



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

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**Beijer ELECTRONICS GL-9089 Modbus TCP Ethernet IP Network Adapter**



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## 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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This Start Up document should not be considered as a complete manual. It is an aid to be able to start up a normal application quickly and easily.

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](mailto: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.

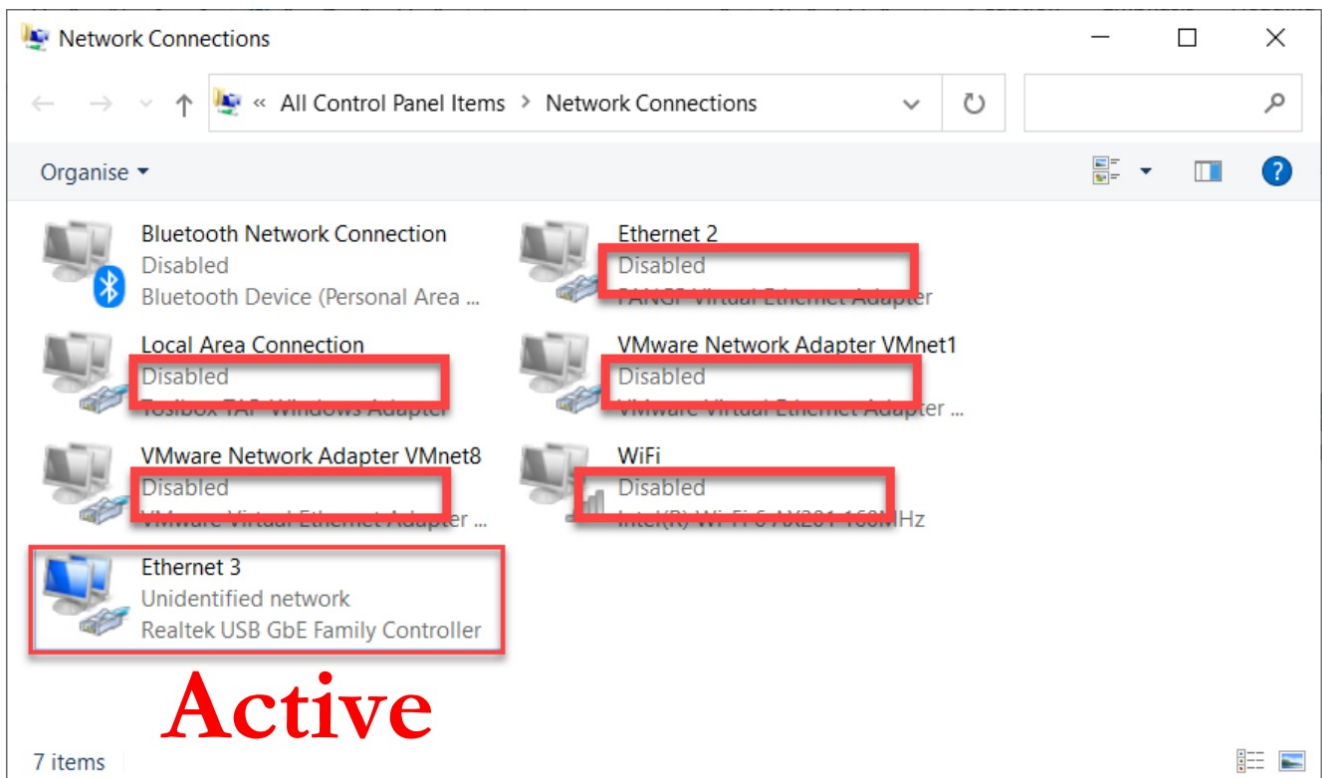
## **Default network settings**

Default Setting	
IP Address	192.168.1.100
Subnet Mask	255.255.255.0
Gateway	0.0.0.0

