

# SETTING UP & USING THE EZ-ETHERNET

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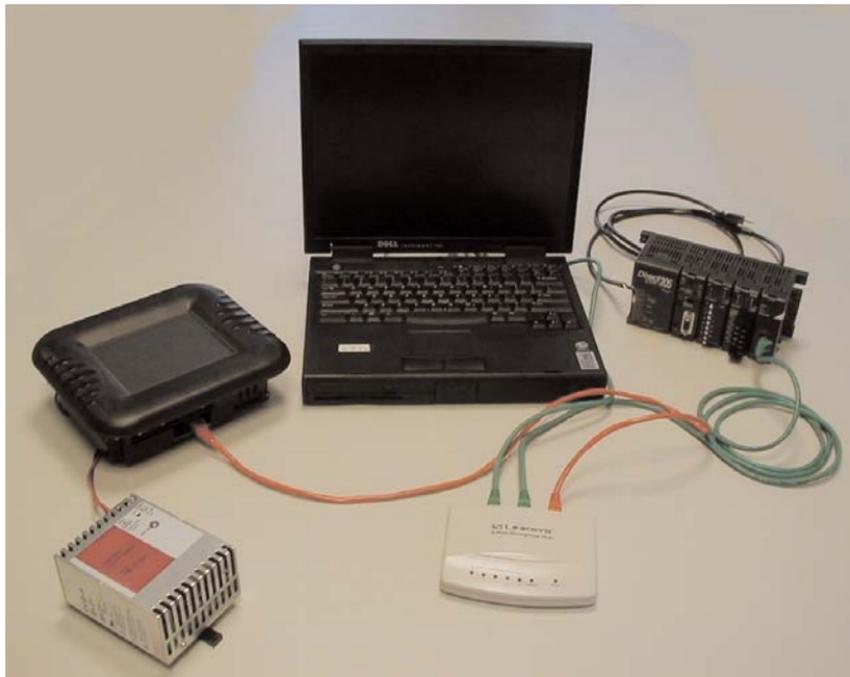
# CHAPTER 2

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## Setting Up Your EZ-Ethernet System

Use the system photo and information shown in Chapter 1 to help you connect the EZ-Ethernet Card to your ethernet system. Make sure you have all the hardware and software listed and that the revision levels match the requirements given. Also refer to the manuals for the EZTouch panel, PLC, and ECOM module.



### DIP Switch Settings

The EZ-Ethernet Card DIP Switch has eight slides. The factory default is for all slides to be in the OFF position. Under normal use, you should not have to change the settings. However, if you wish to assign a “hard” (Module ID) address for the EZ-Ethernet Module ID, you may do this by setting slides 0-5 as shown.

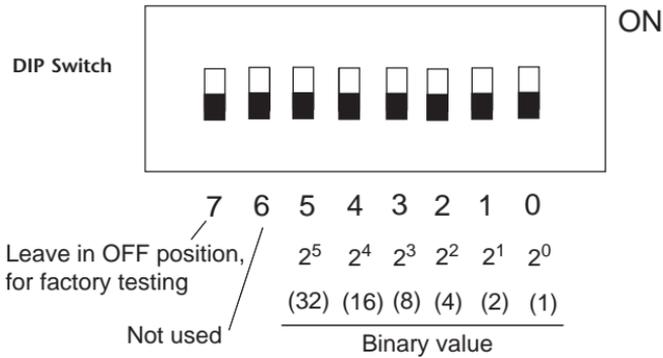
The Module ID equals the sum of the binary values of the slide switches set in the ON position. For example, if you set slide switches 1, 2 and 3 to the ON position, the Module ID will be 14 ( $8 + 4 + 2 = 14$ ). Actual DIP Switch settings can be viewed using NetEdit.



MAC ID

LEDs

DIP Switch



## Diagnostic LEDs

The EZ-Ethernet Card has four indicator LEDs which show the status of the following

### Status Indicator

Power is good to the Card (Green if good).

### Link Good Indicator

The green LINK GOOD LED is steady on when the EZ-Ethernet Card is correctly connected to an active device on the network and is receiving 5VDC operating voltage. The LINK GOOD LED verifies that the proper cables are connected, and the Card is functioning correctly.

### Link Active Indicator

The red link active LED flashes to indicate that the Card sees data traveling on the network. If any network device is sending or receiving data, the link active LED will be illuminated. In idle mode (no network traffic) this LED is OFF. During heavy communication loads this LED will be steady on.

### Error Indicator

If the Card's red ERROR indicator is flashing or steady on, a fatal error has occurred. The error may be in the Card itself, or a network problem may be causing this symptom. The ERROR indication can be caused by a faulty ground, an electrical spike or other types of electrical disturbances. Cycle power to the system to attempt to clear the error.

## Tutorials



Go through the following tutorials to learn how to set up your project and add a PLC and additional EZTouch panels to your project.

**Do not perform control functions over the internet.**

## Tutorial A: First Time Connection

After connecting your EZTouch panel (with the EZ-Ethernet Card installed) and your PLC (with ECOM module installed) to your hub, launch the EZTouch software and set up the project similar to the image below.

Select Edit Program OFFLINE

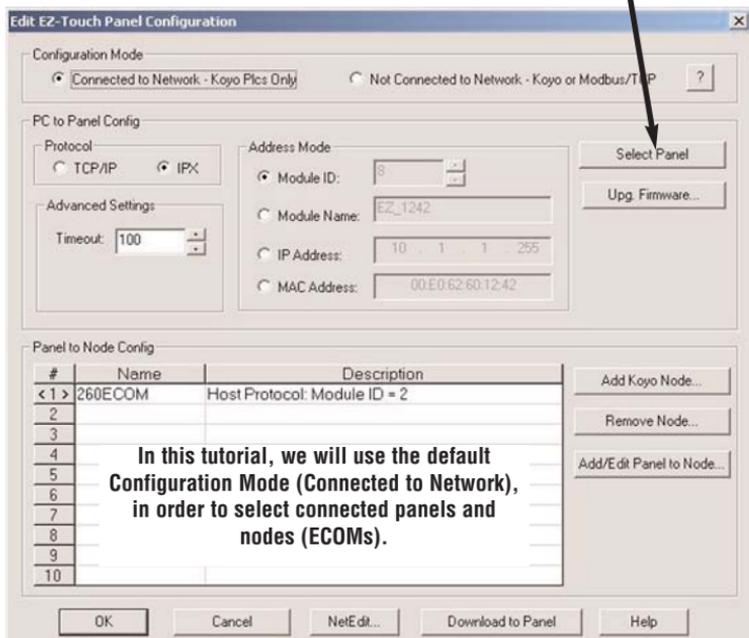
Type name of project

Choose panel type

Choose Ethernet protocol

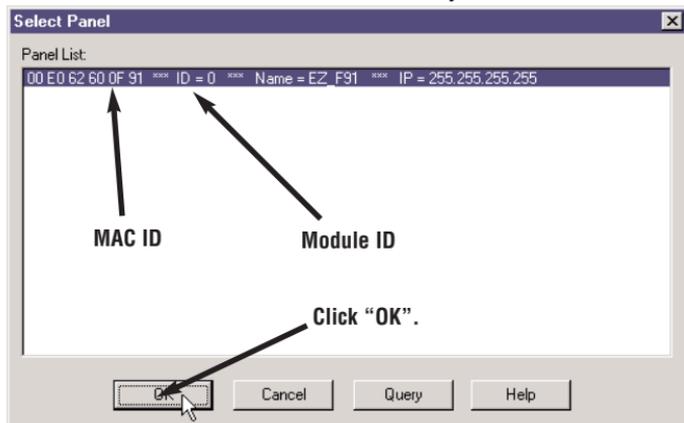
After setting up the project information window as shown, click on this button labeled "View/Edit PLC Com Setup"

The “Edit EZ-Touch Panel Configuration” window is displayed.  
Click the “Select Panel” button to locate your panel.



