Using the T1H–EBC(100) with Think & Do

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Note: Think & Do software (PC-TD8-USB & PC-TD8-WEB4-USB) has been retired and no longer supported. Please consider Do-more software for your project.

Mapping T1H--EBC(100) I/O Points

We recommend that you are familiar with the "Getting Started" and "Creating a Project" chapters in the Think & Do Studio Learning Guide before attempting to map the EBC I/O points/channels to Data Items using ConnectivityCenter.
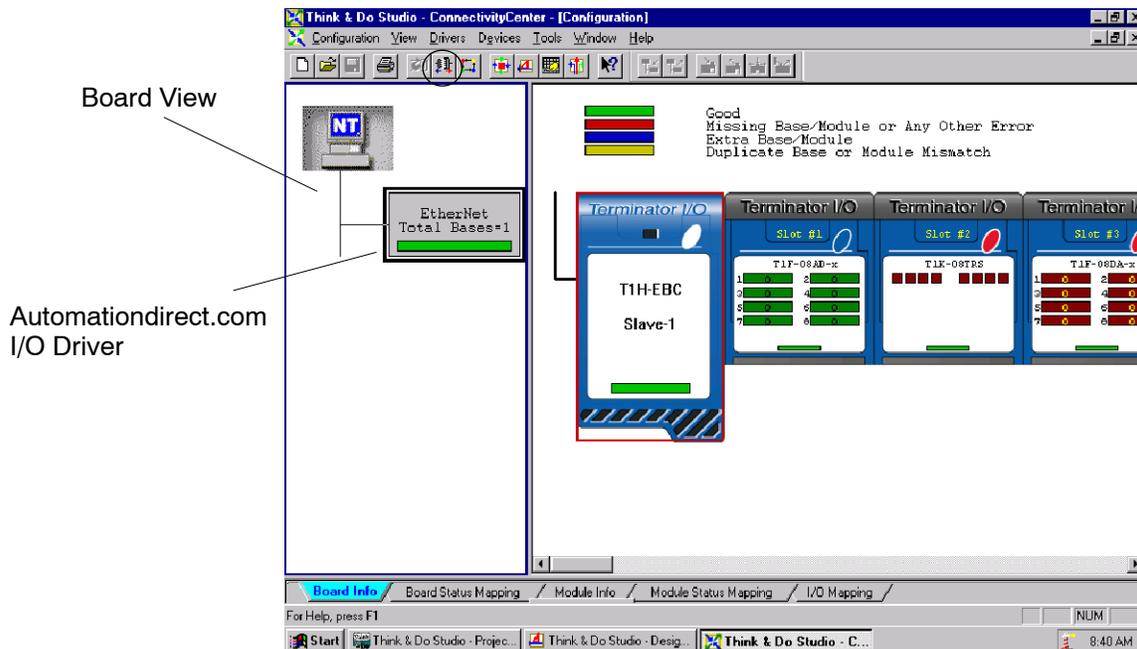
Launching Connectivity Center Tool

To launch ConnectivityCenter:

1) Launch Think & Do Studio ProjectCenter from the Windows desktop by clicking on Start > Programs > Think & Do Studio > ProjectCenter. Or, click on the ProjectCenter icon to start.
2) Click on the File Menu and either Open your Think & Do Project or select New.
3) Within ProjectCenter select Windows 2000 or NT Certified PC as the Runtime Target.
4) Then click Tools > ConnectivityCenter to launch ConnectivityCenter. Or, click on the ConnectivityCenter shortcut in the Project Explorer.
5) Once in ConnectivityCenter click on Drivers > Add and select Automationdirect.com Ethernet I/O Driver.
5)Then click on Configuration > Connect or click on the Connect toolbar button.

