



APPLICATION NOTE

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Product Family: DirectSoft

Number: AN-DS-004

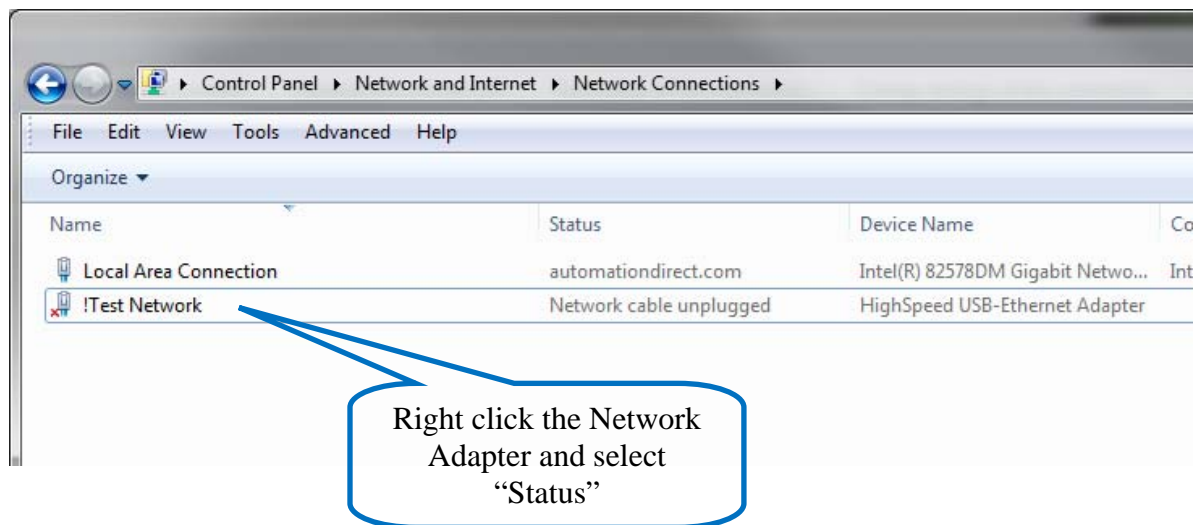
Subject: Ethernet Connection Guide

Date Issued: 12-8-2011

Revision: Original

To begin, open your Windows Control Panel and navigate to the Network Adapter settings: Start -> Control Panel -> Network and Internet -> Network and Sharing Center -> Change Adapter Settings

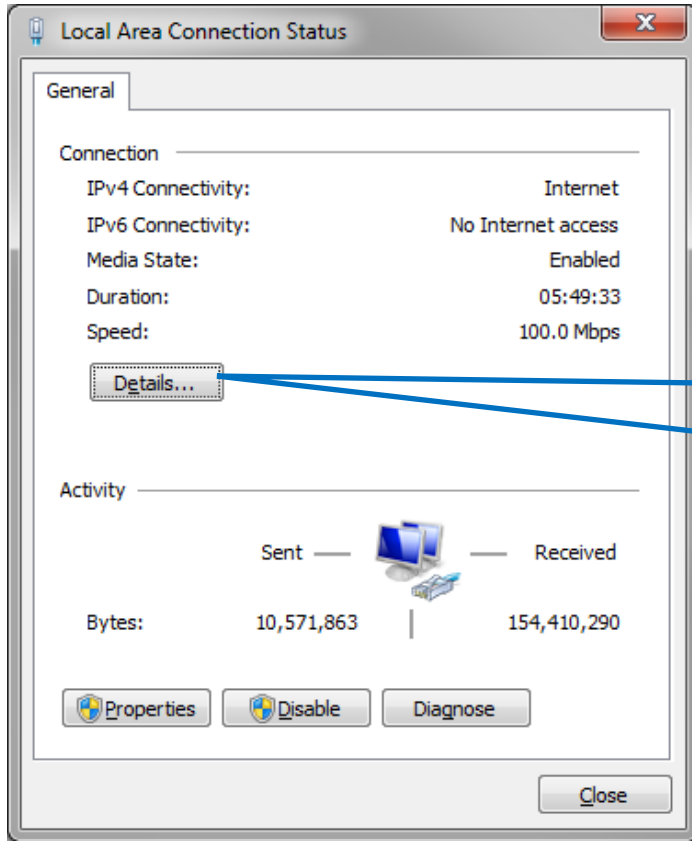
Next pick your Network Adapter that you will be working with.





