



Pulsar 320 TCP/IP Setup Instructions

Contents:

1.0 Configure network settings for the PC

- Connect through a network or router
- Direct connect with a single PC connection

2.0 Connection to the Pulsar 320

- Pulsar 320 TCP/IP setup

TCP/IP Connection through network to Pulsar 320:

PC Setup

Find your current IP address and determine whether it is **static** or **dynamic**:

1. Open Windows **Start** menu
2. Select **Run**
3. Type: **cmd** and click **OK**
4. At the blinking cursor, type: **ipconfig/all** and press Enter
5. Look for these entries near the end of the list:

- **Dhcp enabled.** “No” means your IP address is static. “Yes” means it is dynamic.

- **IP Address.** This is your current IP address

- **Subnet Mask.** This is the local subnet range

- **Default Gateway.** Gateway address of any routers or hubs.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

Z:\>ipconfig/all

Windows IP Configuration

    Host Name . . . . . : R10
    Primary Dns Suffix . . . . . : AdvancedIllumination.local
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No
    DNS Suffix Search List. . . . . : AdvancedIllumination.local
                                        AdvancedIllumination.local

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : AdvancedIllumination.local
    Description . . . . . : Broadcom NetXtreme 57xx Gigabit Cont
roller
    Physical Address. . . . . : 00-14-22-40-FE-95
    Dhcp Enabled. . . . . : Yes
    Ip Configuration Enabled . . . . . : Yes
    IP Address. . . . . : 192.168.24.29
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.24.1
    DHCP Server . . . . . : 192.168.24.2
    DNS Servers . . . . . : 192.168.24.3
                            192.168.24.1
    Primary WINS Server . . . . . : 192.168.24.3