Connecting to the EBC

ConnectivityCenter will draw a picture of your EBC I/O system.
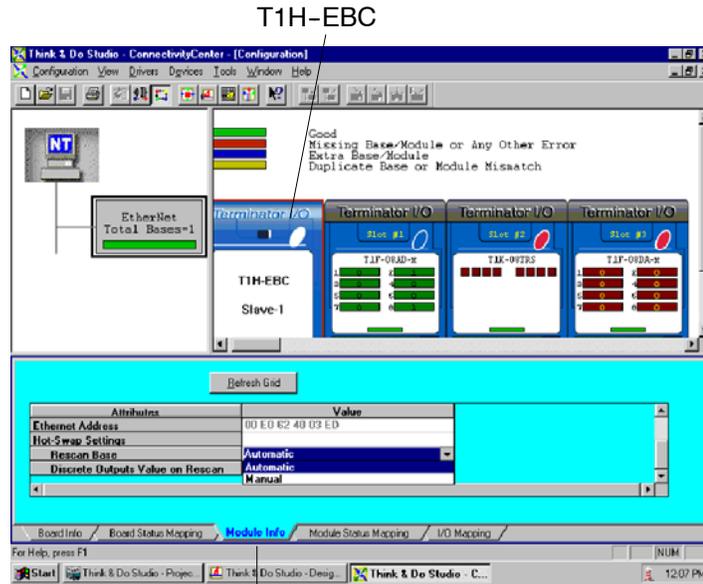

Board View

Automationdirect.com I/O Driver

Mapping I/O Points to Data Items

This procedure is discussed in detail in the "Creating a Project" chapter in the Think & Do Studio Learning Guide. This will map your real world I/O to Data Items.

Hot Swap Setup
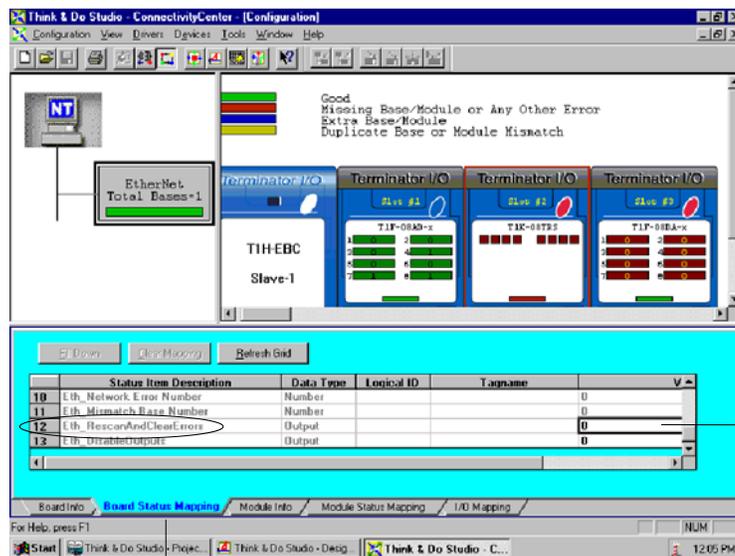
**Hot Swap:
Automatic Mode**

Click on the T1H–EBC(100) graphic and the Module Info tab in ConnectivityCenter. The Hot Swap Settings can be set to either Automatic or Manual mode. If Automatic mode is selected, the base will automatically rescan once a module has been "Hot Swapped".