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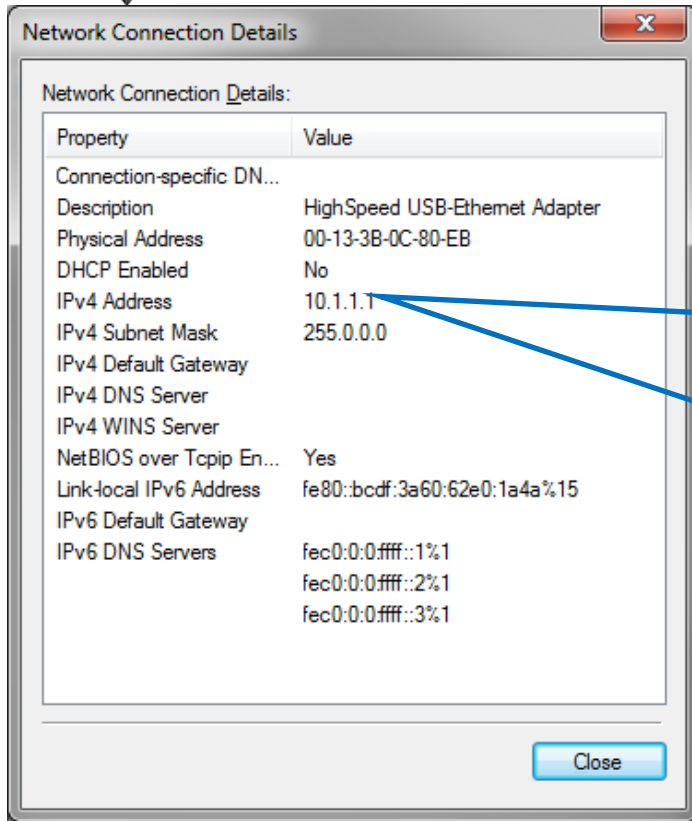


Click on "Details"



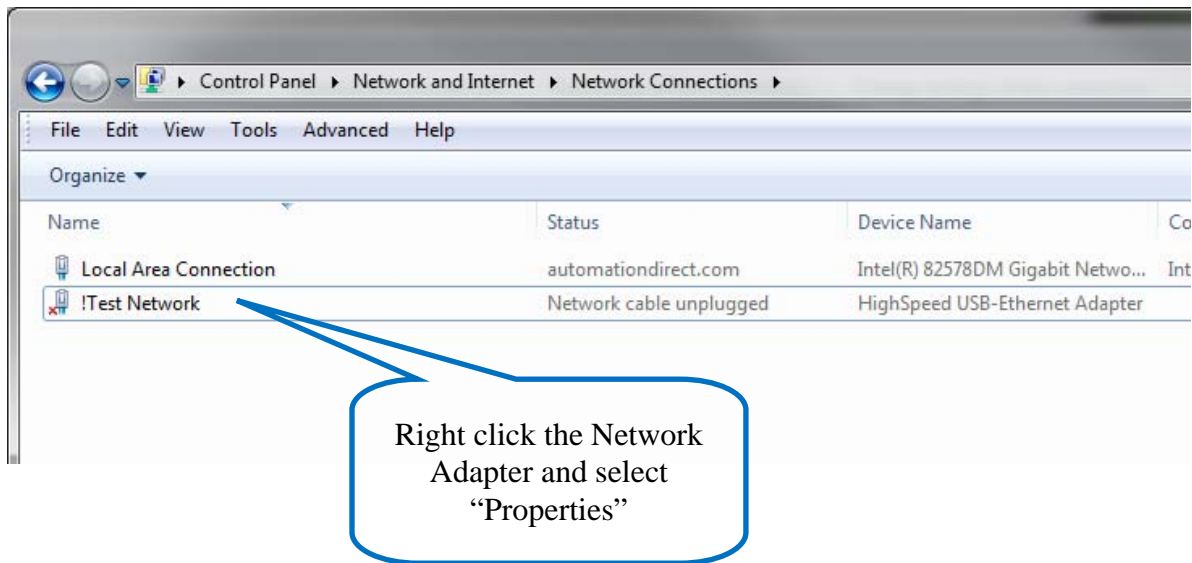
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You must have a valid IP address assigned to your network card. 169.xxx.xxx.xxx is not a valid address.

