

# Ethernet Module Manual



- ❖ INNOVATIVE & COMPACT
- ❖ EASY TO PROGRAM
- ❖ LOW COST FACTOR



## User Manual

## Ethernet Module

Updated: July 10, 2010

The xLogic SuperRelay is an  
Easy Electronic Co., Ltd  
Manufactured product.

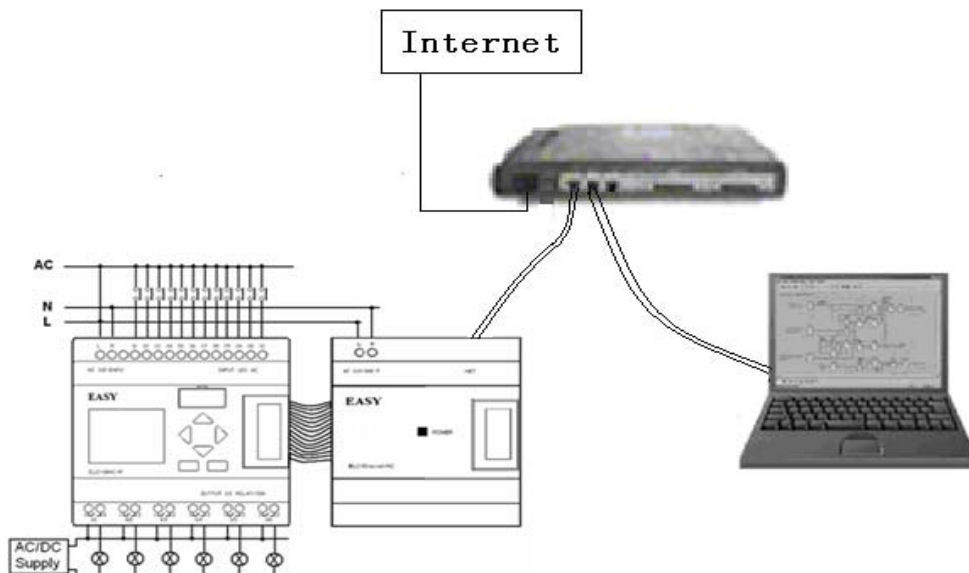
[sales@xlogic-relay.com](mailto:sales@xlogic-relay.com)

## xLogic SuperRelay Ethernet module (ELC-Ethernet)

## How to connect hardware before Ethernet module running?

1. Set ELC-Ethernet IP address. (Refer to software first part)
2. Link the ELC-Ethernet to the xLogic SuperRelay system (which must contain an ELC-18 CPU module)
3. Link the ELC-Ethernet to internet/network using CAT5 Ethernet cable, then use PC or other monitor device for monitoring or download/upload of users' programs.
4. Power on all devices in accordance with their voltage class.
5. Set communication parameter by xLogicsoft. (Page 12)

Sketch map:



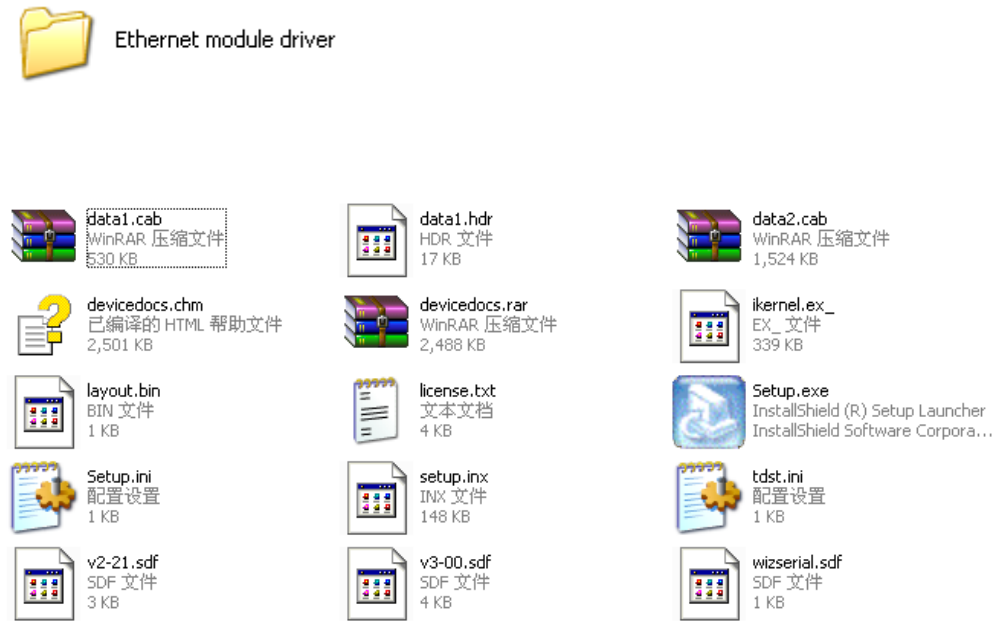
## Software part:

**First part: Set or modify IP address, port number with “serial” software.**

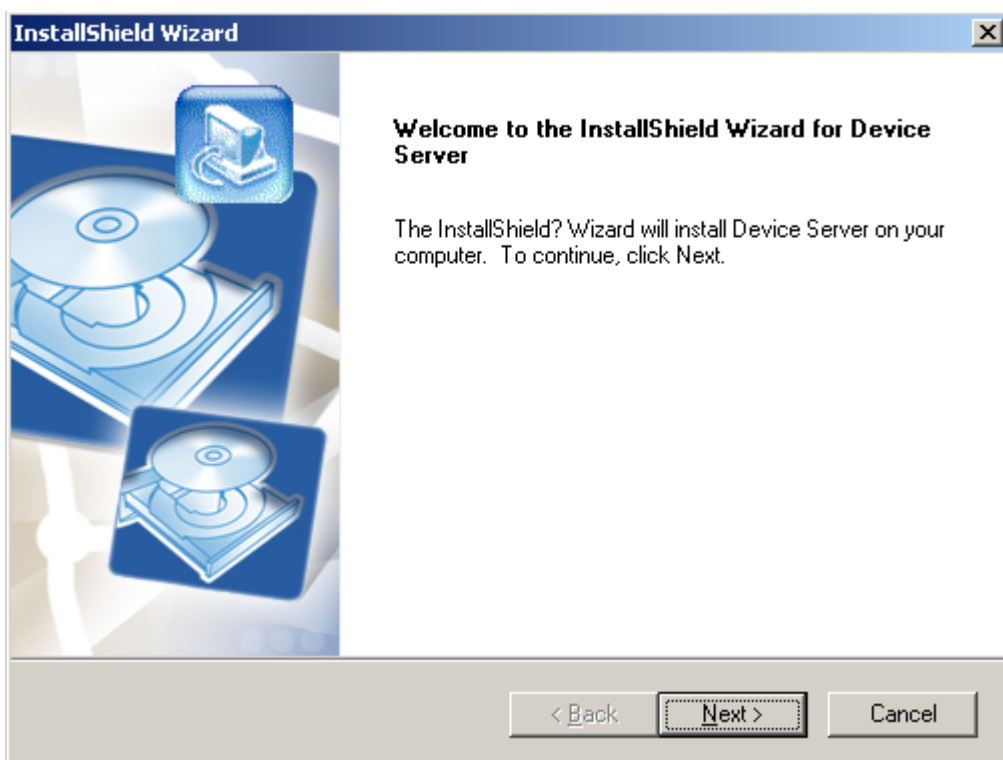
### How to configure Ethernet module IP address?

