Update firmware using IAP over Ethernet

The IAP mode is part of the preparation for a firmware update. There are two ways to update firmware on a Programmable I/O (PIO) device in IAP mode, follow description below:

- PIO Firmware Update Tool (recommended)
- IAP mode web portal

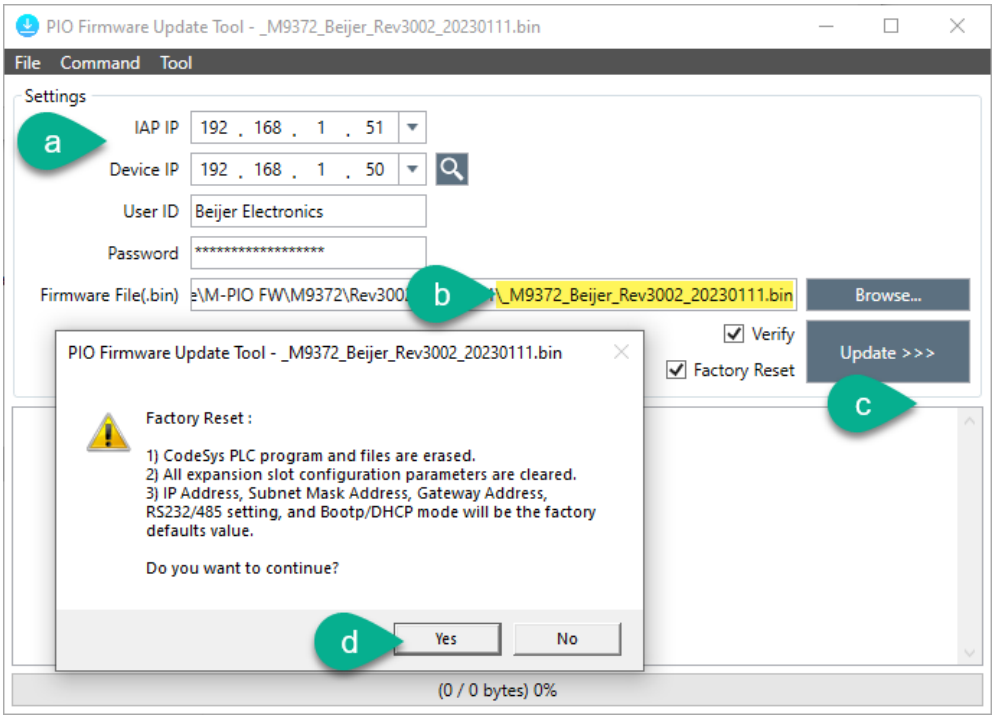
PIO Firmware Update Tool (recommended)

1. Connect a PC via Ethernet (LAN cable) to PIO (e.g. M9372, GN-9372 or GL-9972).

   Note! The PIO device has the default IP **192.168.1.50**, make sure the PC is on the same subnet. Ping the device or access the web server at: http://192.168.1.50/setup.htm.

2. Power off the device. Press and hold the reset button and apply power at the same time. Now the device will enter IAP mode → MOD LED will blink green / red.
   Access the device via IAP web server address: **192.168.1.51**

3. Start **PIO Firmware Update Tool** (version 1.0.0.3)



(a) IAP Web server settings:
Beijer IAP IP: **192.168.1.51**
Beijer Device IP: **192.168.1.50**
User ID: **Beijer Electronics**
User Password: **Beijer Electronics**