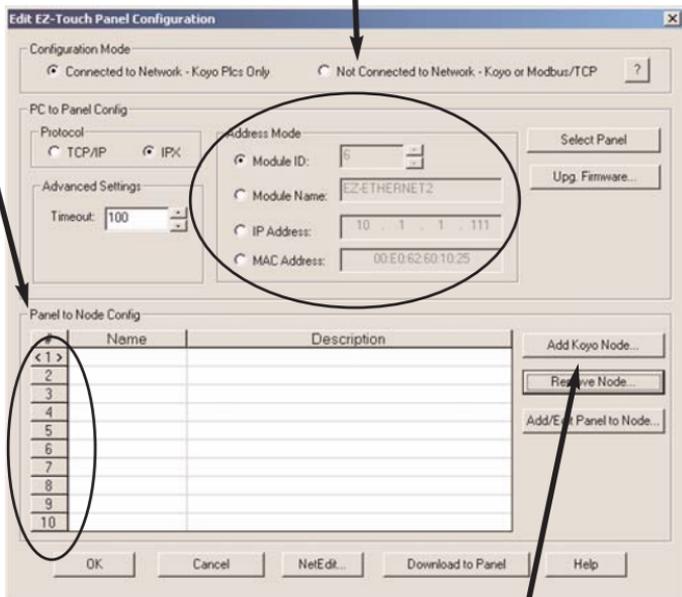
The panel information will appear as shown below. If your panel is not found, check the LINK GOOD LED on the EZ-Ethernet Card and the LINK/ACTIVITY LED on the hub.

Note: The Module ID comes factory set as Ø.

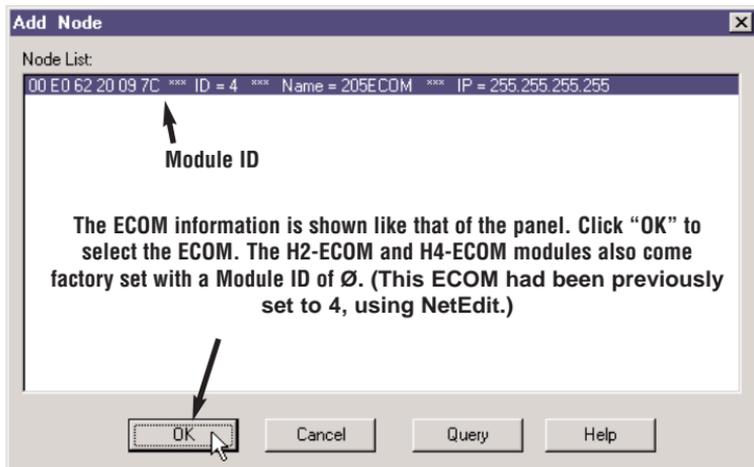


Notice that the panel information is now filled in on the “Edit EZ-Touch Panel Configuration” window.

**Note: The Node Numbers (1-10) correspond to the PLC Station Address in the EZTouch software. For a full description, see the EZTouch software Help file under “DirectLogic PLCs”.**

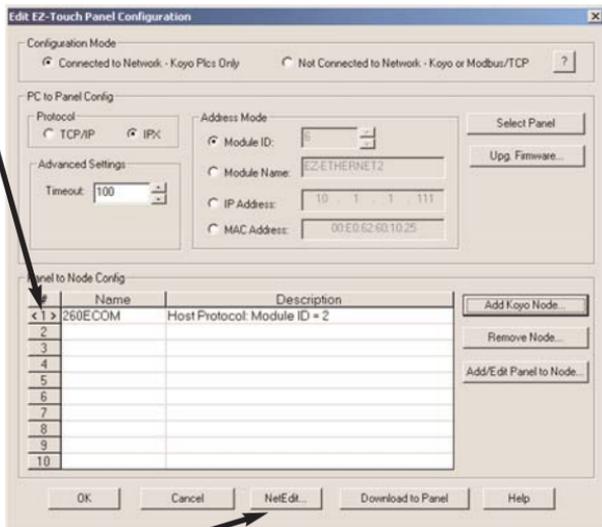


Next, click on “Add Node” to locate and connect any ECOM modules you have connected to your hub. Once a node is added, the panel will communicate to it.



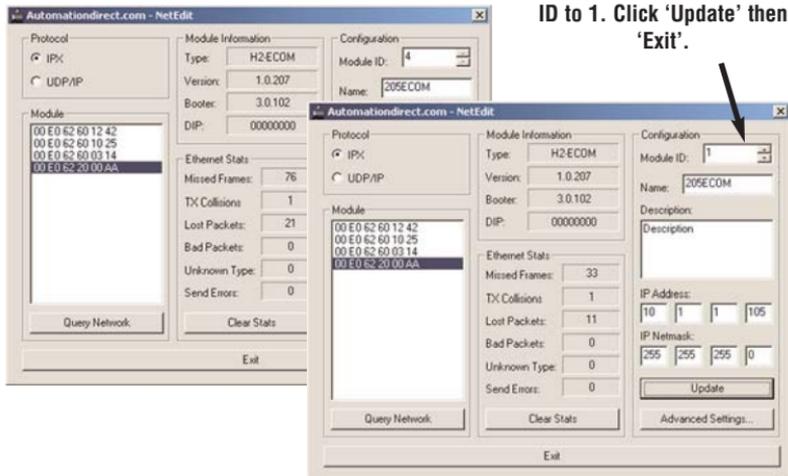
**Note:** If connecting to more than one PLC, we strongly suggest assigning your ECOMs' Module IDs as 1 to 10, to correspond to its number (# column) in the list. This number is used to designate the Station Address the EZTouch panel uses to address the PLC. For example, 2-V3000 is PLC 2's V3000 register.

**NOTE!** NetEdit must be used to make any modifications to EZ-Ethernet and ECOMs (such as: Module ID, Module Name, and IP Address).