#### 1. Install Ethernet module IP address configuration software.

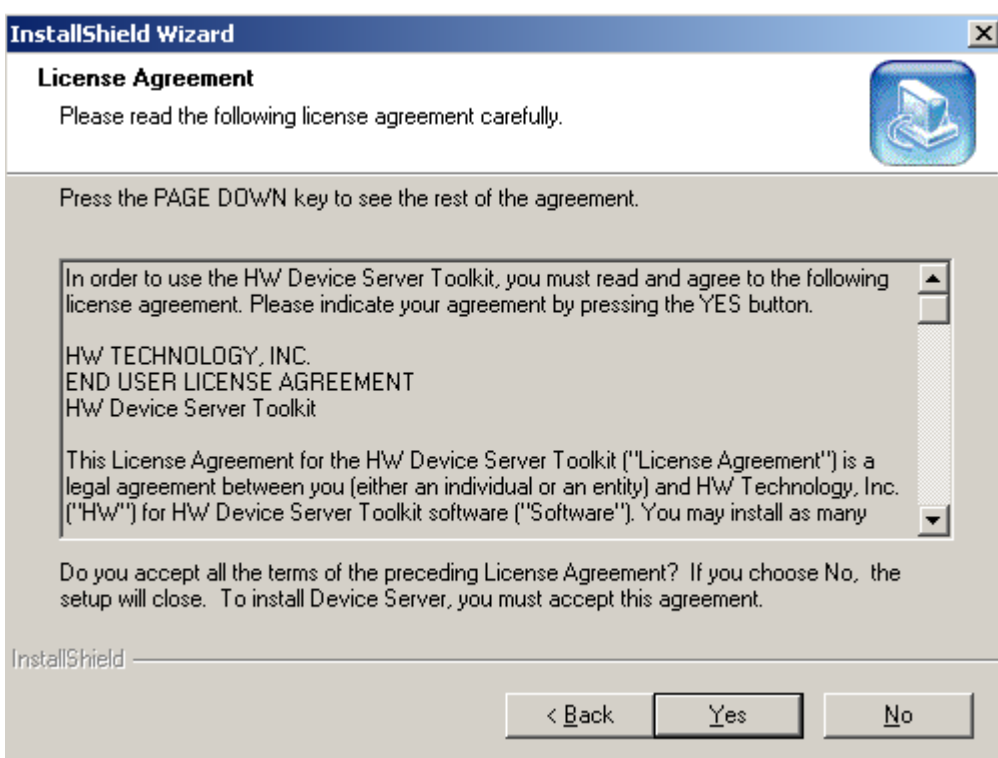
Step one: Double click the file “driver” in CD and then the following contents will be shown:



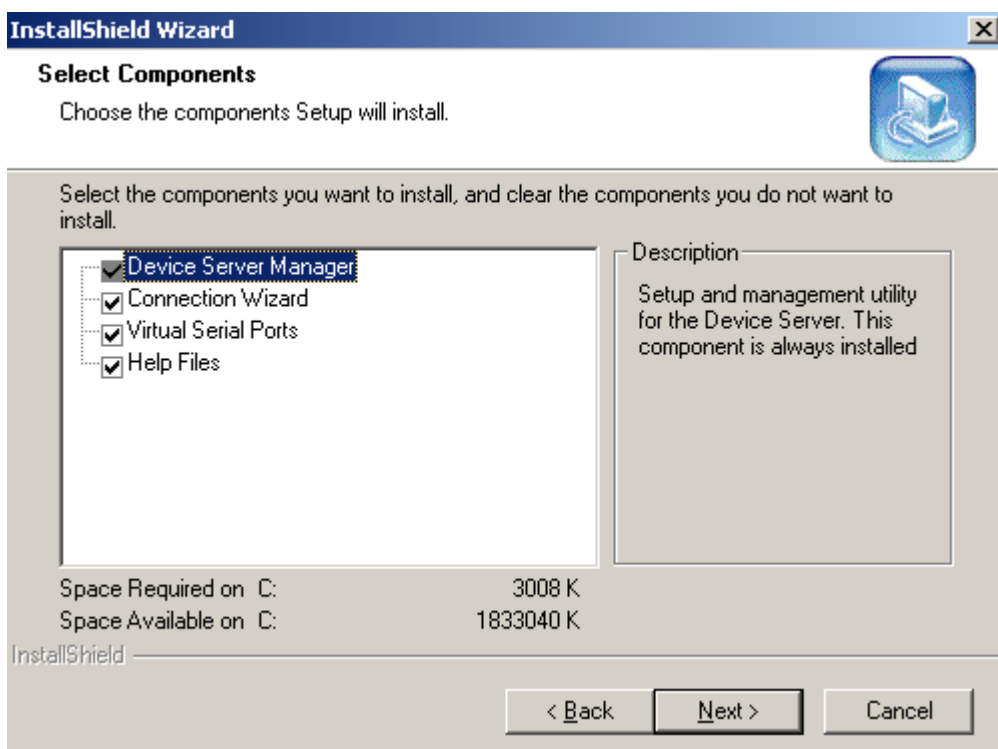
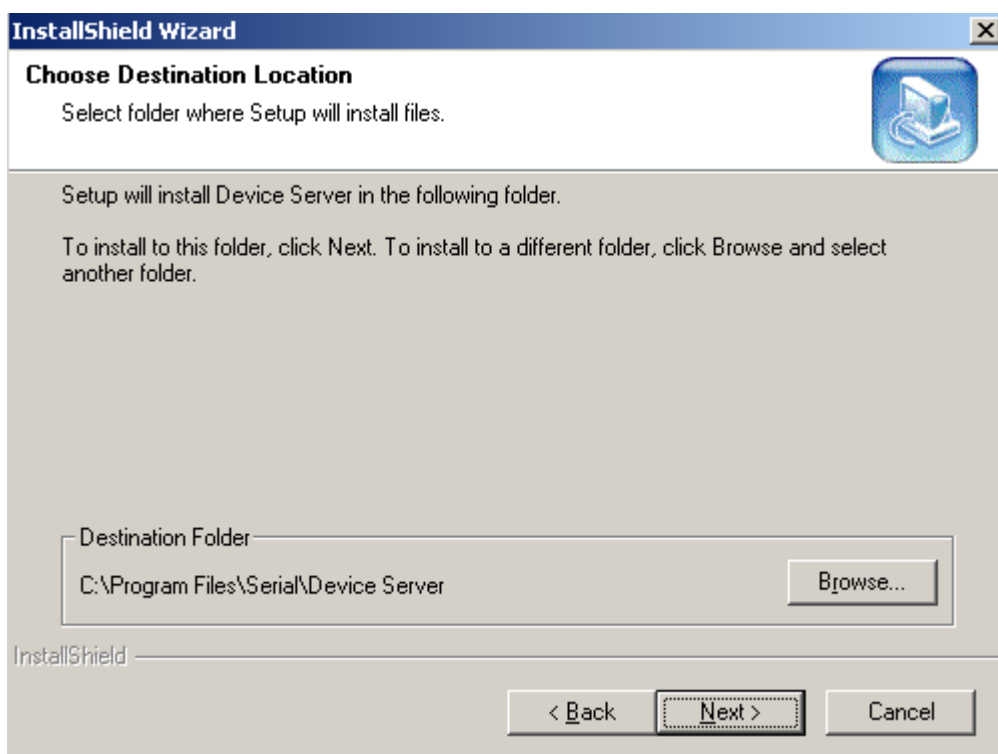
Step two: Select “Setup.exe” file, and install it by double-clicking the left mouse key.