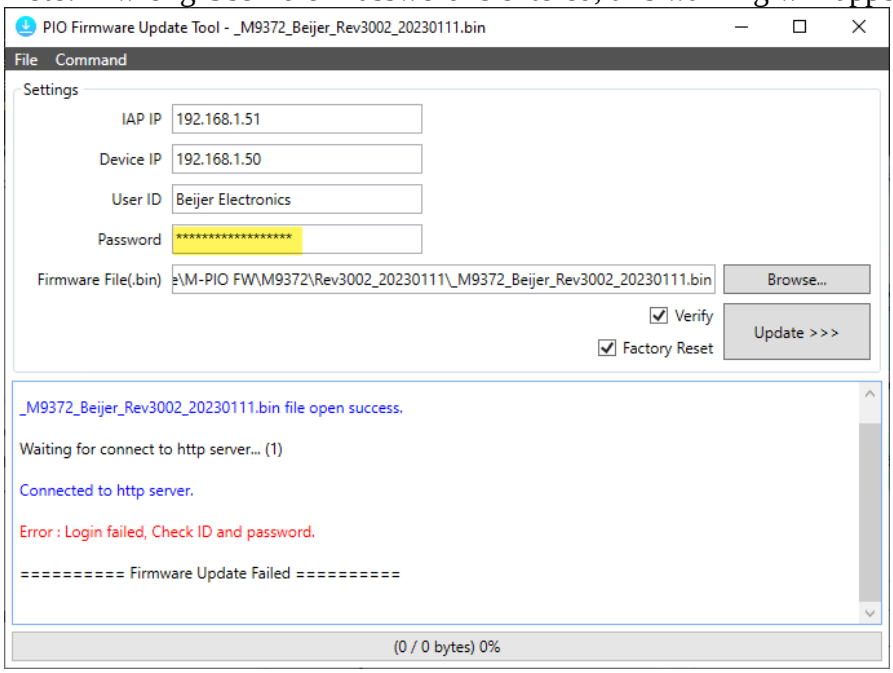
(b) Click the Browse button and select the firmware file (Bin file).

(c) Tick the 'Verify' and 'Factory Reset' check boxes.

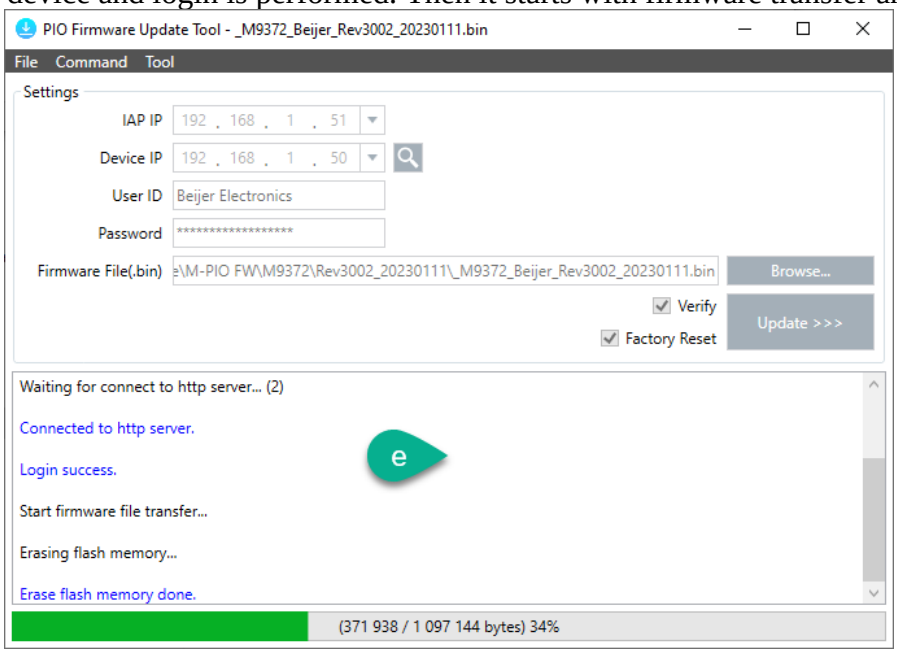
i. **Verify** - To check PIO information after firmware update (Ex: Vendor code, Product code, Product name, Firmware version, Firmware release date)

ii. **Factory Reset** - It's always recommended to proceed with a Factory Reset after firmware update. When checked a factory reset is carried out after a successful verify procedure.