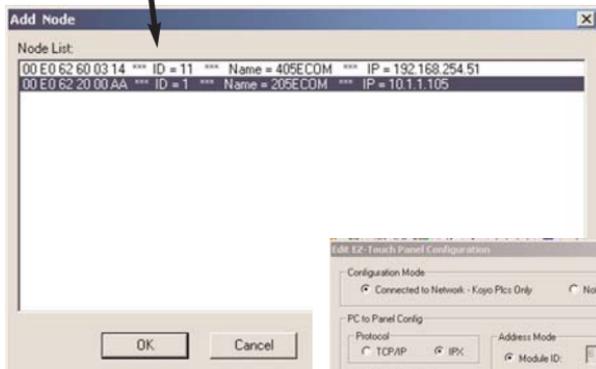
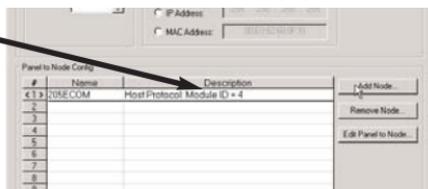


As suggested, to change an ECOM's Module ID from 4 to 1, click on the "NetEdit" button.

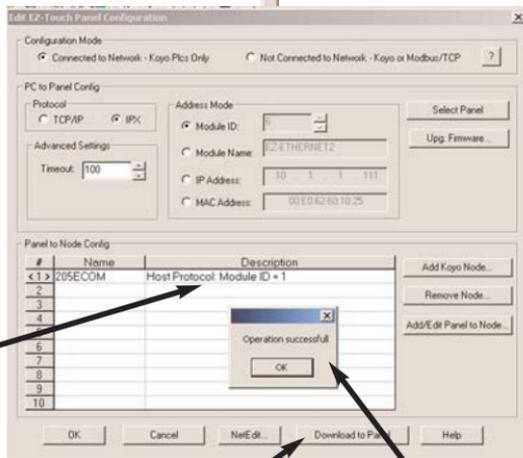
Change the ECOM's Module ID to 1. Click 'Update' then 'Exit'.



Now notice that the Module ID does not show its new setting. Select the row of the node and click 'Add Koyo Node', to re-select the ECOM.



Now the ECOM's Module ID is displayed accurately in the Panel Configuration window.



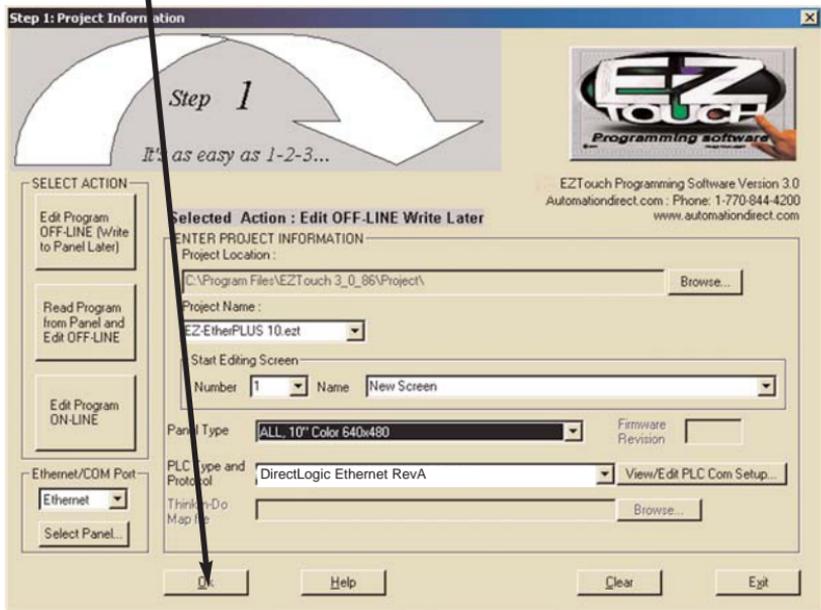
Click Download to Panel to save this configuration to the panel. This panel is now connected to one ECOM.

Now click 'OK'.

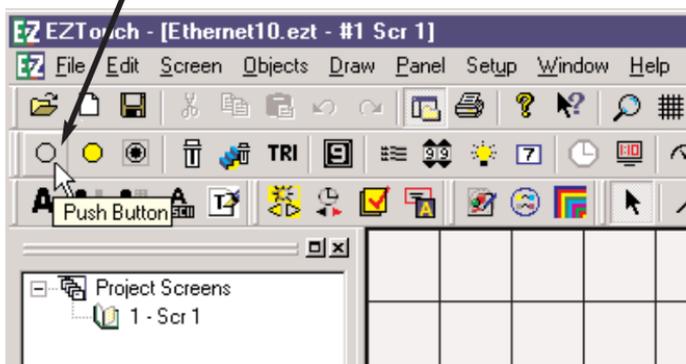
Please remember, the actual Module ID is set by NetEdit. Any new changes made by NetEdit will not be displayed in the Panel Configuration window until re-selected, as shown here.

Finally, click "OK" on the "Project Information" window.

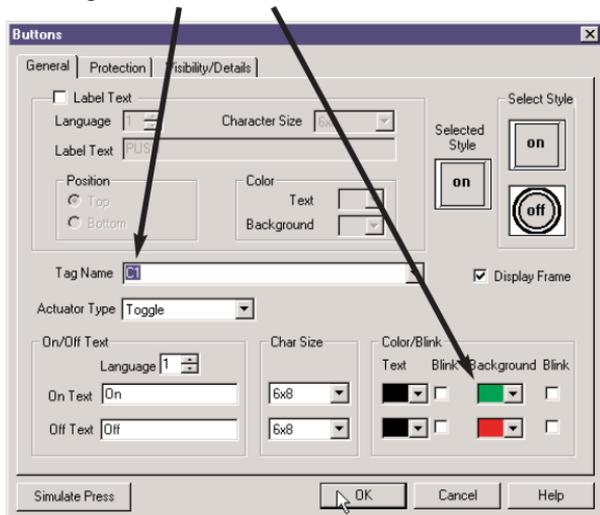
The EZTouch software will now open your newly created project.



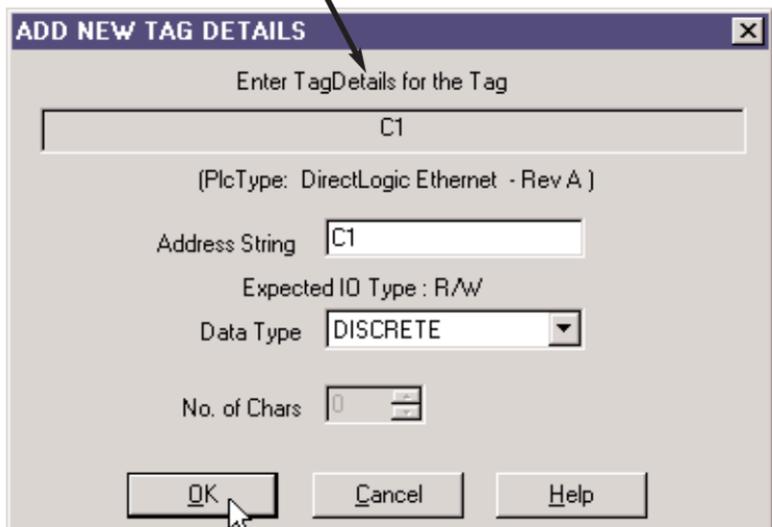
Select the “Pushbutton” object to place a pushbutton on the touch panel.



