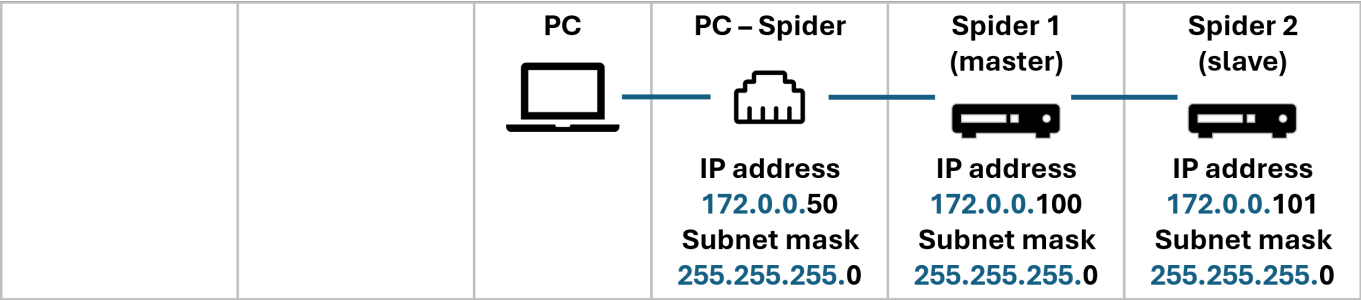# Connecting the Spider System to the PC

In this section, we discuss IP connectivity between Spider and PC.

When each Spider is shipped, unless the user has requested otherwise, it is set by default to a static IP address starting with **172.0.0.x**

The IP settings of the Spider can be changed with the **Front-End IP Address Setup Tool** that was installed with EDM. This tool is located in the EDM installation folder. It is called "Front-End IP config.exe".

Network configuration

		PC	PC – Spider	Spider 1 (master)	Spider 2 (slave)
			IP address 172.0.0.50 Subnet mask 255.255.255.0	IP address 172.0.0.100 Subnet mask 255.255.255.0	IP address 172.0.0.101 Subnet mask 255.255.255.0

The Spider modules and PC need to be on the same subnet to detect each other:

- First three numbers of IP address must match
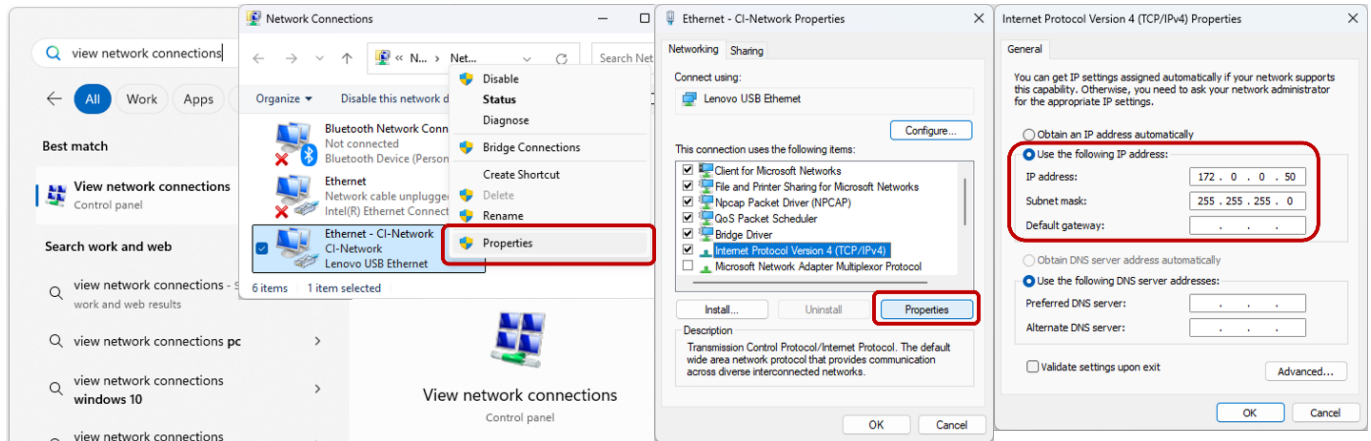- Fourth number must be unique for each device.