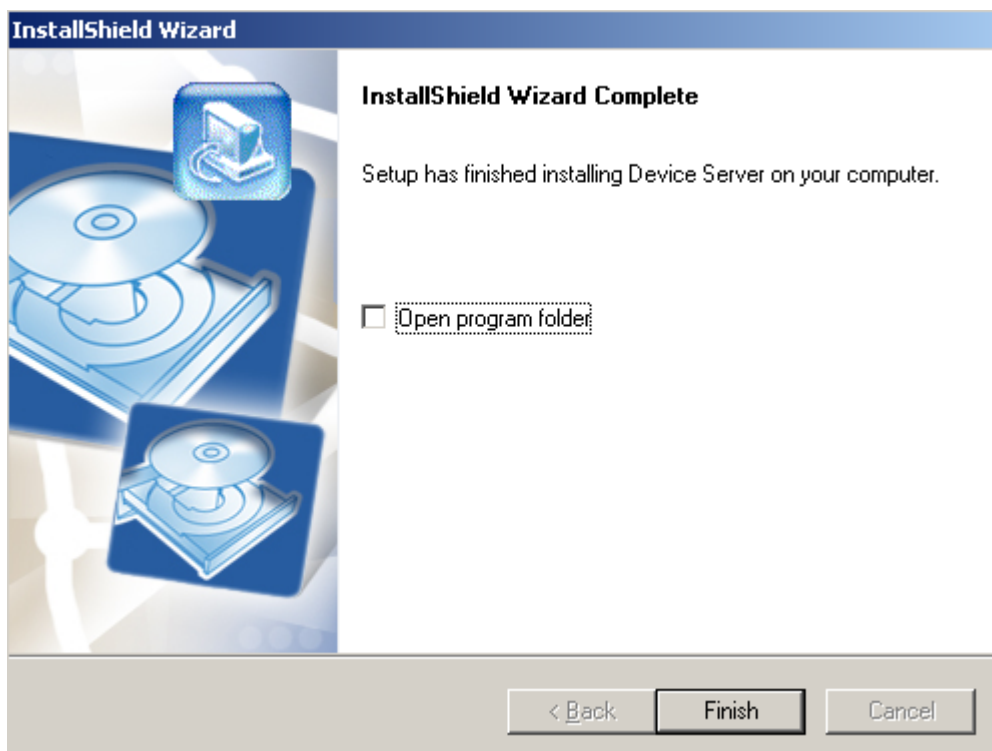
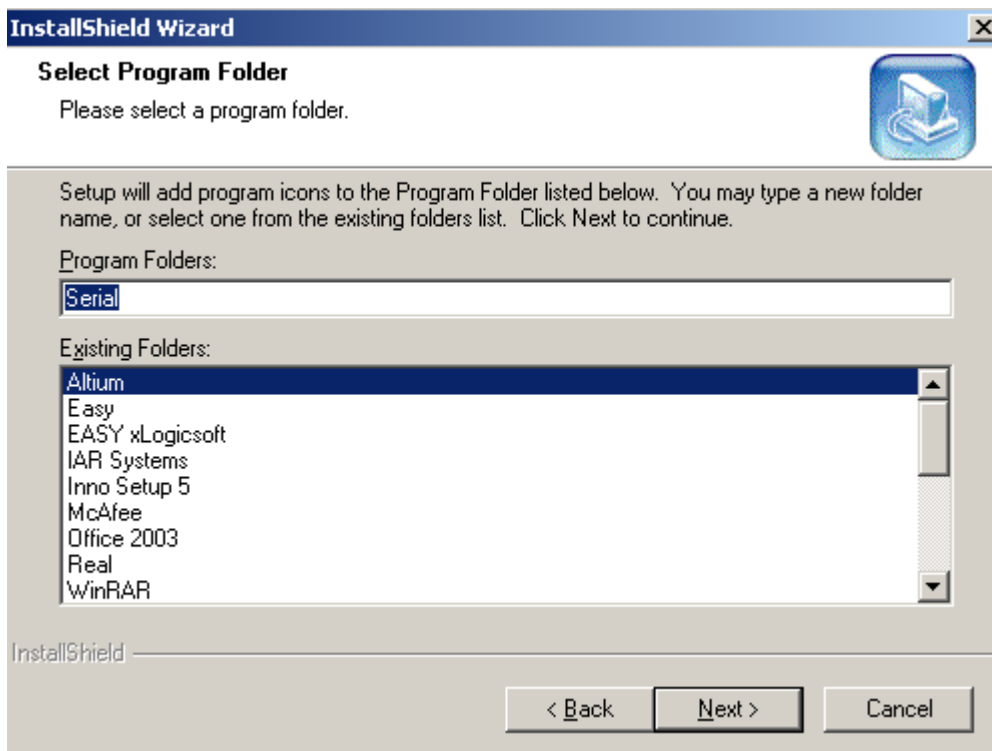


Click "Next".



Click "Yes" to continue the next step.

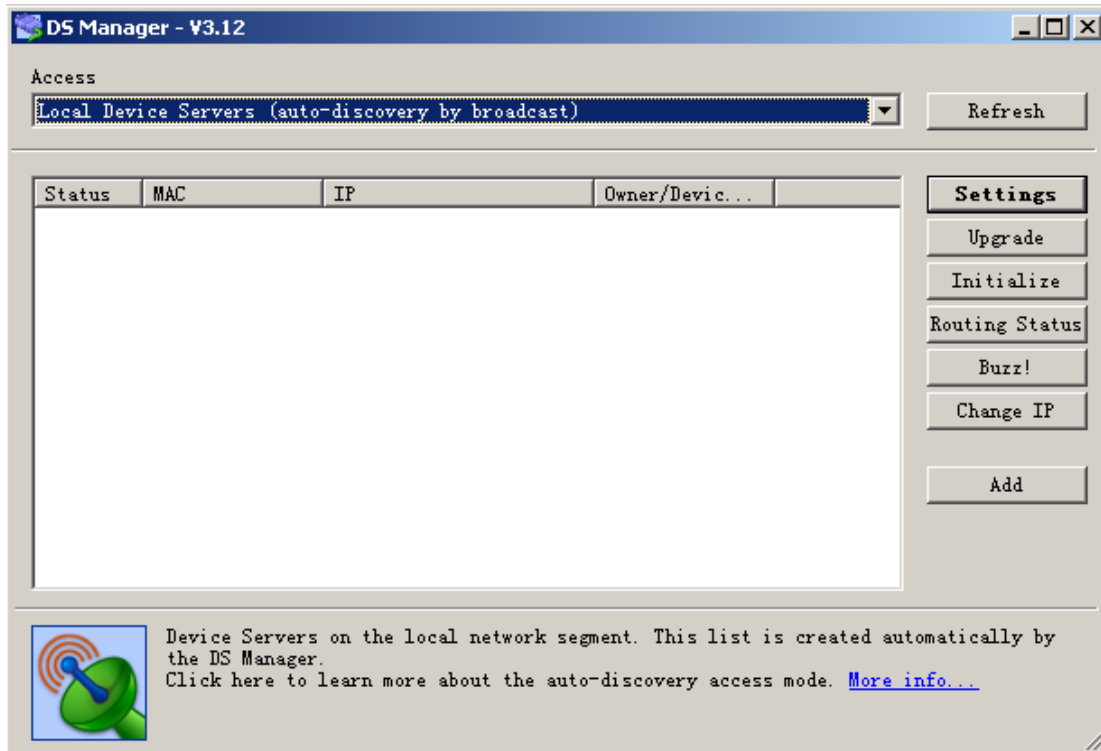
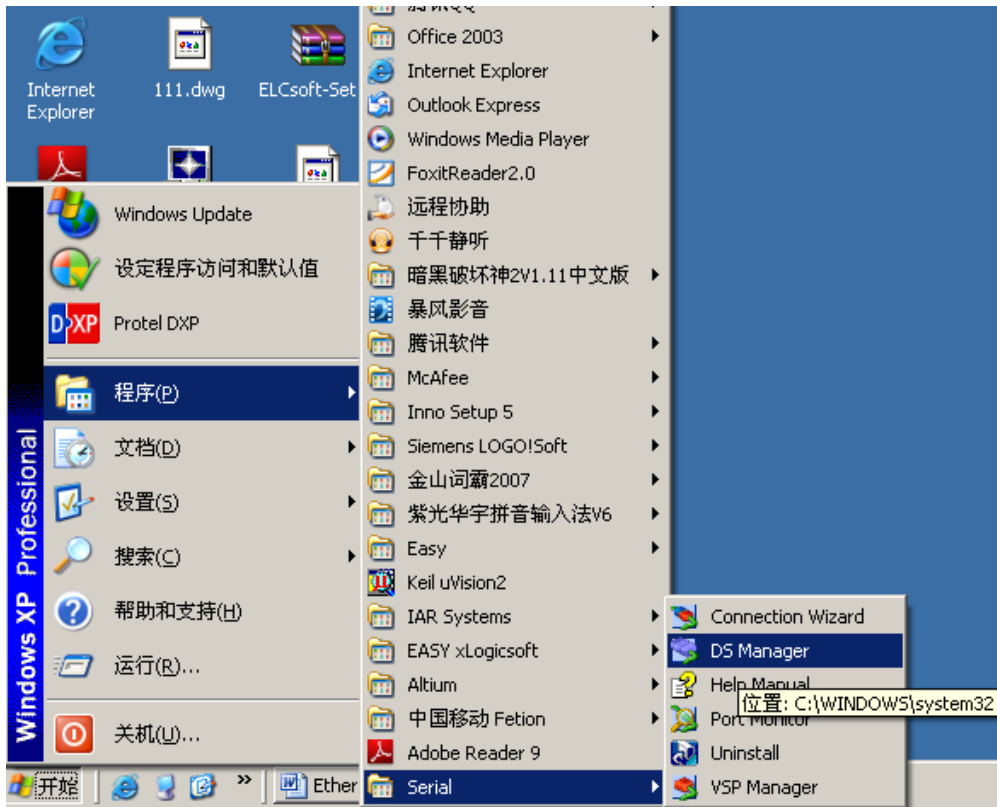