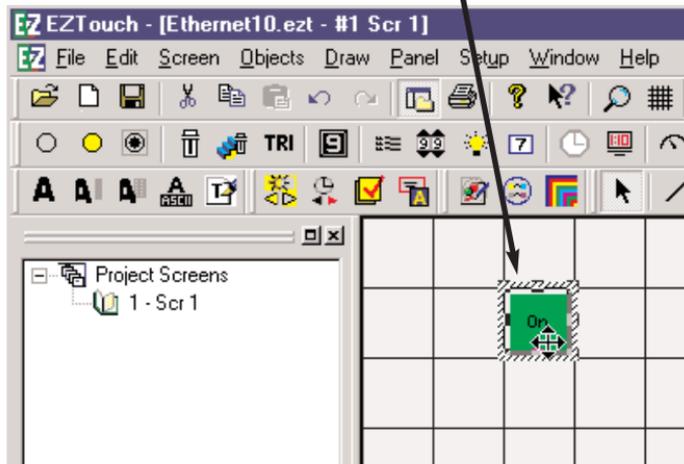
Give the push button a tag name of C1. We have also selected a green On color and a red Off color. Click “OK”.

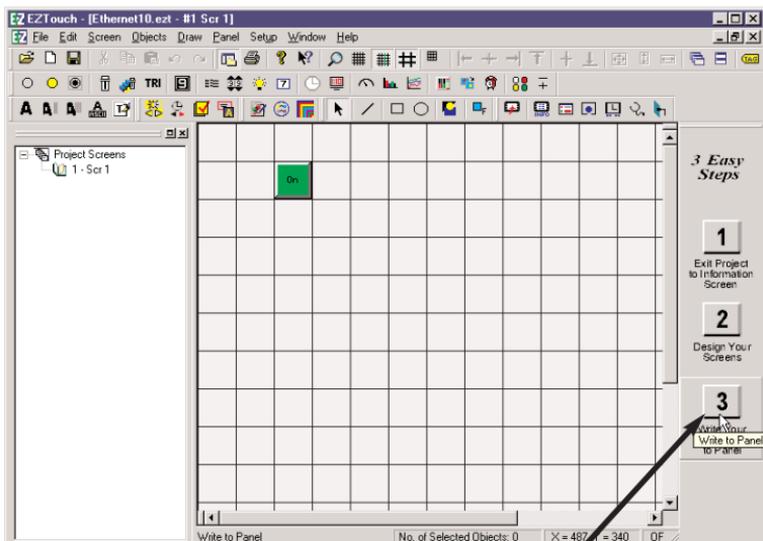


Assign this tag to PLC address C1 and click “OK”.



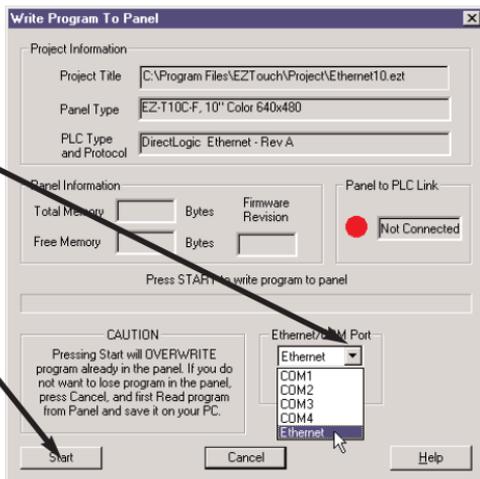
Next, place the object on the screen.

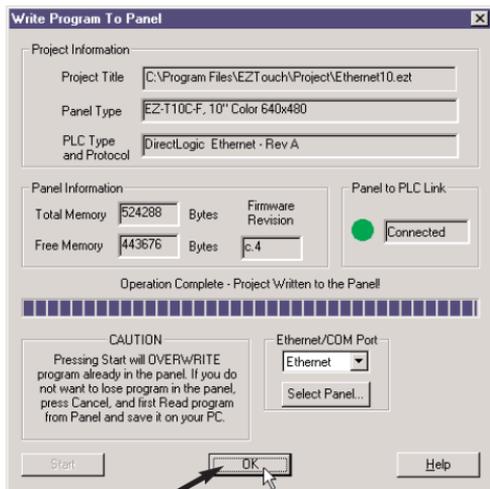




Click on the “Write to Panel” button to download your project to the EZTouch panel.

Select Ethernet and click “Start” to begin writing the project.



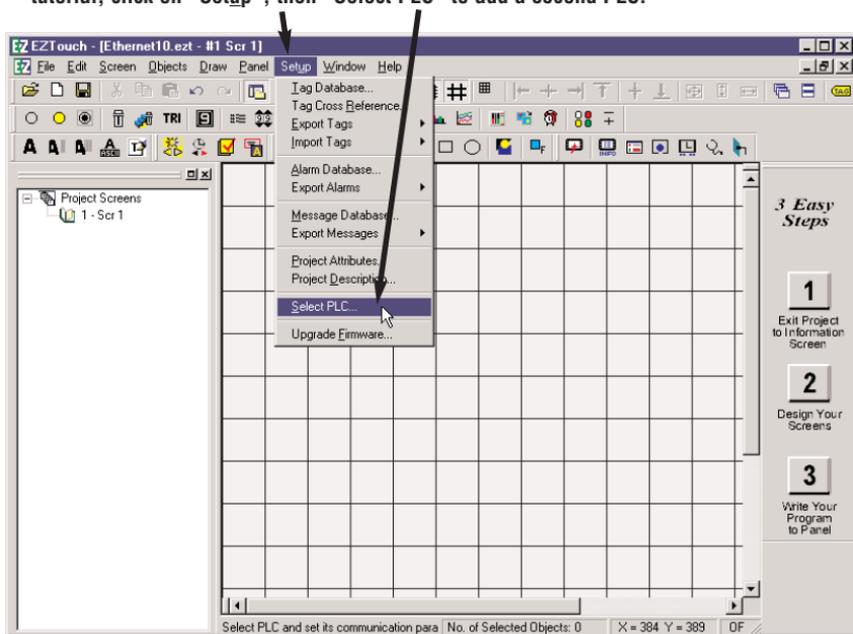


Click "OK". Now check your panel to see if the push button you added works properly.

