

Update via Ethernet (LAN cable)

For the FnIO Remote I/O network adapters with RJ45 Ethernet interface follow this guide. Modules supporting the IAP firmware update mode are: GN-9287/GL-9087/M9287 PROFINET, GN-9289 MODBUS TCP/UDP and GN-9284 CC-link IE Field Basic etc.

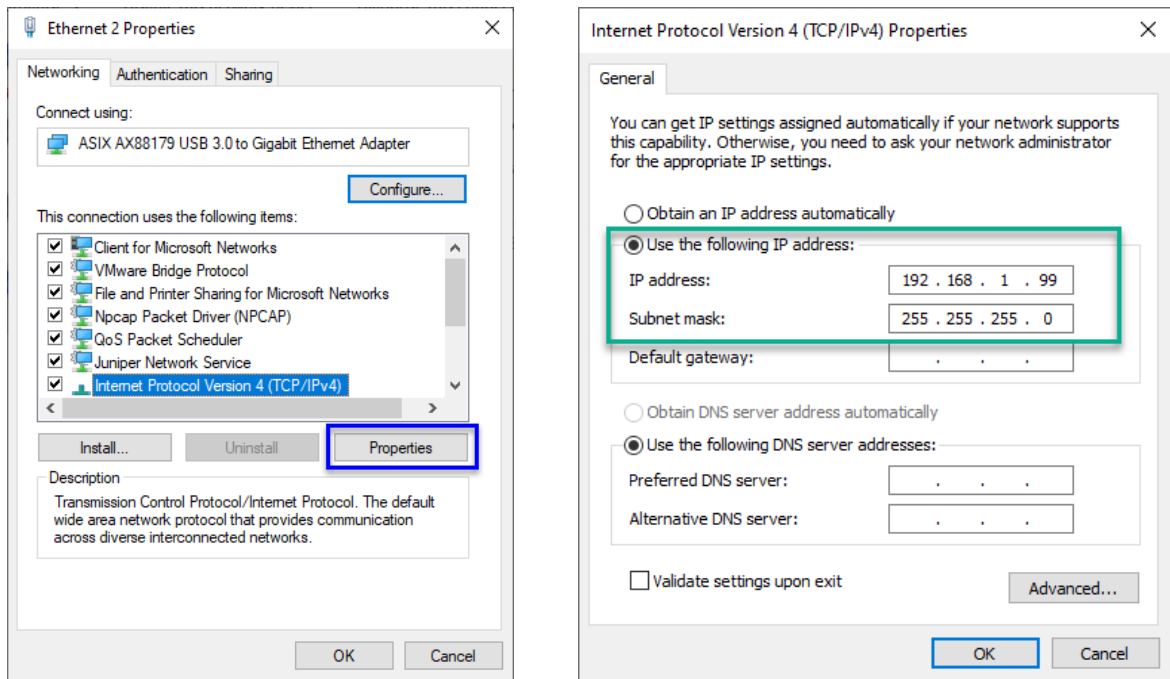
1. Adjust the IP address of the PC to be the same subnet as the Remote I/O adapter.

Network & Internet > Change adapter options > Internet Protocol Version 4 (TCP/IPv4) > Properties, then adjust the PC IP address and Subnet mask:

IP: **192.168.001.xxx (1..99)** Subnet mask: **255.255.255.0** in this example

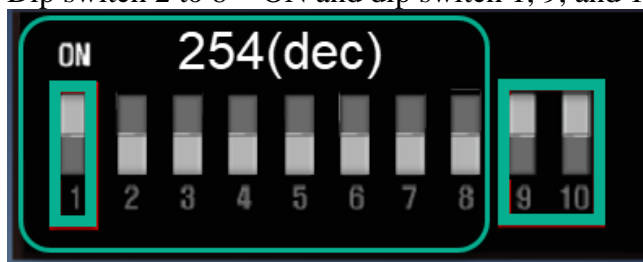
Note, the Beijer Remote I/O adapters normally uses the default IP: 192.168.1.100