    Lease Obtained. . . . . : Thursday, March 31, 2011 7:28:16 AM
    Lease Expires . . . . . : Friday, April 01, 2011 7:28:16 AM

Z:\>
```

Windows IP Configuration

If the current IP address is:

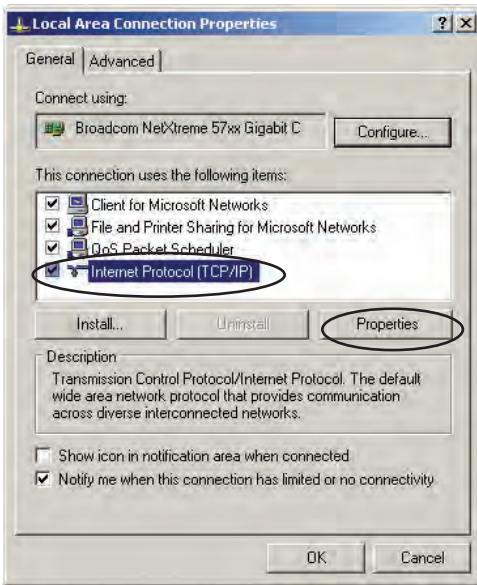
Static, then this IP will need to be changed to Dynamic by enabling DHCP.

Dynamic, then take note of: **IP Address, Subnet Mask, Default Gateway**, then continue to **Pulsar Setup**.

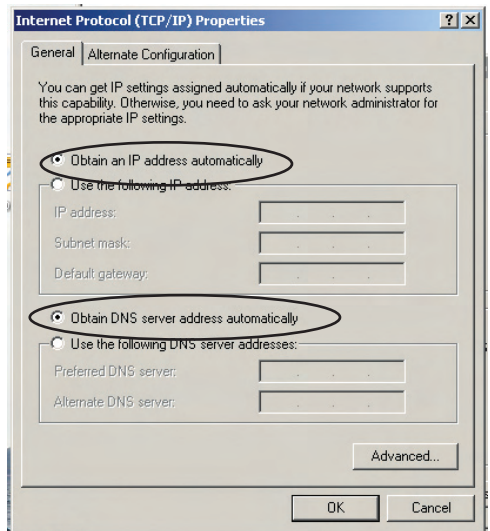
Enable DHCP (Windows XP)

1. Open Windows **Start** Menu
 2. Open **Control Panel**
 3. Classic view: Open **Network Connections**
Category view: Select **Network and Internet Connections**,
- and
- then **Network Connections**
4. Double-click on your active **LAN or Internet connection**
 5. Click **Properties**

This opens the Local Area Connections Properties window.



Local Area Properties



Internet Protocol Properties

6. Enable **Obtain IP address automatically**. Enable **Obtain DNS automatically** unless advised otherwise by your network administrator.

Direct TCP/IP connection from single PC to Pulsar320

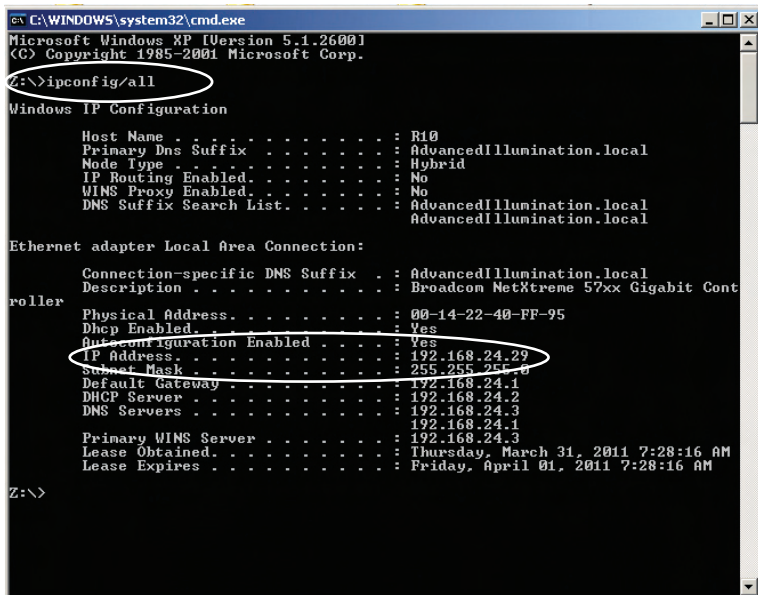
PC Setup

You will need to assign a static IP to the host PC

Find your current IP address and whether it is **static** or **dynamic**:

1. Open Windows **Start** menu
2. Select **Run**
3. Type: **cmd** and click **OK**
4. At the blinking cursor, type: **ipconfig/all** and press **Enter**
5. Look for these entries near the end of the list:

- **Dhcp Enabled.** “No” means your IP address is static. “Yes” means it is dynamic.
- **IP Address:** This is your current IP address.
- **Subnet Mask.** This is the local subnet range.
- **Default Gateway.** Gateway address of any routers or hubs.