Click "Finish" button.

2. Startup the configuration IP address as follow:

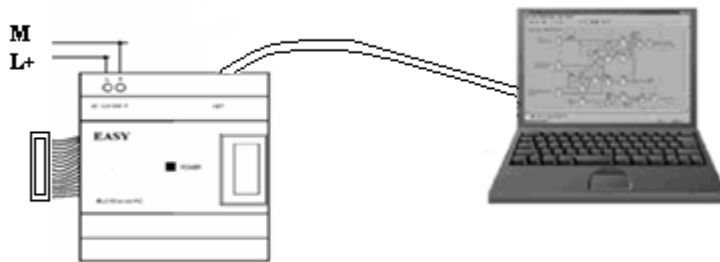
Select the program fold "Serial->DS Manager" and click to open.



In order to enable your Ethernet module to link to an Ethernet network, you are required to connect your Ethernet module (ELC-Ethernet-DC/AC) to your computer or other monitor device by the CAT5 cable. Let's take computer as an example:

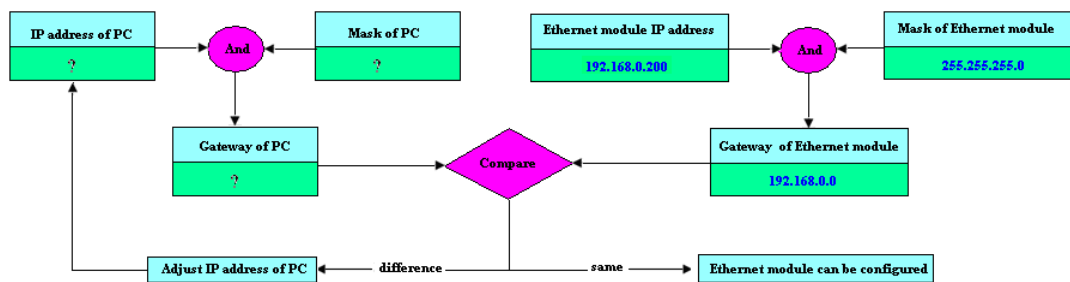


Connect diagram:

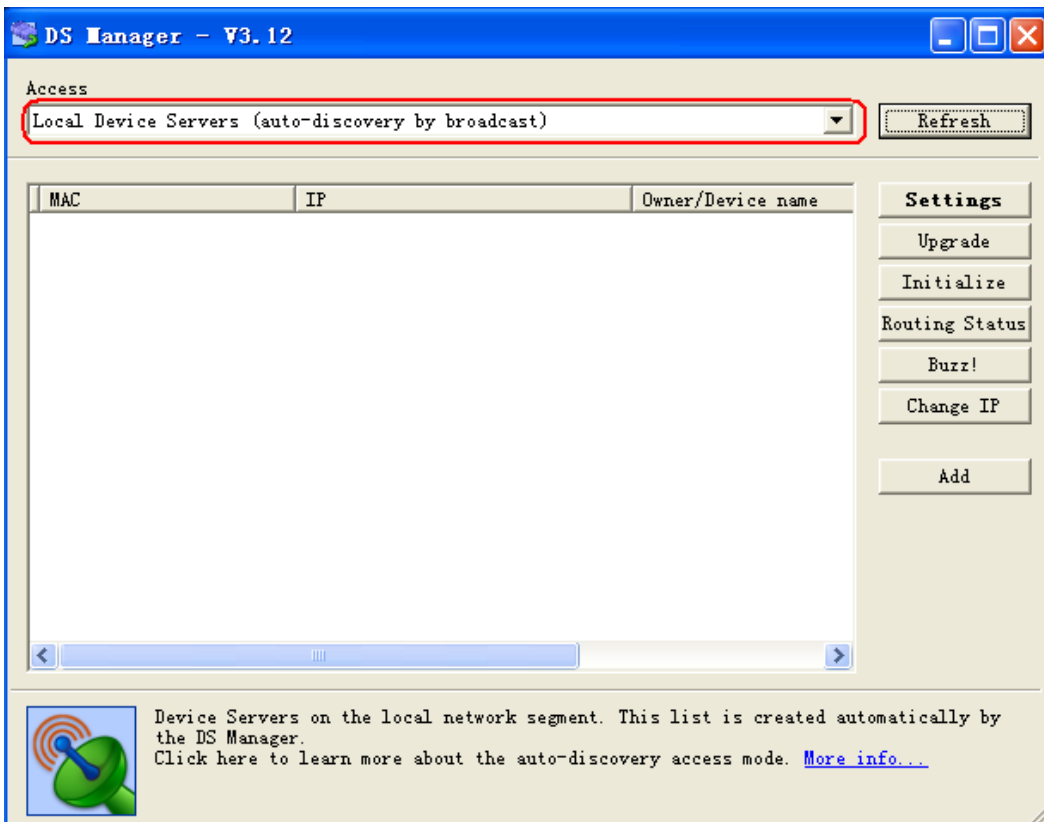


You are required to set in the following way, otherwise the Ethernet module may fail to work. Please take some time to study the following instructions carefully:

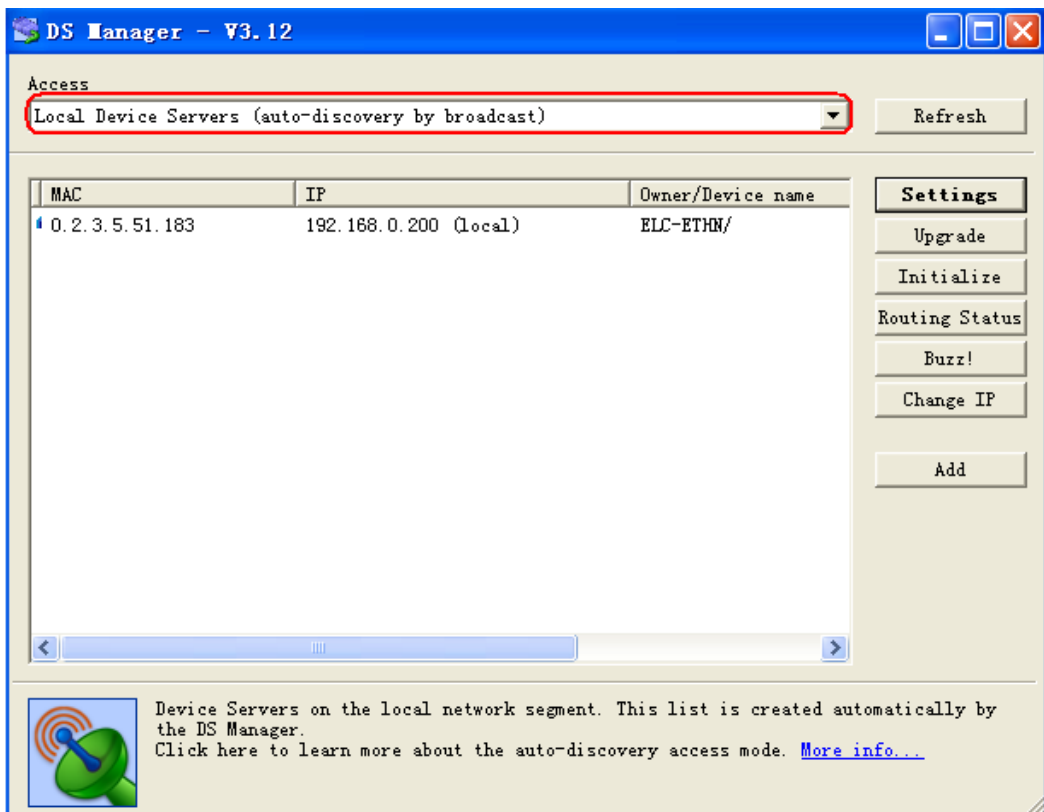
**At first, you would make sure the PC and the Ethernet module are in one net segment. The initial IP of the Ethernet module is “192.168.0.200”. If they are not in one net segment you can change the IP of your pc.**



Note: All the contents in the red frame region cannot be adjusted. That's to say, you must select the items as follows in red circle.



Power on ELC-Ethernet-DC module and click "Refresh" button.



The object module appears as above window shows; it includes "Linking Status", "MAC", "IP", "Owner/Device name"

## Option 1: ELC-Ethernet unit as client, xLogicsoft software as Server.

Click "Settings" button to modify IP address.

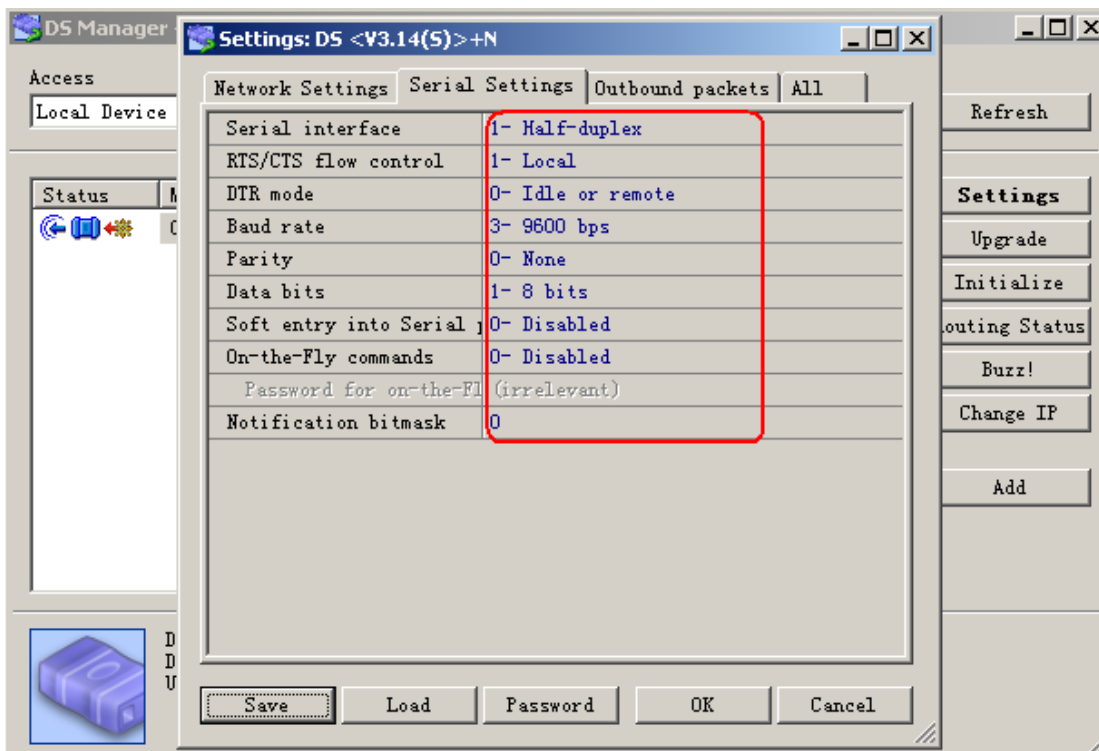
"Network Settings" tab shows:

Settings: DS <V3.14(S)>+W	
Network Settings   Serial Settings   Outbound packets   All	
Owner name	ELC-ETHN
Device name	
MAC-address	0.2.3.5.51.183
DHCP	0- Disabled
IP-address	192.168.0.200
Port	4000
Transport protocol	1- TCP
Broadcast UDP data	(irrelevant)
Inband commands	0- Disabled
Data login	0- Disabled
Connection timeout (min)	0- Disabled
Routing Mode	2- Client only
Connection mode	0- Immediately (on powerup)
Destination IP-address	192.168.0.214
Destination port	5000
Gateway IP-address	192.168.0.1
Subnet mask	255.255.255.0
Notification destination	0- Last port