T1H–EBC

Module Info tab

**Hot Swap:
Manual Mode
Reset**

If Manual mode is selected, you will need to write a logical "1" to the Eth_Rescan And Clear Errors Status Item Value to force the base rescan once the module Hot Swap has been performed. This information is listed under the Board Status Mapping tab.
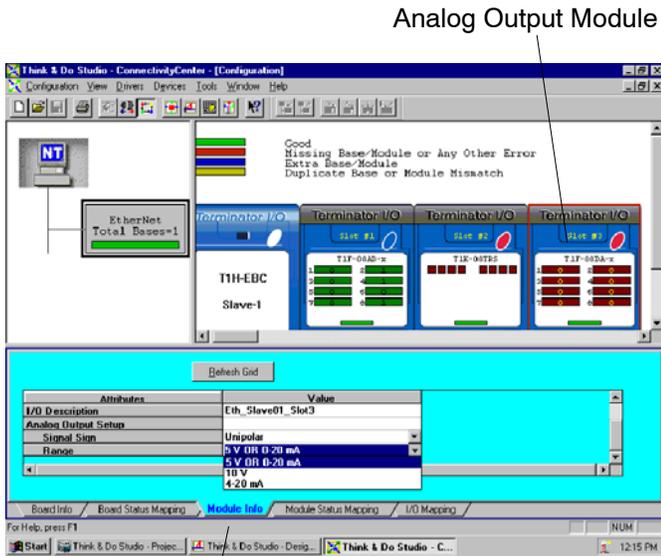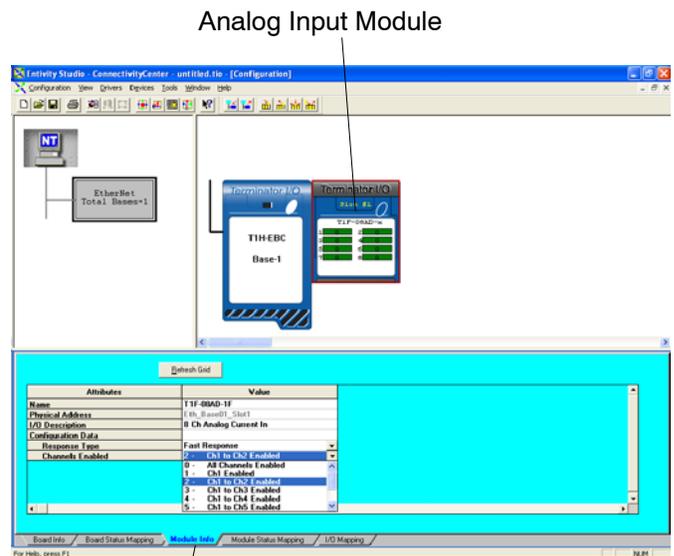

Write a "1" here

Board Status Mapping tab

Analog I/O Module Configuration

Click on the analog I/O module graphic to be configured and the Module Info tab in ConnectivityCenter. For the analog output modules, select the module Signal Sign and Range. For the analog input modules (T1F–08AD1 and T1F–08AD2 only), select either Fast Response or Normal Response (default) mode.
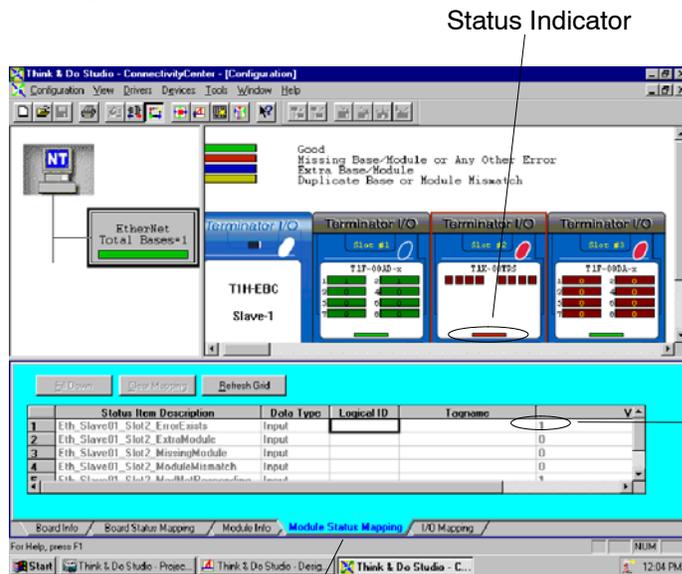
Analog Output Module

Analog Input Module

Module Info Tab

Module Info Tab

I/O Module Status Word / Bits

I/O Module diagnostic information is listed for each I/O module under the Module Status Mapping tab. Click on a module graphic to display its Status Item Descriptions.
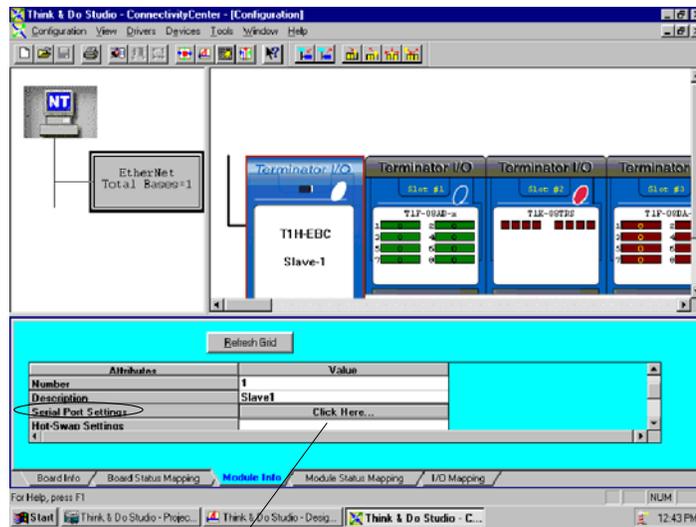
Status Indicator