Example, adjust PC Ethernet port to IP address: 192.168.1.99



2. Set the 10-pol dip switch of the network adapter to value 254 (dec) and restart the adapter, that will activate the IAP Mode. 254(dec) = Fixed IP Address 192.168.1.100 *

A value of **254(dec) = 00 1111 1110 (bin)** counting from the dip switch No.1 as LSB bit. Dip switch 2 to 8 = ON and dip switch 1, 9, and 10 = OFF



HEX	FE
DEC	254
OCT	376
BIN	1111 1110

* Check network adapter specification for individual details

- Below example show screenshots from GN-9289 Modbus TCP and M9287 / GN-9287 ProfiNet adapter during update procedure. Note, for other type of network adapters there may be differences, please check specification documents.
- Power up / Restart the device, that will enter the IAP mode.
- In IAP mode the MOD LED = Flashing Red/Green, and the NET LED = Stable green.
- Ping the adapter from a command prompt: **ping 192.168.1.100**

```
C:\Users\MCO>ping 192.168.1.100

Pinging 192.168.1.100 with 32 bytes of data:
Reply from 192.168.1.100: bytes=32 time<1ms TTL=255
Reply from 192.168.1.100: bytes=32 time<1ms TTL=255
Reply from 192.168.1.100: bytes=32 time<1ms TTL=255