By default, the Spider modules are configured on the 172.0.0.x subnet:

- **Spider(s) IP address start:** 172.0.0.100
- **Spider(s) subnet mask:** 255.255.255.0

Set your PC IP address to another static IP address on 172.0.0.x:

- **PC IP address:** 172.0.0.50 or similar
- **PC subnet mask:** 255.255.255.0
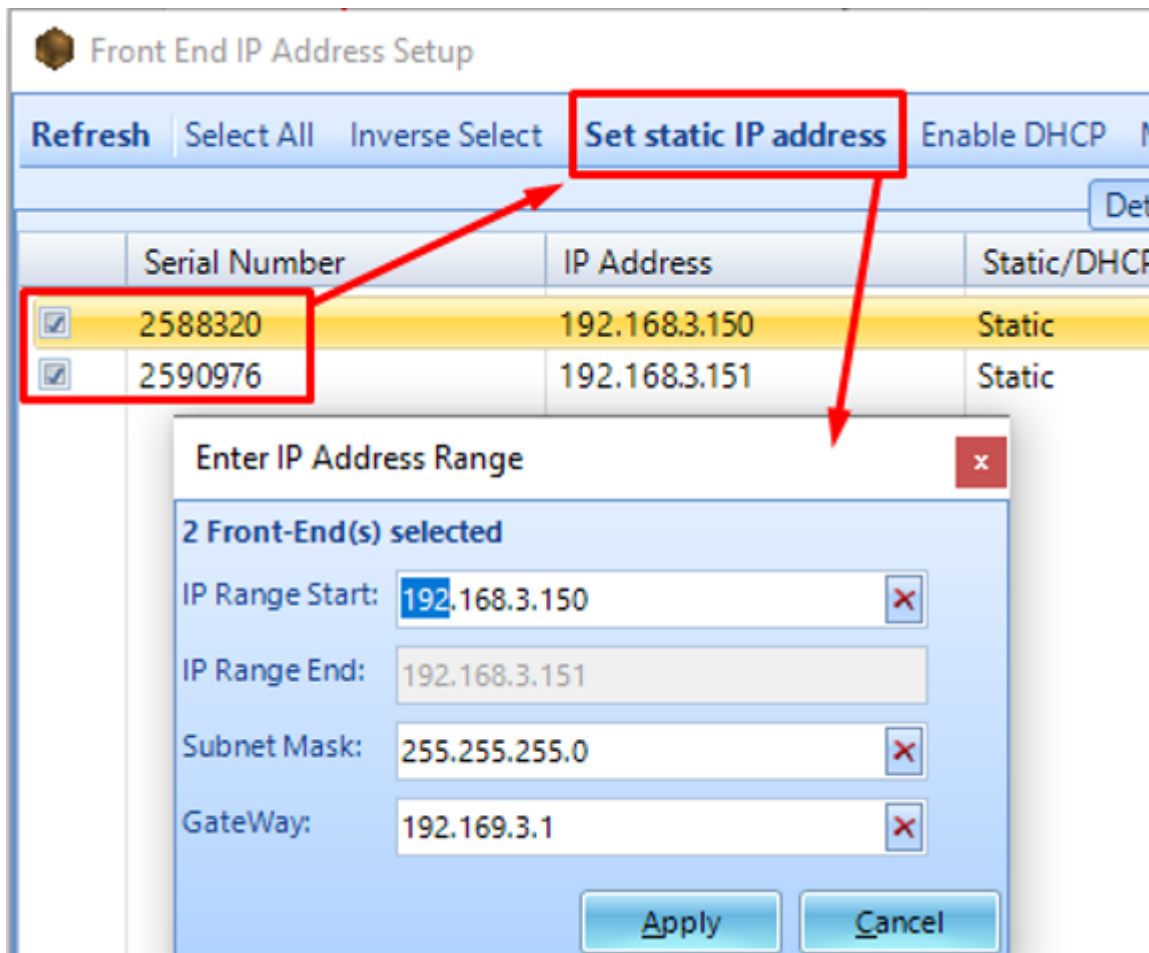- **PC default gateway:** none

How to set PC IP address

1. Search for **"View Network Connections"** in the **Start menu**
2. Right-click on the network adapter
3. Click **Properties**
4. Select **"Internet Protocol Version 4 (TCP/IPv4)"** and click **"Properties"**
5. Select **"Use the following IP address:"**
6. Enter IP settings (e.g., 172.0.0.50 / 255.255.255.0)

