

TFTP FIRMWARE UPDATE

AXL BK PN

Updating the firmware of an AXL BK PN Axioline bus coupler

AUTOMATION

Application note
8129_en_00

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1 Description

This document describes how you can update the firmware of the AXL BK PN bus coupler with the Factory Manager using the TFTP protocol.



In the following, the term "PC" will be used as a general term for a PC and notebook, or similar.

2 System requirements

- AUTOMATIONWORX Software Suite 1.50 SP3, incl. NetNames (general requirement for Axioline)
- Factory Manager 2.3 or earlier version, if the "FL IL 24 BK-PAC" device type is supported.

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

3 Update 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.



In order to establish a connection to the Axioline bus coupler it might be necessary to deactivate the firewall of your PC.



This description does **not** replace the module-specific documentation. Please observe the module-specific documents as well.



Make sure you always use the latest documentation. This can be downloaded at www.phoenixcontact.net/catalog.



Windows XP is a trademark of the Microsoft Corporation.

4 Installing the Factory Manager (if necessary)

Install the Factory Manager if it is not yet installed on your PC. To do this, proceed as follows:

- Search the Factory Manager called "FL SWT" in the download center.
- Download the *setup23_xx.exe* file.
This is the latest version of the Factory Manager as a update or demo version.
You can use earlier versions, if the "FL IL 24 BK-PAC" device type is supported.
- To install the Factory Manager, execute the *setup23_xx.exe* file and follow the installation instructions.
- If there is the error message, that an SNMP service is missing, please activate this service on your PC.
To do this, proceed as follows:



To enable the SNMP service you might need administrator rights or even an operating system CD.

- Open "Start, System Control, Software".
- Click the "Add/Remove Windows Components" menu item.
- In the "Windows Component Wizard" window that opens double-click the "Administrative Tools and Audit Programs" entry.
- Activate the "SNMP" checkbox.
- Close all open windows.

5 Providing a new firmware version



You find the current file for the firmware update in the download area of the bus coupler at www.phoenixcontact.net/catalog.

Store the new firmware version in the directory "C:\Program Files\Phoenix Contact\Factory Manager\Version x.y\download" (for standard installations of the Factory Manager).

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.

6 Updating the firmware with the Factory Manager

- Connect the AXL BK PN bus coupler via an Ethernet cable to the LAN card of your PC.
- Switch on the power supply to the bus coupler.
- Please make sure that the IP address of your PC as well as the IP address of the bus coupler for which you will execute the update are in the same IP address area as the Factory Manager. To do this, please proceed as follows:
 - Start the NetNames program via "Start, All Programs, Phoenix Contact, AUTOMATIONWORX Software Suite 2009 1.50, Service Programs".
 - Click the "Update" button.
The bus coupler (the Axioline station for a complete station) should appear in the NetNames window. IP address and subnet mask of the bus coupler will be shown.
 - Save the IP address of your PCs to restore it after the update.
Set the IP address of the PC to a valid IP address which is located in the same IP address areas as the IP address of the bus coupler.

IP address examples:
AXL BK PN: 172.16.16.94
PC: 172.16.16.95
(with the same subnet mask as the Axioline station)
- Start the Factory Manager.
Remove the error should an error be indicated in the message window.
Continue if no errors are indicated.

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

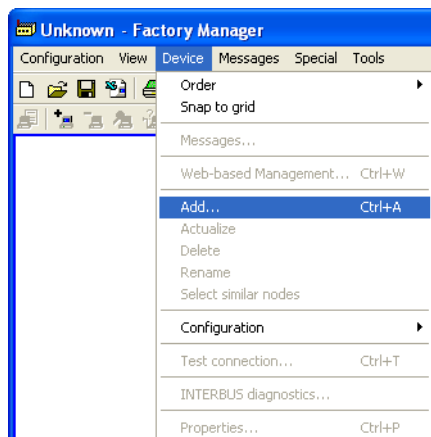


Figure 1 "Device, Add..." in the Factory Manager

- 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", select a similar device (in the example: "FL IL 24 BK-PAC").

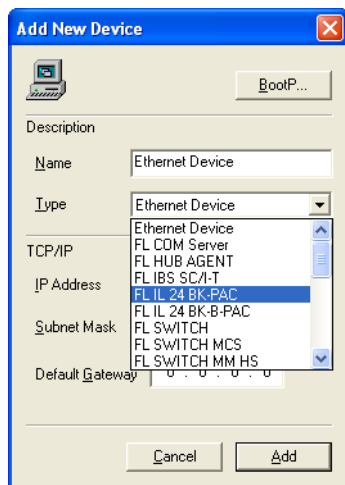


Figure 2 Selecting the device type

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

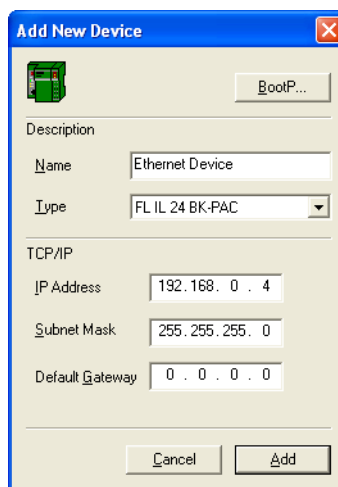


Figure 3 "Add New Device" window

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

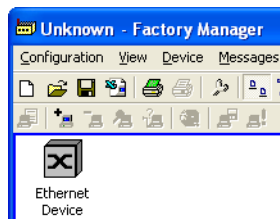


Figure 4 Device inserted

The device cannot yet be accessed if it is displayed as shown in Figure 4.