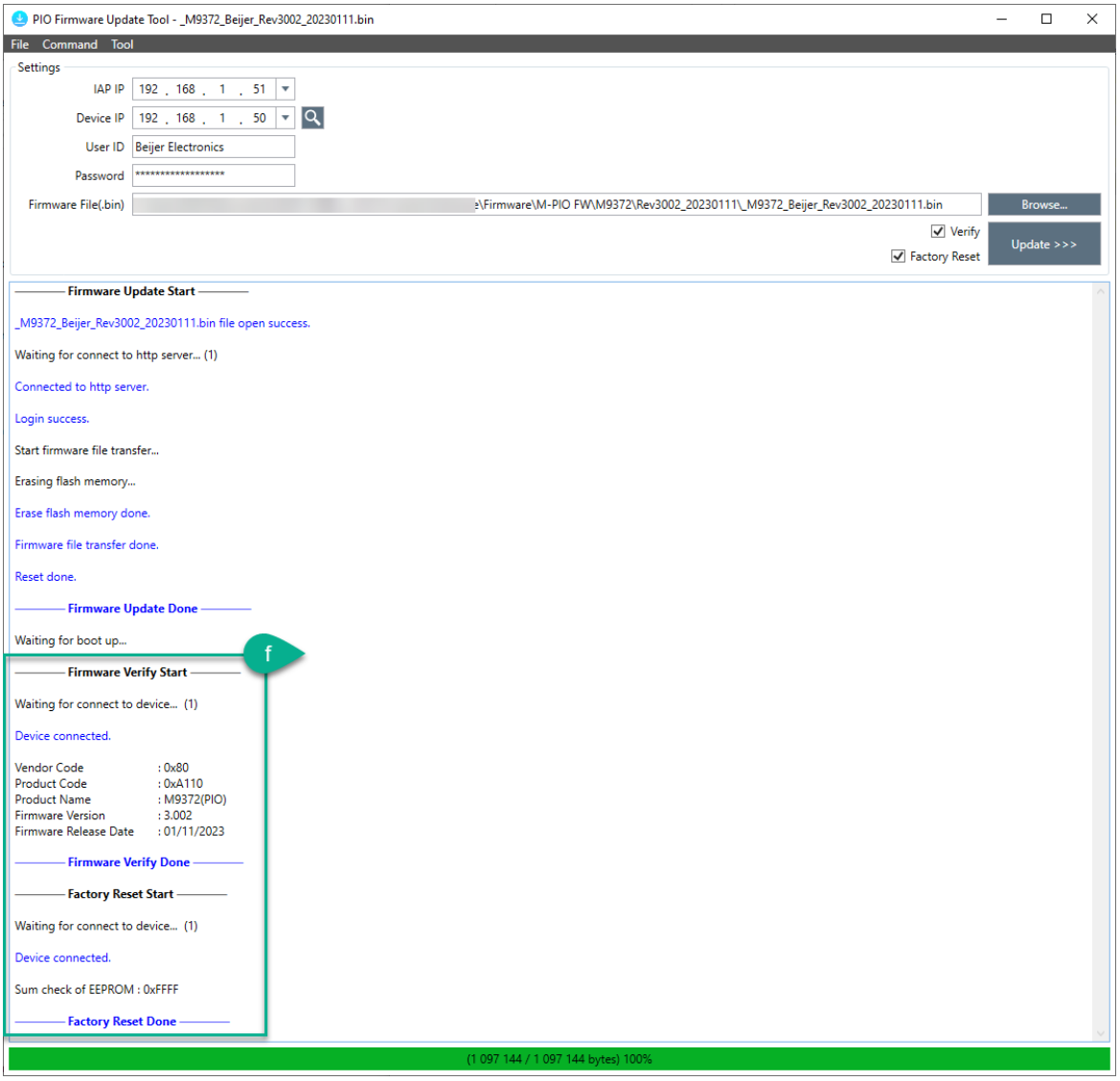
(d) Start firmware update procedure by pressing the Update button.
Note! If wrong User id or Password is entered, this warning will appear.



(e) After the correct User ID / Password has been entered, the tool is connecting to the PIO device and login is performed. Then it starts with firmware transfer and erasing flash.



(f) At the last procedure the tool initiate Firmware Verify and the automatic Factory Reset. Expand the window to show the logged status.



(g) When the update process is completed recycle the power.

(h) Connect to the webserver http://192.168.1.50/setup.htm and verify Firmware version and CODESYS version.

(i) Download application program.

IAP mode web portal

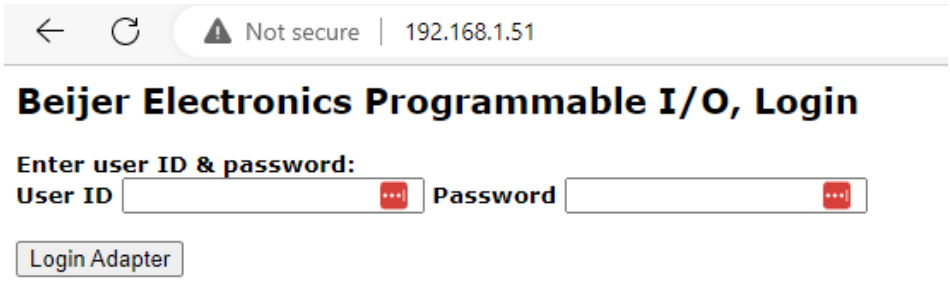
1. Connect a PC via Ethernet (LAN cable) to PIO (e.g. M9372, GN-9372 or GL-9972).

