Beijer ELECTRONICS GL-9089 Modbus TCP Ethernet IP Network Adapter User Guide

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Contents

Function and area of use

In this document we show how to set IP address, Subnet Mask and Gateway for G-Series network adapters GL-9089 and GN-9289.

About this Startup document

This Startup document should not be considered as a complete manual. It is an aid to be able to startup a normal application quickly and easily.

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Use the following software and drivers in order to obtain a stable application:

In this document we have used following hardware and software

- Modbus TCP/Ethernet IP network adapter light GL-9089
- Modbus TCP/Ethernet IP network adapter GN-9289
- BootpServerVer1000_Beijer **Link to BootP**
- Windows 10 64 bit

For further information we refer to

- GL-9089 Manual **Link**
- GN-9289 Manual **Link**

For further information refer to

- Manual name/number
- **Beijer Electronics knowledge database, HelpOnline**

This document and other Startup documents can be obtained from our homepage.
Please use the address **support.europe@beijerelectronics.com** for feedback about our Quick Start documents.

Setup network address in GL-9089 and GN-9289

Setting of the IP address is made through BOOTP.

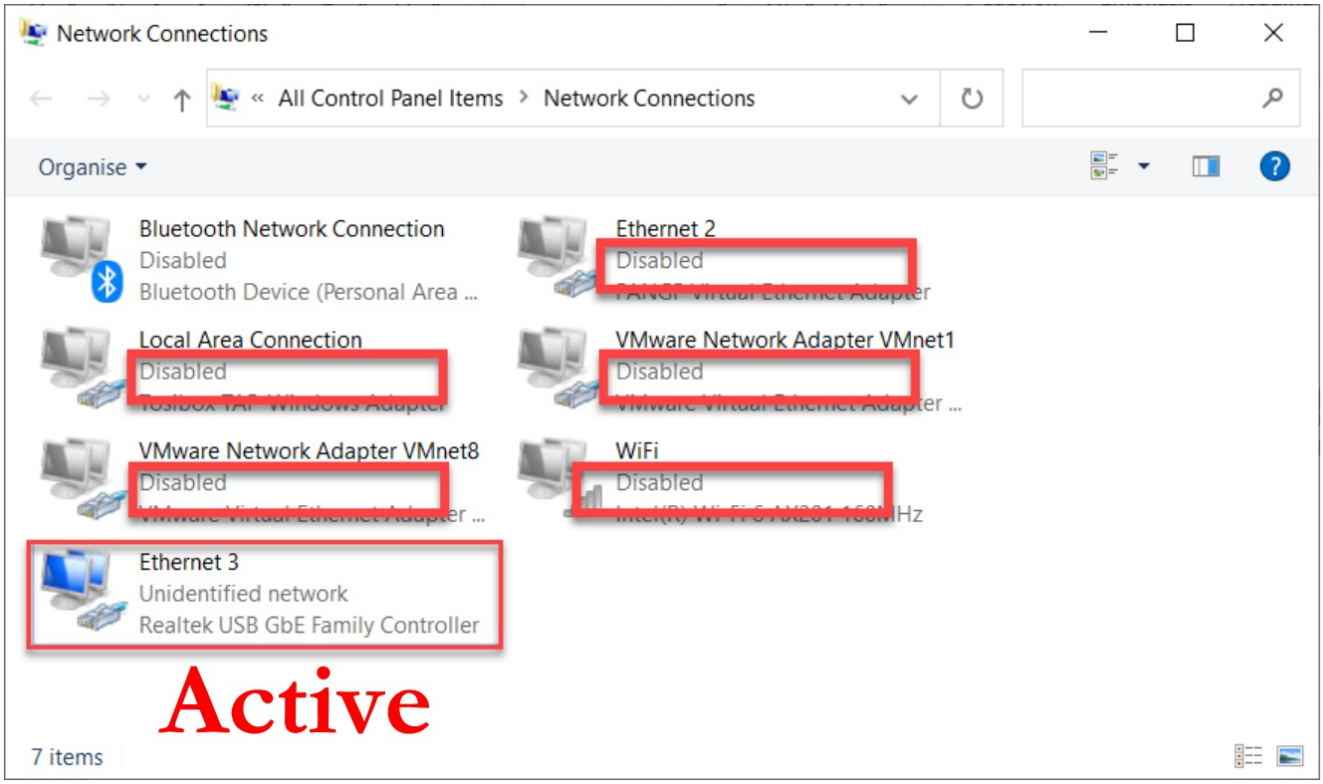
Default network settings

Default Setting	
IP Address	192.168.1.100
Subnet Mask	255.255.255.0
Gateway	0.0.0.0

