Ethernet Communications Module



Simple connections

Use Category 5 UTP cables or 62.5/125 ST-style fiber optic cables depending on the requirements of your application. Inexpensive UTP cables can be run 100 meters between nodes, and fiber optic cables can be run 2,000 meters. Fiber optic cables virtually eliminate electrical noise problems. Use repeaters to extend distances and expand the number of nodes.

Our HA-TADP (10BaseT) and HA-FTADP (combo 10BaseT and 10BaseFL) PC network adapter cards are compatible with the H2-ECOM(-F). See the Communications Products section in this desk reference for information on the adapter cards.

ECOM starter kit

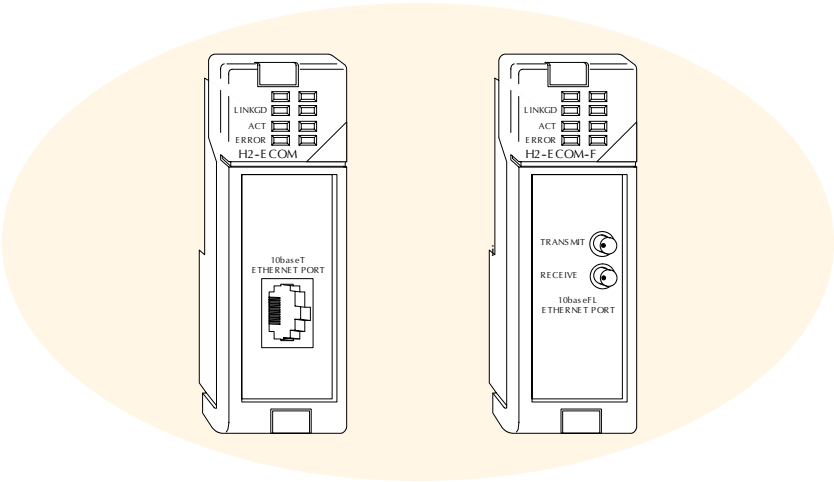
The H2-ECOM-START gives you everything you need to make your first Ethernet network simple to build. It contains an ECOM module and instruction manual, a network adapter card for your PC, a crossover cable, and a Showcase Demo CD. The CD contains demo versions of our software products that support the ECOM Modules. See the Software Products section in this desk reference for information on the available software packages.

Overview

Ethernet Communications Modules offer features such as:

- High-speed peer-to-peer networking of PLCs
- Fast updates with *Direct*SOFT32 Programming Software
- High-performance access for Human Machine Interface (HMI), ERP, MES or other Windows-based software
- Free SDK for custom drivers
- Virtually unlimited number of network nodes
- Easy setup

The Ethernet Communication (ECOM) Modules represent a price breakthrough for high-speed peer-to-peer networking of PLCs. No longer are you forced to designate a single PLC to be the network master. Any PLC can initiate communications with any other PLC. Link your PLCs with PCs using industry standard cables, hubs, and repeaters. A simple Windows-based spreadsheet program can be linked to your networked PLCs using our *Direct*SOFT32 Data Server. Or, use our DSData Server to link Human Machine Interface (HMI) software to *Direct*LOGIC PLCs. Our Lookout*Direct* HMI includes ECOM drivers. *Direct*SOFT32 Programming Software can be used to monitor or update the program in any *Direct*LOGIC PLC on the network.



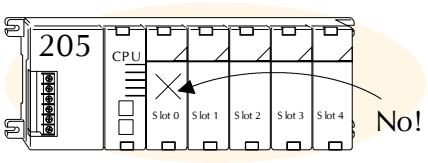
Specifications	H2-ECOM	H2-ECOM-F
Communications	10BaseT Ethernet	10BaseFL Ethernet
Data Transfer Rate	10Mbps	10Mbps
Link Distance	100 meters (328 ft)	2,000 meters (6,560 ft)
Ethernet Port	RJ45	ST-style fiber optic
Ethernet Protocols	TCP/IP, IPX	TCP/IP, IPX
Power Consumption	320mA	450mA
Manufacturer	Host Engineering	Host Engineering

Ethernet Communications Module

Choose your slot

The H2-ECOM(-F) modules plug into any I/O slot (excluding slot 0) of any local DL205 I/O base. The module maintains identification data, descriptive information, and communication parameters for PLC-to-PLC communications in flash memory. Disconnect power before installing or removing any PLC module.

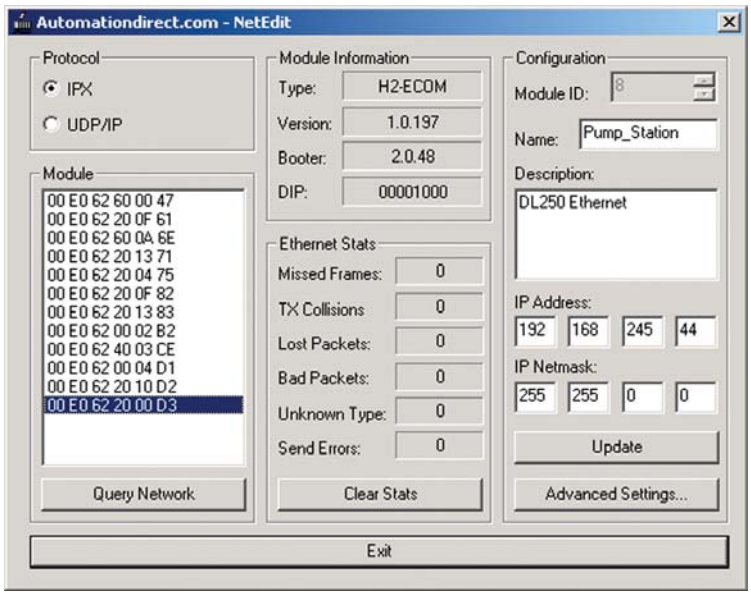
Note: Use D2-240, D2-250, D2-250-1 or D2-260 CPUs with the ECOM modules. The D2-230 CPU does not support the ECOM modules.



NetEdit Software

Free NetEdit Software ships with the ECOM User Manual. Use NetEdit to set up the ECOM modules for your network. Flexible addressing allows you to use your choice of protocols and identifying methods. Assign each module a number or a name or both. You don't have to use an IP address, but you can if it's necessary for your network. Two protocols are available for PC-to-PLC communications: IPX and TCP/IP. Select the one you want to use, or use them both. The NetEdit screen displays all identifiers and troubleshooting information for each module on the network. You can use NetEdit to adjust parameters for PLC-to-PLC communications by clicking on Advanced Settings. The network identifiers can also be changed from *Direct*SOFT32 Programming Software.

NetEdit Software Screen



PLC-to-PLC communications

PLC-to-PLC communications are accomplished using Read from Network (RX) and Write to Network (WX) instructions. Build the RX and/or WX instructions into a routine as shown. One SP relay (the busy bit) is used for sequencing of multiple instructions or to prevent a single RX or WX instruction from being overwritten. The other SP relay can be used to annunciate a communication error. The first Load (LD) instruction contains the base and slot number of the initiating ECOM and the Module ID of the responding ECOM. The second LD instruction contains the number of bytes being transferred. You can transfer up to 256 bytes with one RX or WX instruction. The Load Address (LDA) instruction contains the beginning address in the initiating PLC's memory, regardless of whether or not it is an RX or WX instruction that is being executed. The RX or WX instruction contains the beginning address in the responding PLC.