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

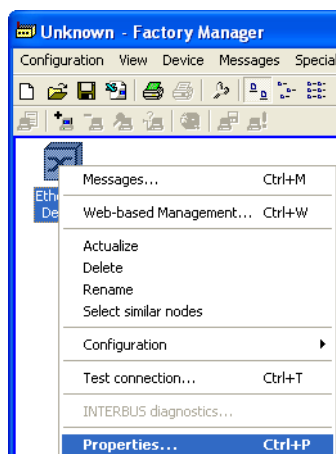


Figure 5 Device properties

- Select the device type again.

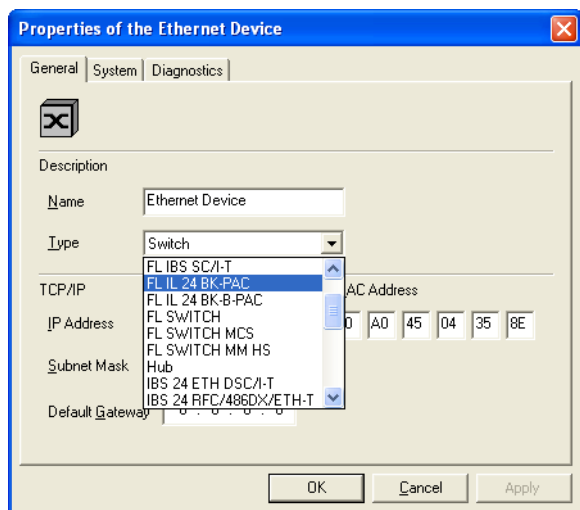


Figure 6 Selecting the device type again

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

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



Figure 7 Device is accessible

i 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.

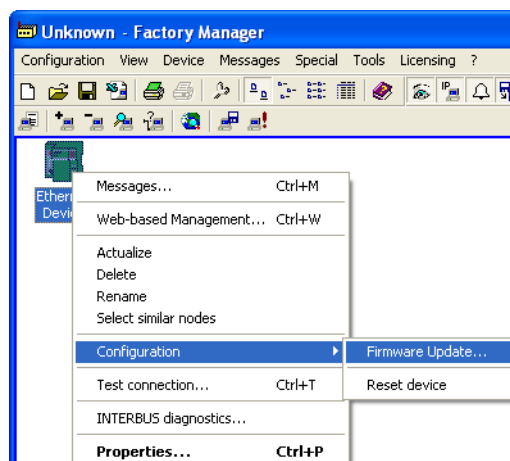


Figure 8 Firmware update context menu

- 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 up. If you file for the firmware update uses a different file type set the selection to "All files (*.*)".
- Select the update file (xxxxxxx.fw).

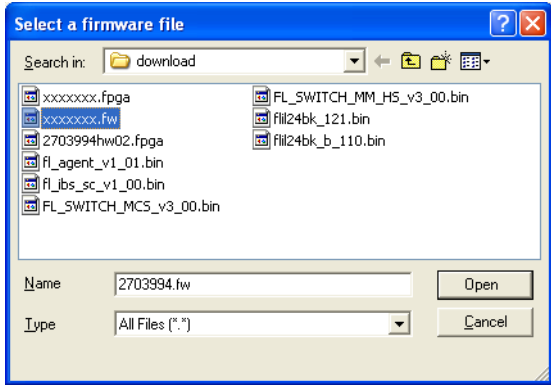


Figure 9 Selecting the file for the firmware update

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

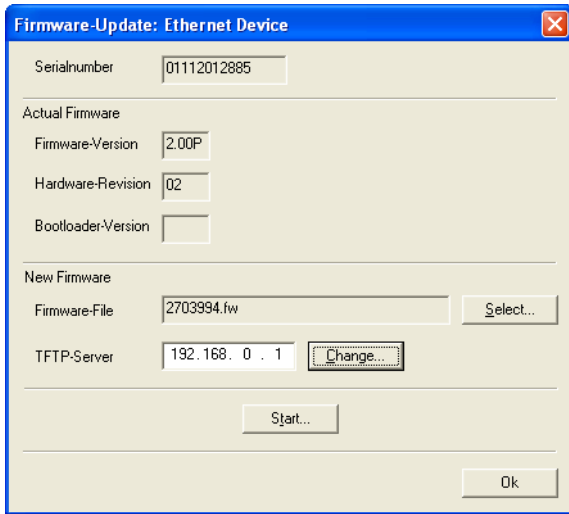


Figure 10 Selecting the address of the TFTP server

- 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 LEDs on the bus coupler also show the current status of the firmware update.

LED	Meaning
RDY flashing	BootP requests are sent and the firmware container is loaded via tftp.
RDY ON / M ON	Firmware is being stored.



The firmware update can take several minutes. Never disconnect the supply voltage during the firmware update process.

After a successful update the bus coupler will be restarted automatically.

Since 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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