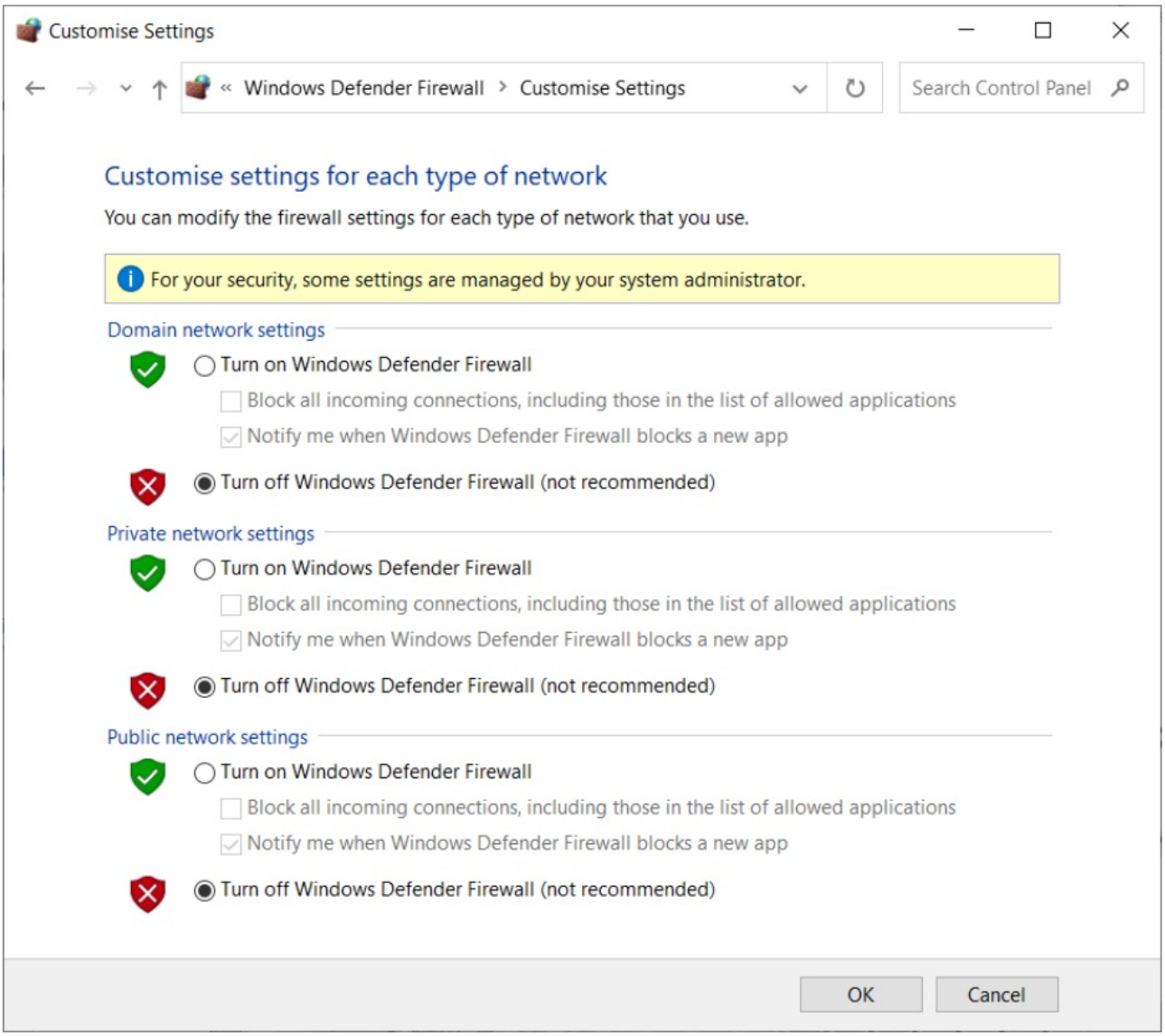
Use BOOTP server

BOOTP is a standard protocol that can be used to configure the network settings on a GL-9089 and GN-9289.

Sometimes it's required to disable all other network devices besides the one being used to configure the GL-9089/GN-9289.



In some rare case the firewall needs to be disabled, select "Turn off…" on all networks and push "OK".



Remember to reactivate the firewall after the IP address setting is done!

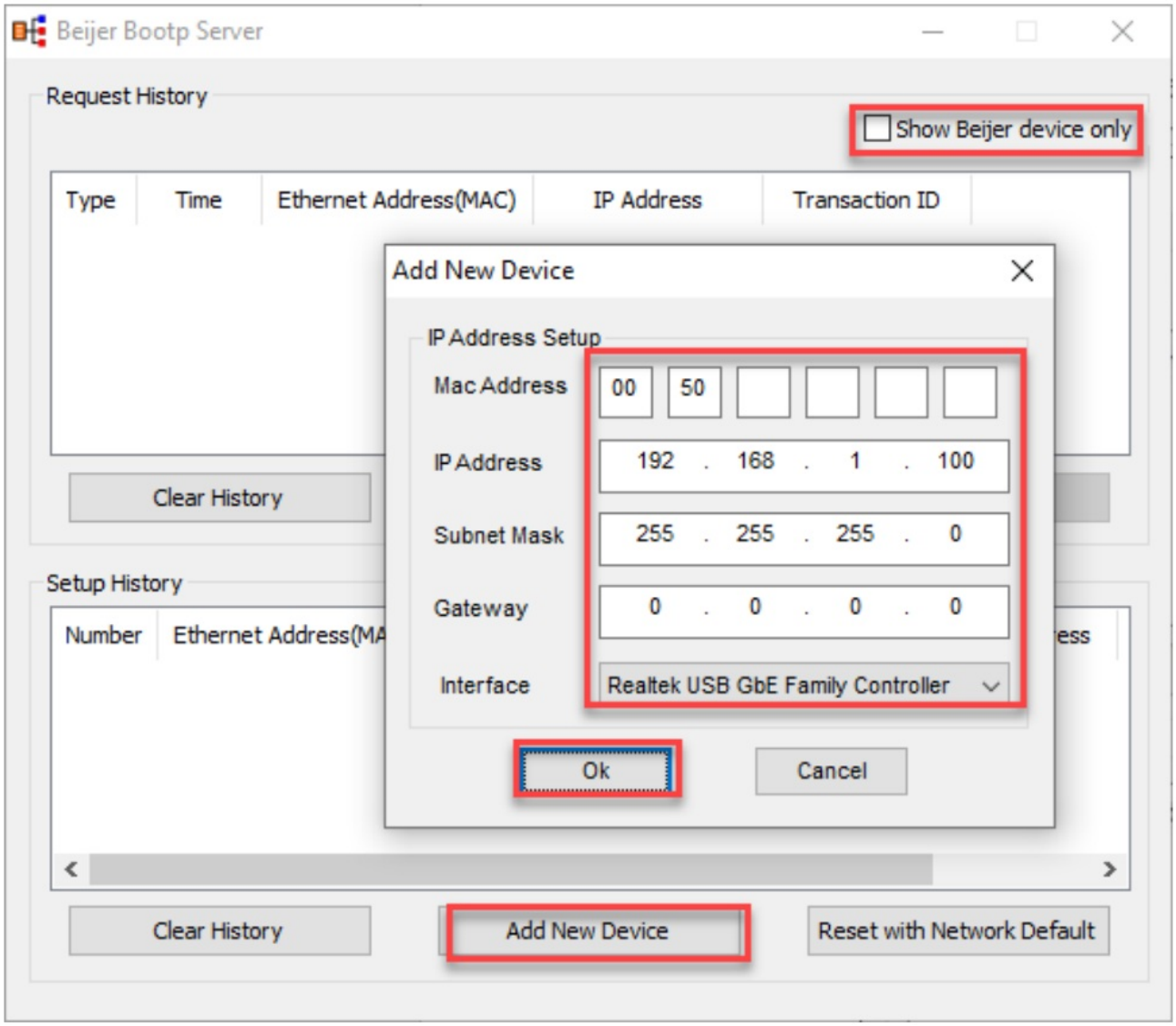
There could be security software (like antivirus programs) that might need to be temporarily disabled.

