

How do I know what serial ports are open in the DeviceMaster?

There are a couple of different ways to see if a serial port is open and in use.

One method uses telnet.

In PortVision DX, Right Click on the DeviceMaster in question.

Select Telnet/SSH session from the pop-up

Leave the options set for Telnet but change the port to be 4607

This is a read only port for the diagnostics in the DeviceMaster itself

You will see a line presented at 10 second intervals

Here is what the log file shows. I will use this line as an example

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70: idle=4192 1001 0000
```

70 = the number of seconds the DeviceMaster has been running. The idle statement will be refreshed at 10 second intervals.

Idle=4192 tells the amount of CPU that is available for use. About 4400 is the maximum value that will ever be seen. A value of 4192 tells us that the DeviceMaster is almost totally idle. If this values gets into double digits, the processor is really maxed out. A comparison would be CPU Utilization in Windows. A Windows CPU at 100% is using all of the processor and there is nothing left. Control shows how much is left instead of how much is in use.

1001 0000 - this is the status of each physical serial port. There is a value for each physical serial port on the DeviceMaster. From this 1001 0000 it can be see that this is an 8 port DeviceMaster. (A 32 port unit would have 8 groups of 4 digits.) A '1' indicates that the port is NOT in use; There is not an application that has opened the port. A '0' indicates that the port IS in use; That an application has opened this port and is in communications with it. This does not tell us WHO has opened the ports. Only that they are in use. The driver could be installed on more than one PC with some ports in one PC and other ports in a different PC.

What this translates to is: (Assuming com port numbers of 3 through 10)

Com3 is NOT in use and would be available to be opened.

Com4 IS in use and would not be available to be opened by an application.

Com5 IS in use and would not be available to be opened by an application.

Com6 is NOT in use and would be available to be opened.

Com7 IS in use and would not be available to be opened by an application.

Com8 IS in use and would not be available to be opened by an application.

Com9 IS in use and would not be available to be opened by an application.

Com10 IS in use and would not be available to be opened by an application.

Com3 and Com6 could be used by either an application that uses com ports, or an application that is Winsock compatible. From this we do not know if the ports are enabled for socket connections. There are means to determine this, but not in this log file.

There are many other lines that may be seen using the diagnostic port of 4607. When a port is opened, all of the parameters for that process will be shown. The same when a port is closed. Most of these lines can be deciphered, but are not in clear English text. HDLC messages for example will be displayed in response to a query from PortVision Plus or PortVision DX requesting a status. I will not try to describe all of the possibilities in this note. If you have questions about some of what you are seeing, let me know and I will provide specific answers.

The other method uses the web pages and is dependent on the version of firmware installed in the DeviceMaster. Earlier versions will not have this option.

Open the web page of the DeviceMaster.

In PortVision DX highlight the DeviceMaster and click on the Webpage icon on the launch bar.

The screenshot shows a web browser window with the URL <http://192.168.2.82/home.asp>. The page title is "Control Corporation - Devi...". The main header features the "CONTROL" logo and "DEVICE MASTER". Below the header are navigation tabs: "Server Status", "Network", "Security", "EMail", and "RFC1006".

Server Status

Software: NS-Link 10.02	IPv4 Config: Static	IPv6 Config: Static
Host Name:	Address: 192.168.2.82	Address: 1922::8:0:2a/64
	Netmask: 255.255.0.0	Gateway: ::
	Gateway: 192.168.0.253	

Connection Status

	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8
Port Name:								
NSLink Connection Status								
[192.168.2.30]:49152	open							
[1922::7b:75:4c]:1554			open	open			open	
00:18:8b:8a:f2:01		open						
TCP Connection Status								
Enabled:	No	No	No	No	Yes	No	No	No
Local:	[:0	[:0	[:0	[:0	[0.0.0.0]:8004	[:0	[:0	[:0
Remote:	[:0	[:0	[:0	[:0	[192.168.2.20]:1078	[:0	[:0	[:0
Rx bytes:	0	0	0	0	42	0	0	0

In this example under the "Connection Status" we can see that we have 3 different PC's connecting to this DeviceMaster using the Control driver to create com ports.

One PC is using IPv4 ([192.168.2.30]:49152)

One PC is using IPv6 ([1922::7b:75:4c]:1554)

And the third is using MAC mode 00:18:8b:8a:f2:01

Now we can actually tell who has the port open.

192.168.2.30 has opened physical port #1

1922::7b:75:4c has opened 3 physical serial ports. Ports 3,4 and 7

00:18:8b:8a:f2:01 has opened port#2.

We can also see that a fourth PC has made a Winsock connection to physical port 5 by looking at the “Local” and “Remote” lines showing the IP address information of the connected application. We can also see that the DeviceMaster has received 42 bytes from the application. This graphic is not long enough to show if any bytes have been sent back to the application. (Rx and Tx bytes in this case are counting the amount of data sent or received on the Ethernet port, NOT the serial port.)

In this example ports 6 and 8 are not currently in use and are available to be opened.