How to set Spider IP address

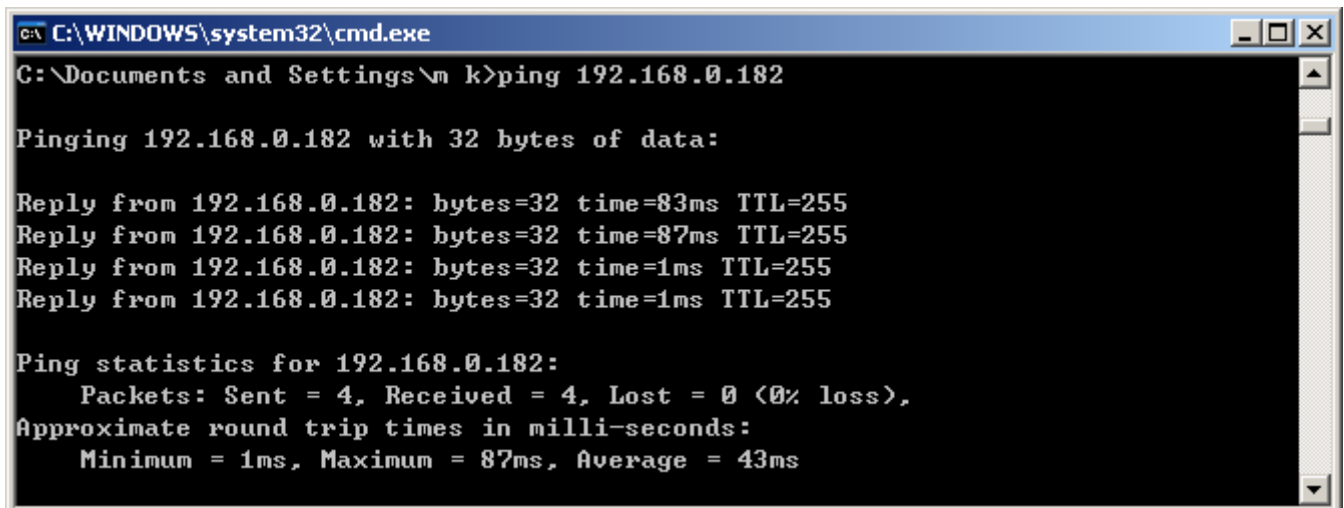Open **Front-End IP Address Setup Tool** (use the Windows search menu).

Select the module(s) and click **Set static IP address**. Fill in the IP address(es), subnet mask, and gateway as needed. The LED on the Spider will flash for a couple seconds, indicating that the new IP

has been assigned.

To verify the network connection, use the PING command in the Command Prompt window on the PC. In the Windows Start Menu, select **Run**, type **ping 192.168.0.182**, and press enter.

Replace 192.168.0.182 with the configured IP address of the device.

If it is correctly configured, the **ping** command will receive responses, as shown below.

```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\m k>ping 192.168.0.182

Pinging 192.168.0.182 with 32 bytes of data:

Reply from 192.168.0.182: bytes=32 time=83ms TTL=255
Reply from 192.168.0.182: bytes=32 time=87ms TTL=255
Reply from 192.168.0.182: bytes=32 time=1ms TTL=255
Reply from 192.168.0.182: bytes=32 time=1ms TTL=255

Ping statistics for 192.168.0.182:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 87ms, Average = 43ms
```
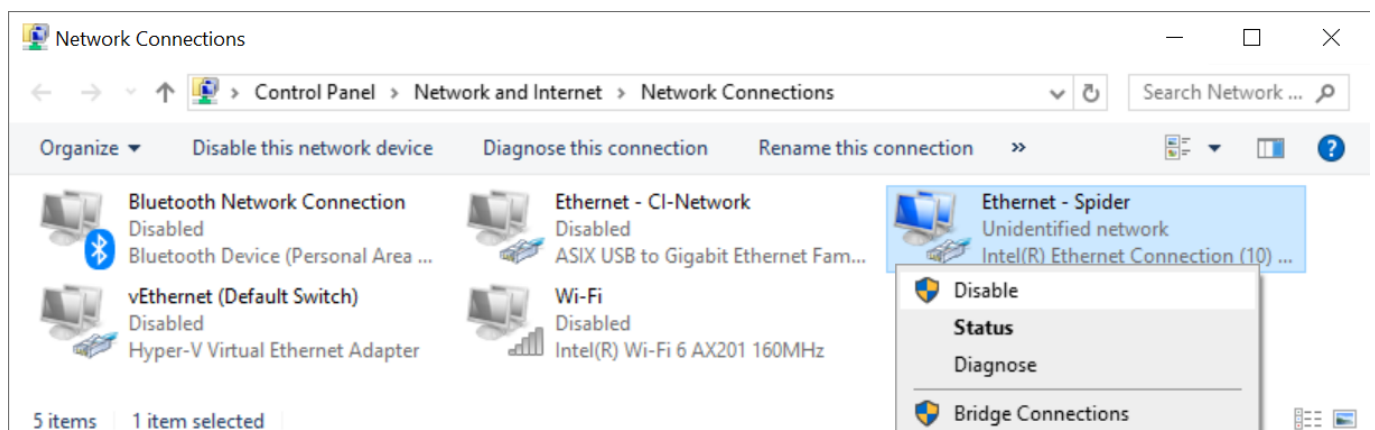
Troubleshooting