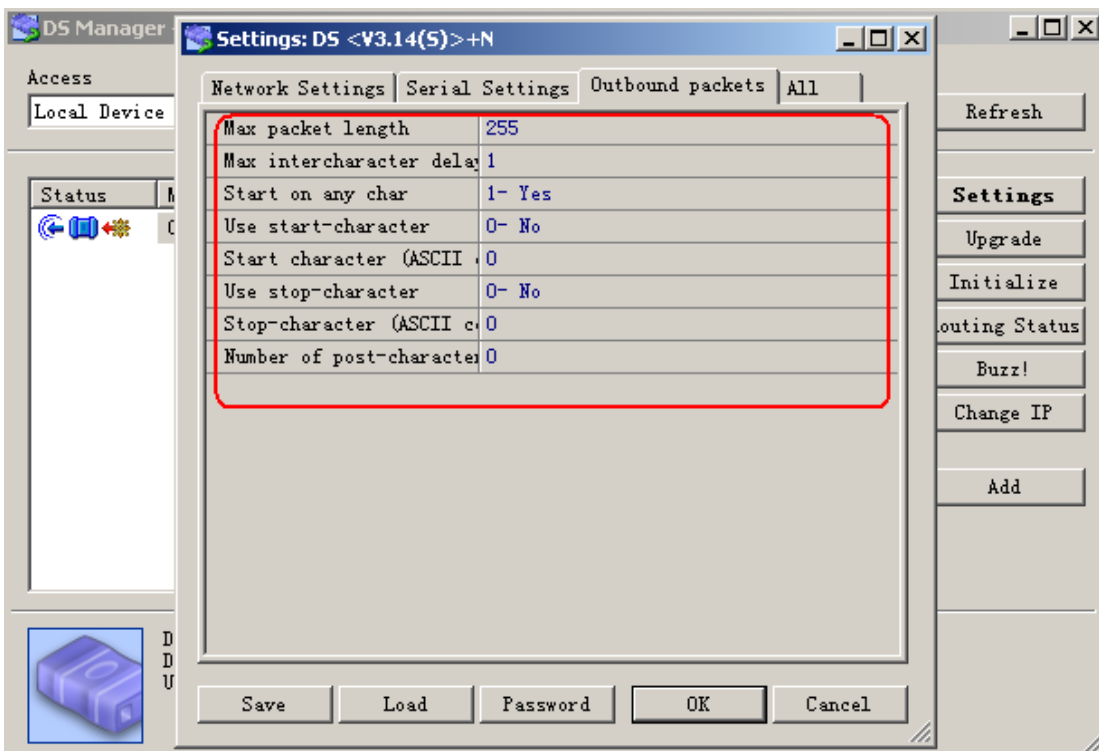
Save Load Password OK Cancel

Note: Just as above figure shows, parameters in "Destination IP-address, Gateway IP-address and Subnet mask" must be adjusted to be exactly same as those in your PC. However, "IP-address" and "Port" in above configure shows can be adjusted as you like.

"Serial Settings" tab shows:



"Outbound packets" tab shows:



"All" tab shows the following configuration:

Settings: DS <V3.14(S)>+H

Network Settings | Serial Settings | Outbound packets | All

Owner name	ELC-ETHN
Device name	
MAC-address	0.2.3.5.51.183
DHCP	0- Disabled
IP-address	192.168.0.200
Port	4000
Transport protocol	1- TCP
Broadcast UDP data	(irrelevant)
Inband commands	0- Disabled
Data login	0- Disabled
Connection timeout (min)	0- Disabled
Routing Mode	2- Client only
Connection mode	0- Immediately (on powerup)
Destination IP-address	192.168.0.214
Destination port	5000
Gateway IP-address	192.168.0.1
Subnet mask	255.255.255.0
Notification destination	0- Last port
<b>Serial Settings</b>	
Serial interface	1- Half-duplex
RTS/CTS flow control	1- Local
DTR mode	0- Idle or remote
Baud rate	3- 9600 bps
Parity	0- None
Data bits	1- 8 bits
Soft entry into Serial	0- Disabled
On-the-Fly commands	0- Disabled
Password for on-the-fly	(irrelevant)
Notification bitmask	0
<b>Outbound packets</b>	
Max packet length	255
Max intercharacter delay	1
Start on any char	1- Yes
Use start-character	0- No
Start character (ASCII)	0
Use stop-character	0- No
Stop-character (ASCII)	0
Number of post-character	0

Save Load Password OK Cancel

Confirm your settings by clicking "OK". You also can save your settings for loading next time.


Communicating with Device Server

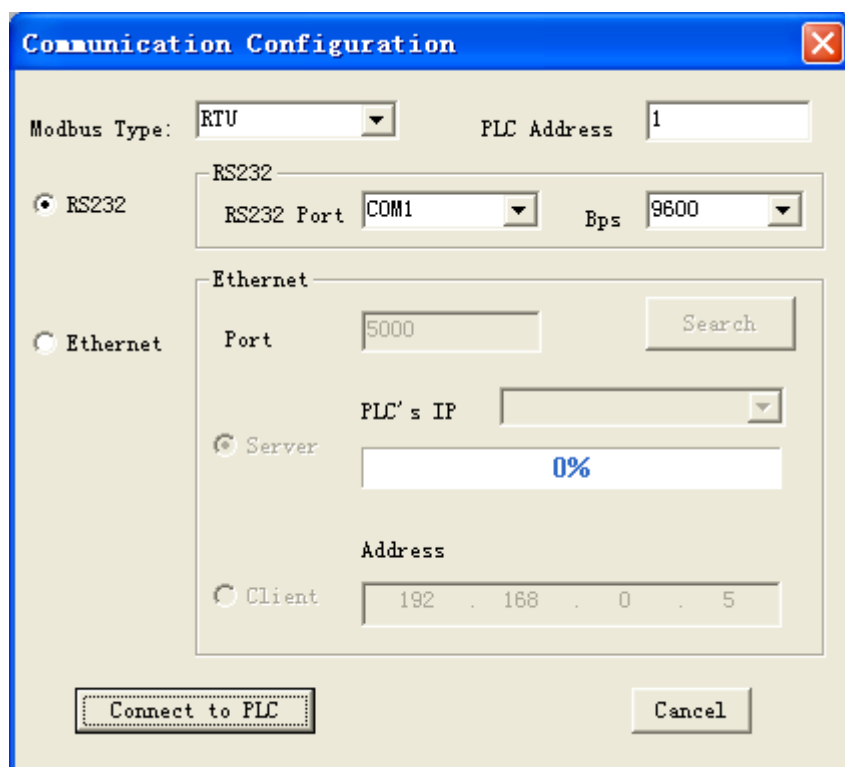
Logging in...

Cancel

## Second part: Communication and monitor with xLogicSoft software.

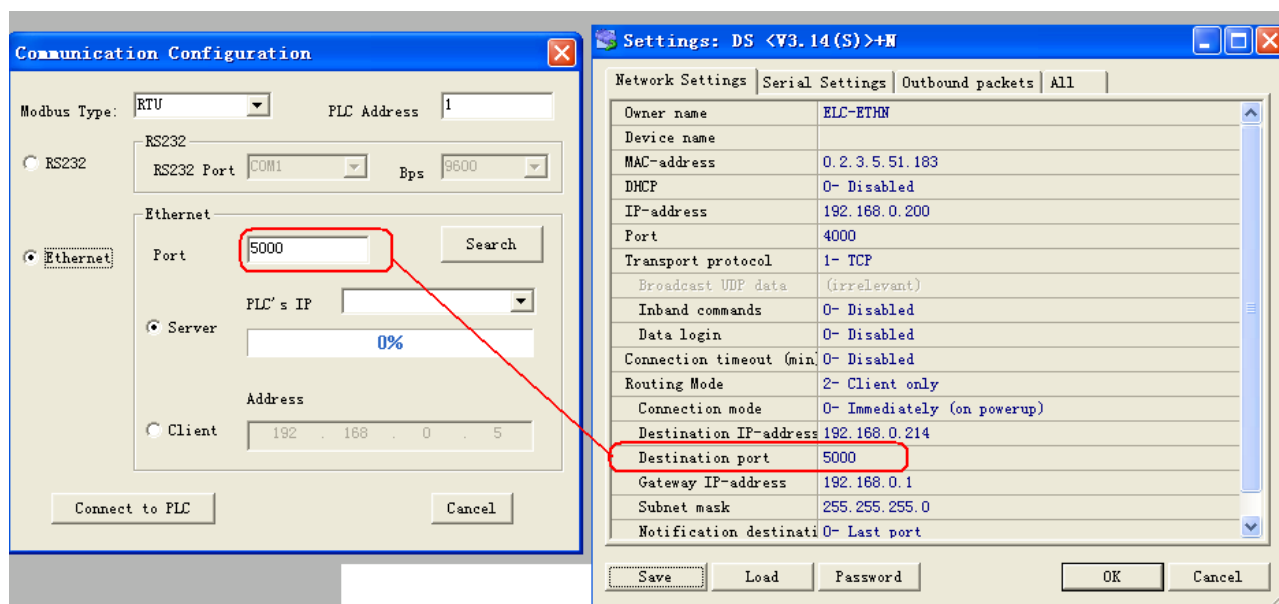
- 1.Link ELC-Ethernet to ELC-18 CPU module
2. Here are two options to open "COM PORT":

