never disconnect the supply voltage during the firmware update process. The update is finished as soon as the device has rebooted.

If the device is a PROFINET IO device,

- rename the device and reset the IP parameter after the update and
- check whether configuration settings and parameterization are correct.



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