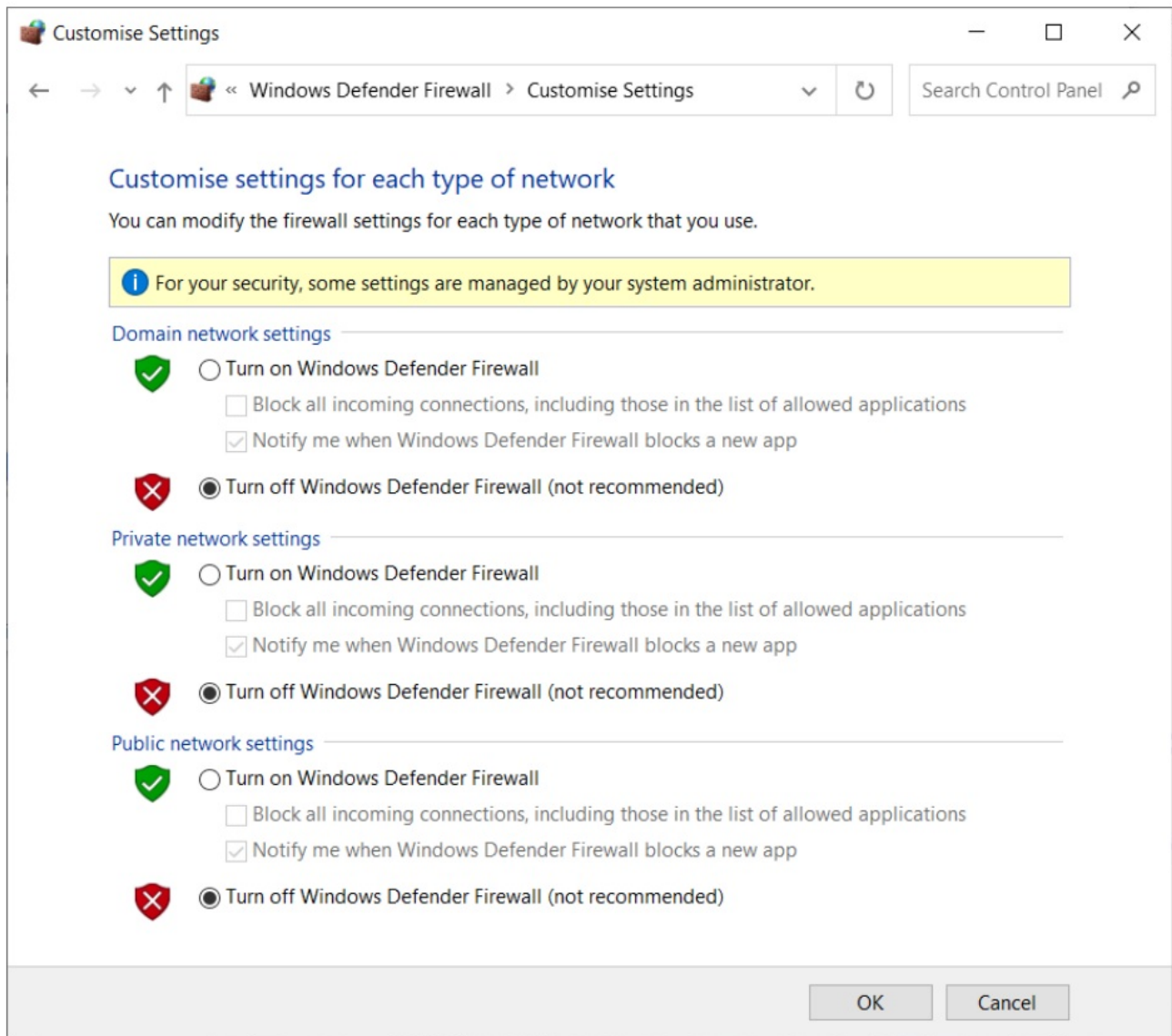
### Use BOOTP server

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!**

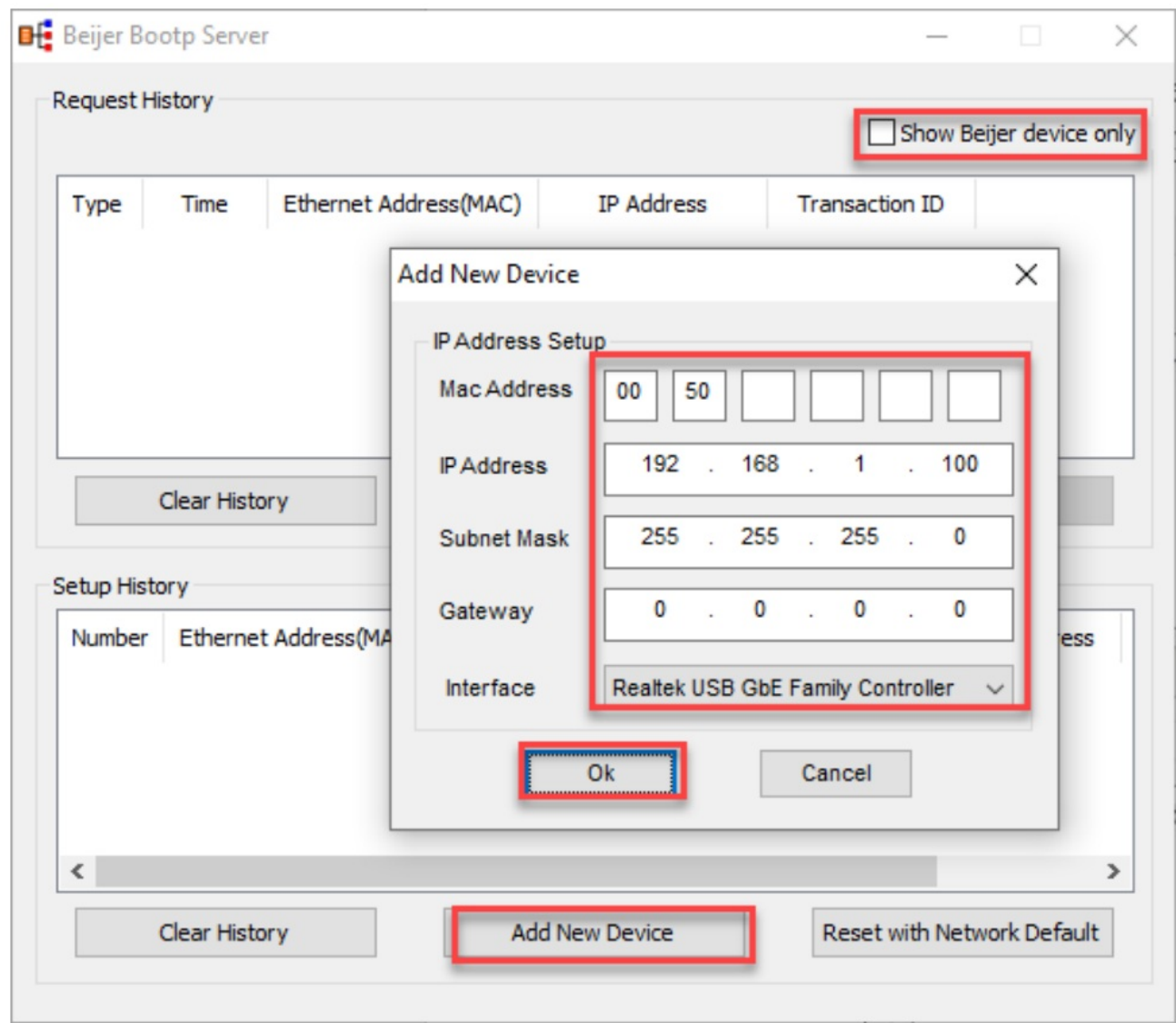
There could be security software (like antivirus programs) that might need to be temporarily disabled.

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 lose its reference to the ethernet port. The best and recommended way is to use a switch between the PC and the device.