A. click  symbol      B. select menu Tools->Configuration



The "Communication Configuration" dialog box is shown. It has a title bar with a close button. The "Modbus Type" is set to "RTU" and "PLC Address" is "1". Under the "RS232" section, "RS232 Port" is "COM1" and "Bps" is "9600". The "Ethernet" section is selected. Under "Ethernet", "Port" is "5000" and "Search" button is visible. Below "Search", "PLC's IP" is a dropdown menu. Under "Server", there is a "0%" progress bar. Under "Client", the "Address" is "192 . 168 . 0 . 5". At the bottom, there are "Connect to PLC" and "Cancel" buttons.

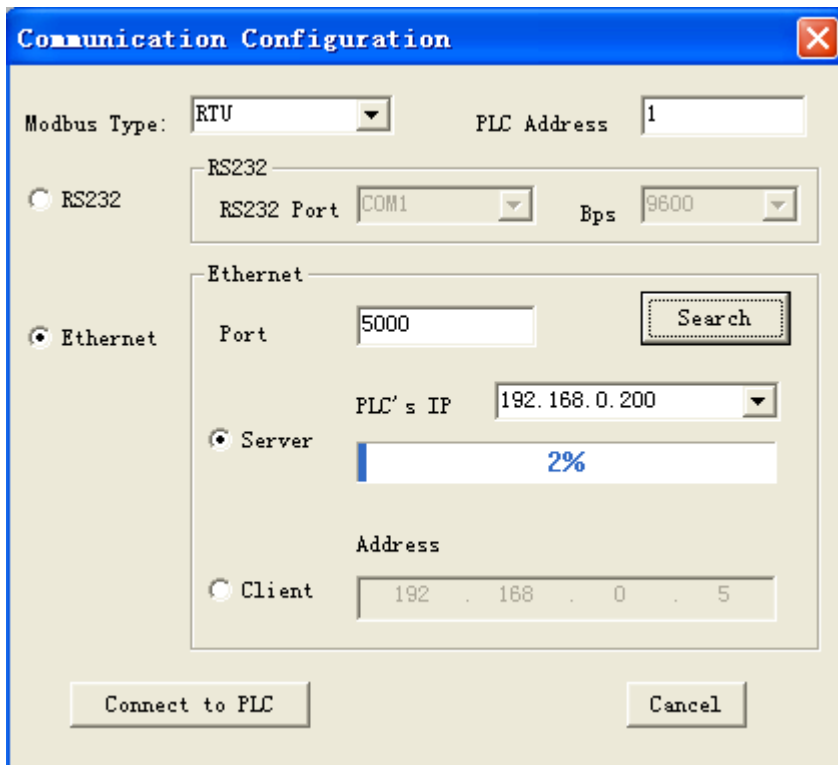
- 3.Select "Ethernet" option



The "Communication Configuration" dialog box is shown on the left, with the "Ethernet" option selected. The "Port" field is highlighted with a red box. A red arrow points from this box to the "Destination port" field in the "Settings: DS <V3.14(S)>+N" dialog box on the right. The "Settings" dialog box has tabs for "Network Settings", "Serial Settings", "Outbound packets", and "All". The "Network Settings" tab is active. It shows various network parameters for the device "ELC-ETHN". The "Destination port" is set to "5000".

Parameter	Value
Owner name	ELC-ETHN
Device name	
MAC-address	0.2.3.5.51.183
DHCP	0- Disabled
IP-address	192.168.0.200
Port	4000
Transport protocol	1- TCP
Broadcast UDP data	(irrelevant)
Inband commands	0- Disabled
Data login	0- Disabled
Connection timeout (min)	0- Disabled
Routing Mode	2- Client only
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Subnet mask	255.255.255.0
Notification destination	0- Last port


4. To search "PLC's IP" click "Search" button





When the "PLC's IP" has been found, you can do the following.

5. Click "Connect to PLC" button, and then the Ethernet module and PC will be linked.

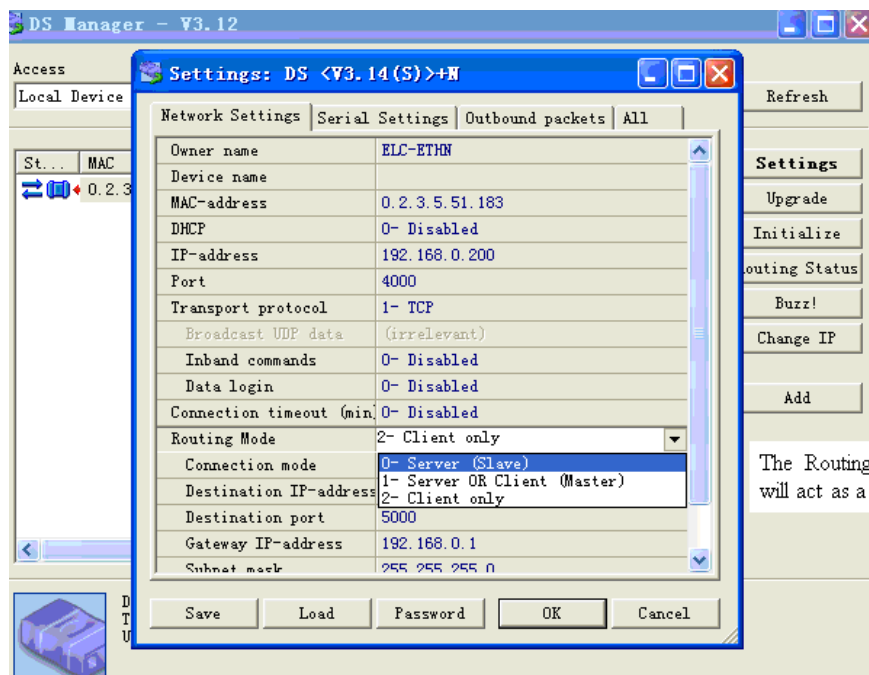
After the Ethernet module and PC are linked, many features are available, e.g. Downloading user program into xLogic CPU module, uploading program into PC and online monitor (monitor real time status of xLogic IO) can be done, herewith Ethernet module just plays the role of ELC-RS232/USB programming cable.