In some cases when cycling the power of the network adapter, without using a switch between the PC and network adapter, the BOOTP application will loose its reference to the ethernet port. The best and recommended way is to use a switch between the PC and the device.

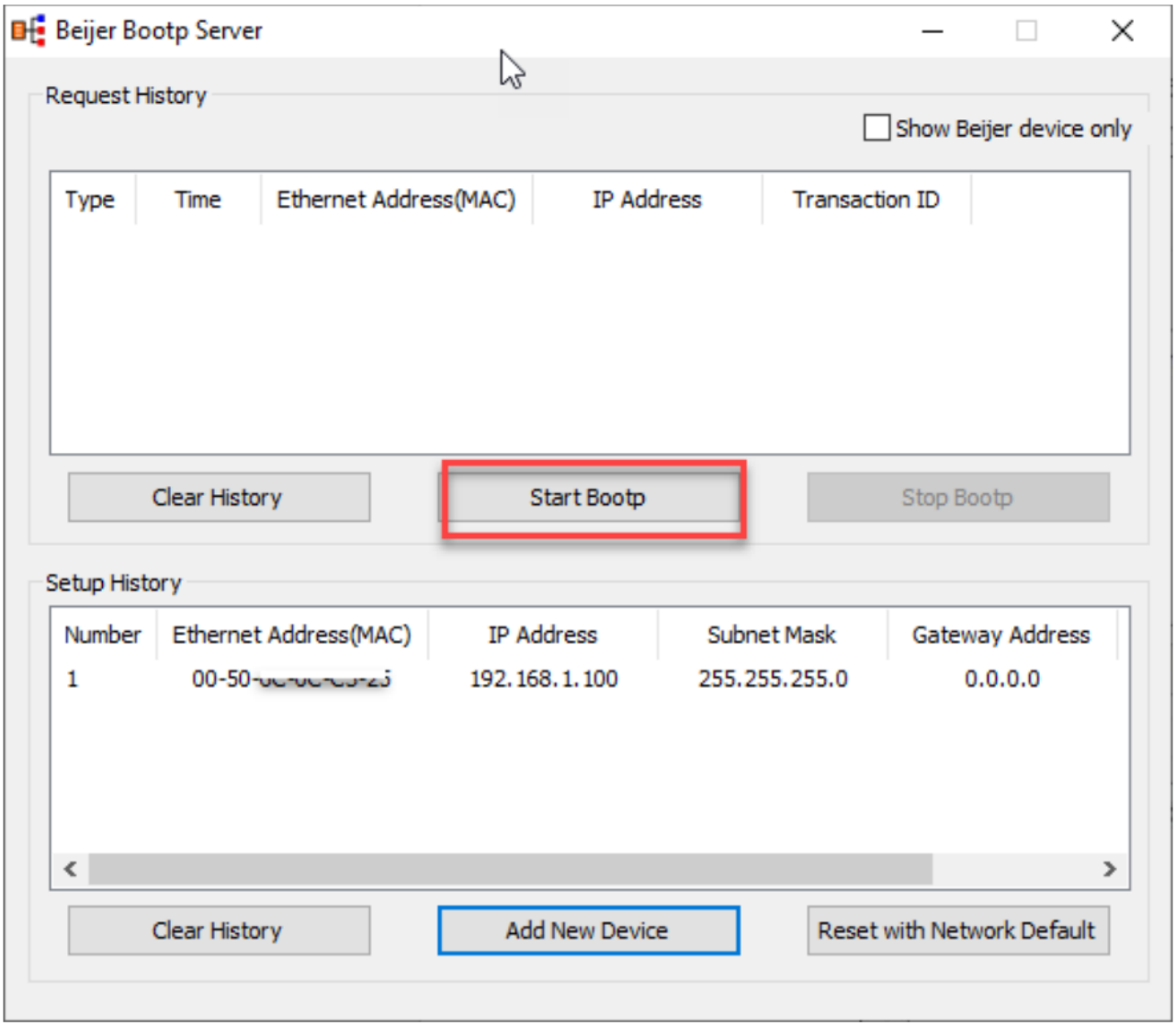
BootP, method 1

1. Connect the PC with the GL-9089/GN-9289 over Ethernet.
2. Set a fixed IP address on the PC, same subnet as the GL-9089/GN-9289 is to be changed to. The IP address for the PC should not be assigned automatically (DHCP).Se section 4.2. part 1.
3. Always use the latest version of Beijer BOOTP server (included in IOGuidePro or extracted tool).
4. Run IOGuidePro, and select menu Tools > Bootp Server, or start the BOOTP tool from folder. Alternative run the BOOTP server separately (BootpSvr.exe).
5. When the BOOTP Server is launched and to allow G-series device in present version of IOGuidePro. Make sure that option ”Show Beijer device only” is unchecked!
   Push the “Add New Device” button and enter the MAC address and desired IP address, subnet and gateway.

Select the network interface that the GL-9089/GN-9289 is connected to.

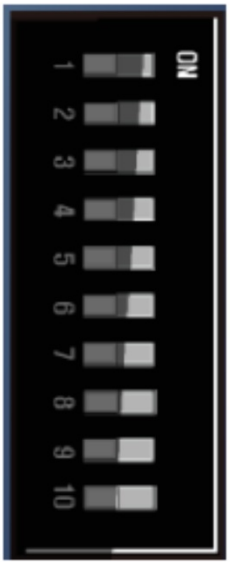


Push “Ok” and “Start Bootp”.