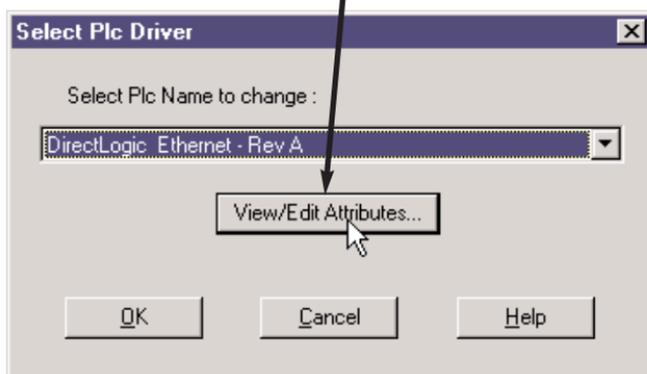
To add PLCs to your project, go to Tutorial B. To add an additional EZTouch panel, go to Tutorial C.

## Tutorial B: Adding PLCs to Your Project

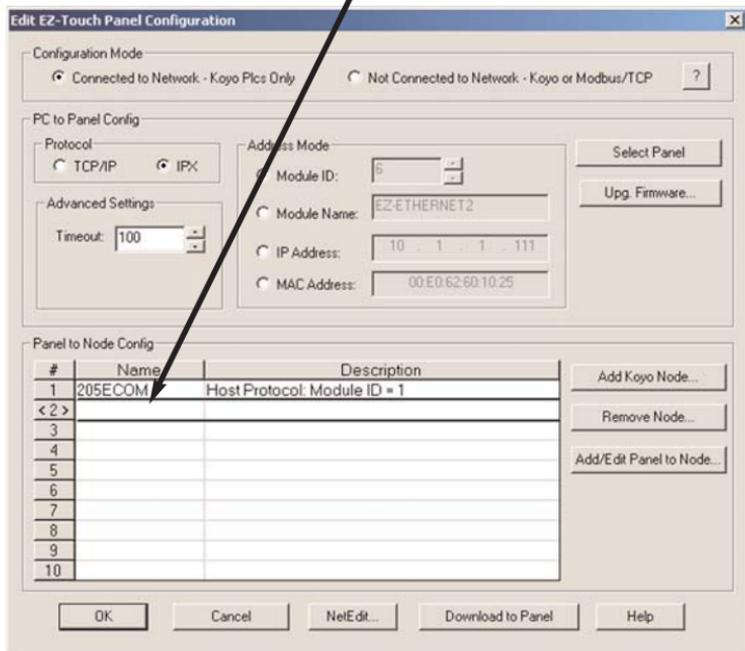
Beginning with the project “Ethernet10.ezt” created in the first tutorial, click on “Setup”, then “Select PLC” to add a second PLC.



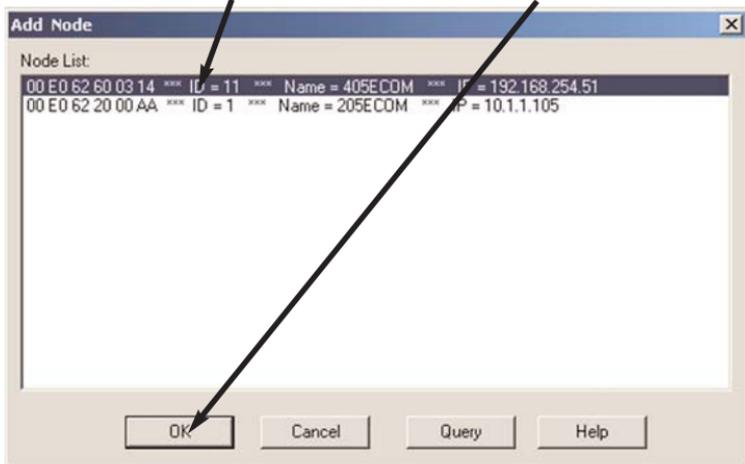
Click “View/Edit Attributes” to bring up the “Edit EZTouch Panel Configuration” window.



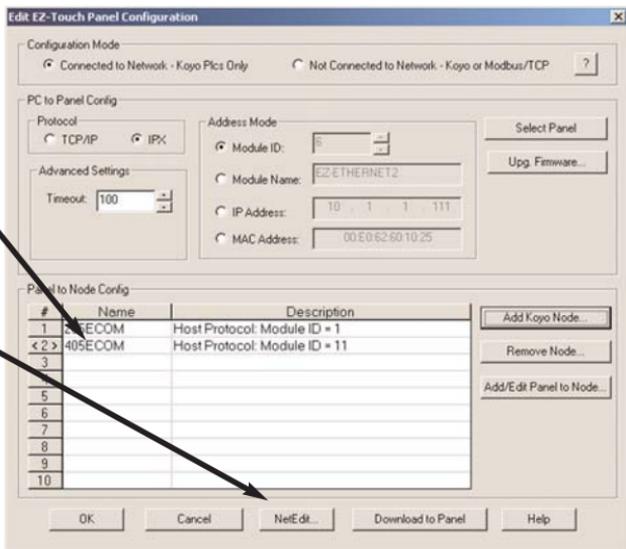
Now, select the next row (Row 2), and click the “Add Koyo Node” button.



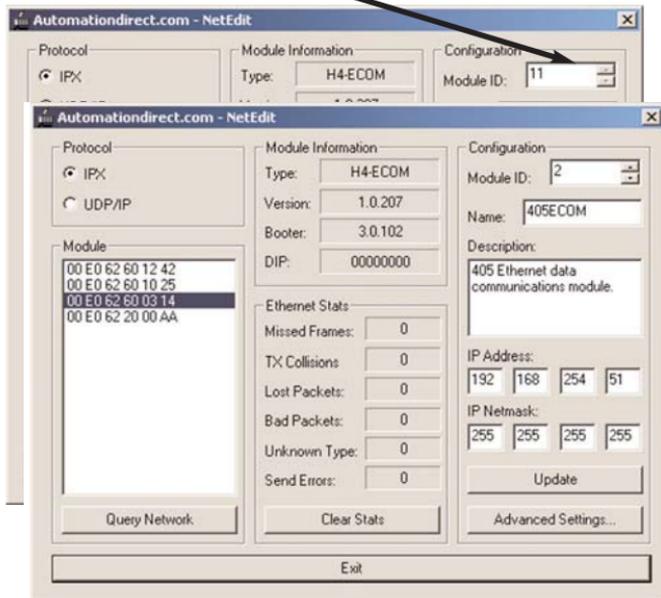
Select the new ECOM module listed, and click “OK”.



Select the new ECOM module, and click "NetEdit". We will now change the new ECOM's Module ID to 2, to match its Station Address (#).