If your adapter does not have a valid IP address assigned, then do the steps below. If you do have a valid IP address, skip down to the appropriate device that you are trying to connect.

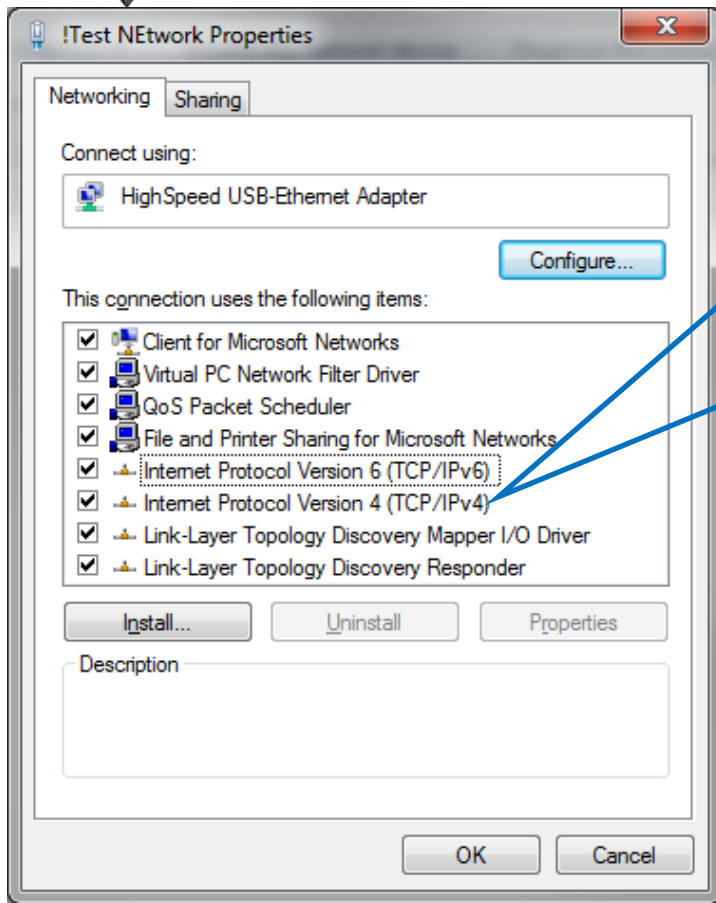


Right click the Network Adapter and select "Properties"



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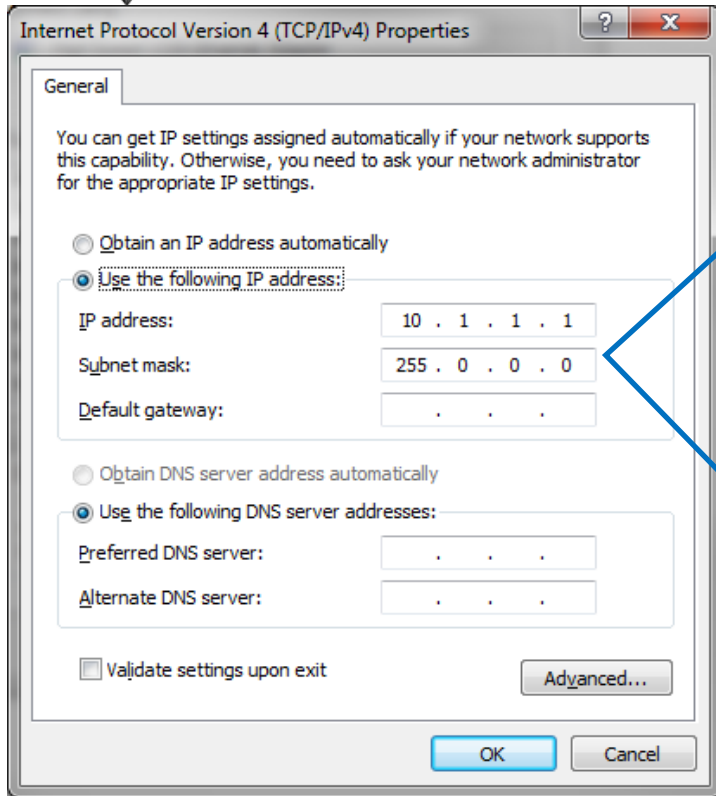


All of these items are not necessarily needed. The only one that absolutely has to be in this list is "Internet Protocol Version 4 (TCP/IPv4)". The rest can be left alone. If you don't understand what each item does, do not delete any of them. Right click on "Internet Protocol Version 4 (TCP/IPv4)" and select "Properties".