A. Upload program: click 

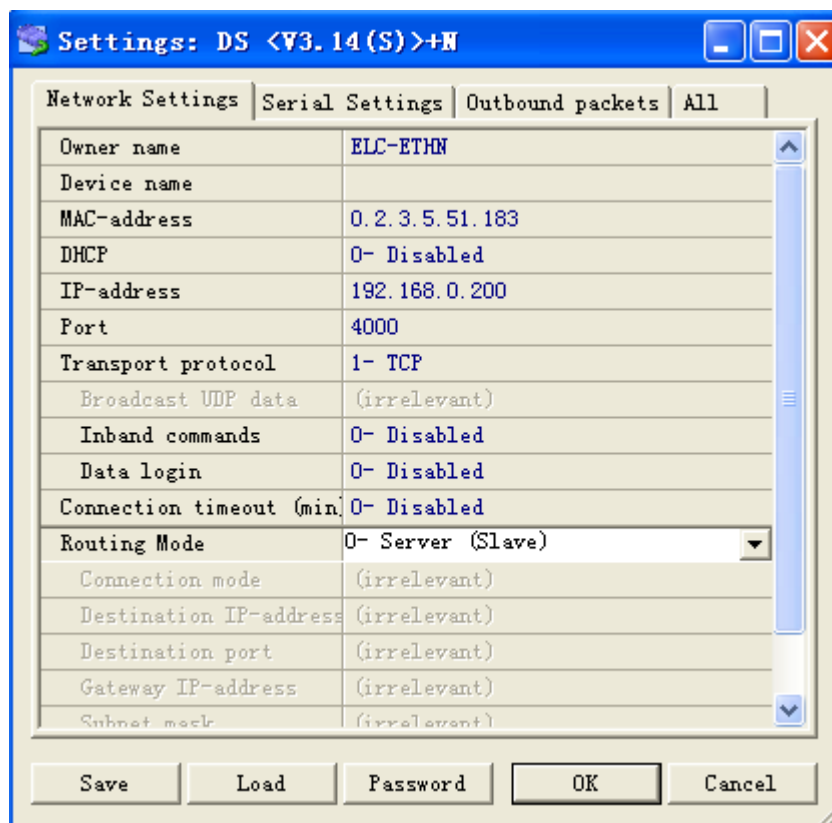
B. Download program: click 

C. Monitor program run status: click 

## Option 2: ELC-Ethernet unit as server (Slave), xLogicsoft software as Client.



The Routing mode set "0-Server(Slave)" ,ELC-Ethernet will act as a server.

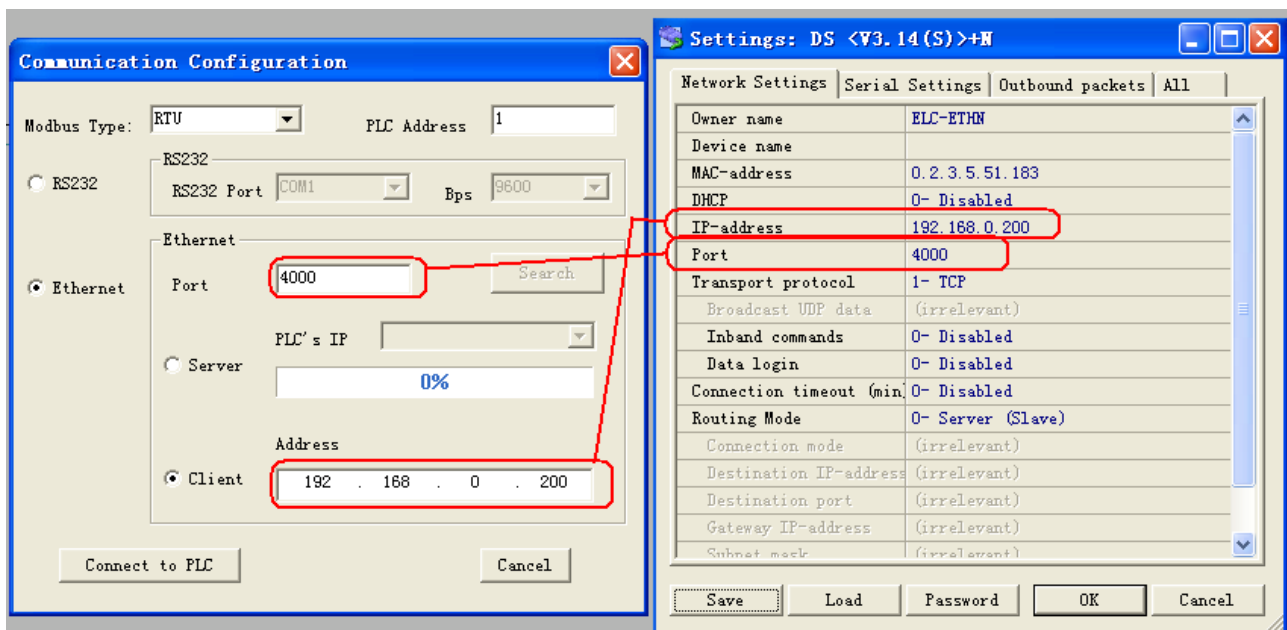


Confirm your settings by clicking "OK".





xLogicsoft communication configuration as follows:

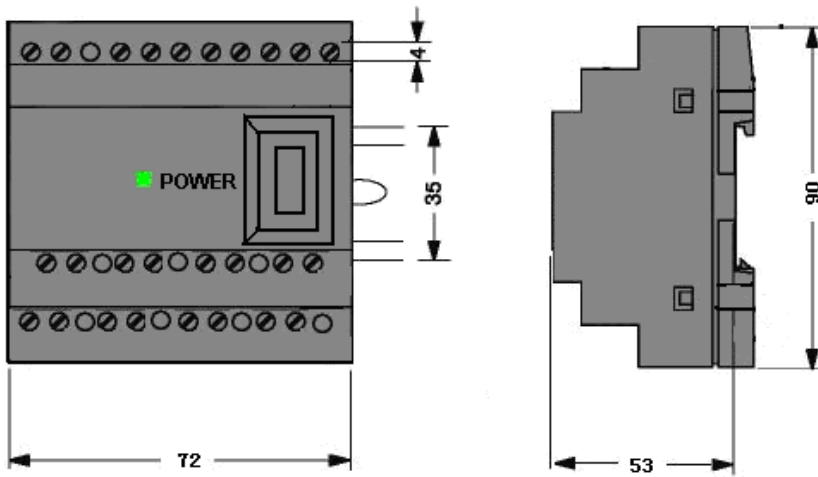


Click "Connect to PLC" button, and then the Ethernet module and PC will be linked.

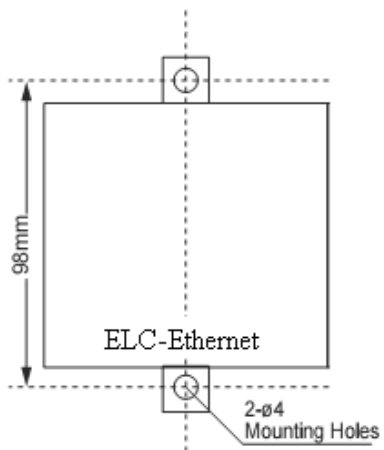
In addition, if more than one CPU module is required in certain application/project system, then communication between those CPU modules has to be done via Ethernet module. To achieve this, please note that each CPU module must require one Ethernet module to be linked to. In other words, one Ethernet module can ONLY be used to link with ONE CPU module.

Note: MODBUS RTU is the communication protocol between the Ethernet module and any other device. Such communication protocol would be available if required.

## Dimension:



## Mounting Hole Layout



Model	ELC-Ethernet-DC	ELC-Ethernet-AC
Supply Voltage	DC 12-24V	AC 110-240V