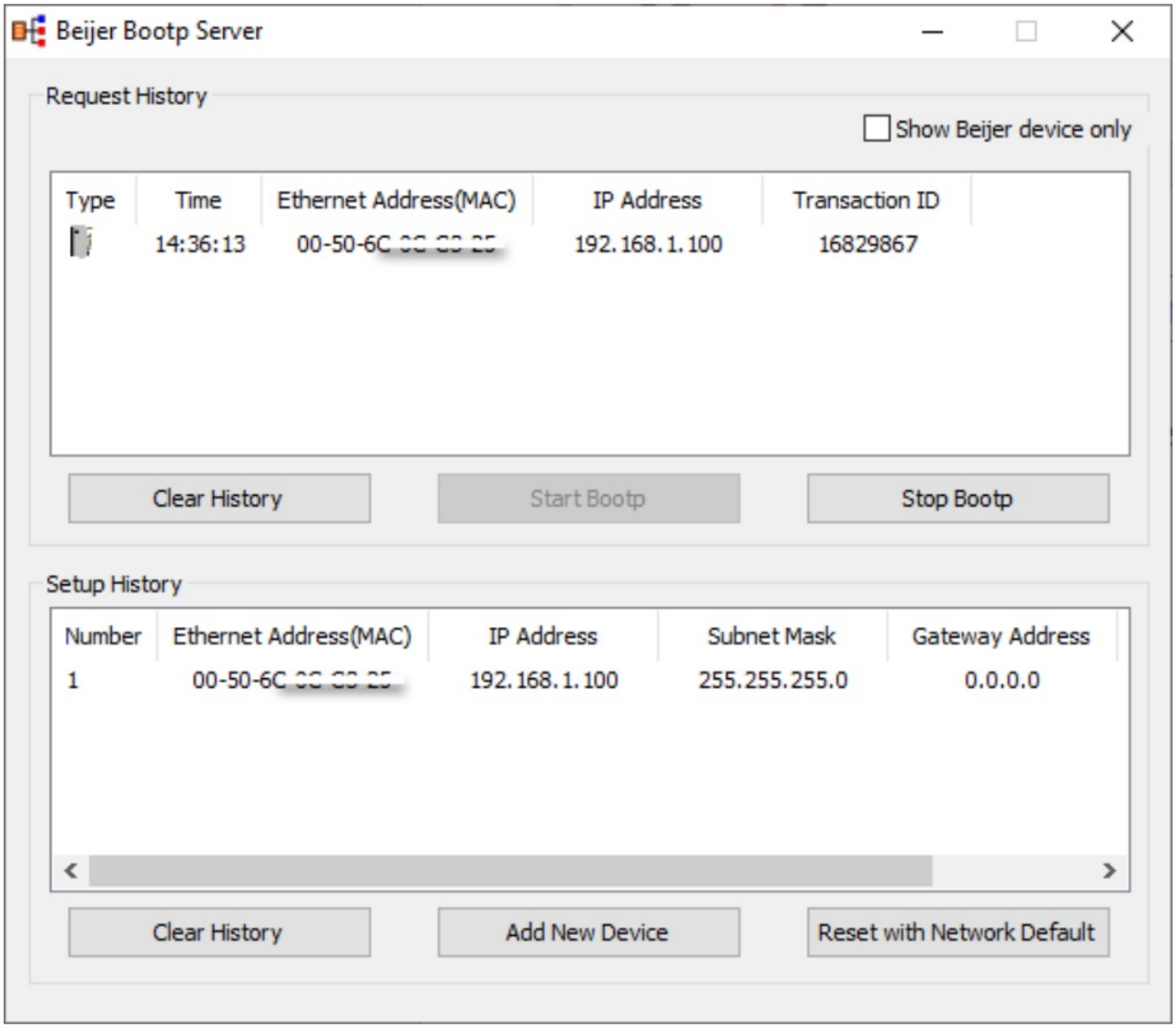
6. Power OFF the GL-9089/GN-9289 and set DIP switch 9 to ON (BOOTP).