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If you do not have a DHCP server and there is no address assigned to the Network Card, then this is where you would enter your IP addressing.

These first two fields are the ones that you must have unless you have a DHCP server (IP Address and Subnet).

If your IT department has not assigned addressing, please get them to do so and use the IP address and subnet that they provide.

If you do not have an IT department and this connection will only be used for your industrial devices then pick either a 10.x.x.x address or a 192.168.x.x address. The first two sets of numbers must match for all industrial devices. The last number should be unique for each device.

For subnet, if you use a 10.x.x.x address, use 255.0.0.0. If you use a 192.168.x.x address then use 255.255.0.0.



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DirectSoft – Automatic Link Creation

The image shows two screenshots from a Windows environment. The top screenshot is the DS5 DSLaunch application window. The left sidebar shows a tree view of applications, with 'NetEdit 3' highlighted. A blue callout bubble points to 'NetEdit 3' with the text 'Open NetEdit3'. The right pane shows the 'NetEdit 3' application window with fields for 'Description:', 'Version:', and 'Additional Info:'. The bottom screenshot is the NetEdit 3 application window. The 'Network' menu is open, and 'TCP/IP' is selected, highlighted with a red box. Below the menu is a table of network devices. A blue callout bubble points to the table with the text: 'Select TCP/IP at the top. Click on the ECOM that you wish to work with and then select the "ECOM settings" tab. Click on the "General" button to set up the ECOM module.'

Ethernet Address	F	B	C	Module Ty...	IP Address	ID	Name
00 E0 62 20 4D 1D				H0-ECOM100	10.1.1.10	0	06 Cmore ECOM
00 E0 62 20 F3 39				H0-ECOM100	10.1.1.12	0	DL06 #2 H0-ECOM100
00 E0 62 20 41 88				H2-ECOM100	10.1.1.25	31	H2-ECOM 100 - 3 CTRIO's
00 E0 62 60 28 57				H4-ECOM100	10.1.1.40	0	H4-ECOM100
00 E0 62 90 00 41	-	-		MX-275e	10.1.1.120	0	H2-MP1x

Module Info | ECOM Settings | ECOM Help | General Help |

Configuration

- General...
- Advanced...
- Peer to Peer Config...
- E-Mail Config...
- Start Web based Config...

Utils

- Test CPU Access!
- Test E-Mail...

Firmware

- Update Firmware...
- Update Booter...
- Restore Factory Settings...

Ready



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General Settings

Module ID: 0

Name: H4-ECOM100

Description: H4-ECOM100 Ethernet Communications Module.