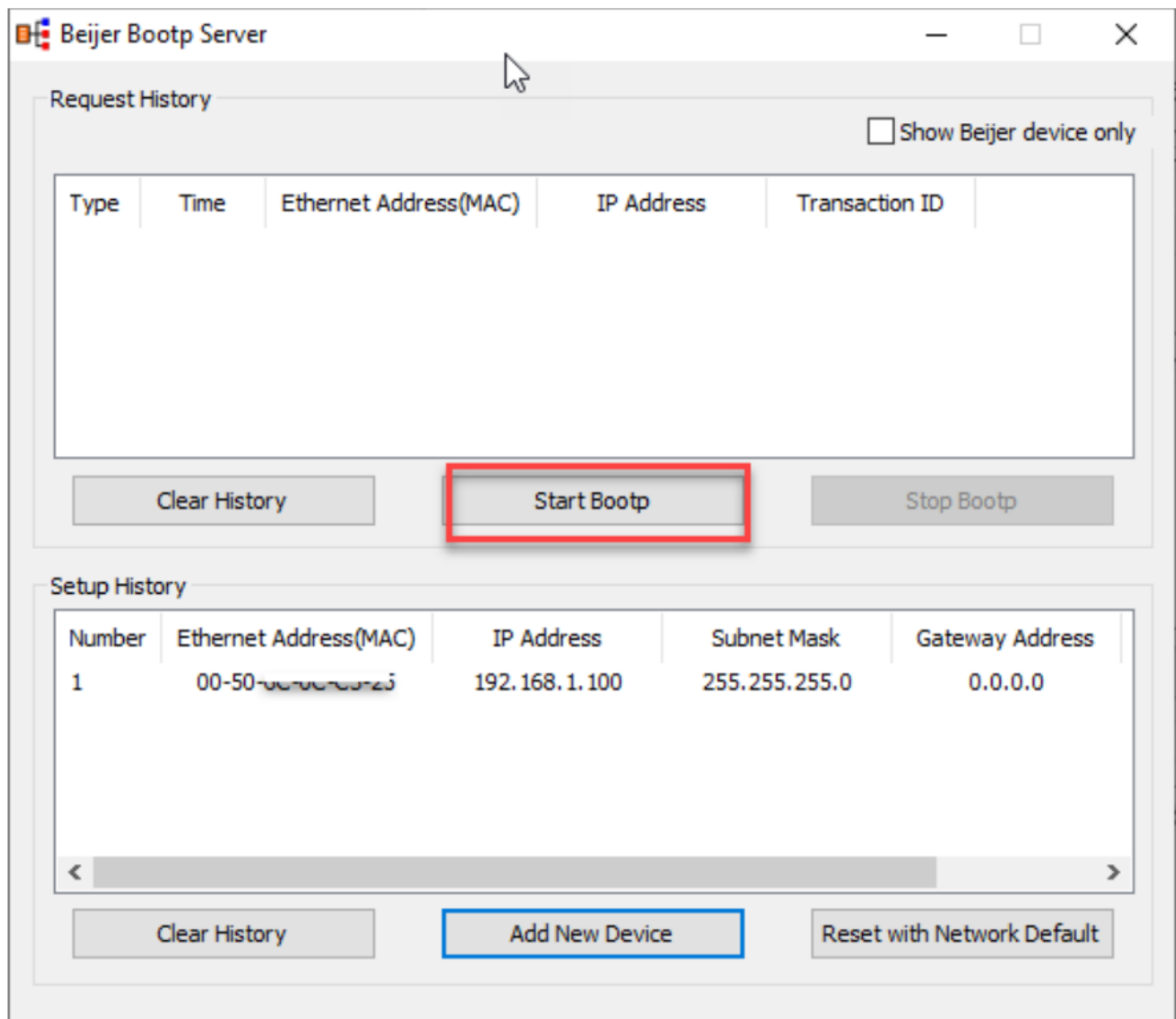
### **BootP, method 1**

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). See 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. Alternatively 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.

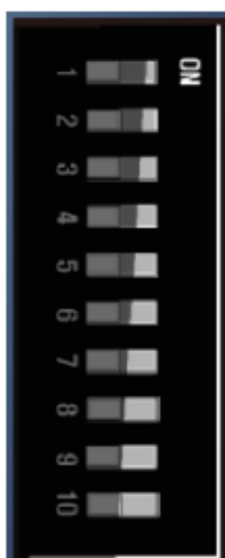


Push “Ok” and “Start Bootp”.



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.

Beijer Bootp Server

Request History ☐ Show Beijer device only

Type	Time	Ethernet Address(MAC)	IP Address	Transaction ID
	14:36:13	00-50-6C CC CC CC	192.168.1.100	16829867