```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
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Z:\>ipconfig/all

Windows IP Configuration

    Host Name . . . . . : R10
    Primary Dns Suffix . . . . . : AdvancedIllumination.local
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No
    DNS Suffix Search List. . . . . : AdvancedIllumination.local
                                        AdvancedIllumination.local

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . . : AdvancedIllumination.local
    Description . . . . . : Broadcom NetXtreme 57xx Gigabit Controller
    Physical Address. . . . . : 00-14-22-40-FP-95
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IP Address. . . . . : 192.168.24.29
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.24.1
    DHCP Server . . . . . : 192.168.24.2
    DNS Servers . . . . . : 192.168.24.3
                                192.168.24.1
    Primary WINS Server . . . . . : 192.168.24.3
    Lease Obtained. . . . . : Thursday, March 31, 2011 7:28:16 AM
    Lease Expires . . . . . : Friday, April 01, 2011 7:28:16 AM

Z:\>
```

Windows IP Configuration

If the current IP address is:

- **Static**, then make note of the **IP address, subnet mask, and default gateway**. You will need to assign the Pulsar 320 network settings so they work in the same range.

- **Dynamic**, then assign a static IP address instead (covered in the following pages).

If your IP is already Static, then you can skip to **Pulsar Setup**. You only need to do these steps if you want to adjust any of the TCP settings (IP, Gateway, Subnet).

Choose an IP Address

Choose an IP address, and collect other information needed in order to assign a static IP address to your computer.

This only needs to be done if you have a router with multiple PCs and/or other devices connected with different IP addresses.

In your router administration program, find an IP address that can be assigned as a static IP. The address:

- Must not be one that might be assigned to someone as a dynamic address.
- Must not be one that has been assigned to another device
- Must be lower than the range of dynamic addresses.

This may be handled by an administrative group or network engineers. Have this group assign an IP that you can use for both the host PC and target Pulsar 320 unit. This will prevent any IP conflicts from occurring.

Assign the IP Address to the PC (Windows XP)

To set a static IP address:

1. Open Windows **Start** menu
2. Open **Control Panel**

3. Classic view: Open **Network Connections**
Category view: Select **Network and Internet Connections**, and then **Network Connections**
4. Double-click on your active **LAN** or **Internet Connection**
5. Click **Properties**

This opens the Local Area Connections Properties window

6. In the **General** tab, highlight the **Internet Protocol (TCP/IP)** item, and click **Properties**.

This opens the Internet Protocol (TCP/IP) Properties window.

7. In the **General** tab, click **Use the following IP address**, and then enter:

- **IP address**. The static IP address you want to assign to this computer.
- **Subnet Mask**. Subnet Mask used by your router.
- **Default Gateway**. IP address of your router's default gateway.

8. In **Use the following DNS server addresses**, enter all the IP addresses for the DNS servers your router uses if applicable. If DNS server addresses do not pertain to you, use **Obtain DNS server address automatically**.

9. Click OK

Then:

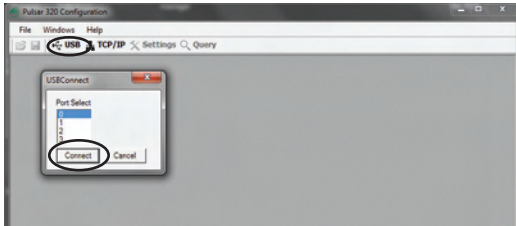
10. Click **OK** to close each window
11. Restart your computer
12. Recheck your IP address again, to make sure the changes were applied.

Run: **cmd** Type: **ipconfig/all**

Continue to **Pulsar Setup**

Pulsar Setup

Once we know what the system and network settings are, we can configure the Pulsar 320 controller to communicate across the network via TCP/IP.



USB Port Configuration

Connect to the Pulsar 320

The Pulsar must first be configured via USB.

1. Connect the target Pulsar 320 unit **via USB** cable to host PC
2. Connect 24VDC power source and toggle the controller **ON**
3. Launch **“PulsarV00_02.exe”**
4. In the parent window, select the **USB icon** to establish a USB connection

This will open the USB port select dialog.

5. Select the **USB port** to connect to -- usually **port 0** for a single Pulsar
6. Once connection is established, select **Query**
7. In the information box you can view current IP, Subnet, Gateway, and other pertinent information regarding current settings on the controller.
8. To edit network settings press **Edit Network**
9. Before assigning a new IP address you must choose an IP address that won't conflict with any other devices on the network (PCs, printers, routers, other machines, etc.).

For most small networks with <255 devices, the first 3 sets of digits should match, with only the last digits being unique.

Example:

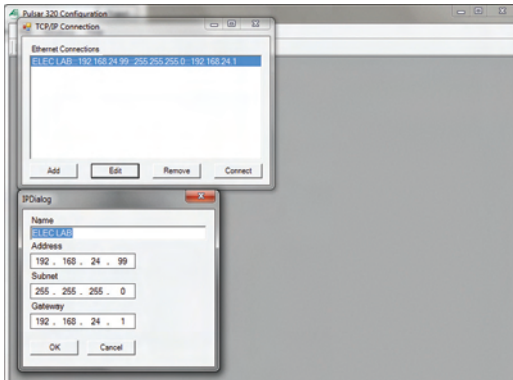
PC IP Address: 192.168.24.50
Pulsar IP Address: 192.168.24.240

10. Subnet Mask is a division of networks into separate pieces. Essentially you will want both host PC and Pulsar 320 to be on the same subnet so they can find each other.

Enter the value found from your PC settings.

Example:

PC Subnet: 255.255.255.0
Pulsar 320 Subnet: 255.255.255.0



Pulsar TCP/IP Connection and IP Dialog Window

The subnet also determines how many unique places are used in **IP address**. **Contact your network administrator if you need more assistance.**

11. Enter the same value obtained from the PC for default gateway into the Pulsar 320

PC Default Gateway 192.168.24.1
Pulsar 320 Subnet 192.168.24.1

12. Press **OK**
13. Close the **Query Dialog** and close the **USB connection**
14. Power down the Pulsar 320 and **disconnect the USB cable**
15. Connect the Ethernet cable and power the Pulsar **ON** again
16. Select the TCP/IP icon to open the ECP/IP connection dialog

17. Press **ADD** to add a new device to the list.
18. Name the device for easy recognition and enter all the proper IP settings that were loaded onto the controller. Once finished, press **OK**
19. Select the newly added device and press **Connect** to establish the TCP/IP connection to that device.