If for some reason the PC does not detect the spider devices or one day the PC no longer detects spider devices despite it used to just yesterday or last week, then there are some initial checks or solutions to try below:

Disable other networks

Temporarily disable all other network adapters and only connect one Spider to the PC.
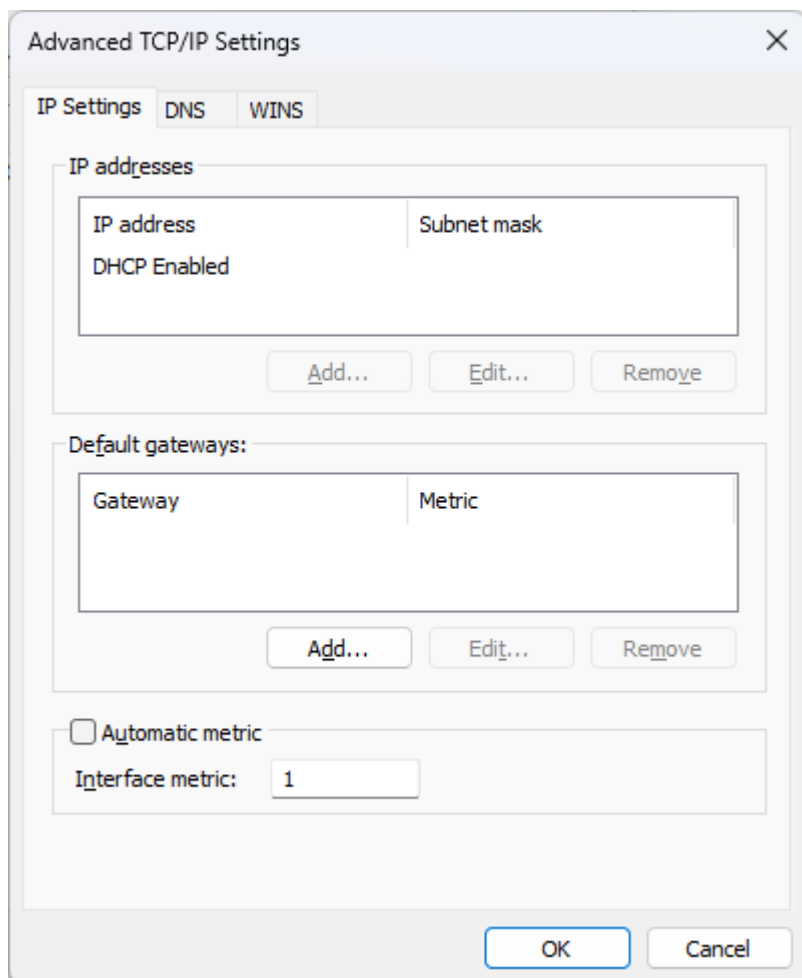

Search for **"View Network Connections"** in the **Start menu** and then right-click on all other network adapters to disable them.

If you wish to operate with the other networks turned on, see the below section "Dealing with multiple networks".

Set network priority

If disabling other adapters is not an option, you can also raise the priority of the Spider network adapter.