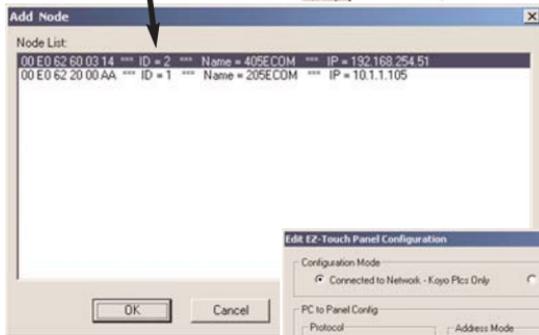
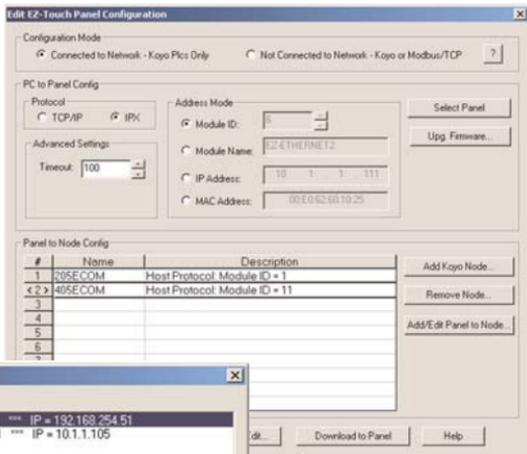


Select the Module ID, and enter "2". Click "Update".

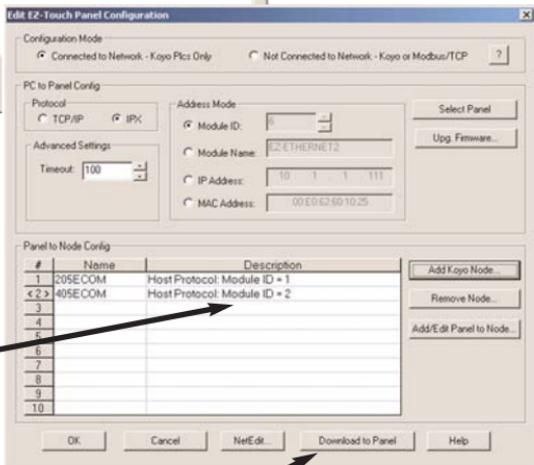


**NOTE!** NetEdit must be used to make any modifications to EZ-Ethernet and ECOMs (such as Module ID, Module Name, and IP Address).

Now notice that the Module ID does not show its new setting (2). Select the row of the node and click 'Add Koyo Node', to re-select the ECOM.

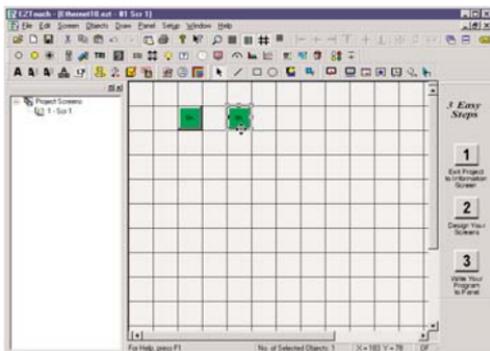
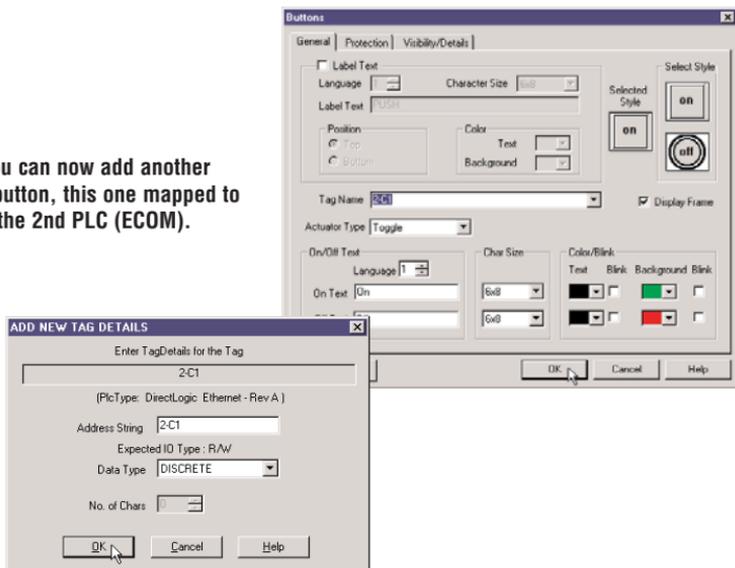


The ECOM's Module ID is now displayed accurately in the Panel Configuration window.



Click Download to Panel to save this configuration to the panel. This panel is now connected to two ECOMs.

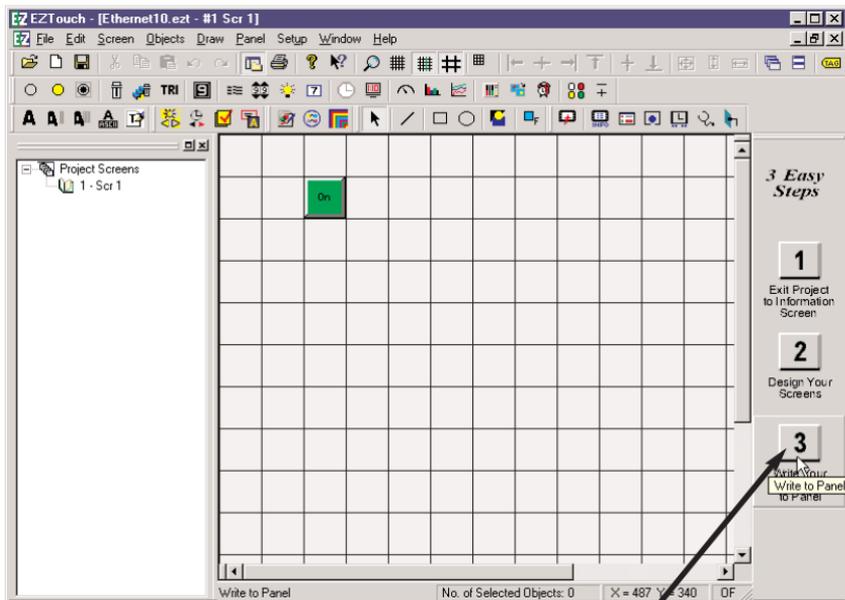
You can now add another pushbutton, this one mapped to the 2nd PLC (ECOM).