Dip Switch

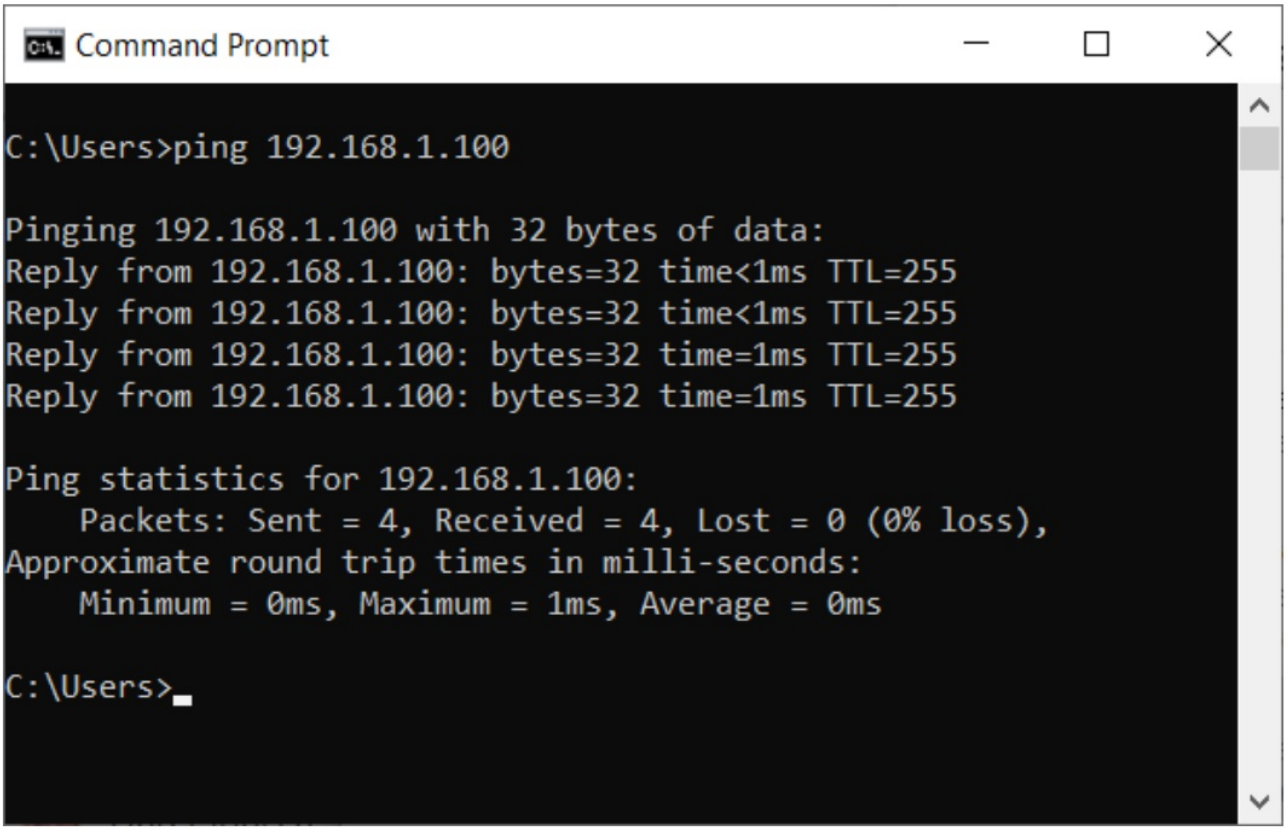


DIP Pole#	Description	
1	IP_DIP bit#0	Lowest IP Address When Pole#10=ON, Then IP Address will be XXX.XXX.XXX.IP_DIP
2	IP_DIP bit#1	
3	IP_DIP bit#2	
4	IP_DIP bit#3	
5	IP_DIP bit#4	
6	IP_DIP bit#5	
7	IP_DIP bit#6	
8	IP_DIP bit#7	
9	= ON : Enable DHCP/BOOTP *	
10	= ON : Use Lowest IP Address with IP_DIP value	

7. Power on the GL-9089/GN-9289 device, and the device will get the new IP address from the BootP server, it appears in the upper window.



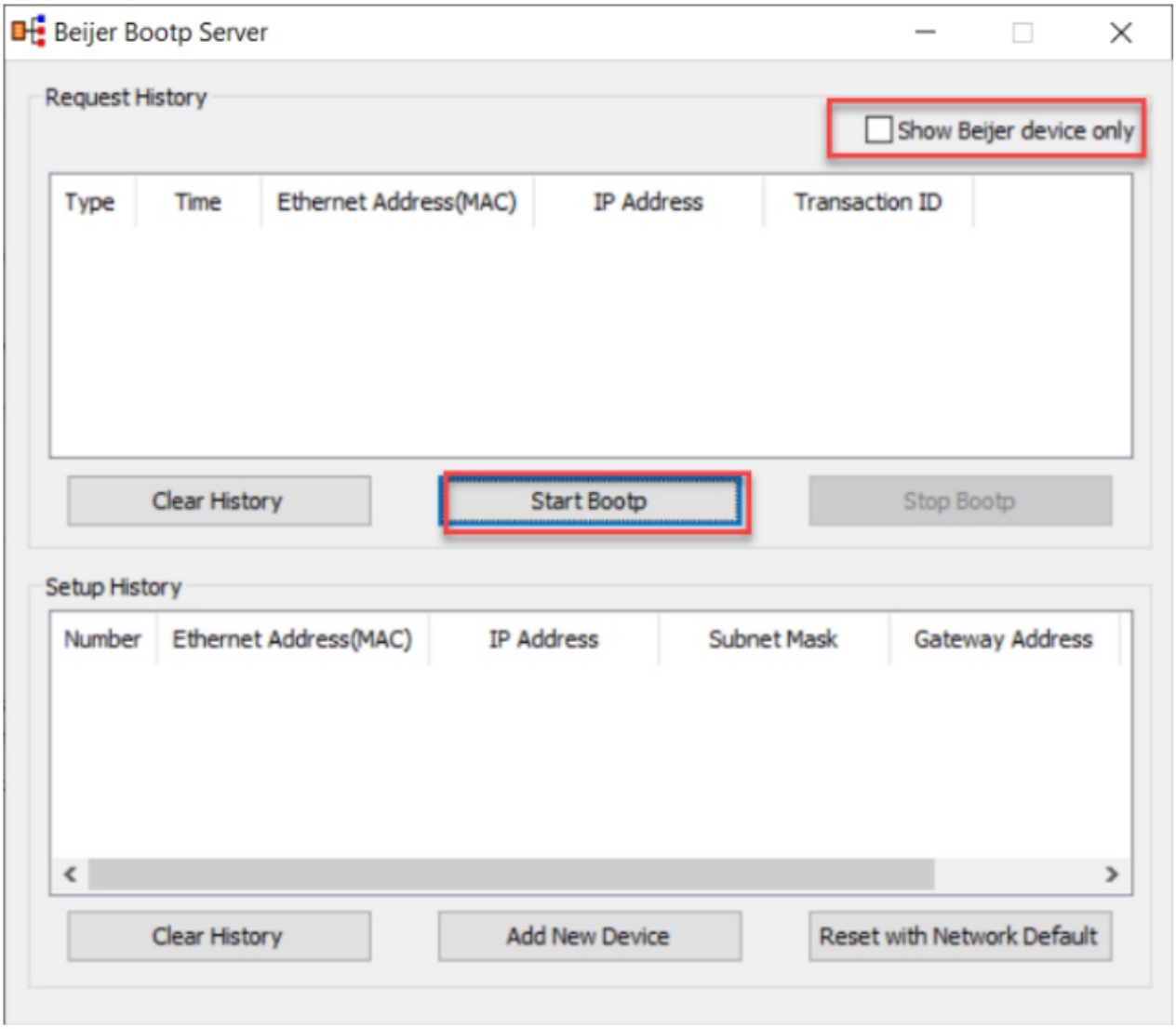
8. “Stop Bootp” and reset DIP switch 9 to OFF, and reboot the GL-9089/GN-9289 device.
9. If the IP is set to a different subnet then change the IP address of your computer accordingly.
10. Try to ping the device with new IP address.



