H0/H2/H4-ECOM100 DHCP & HTML CONFIGURATION



In This Chapter...

H0/H2/H4 -ECOM100 DHCP 6-2
Using HTML Configuration 6-3

H0/H2/H4 -ECOM100 DHCP

DHCP Issues

The H0/H2/H4- ECOM100 is configured at the factory to look for a DHCP (Dynamic Host Configuration Protocol) server at power up. DHCP provides a way to allocate IP address dynamically to devices on a local area network (LAN). A system or network administrator configures a DHCP server with a range of IP addresses that can be assigned to DHCP enabled clients/servers (i.e. H0/H2/H4 -ECOM100).

In addition to an IP address, a DHCP server can provide other information such as DNS domain or a gateway IP address.

DHCP uses the concept of a "lease" or amount of time that an assigned IP address will be valid for a client. The lease time can vary depending on how long a user is likely to require the network connection at a particular location. Since the TCP/IP configuration is "leased" to the client, that is, it's not a permanent configuration. This information can change from one power up session to the next. While this is an acceptable solution for the initial testing and setup of your H0/H2/H4 -ECOM100 device, we do not recommend that you use DHCP to assign IP addresses for your runtime operation. Use NetEdit3 or the H0/H2/H4 -ECOM100's HTML Configuration page to assign a static IP address to the module (shown below).

NetEdit3 can be used to connect to a H0/H2/H4 -ECOM100 using the IPX protocol, regardless of the IP address that was assigned to it by a DHCP server.

Disabling DHCP and Assigning a Static IP Address

You can use NetEdit3 or the H0/H2/H4 -ECOM100's HTML Configuration page to disable DHCP and assign a static IP address to the module. Click on the Use the following IP Address button and enter a valid IP address for your network application.

NetEdit3 (refer to chapter 3 of this manual)



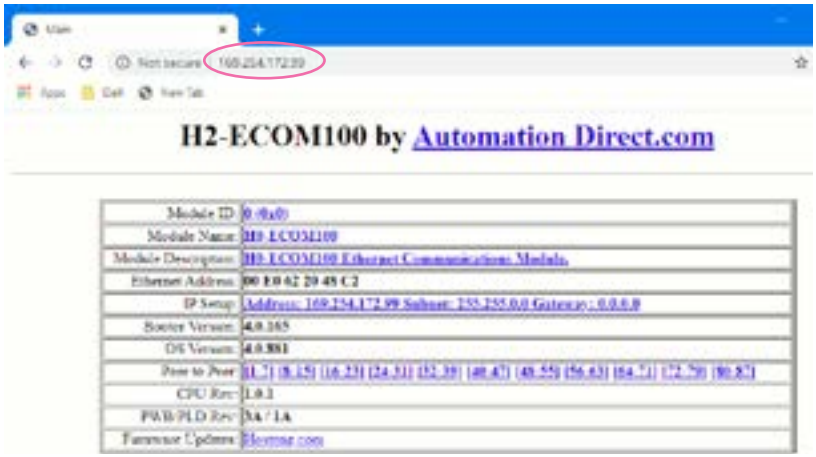
HTML Configuration



Using HTML Configuration

The H0/H2/H4 -ECOM100 can be configured by using your PC's internet browser to access the module's HTML configuration page. This method of configuration uses the TCP protocol, so you must know the H0/H2/H4 -ECOM100's IP address to establish communications. The IP address may have been assigned by a DHCP server (default) or may have been set by using NetEdit3 or later.

Enter the module's IP address in your browsers Address field. Connecting to the module's HTML Configuration utility brings up the window below.

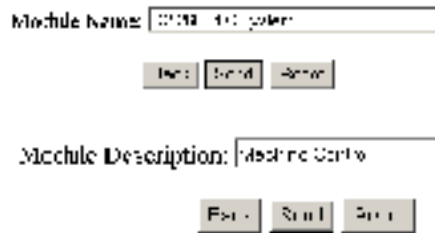


Connecting to the H0/H2/H4 -ECOM100

To configure the module, click on the desired parameter field. A new window will open, which are all described below and on the following page. Clicking the Back button will take you back to the main configuration screen shown above. Clicking the Send button writes the entry or change to the module's flash memory and clicking the Reset button reads the module's flash memory.

Module ID: Module IDs must be unique for each ECOM, but they do not have to be in sequence. The module's DIP switches must both be set to allow the HTML configuration tool to set a Module ID. Do not use address zero for communications.

Module Name and **Module Description** fields (optional) are used to identify the module. Click the Send button to write to the module's flash memory.