Reply from 192.168.1.100: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Enter the web page from a standard web browser. **192.168.1.100**

Login with User id and Password:

User ID : **beijer**

Password : **beijer**

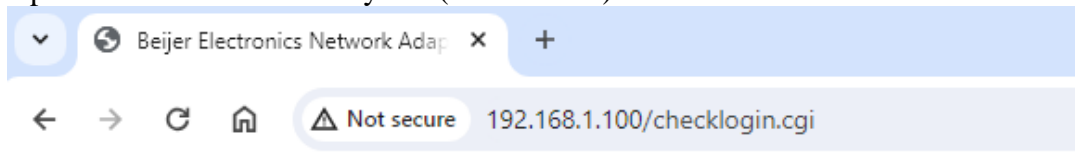
Beijer Electronics Network Adapter, Login

Enter user ID & password:

User ID Password

Login Adapter

- Update firmware with binary file (Choose File):



Beijer Electronics Network Adapter, Update Firmware

Please specify a firmware binary file(.bin) to send to the adapter

Choose File No file chosen

Update Firmware



9. Select the firmware file (*.bin):

Example: Beijer_GN-9289_INA_Rev1011_20230103.bin

Beijer Electronics Network Adapter, Update Firmware

Please specify a firmware binary file(.bin) to send to the adapter

Beijer_GN-928...1_20230103.bin

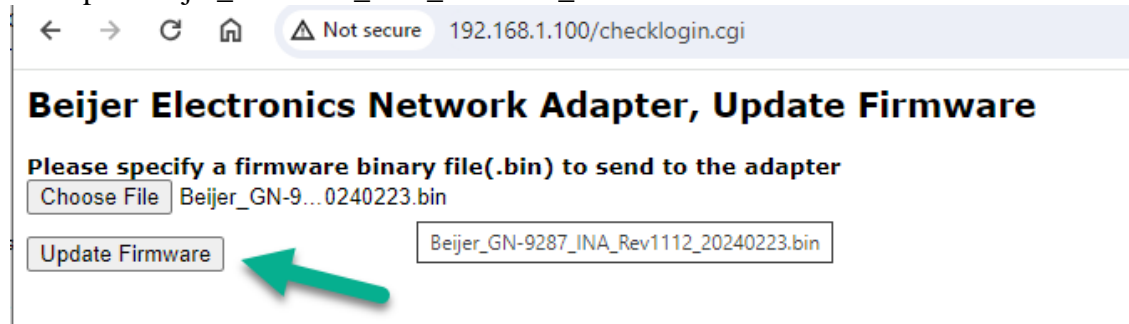
Example: Beijer_M9287_Rev1005_20240223.bin

Beijer Electronics Network Adapter, Update Firmware

Please specify a firmware binary file(.bin) to send to the adapter

Beijer_M92...20240223.bin

Example: Beijer_GN-9287_INA_Rev1112_20240223.bin



10. Press “Update Firmware” and the procedure will start.