Right-click on the Spider network adapter, go to **Properties > select "Internet Protocol Version 4 (TCP/IPv4)" > Properties > Advanced**, uncheck **Automatic metric** and set **Interface metric** to 1 (lower is higher priority)

Power adapters

Check the power adapter of the Spiders. Devices with inadequate power can seem turned on while not functioning properly,

Check Ethernet ports

Try using a different Ethernet port or a separate USB-to-Ethernet adapter. Check the Ethernet connector lights are blinking to indicate a live connection.

Reset DNS cache

Reset the DNS cache (open **Command Prompt** and type in "`ipconfig /flushdns`" and press **Enter.**

```
> ipconfig /flushdns
Windows IP Configuration
```

```
Successfully flushed the DNS Resolver Cache.
```

Resetting the Spider

If all else fails, individual Spider modules can be reset to:

- **IP address:** 192.168.1.153
- **Subnet mask:** 255.255.255.0
- **Default gateway:** 192.168.1.5

How to reset IP address to factory default settings:

1. Press and hold the **Reset** pin (you'll need a paper clip or similar) at the back of the unit for **4-10 seconds** until the internal relays click

For the Spider-81, it is recommended to use the front panel LCD and menu buttons to make changes to the IP settings.

How to reset firmware and IP address: if the above reset fails, there is a more aggressive reset function for both IP and DSP settings. This resets the DSP firmware version back to a base 1.0.0.4.

1. Turn off Spider
2. Press and hold the **Reset** pin
3. While the **Reset** pin is still pressed, press the **Power** button
4. Release the **Reset** pin

For Spider-80X/Xi units, the **Play** and **Stop** button LEDs will alternating blink if the reset was successful

After this reset, the unit should be detectable on the network using EDM or Front-End IP Address Setup. The firmware will need to be updated again from EDM.

Dealing with multiple networks

If your PC is connected to multiple networks (i.e., Internet, office network), it will have multiple IP addresses.

These multiple networks should not have overlapping IP ranges. Otherwise, our software may look on the wrong network for your Spider.

In the below example, the office network already uses the 172.0.0.x subnet, so the Spiders should be configured to another subnet, such as 10.0.0.x

Office network	PC – Office	PC	PC – Spider	Spider 1 (master)	Spider 2 (slave)
IP address 172.0.0.1 Subnet mask 255.255.255.0	IP address 172.0.0.100 Subnet mask 255.255.255.0		IP address 10.0.0.50 Subnet mask 255.255.255.0	IP address 10.0.0.100 Subnet mask 255.255.255.0	IP address 10.0.0.101 Subnet mask 255.255.255.0

What are my other office subnets?

Open the **Command Prompt** by typing **cmd** in your **Windows start menu**.

Type **ipconfig**

This will print out a list of all existing office subnets for your PC. The format should look like:

```
Wireless LAN adapter Wi-Fi:
IPv4 Address. . . . . . . . . . . : 172.0.0.100
Subnet Mask . . . . . . . . . . . : 255.255.255.0
Default Gateway . . . . . . . . . : 172.0.0.1
```

Alternative subnets to consider

For a private network when using the Spider, any combination of IP values between 0.0.0.0 and 255.255.255.255 can be used. Below are some popular IP schemas that are popular in the IT practice:

172.0.0.x subnet

By default, all Spider devices are sent out with static IP addresses starting at 172.0.0.100. We recommend setting your PC to an IP address like 172.0.0.50 for the quickest setup.

- **PC IP address:** 172.0.0.50
- **Spider IP addresses:** 172.0.0.100, 172.0.0.101, …
- **Subnet mask:** 255.255.255.0
- **Default gateway:** (blank)

10.0.0.x subnet

If your PC is already connected to another network (e.g., office Internet) that uses the 172.0.0.x subnet, consider the 10.0.0.x network.

- **PC IP address:** 10.0.0.50
- **Spider IP addresses:** 10.0.0.100, 10.0.0.101, …
- **Subnet mask:** 255.255.255.0
- **Default gateway:** (blank)

192.168.1.x subnet

- **PC IP address:** 192.168.1.50
- **Spider IP addresses:** 192.168.1.100, 192.168.1.101, …
- **Subnet mask:** 255.255.255.0
- **Default gateway:** (blank)

From:
https://help.go-ci.com/ - **Crystal Instruments Help**

Permanent link:
https://help.go-ci.com/general:ip-connect

Last update: **2024/11/06 23:07**