   Note! The PIO device has the default IP **192.168.1.50**, make sure the PC is on the same subnet. Ping the device or access the web server at: http://192.168.1.50/setup.htm.

2. Power off the device. Press and hold the reset button and apply power at the same time. Now the device will enter IAP mode → MOD LED will blink green / red.
   Access the device via IAP web server address: **192.168.1.51**

   Example from IAP mode of a M9372 device:

3. Start the web browser and connect to IP 192.168.1.51.

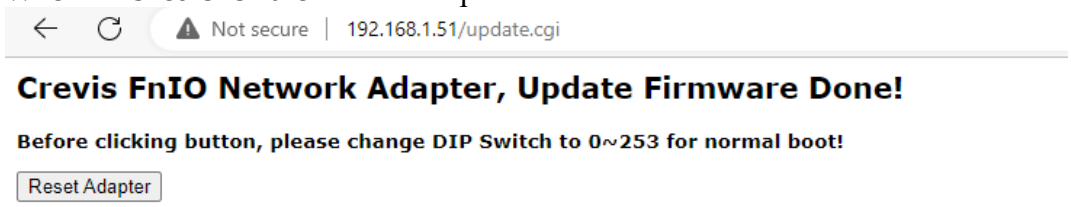


4. Login with User ID: **Beijer Electronics** / Password: **Beijer Electronics**

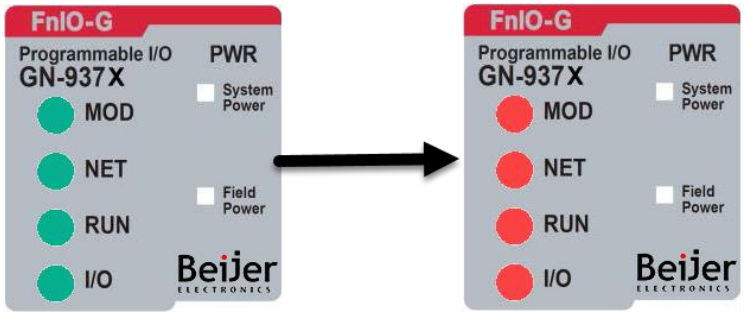
5. Specify a firmware binary file (*.bin) with 'Choose File'.

6. Select the file and press ‘Update Firmware’.

7. When finished click the ‘Reset Adapter’.



8. It’s recommended to always proceed with a **Factory Reset** after firmware update, for example when transitioning from CODESYS version SP11 to SP17 or the contrary.
   a. After updating to the latest firmware.
   b. Press and hold the reset button for 20 seconds (see pictures below).
   c. During the Factory Reset process, all LED indicators will switch from green to red



   d. Cycle Power.
   e. Download your PLC project.

Example) M9372 PIO

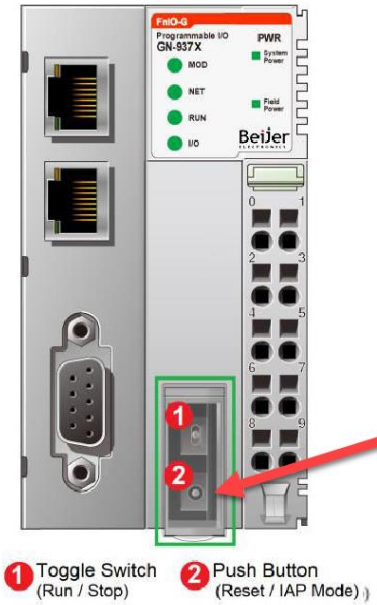
2.5.1. Toggle Switch

Toggle Switch Status	Module is	Description
UP	RUN	PLC Run
DOWN	STOP	PLC Stop

2.5.2. Push Botton

Push Botton	Module is	Description
Push and detach	Reset	PLC Reset and Stop
Push for 5sec and Power Reset	PLC Reset	Erase PLC user program and Retain memory
Push for 20sec and Power Reset	Factory Reset	Erase PLC user program and PLC parameter reset
Push hold and Power Reset	IAP mode	Firmware download via FireFox.