11. When the update is completed, this message is shown:

Beijer Electronics Network Adapter, Update Firmware Done!

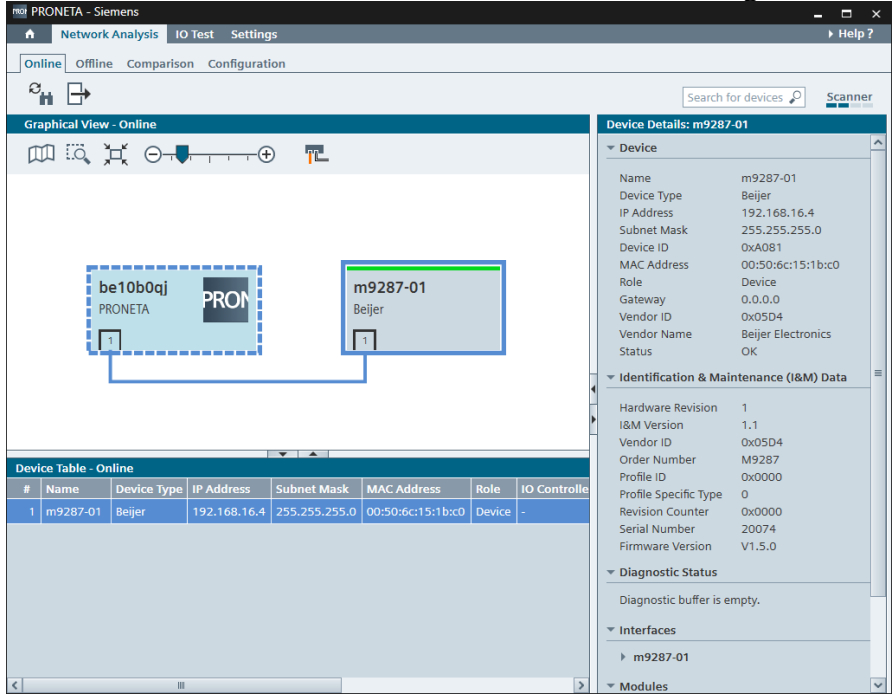
Before clicking button, please change DIP Switch to 0~253 for normal boot!

12. Now reset all dip switches, then press “Reset Adapter”.

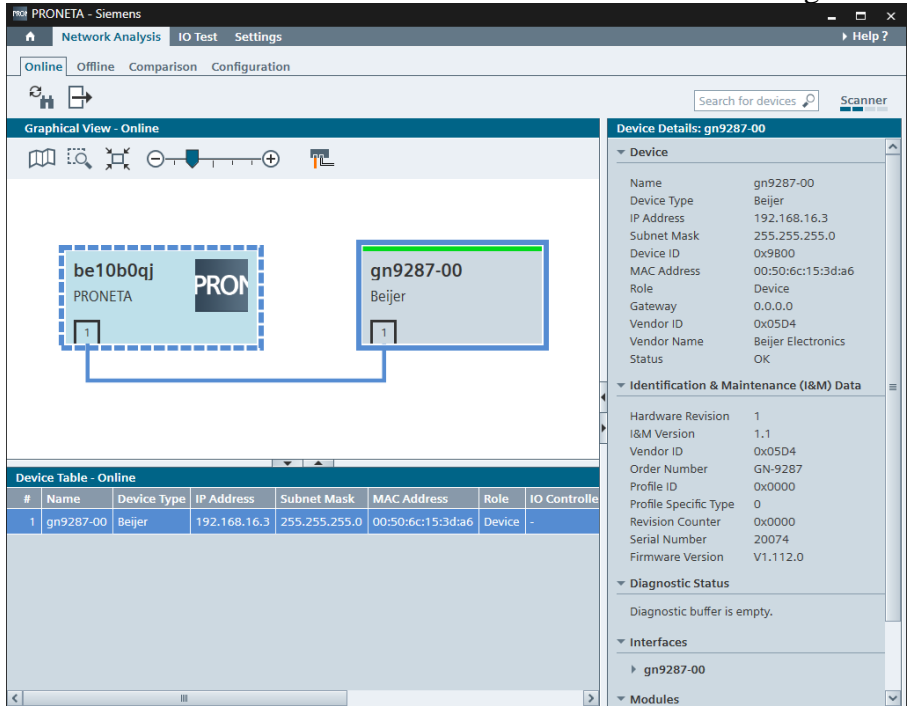
13. Power Off/On to Restart the device.

14. Before using the ProfiNet adapter, check that the adapter has completed the update:

- a. Checking the ProfiNet adapter after firmware update using for example the free tool PRONETA from Siemens.
- b. Picture show the **M9287 F/W 1.005 = V1.5.0** in the dialog.

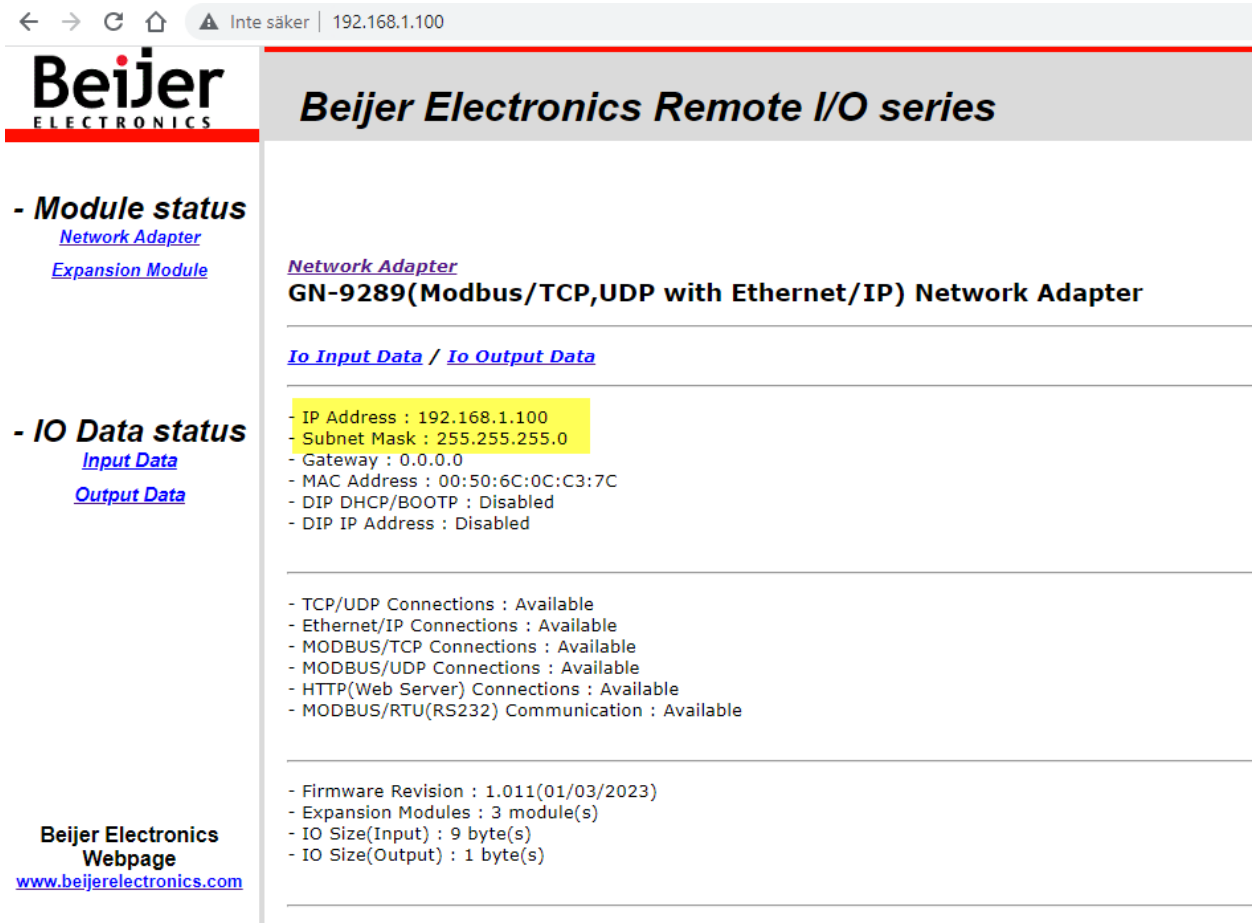


- c. Picture show the **GN-9287 F/W 1.112 = V1.112.0** in the dialog.



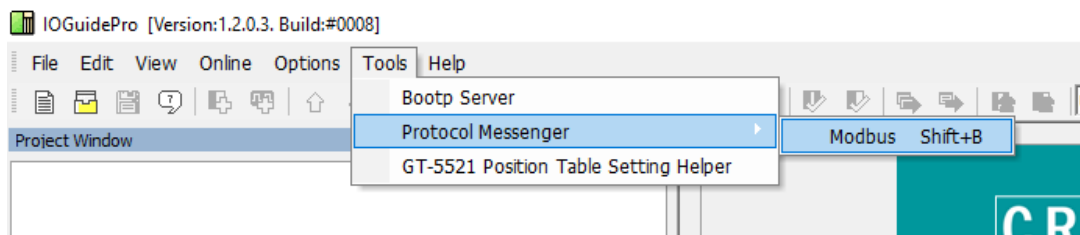
15. Before using the Modbus adapter, check that the adapter has completed the update:

- a. Checking the Modbus TCP adapter via the built-in web server, use 192.168.1.100 (default IP)
- b. Picture show the adapter **GN-9289** F/W 1.011



16. Check the firmware version of the same adapter GN-9289 using IO Guide Pro