Clear History Start Bootp Stop Bootp

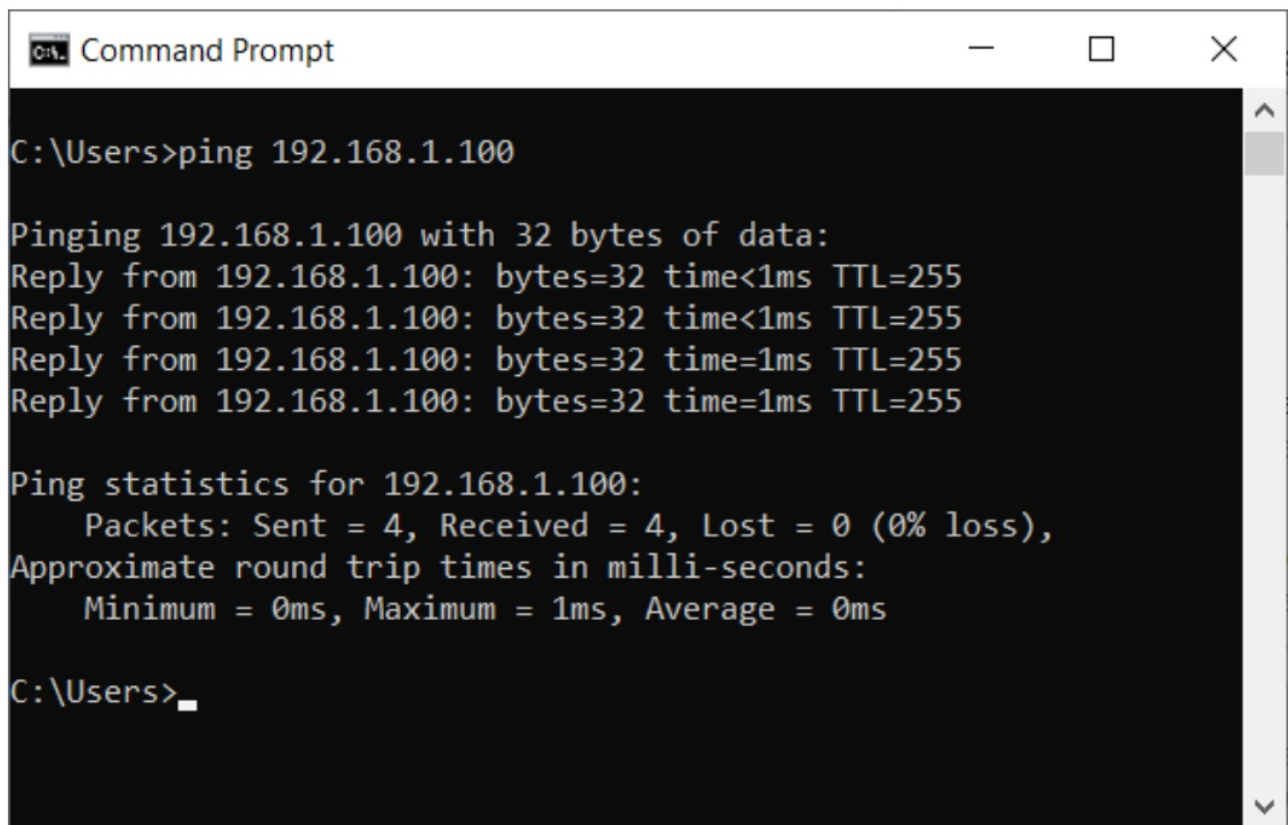
Setup History

Number	Ethernet Address(MAC)	IP Address	Subnet Mask	Gateway Address
1	00-50-6C CC CC CC	192.168.1.100	255.255.255.0	0.0.0.0

< >

Clear History Add New Device Reset with Network Default

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.