11. Close the BOOTP Server.

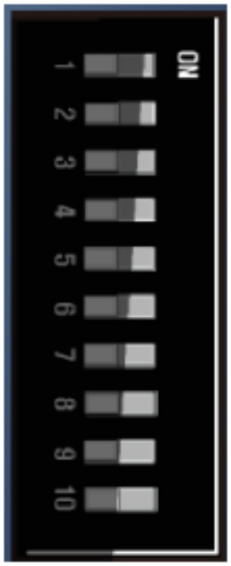
BootP, method 2

1. Connect the PC with the GL-9089/GN-9289 over Ethernet.
2. Set a fixed IP address on the PC, same subnet as the GL-9089/GN-9289 is to be changed to. The IP address for the PC should not be assigned automatically (DHCP). Se section 4.2. part 1.
3. Always use the latest version of the Beijer BOOTP server included in IO Guide Pro or extracted tool.
4. Run IO Guide Pro and select menu Tools > Bootp Server, or start the BOOTP tool from folder. / Alternative run the Bootp server separately (BootpSvr.exe).
5. When the BootP Server is launched and to allow M-series device in present version of IO Guide Pro, make sure that ”Show Beijer device only” is unchecked!
6. Press “Start Bootp”.



7. Power OFF the GL-9089/GN-9289 and set DIP switch 9 to ON (BOOTP).

Dip Switch



DIP Pole#	Description	
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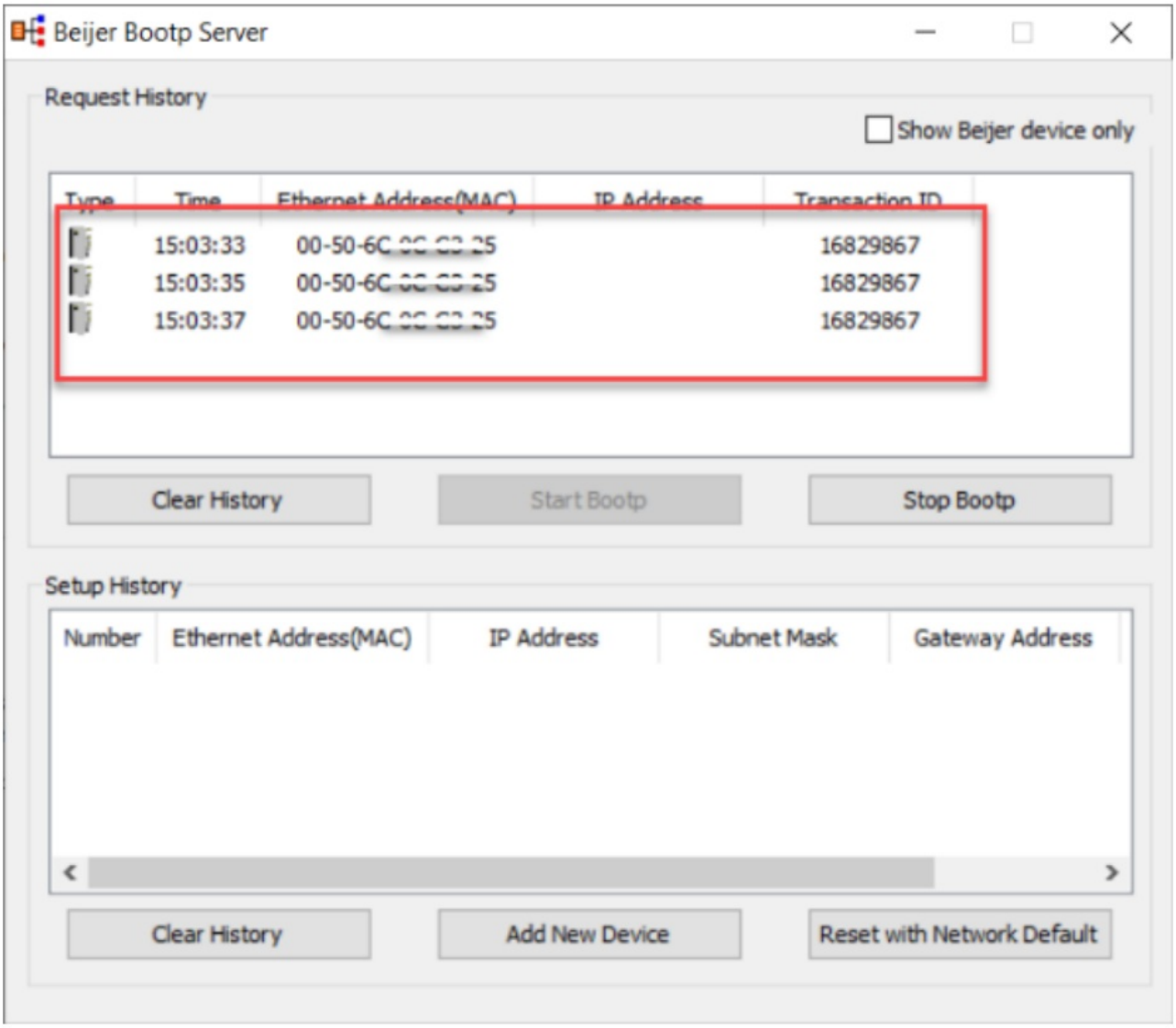
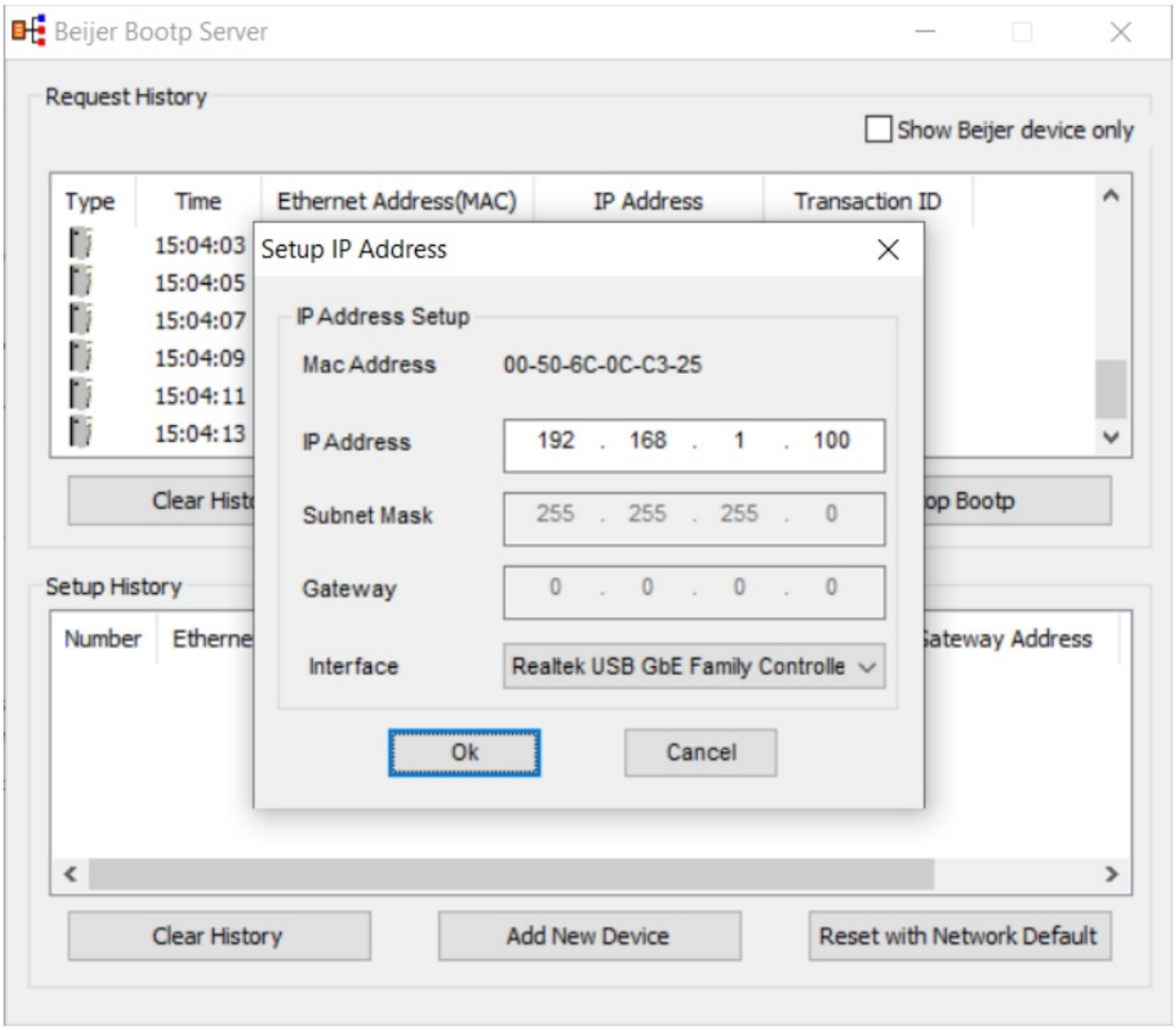
6	IP_DIP bit#5	
7	IP_DIP bit#6	
8	IP_DIP bit#7	
9	= ON : Enable DHCP/BOOTP *	
10	= ON : Use Lowest IP Address with IP_DIP value	