- a. Select submenu: Tools > Protocol Messenger > Modbus, and device IP and Protocol: Modbus TCP



b. From the GN-9289 manual read out the Modbus address for the Firmware version

GN-9289 User Manual



8.3. MODBUS Special Register Map

The special register map can be accessed by function code 3, 4, 6 and 16. Also the special register map must be accessed by read/write of every each address (one address).

8.3.1. Adapter Identification Special Register (0x1000, 4096)

Address	Access	Type, Size	Description
0x1000(4096)	Read	1word	Vendor ID = 0x02E5(741), Crevis. Co., Ltd.
0x1001(4097)	Read	1word	Device type = 0x000C, Network Adapter
0x1002(4098)	Read	1word	Product Code = 0x9000
0x1003(4099)	Read	1word	Firmware revision, if 0x0101, revision 1.01
0x1004(4100)	Read	2word	Product unique serial number
0x1005(4101)	Read	String upto 34byte	Product name string (ASCII) "GN-9289,Modbus/TCPAdapter,GBUS"
0x1006(4102)	Read	1word	Sum check of EEPROM
0x1010(4112)	Read	2word	Firmware release date
0x1011(4113)	Read	2word	Product manufacturing inspection date
		7word	Composite Id of following address *DTU mode

c. Send Modbus message on address (hex): 1003
Response: 010B (hex) = 1.011