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The command prompt shows the user at the C:\Users> prompt, having entered the command "ping 192.168.1.100". The output shows four successful replies from 192.168.1.100, each with 32 bytes of data, a time of less than 1ms, and a TTL of 255. Below the replies, the ping statistics are displayed: 4 packets sent, 4 received, 0% loss, and round trip times of 0ms minimum, 1ms maximum, and 0ms average. The prompt is now at C:\Users> with a cursor.

```
C:\Users>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

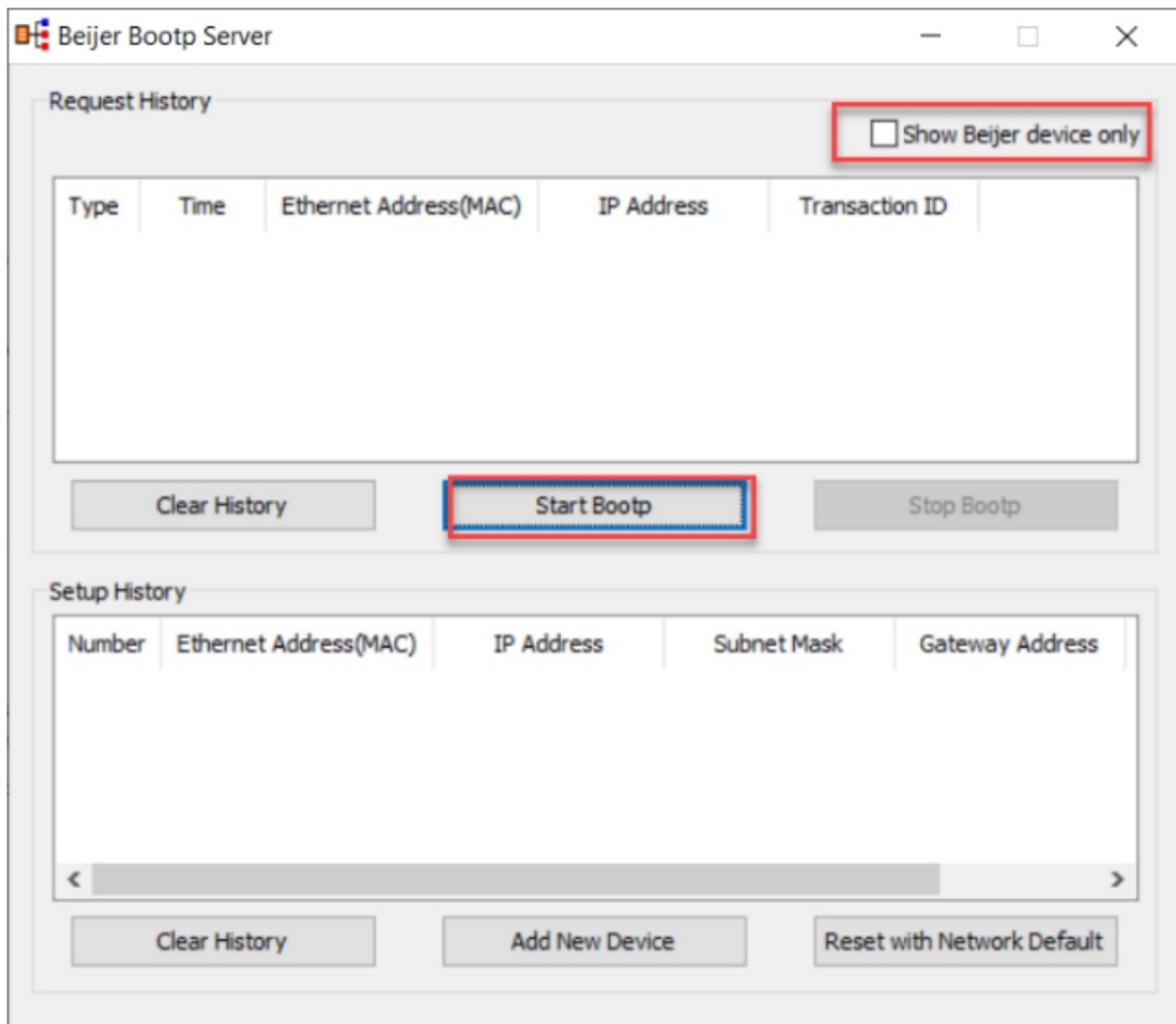
Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users>
```

11. Close the BOOTP Server.

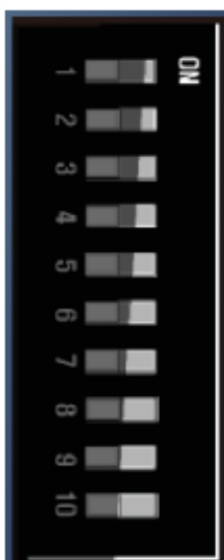
### **BootP, method 2**

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). See 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	
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	

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

Beijer Bootp Server

Request History ☐ Show Beijer device only

Type	Time	Ethernet Address(MAC)	IP Address	Transaction ID
	15:03:33	00-50-6C-CC-CC-25		16829867
	15:03:35	00-50-6C-CC-CC-25		16829867
	15:03:37	00-50-6C-CC-CC-25		16829867

Clear History Start Bootp Stop Bootp

Setup History

Number	Ethernet Address(MAC)	IP Address	Subnet Mask	Gateway Address
--------	-----------------------	------------	-------------	-----------------

< >







Clear History Add New Device Reset with Network Default

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".