Ethernet Address: this is the MAC Address. It is a factory-assigned address that is on the permanent label on the module.

IP Configuration: Set IP Address, Subnet Mask and Gateway addresses. Click the Send button to write to the module flash memory.



The module's current **Booter Version** and **OS Version** are listed. The latest versions can be found by clicking **Hosteng.com** in the Firmware Updates field.

The module's current **CPU Rev** and **PWB/PLD Rev** are listed. The latest versions can be found by clicking **Hosteng.com** in the Firmware Updates field.

Firmware Updates: If your PC is connected to the internet, clicking on **Hosteng.com** will take you to Host Engineering's web site where the most current firmware files are available for downloading to your PC. You must use NetEdit3.5 or later to upgrade the module.

H0/H2/H4-ECOM100 Client Peer to Peer Configuration

Peer to Peer: The following are reasons or conditions of when to configure the H0/H2/H4-ECOM100 for peer to peer communications with a TCP/IP server device:

- To eliminate network broadcast traffic when the ECOM100 is a client executing RX/WX network instructions.
- When an ECOM100 is an "ECOM protocol client" and needs to access other server ECOMs through a router.
- When an ECOM100 needs to serve as MODBUS TCP client

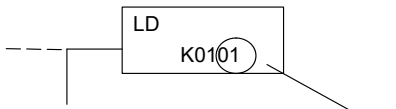
The default configuration window is shown below.

Peer to peer Configuration

Device 1:	10.1.45.33	ECOM	Modbus-TCP Port:	502	Unit ID:	255
Device 2:	0.0.0.0	ECOM	Modbus-TCP Port:	502	Unit ID:	255
Device 3:	0.0.0.0	ECOM	Modbus-TCP Port:	502	Unit ID:	255
Device 4:	0.0.0.0	ECOM	Modbus-TCP Port:	502	Unit ID:	255
Device 5:	0.0.0.0	ECOM	Modbus-TCP Port:	502	Unit ID:	255
Device 6:	0.0.0.0	ECOM	Modbus-TCP Port:	502	Unit ID:	255
Device 7:	0.0.0.0	ECOM	Modbus-TCP Port:	502	Unit ID:	255

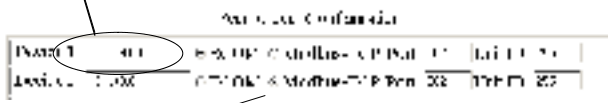
Back Send Reset

Device Number: This is a "RX/WX node number" that is associated with the server's IP address that is entered in the field beside the Device number. This node or server (slave) number is used in the RX/WX instruction.



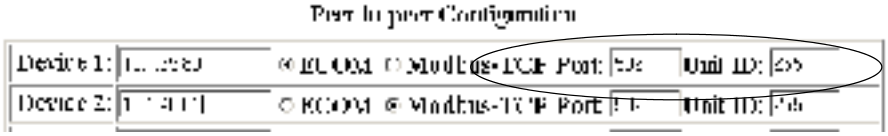
This is the first LD box of the RX/WX instruction. It specifies the ECOM slot number and the server (slave) node number. Use the Device number here.

IP Address: Enter the server's IP address in the field beside the Device Number. Again, this associates the Device Number to the entered IP address.



IP Protocol: Select the protocol that the client H0/H2/H4- ECOM100 will be using to communicate with the server device. Select the ECOM radio button if the target device is another ECOM module. Select the MODBUS TCP button if the target device is a MODBUS TCP server.

The Port Number and Unit ID are only used if the H0/H2/H4 -ECOM100 client is trying to communicate with a Modbus TCP server device through a firewall or an Ethernet- to- serial converter.



Port Number: The Modbus TCP specification states that all Modbus TCP devices respond to (server) and send (client) on port 502. This will allow a Modbus TCP server device to communicate with an H0/H2/H4- ECOM100 Modbus TCP client through a firewall.

Unit ID: The Unit ID may be required for the following applications:

- Modbus/TCP- to- Modbus/RTU converters: These devices convert Ethernet (TCP) packets to serial (RTU) communications. The Unit ID field is used to direct the TCP packet to the correct, serially connected RTU slave device.
- Some Modbus/TCP slave devices require this; It may be a holdover from an old serial device driver that was converted to Ethernet. The slave device usually requires the Unit ID to be set to “255”, but in some instances the slave requires the Unit ID to be set to “0”. The Modicon specification states to use Unit ID set to “255”. If communications are unsuccessful, it is recommended to try Unit ID of “0”. It is possible you may need to get the actual Unit ID setting from the slave device documentation or manufacturer.