Obtain an IP address automatically

Use the following IP settings

IP Address: 10 . 1 . 1 . 40

Subnet mask: 255 . 0 . 0 . 0

Gateway: 0 . 0 . 0 . 0

OK Cancel

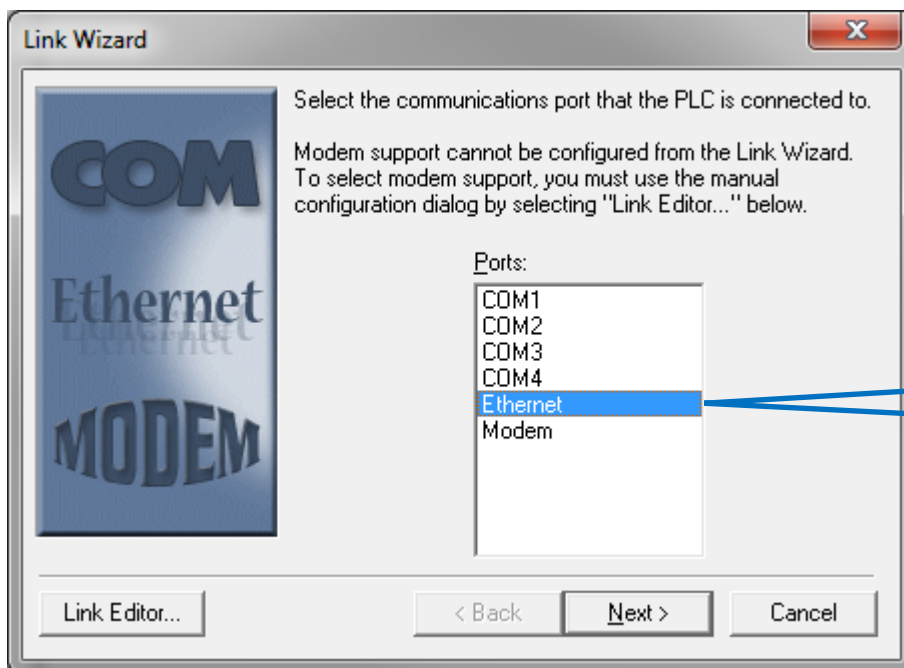
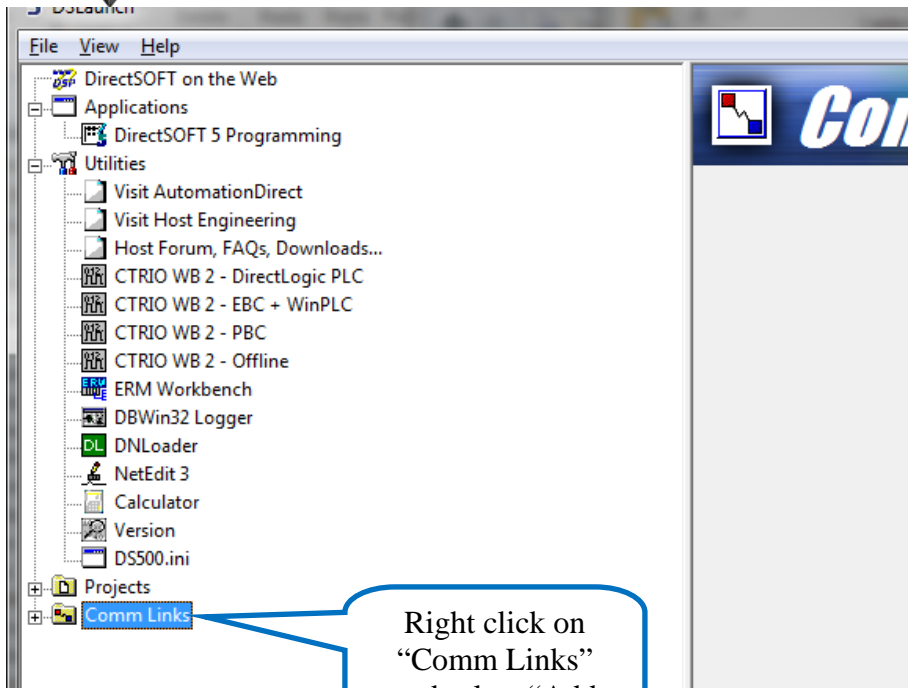
These first two fields are the ones that you must have (IP Address and Subnet). If your IT department has not assigned addressing, please get them to do so and use the IP address and subnet that they provide. **Do not use DHCP for your ECOM card.** If you do not have an IT department and this connection will only be used for your industrial devices then pick either a 10.x.x.x address or a 192.168.x.x address. The first two sets of numbers **must** match the ones that your Network Adapter uses. The last number should be unique for each device.

For subnet, if you use a 10.x.x.x address, use 255.0.0.0. If you use a 192.168.x.x address then use 255.255.0.0.



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Link Wizard

Select the transport protocol. Be sure the protocol you select is installed in Windows.

Transport Protocol

IPX UDP/IP

Link Editor... < Back Next > Cancel

Select "UDP/IP" and click next.

Link Wizard

DEVICE Address

Select the device and addressing mode. Using module ID is easiest and can be selected with the switches on the module. Please note, the ethernet address is unique to each module and cannot be changed.

Module List	
00 E0 62 20 4D 1D	10. 1. 1. 10
00 E0 62 20 F3 39	10. 1. 1. 12
00 E0 62 60 28 57	10. 1. 1. 40
00 E0 62 20 41 88	10. 1. 1. 25

Module: H4-ECOM100 CPU: 450

Query Setup...

Address Mode

Module ID 0

Name H4-ECOM100

IP address

10.1.1.40

Ethernet address

00 E0 62 60 28 57

Link Editor... < Back Next > Cancel

Select your ECOM module and click the radio button next to "IP Address". Click next.



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Link Wizard

Link settings complete!

Please select a unique name for the new link.