## 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 History

## Setup History

Number Ethernet

## 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 v

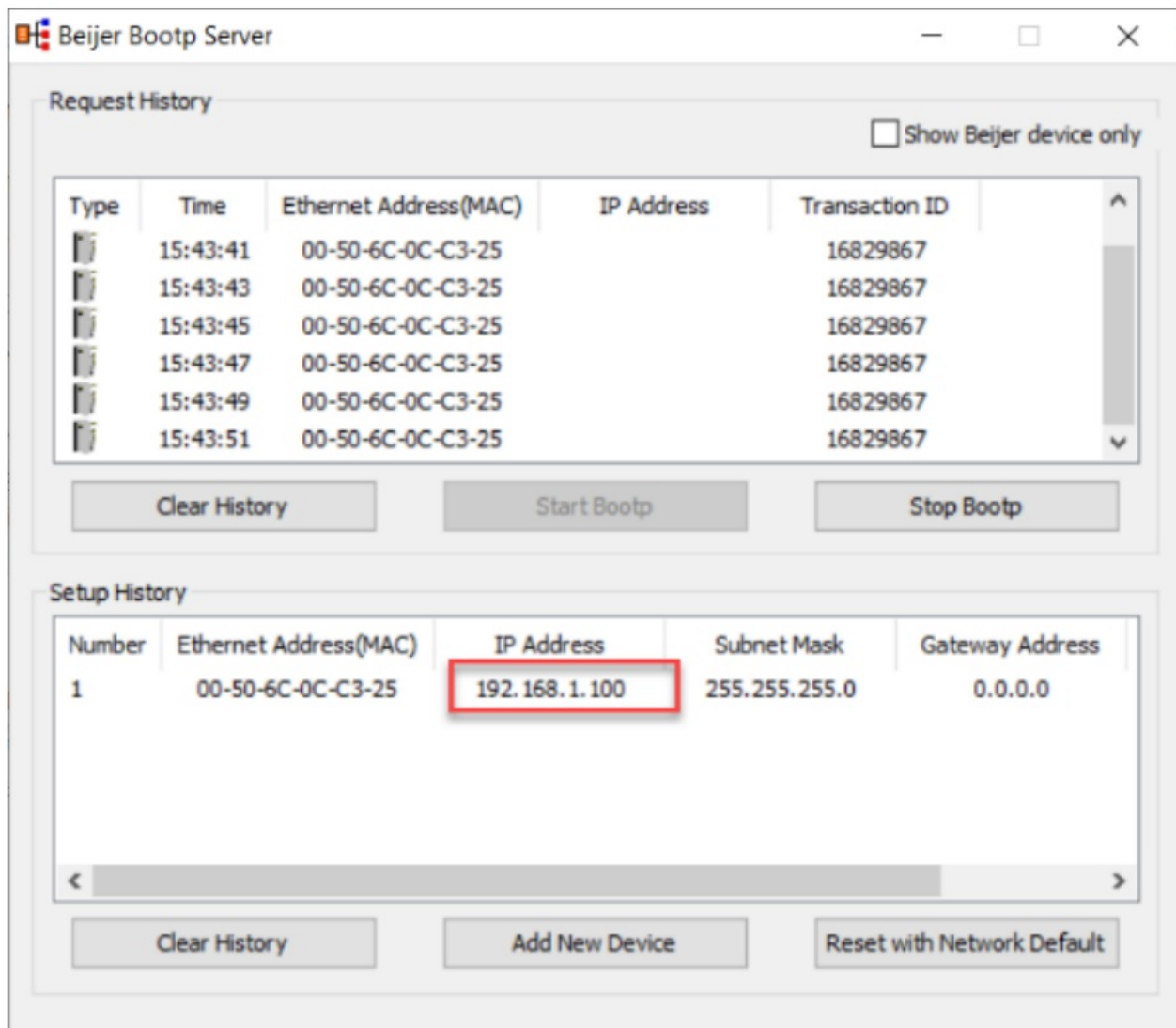
Ok

Cancel

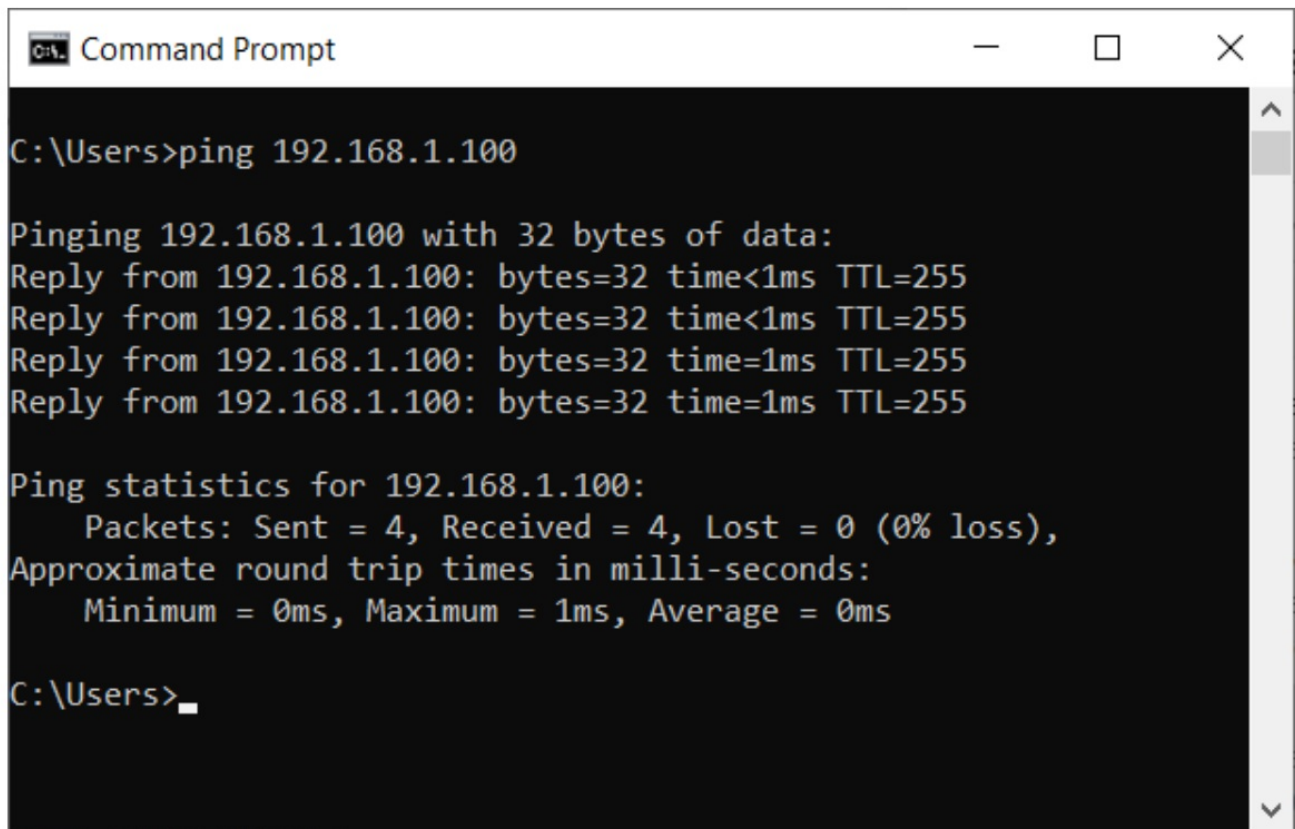
Clear History

Add New Device

Reset with Network Default



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.



```
C:\Users>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 = 1ms, Average = 0ms

C:\Users>_
```

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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## Documents / Resources

<p>Quick Start Guide </p> <p>Modbus TCP, Ethernet IP network adapter, GL-9089 and GN-9289</p> <p>TECHNICAL INFORMATION How to set IP address, Subnet Mask and Gateway on GL-9089 and GN-9289</p>  <p>Beijer</p>	<p><a href="#">Beijer ELECTRONICS GL-9089 Modbus TCP Ethernet IP Network Adapter</a> [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</p>
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## References

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