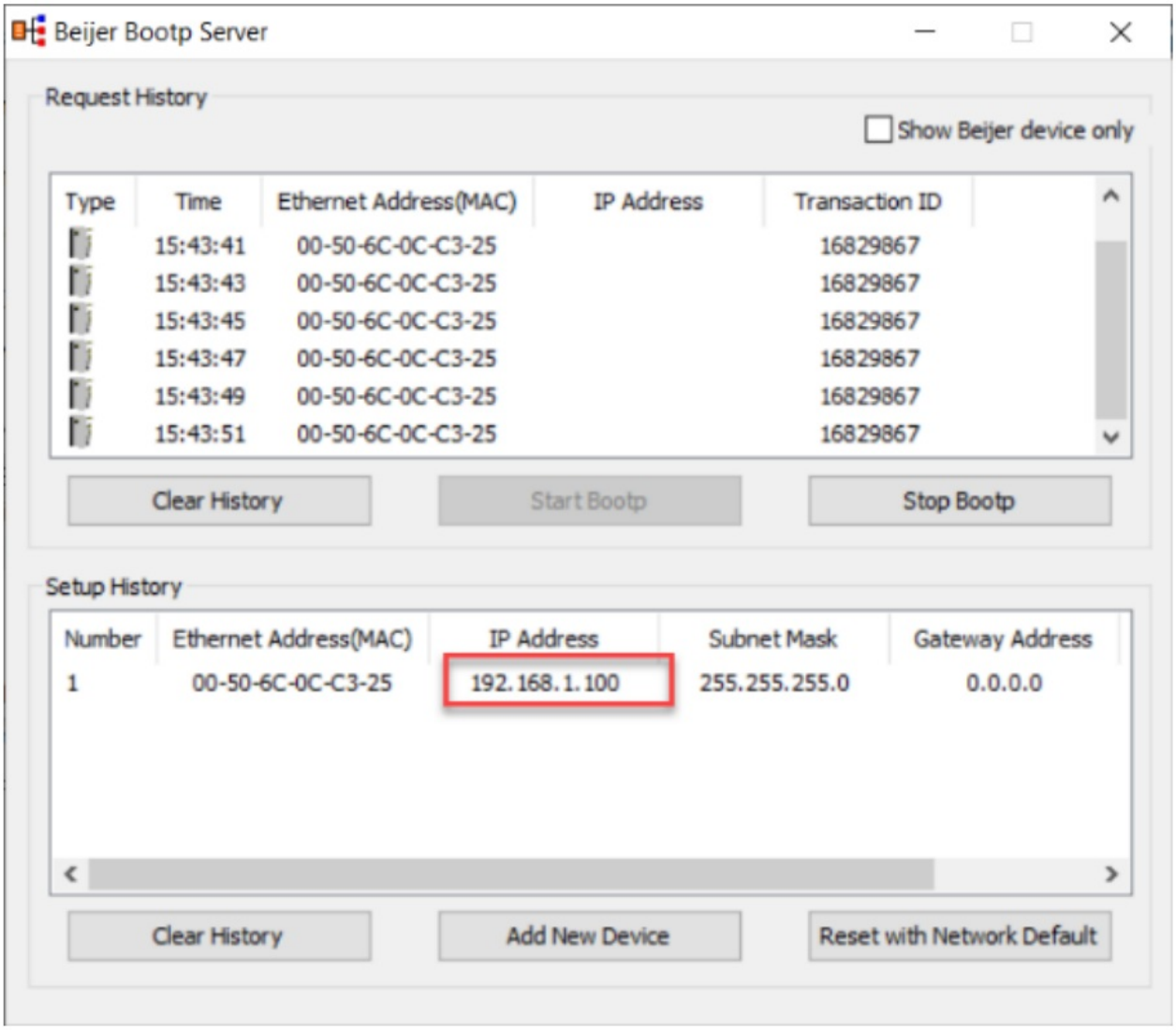
8. Power on the GL-9089/GN-9289 device, and the device will be shown in the BootP server.