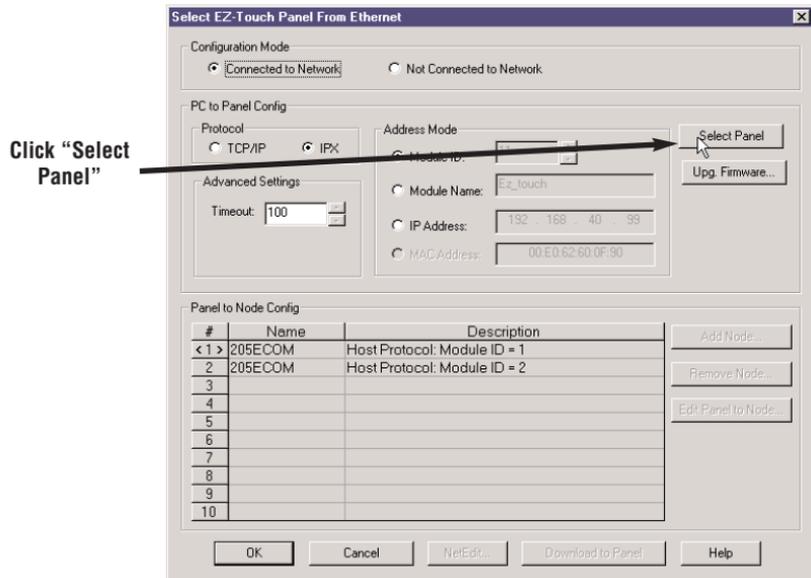
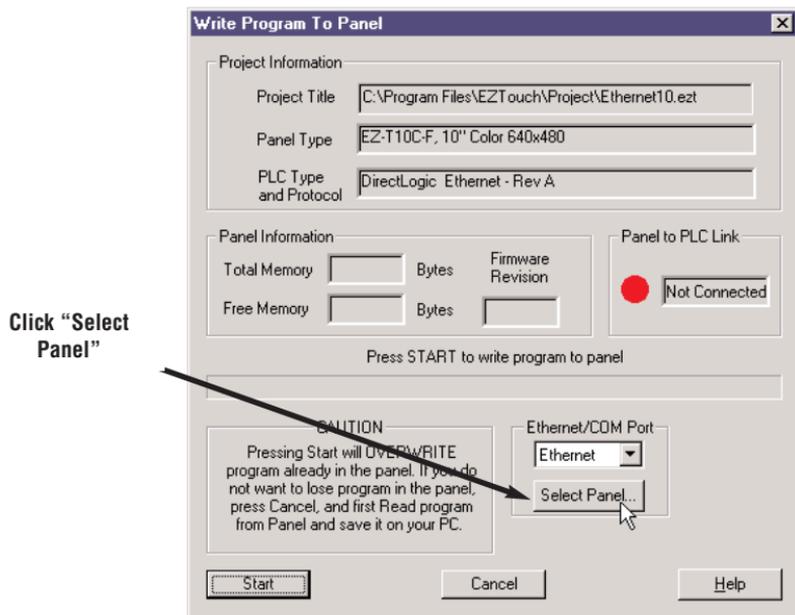
Follow the same steps as in the first tutorial and write the project to the panel.

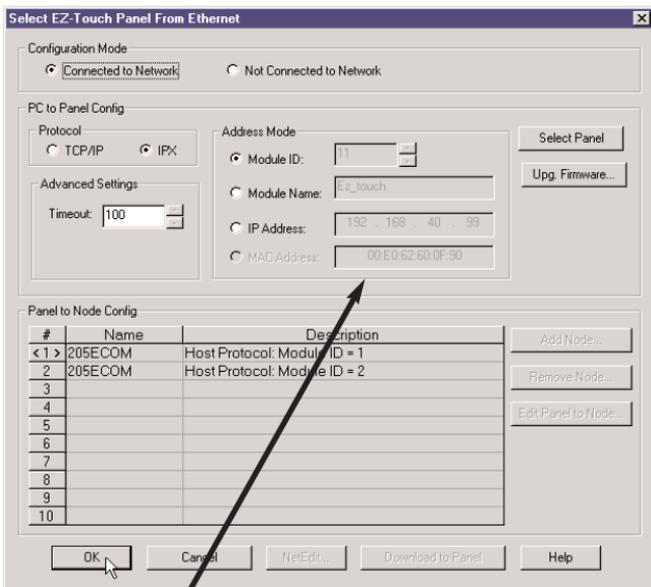
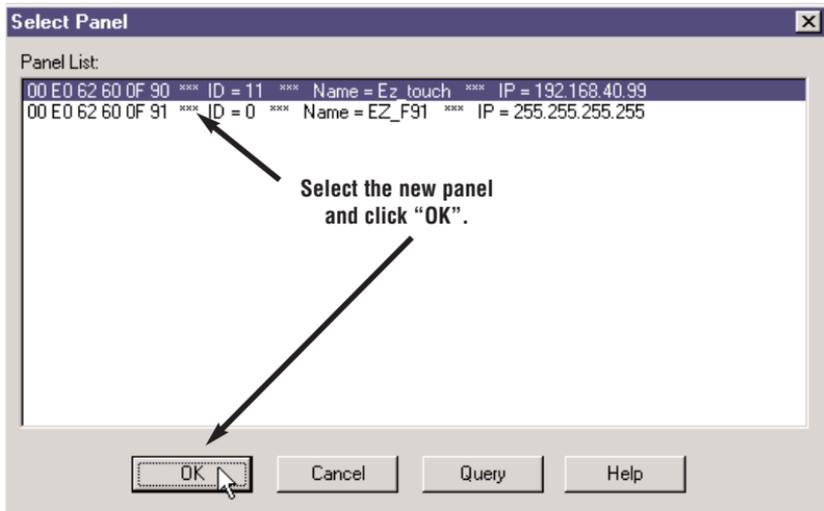
## Tutorial C: Adding a Second EZTouch Panel

This tutorial actually writes the existing project to an additional panel, identical to the first EZTouch panel.

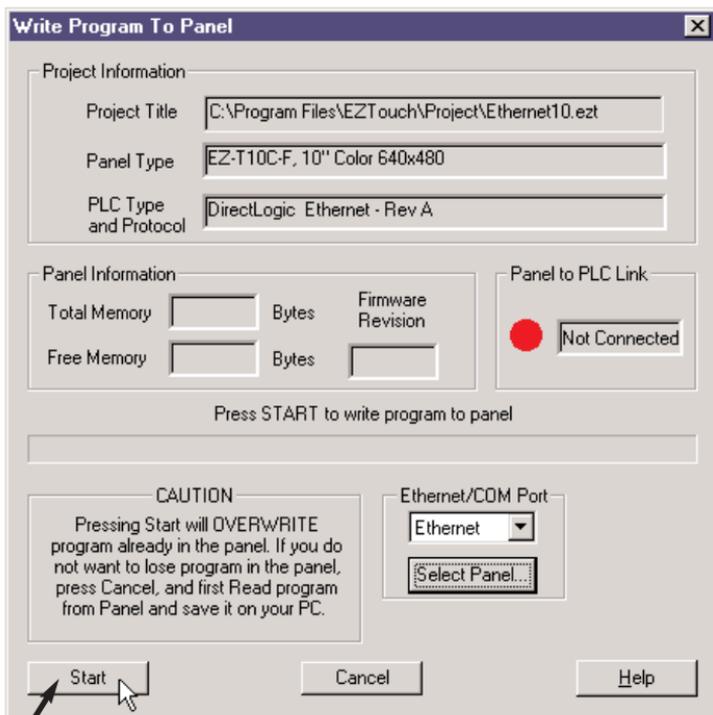


Physically connect your second EZTouch panel to the hub. Just as in Tutorial A, click on "Write to Panel".





Notice that the new panel information is now listed. You can now download this configuration to the panel. Click "OK".