Link Name:

Link Description:

Settings

PLC: Port:

Protocol: Baud:

Address: Parity:

Link Editor... < Back Finish Cancel

Give your Link a Name and a Description to identify it and make it easy to find. Click "Finish"

If you experience any errors during these steps, please refer to the troubleshooting help found in the FAQ's for DirectSoft at www.hosteng.com.

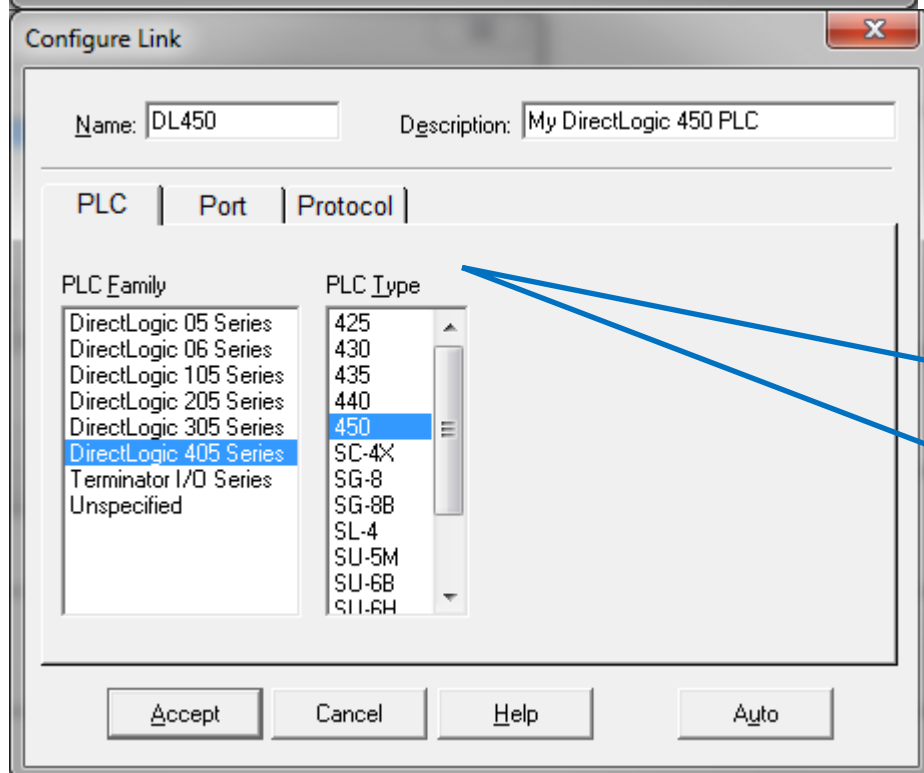
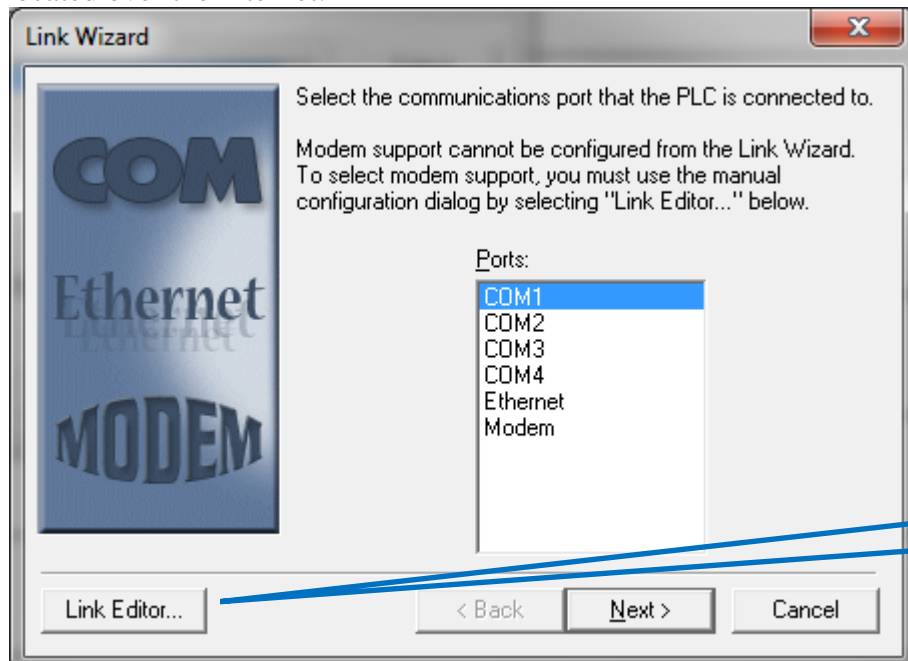


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DirectSoft – Manual Link Creation

If you have done the Automatic settings and your link is working properly, then you are done. This is for more advanced setup where you cannot auto-discover the PLC such as when it is located over the Internet.