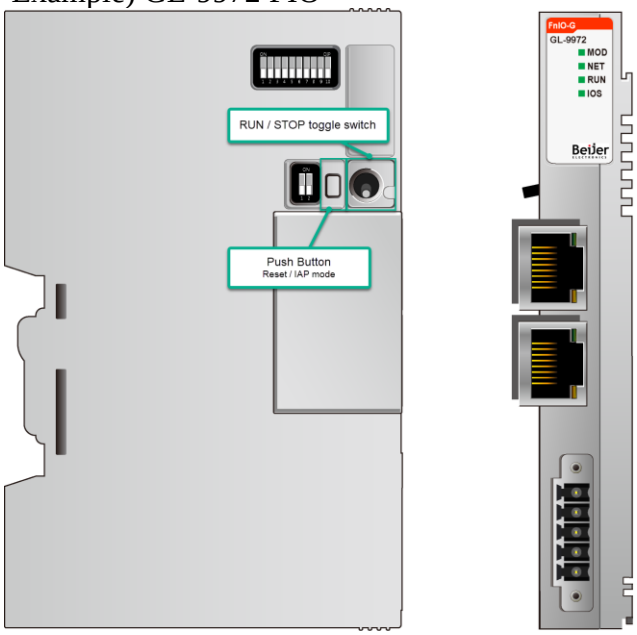
Example) GN-9372 PIO



Toggle Switch Status	Module is	Description
UP	RUN	PLC Run
DOWN	STOP	PLC Stop

Push Button	Module is	Description
Press and detach.	Reset	Reset the PLC and then stop.
Push for 5sec and power Reset	PLC Reset	Erase PLC user program and Retain memory
Push for 20sec and power reset	Factory default	Erase PLC user program and PLC parameter reset
Hold down and reset the power.	IAP mode	Available for firmware download using FireFox

Example) GL-9972 PIO

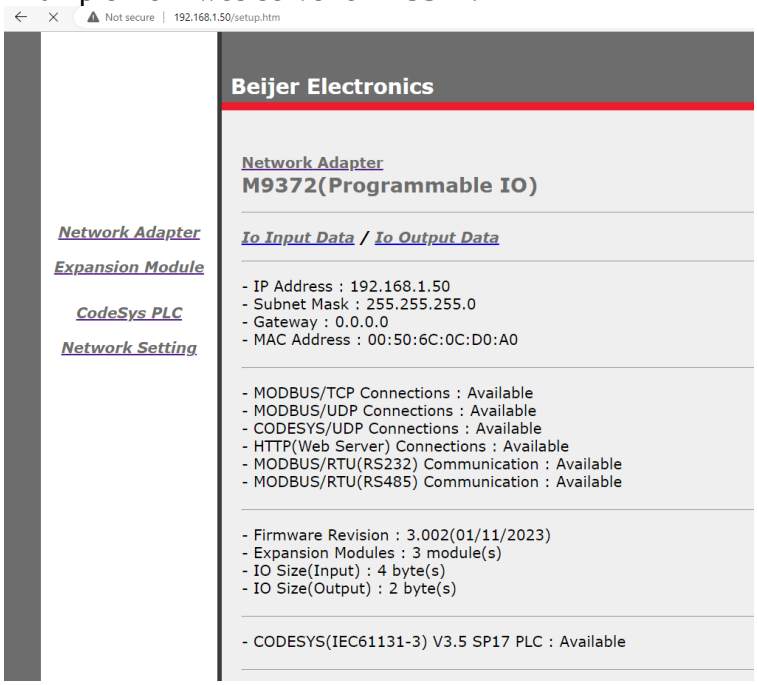


Push Button	Module is	Description
Push and detach	Reset	Reset CODESYS PLC program and make the program be in the stop status.
Push for 5sec	PLC Reset	Erase CODESYS PLC program and retain memory.
Push for 20sec	Factory Reset	Erase CODESYS PLC program and parameter reset.
Push hold and Power Reset	IAP mode	Firmware download via FireFox.

9. When the update process is completed recycle the power.

10. Connect to the webserver http://192.168.1.50/setup.htm
and verify Firmware version and CODESYS version.

Example from web server of M9372:



11. Download application program.