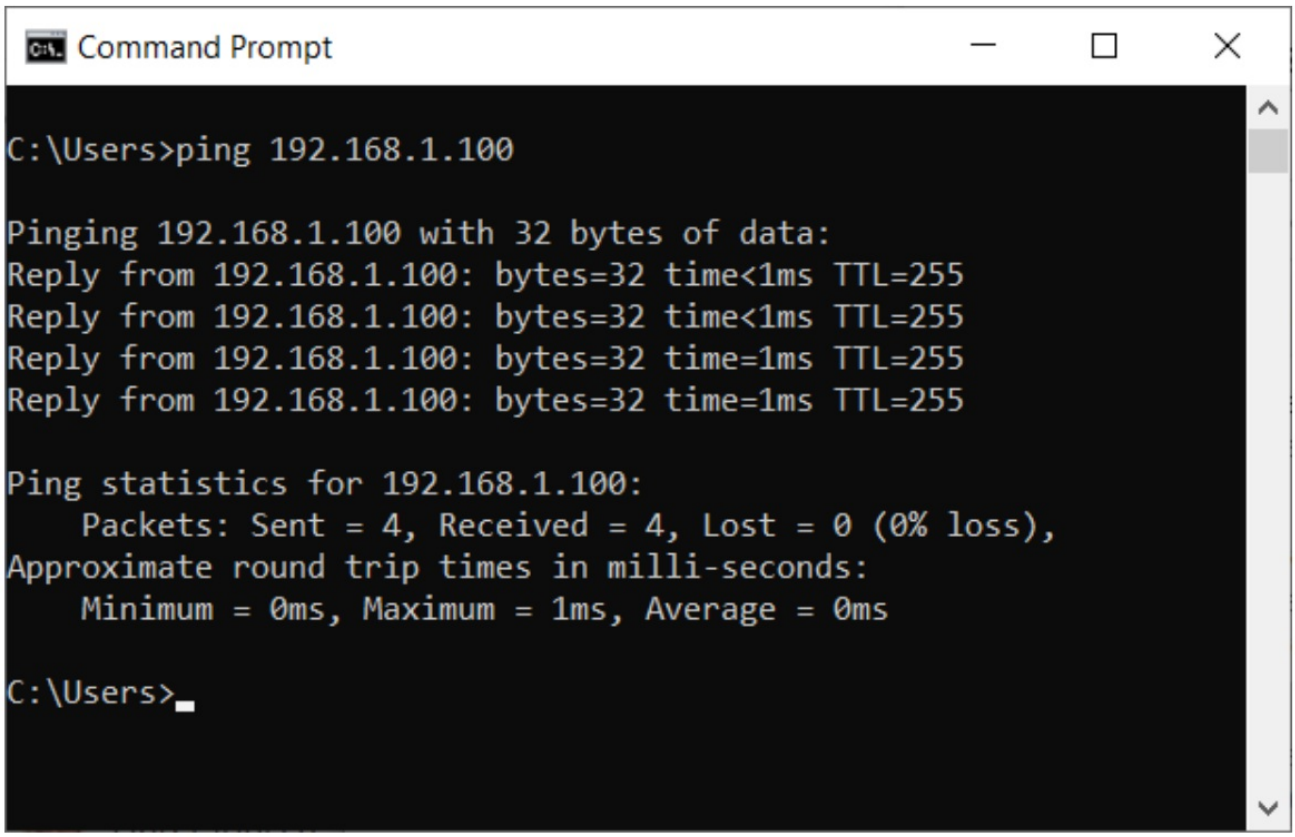
Double click on one of the marked rows above.

The MAC address is default entered, type required IP address, Subnet and Gateway. Select the correct “Interface”, PC:s Ethernet connection to the GL-9089/GN-9289 and push “Ok”.


Beijer Bootp Server
Request History
Show Beijer device only
Type
Time
Ethernet Address(MAC)
IP Address
Transaction ID
15:04:03
15:04:05
15:04:07
15:04:09
15:04:11
15:04:13
Clear Hist
op Bootp
Setup History
Number
Etherne
ateway Address
Clear History
Add New Device
Reset with Network Default
Setup IP Address
IP Address Setup
Mac Address
00-50-6C-0C-C3-25
IP Address
192 . 168 . 1 . 100
Subnet Mask
255 . 255 . 255 . 0
Gateway
0 . 0 . 0 . 0
Interface
Realtek USB GbE Family Controlle
Ok
Cancel



9. Now press “Stop BootP”.
10. Reset the DIP switch 9 to OFF, and reboot the GL-9089/GN-9289 device.
11. If the IP is set to a different subnet then change the IP address of your computer accordingly.
12. Try to ping the device with new IP address.



13. Close the BOOTP Server.

Note!

MODBUS/TCP IP – Address Setup

If the adapter BOOTP/DHCP enabled (DIP Pole#9 ON), the adapter sends BOOTP/DHCP request message of 20 times every 2sec. If BOOTP/DHCP sever does not response, the Adapter applies its IP Address with EEPROM (Latest saved IP Address).

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Beijer Electronics is a multinational, cross-industry innovator that connects people and technologies to optimize processes for business-critical applications. Our offer includes operator communication, solution engineering, digitalization and communication, and support. As experts in user-friendly software, hardware and services for the Industrial Internet of Things, we empower you to meet your challenges through leading-edge solutions.
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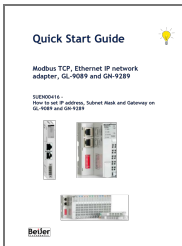	Beijer ELECTRONICS GL-9089 Modbus TCP Ethernet IP Network Adapter [pdf] User Guide GL-9089, GN-9289, GL-9089 Modbus TCP Ethernet IP Network Adapter, GL-9089, Modbus TCP Ethernet IP Network Adapter, TCP Ethernet IP Network Adapter, Ethernet IP Network Adapter, IP Network Adapter, Network Adapter, Adapter

References

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