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The "Configure Link" dialog box is shown with the following fields and options:

- Name: DL450
- Description: My DirectLogic 450 PLC
- Tabbed interface with "PLC", "Port", and "Protocol" tabs.
- Under "Protocol":
 - Transport Protocol: IPX, UDP/IP
 - Node Address:
 - Module ID: 0
 - Module Name: [empty]
 - IP: 10 | 1 | 1 | 40
 - Ethernet: 0 | 0 | 0 | 0 | 0 | 0
- Buttons: Advanced Settings, Module Setup
- Bottom buttons: Accept, Cancel, Help, Auto

Select "Ethernet" under Devices. For "transport Protocol" select "UDP/IP". Next Select the radio button beside the IP address. If you know the address, type it into the boxes provided.

The "Ethernet Module Setup" dialog box is shown with the following fields and options:

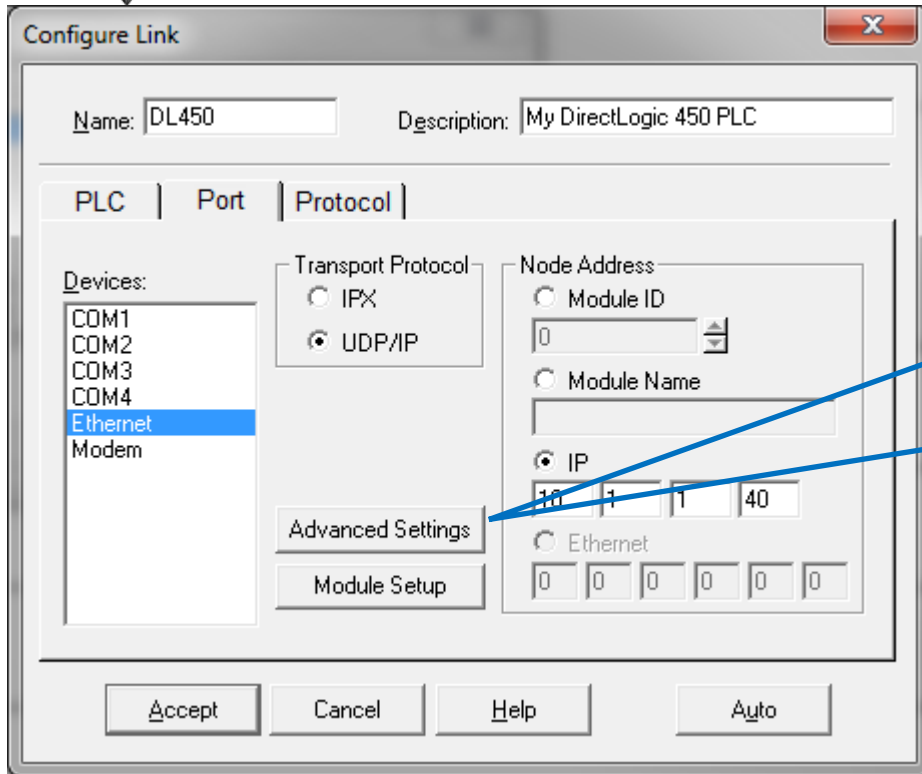
- Devices list:
 - 00 E0 62 20 41 88
 - 00 E0 62 20 4D 1D
 - 00 E0 62 20 F3 39
 - 00 E0 62 60 28 57 (highlighted)
 - 00 E0 62 90 00 41
- Configuration:
 - Type: H4-ECOM100
 - Module ID: 0
 - Name: H4-ECOM100
 - Description: H4-ECOM100 Ethernet Communications Module.
 - IP Address: 10 | 1 | 1 | 40
- Buttons: Query Network, Update Module, Exit

If you do not know the IP address, then you may click on "Module Setup" and see what the IP address is.