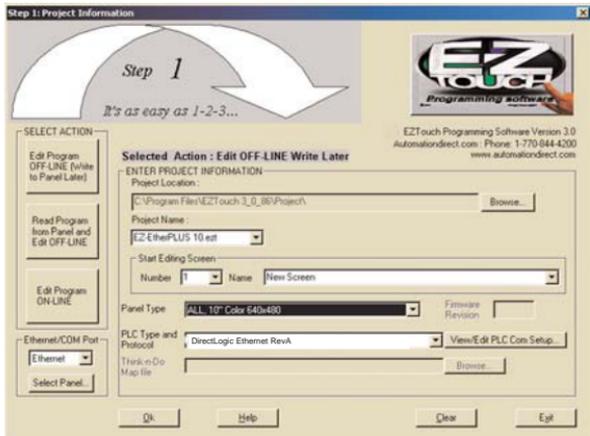


Click “Start” to write the EZTouch project (program) to the new panel, and click “OK” to acknowledge. Now, both panels have the same ethernet configuration, with any PLCs [ECOMs] configured, and the same project.  
Repeat this procedure to add other EZTouch panels.

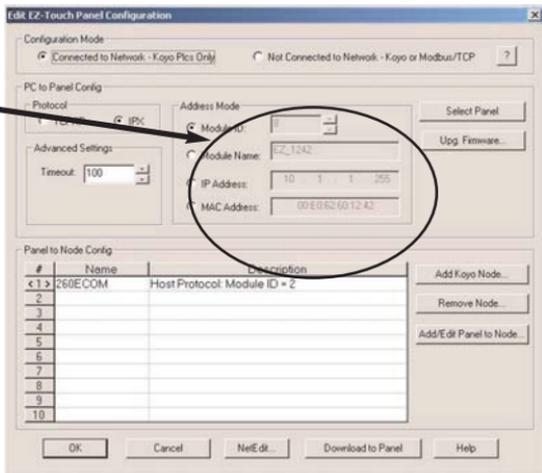
## EZ-Ethernet Firmware Upgrade Instructions

**Note!** You must first download the latest \*.ceb file from the AutomationDirect.com website (Technical Support > EZTouch panel page). Be sure to paste the new \*.ceb file into the C:\Program Files\EZTouch\Firmware folder.

To Upgrade a panel's EZ-Ethernet firmware, select 'Edit Program OFF-LINE' and choose the correct project. Click 'View/Edit PLC Com Setup'.



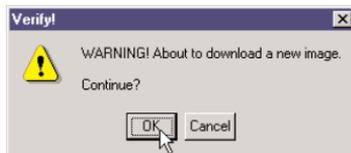
Make sure you have the correct panel, and click 'Upp Firmware'.



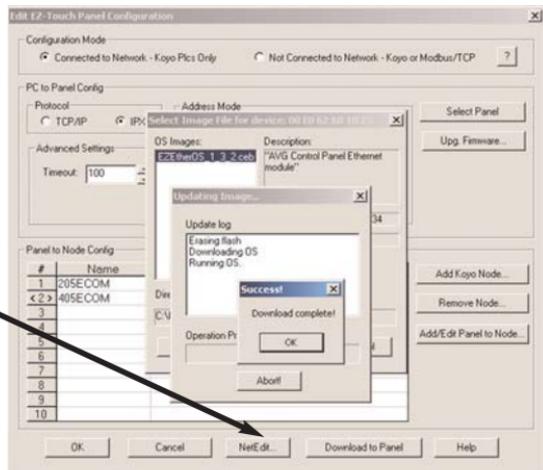
Click 'Download'.



Click 'OK', twice.



You can now confirm the new OS version using NetEdit.



## The EZ-Touch Panel Configuration Window

This is the main window utilized by the EZ-Ethernet card. It allows the user to do two types of configuration relating to the EZTouch panel:

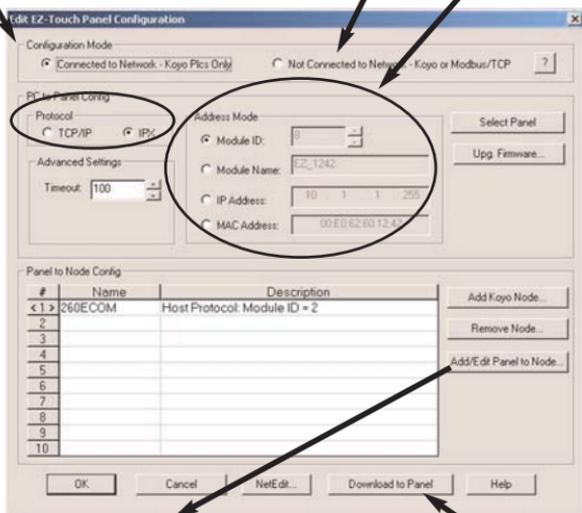
1) PC to Panel and 2) Panel to Node.

The Configuration Mode can be either Connected to Network or Not Connected to Network. If you choose Connected, you will be able to 'see' actual devices that are physically connected to your PC's Ethernet network (by hubs, etc).

If you choose Not Connected, you will only be able to configure your panel in an 'offline' fashion. In doing this, you must already know at least the specifics of the panel's Address Mode (e.g. Module ID).

The Address Mode is the way in which your PC will talk to your EZTouch panel (and EZ-Ethernet card).

Protocol is the Ethernet protocol your PC will use to talk to the EZTouch panel. IPX is the preferred and default protocol. Timeout is an advanced setting.



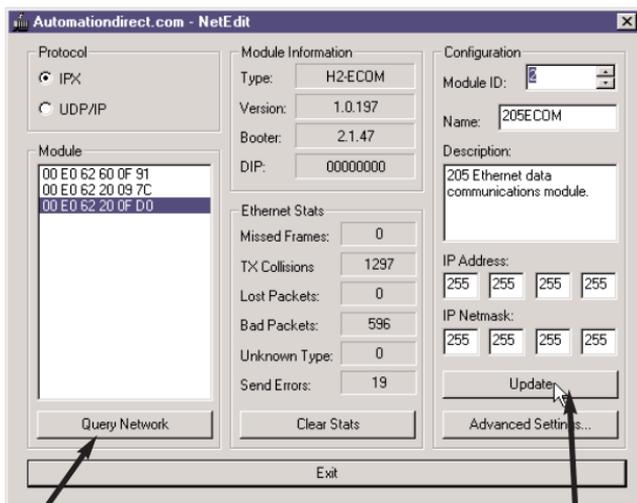
The Panel to Node settings refer to the Retries and Timeouts (and Address Mode) that the panel will use communicating with the Node selected.

When using multiple nodes or panels, you may need to increase timeouts and retries.

The 'Download to Panel' button writes the current configuration to the selected panel. If you have added Nodes (ECOMs) to your list since the last download, your panel will not be configured to talk to them until you download again.

## The NetEdit Window

NetEdit is a utility which edits ECOM and EZ-Ethernet devices. It can be used to change Module ID, Name, Description, Protocol, and IP Addresses. It also allows the user to view the device's current Firmware Version, Booter Version and DIP Switch settings. Please see your H24-ECOM-M manual for additional information on NetEdit.



Click on 'Query Network' to re-scan the network for newly added devices.

Click on 'Update' to make any changes take effect on the selected device.