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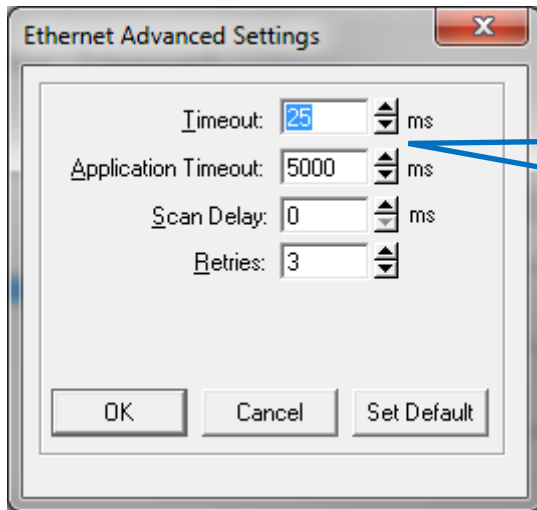
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The "Configure Link" dialog box is shown with the following settings:

- Name: DL450
- Description: My DirectLogic 450 PLC
- PLC | Port | Protocol tabs are visible.
- Devices list: COM1, COM2, COM3, COM4, Ethernet (selected), Modem.
- Transport Protocol: IPX, UDP/IP.
- Node Address: Module ID (0), Module Name, IP (10.1.1.40), Ethernet (0.0.0.0.0.0).
- Buttons: Advanced Settings, Module Setup, Accept, Cancel, Help, Auto.

If you are connecting to the PLC over the Internet or on some other high latency network such as a cell connection, click on the "Advanced



The "Ethernet Advanced Settings" dialog box is shown with the following settings:

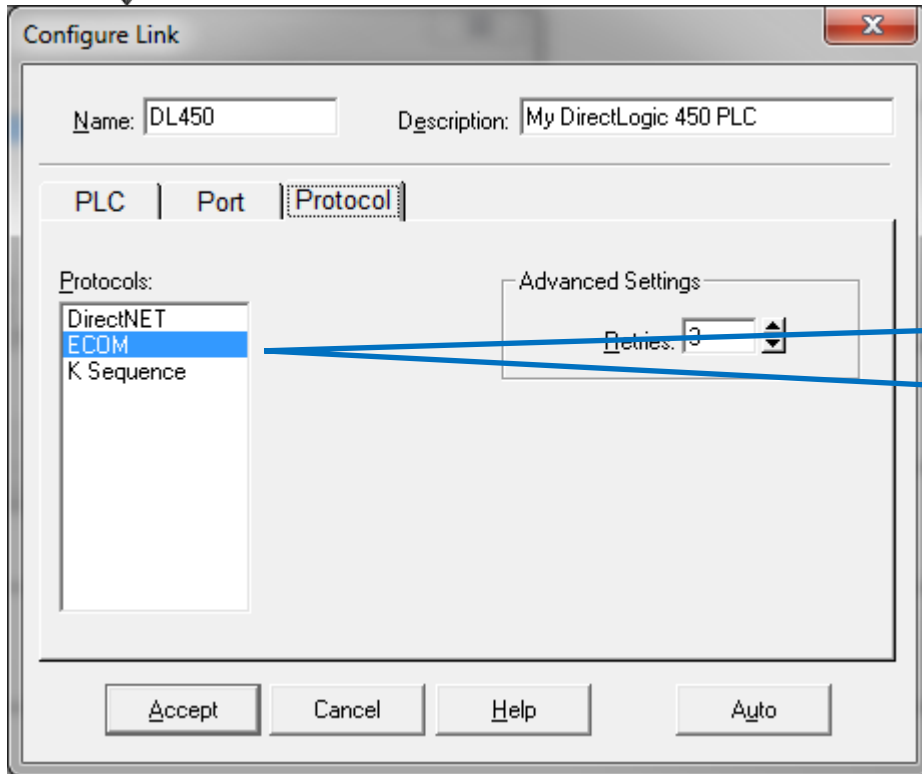
- Timeout: 25 ms
- Application Timeout: 5000 ms
- Scan Delay: 0 ms
- Retries: 3
- Buttons: OK, Cancel, Set Default.

Follow the directions from <http://www.hosteng.com/FAQFiles/DirectSOFT.htm> - FAQ0066



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Select the "Protocol" tab and "ECOM" and click Accept.

Technical

Assistance: If you have questions regarding this Application Note, please contact us at 770-844-4200 for further assistance.