1 = Error

Module Status Mapping Tab

Using EZTouch/EZText Panel with the RJ-12 Serial Port

The T1H-EBC has a built-in RS232C serial port that can be used to connect to an operator interface panel. Use ConnectivityCenter to configure the connection from the T1H-EBC to the EZTouch or EXText panel. The "HMI Options for Remote Base Controllers" section in the "Operator Screen Techniques" chapter in the Think & Do Studio Learning Guide discusses configuring and using Optimate Panels with the EBC.

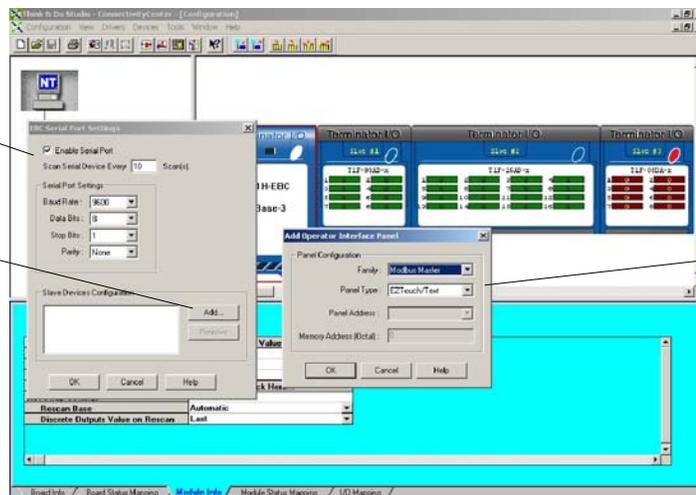**Adding Operator Interface Device**

Click on the T1H-EBC graphic and Module Info tab in ConnectivityCenter. The Serial Port Settings attribute is only visible in ConnectivityCenter when the I/O is disconnected. Following the steps below will configure the EBC's RJ12 serial port to be used with the EZTouch or EZText panels.
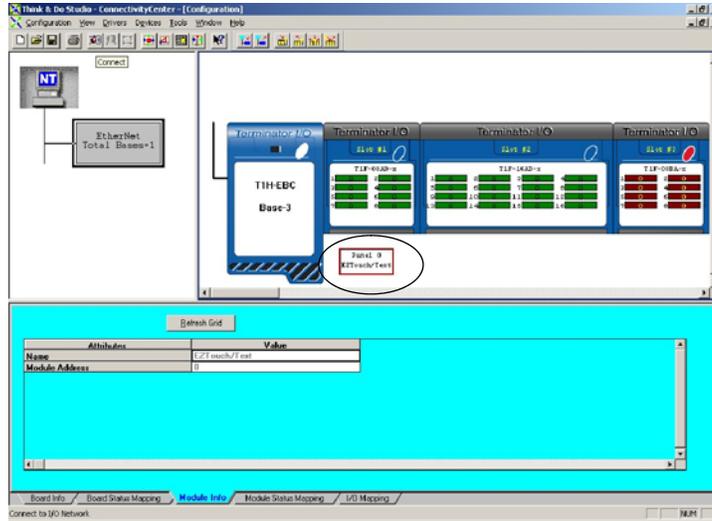

1. Click to access port settings

2. Select to Enable the serial port. These settings must match the port configuration of the EZ panel.

3. Click to Add Panel

4. Set the Family to Modbus Master and the Panel Type to EZTouch/Text.

Once the EZTouch or EZText panel has been added, it will show up in the list of the configured devices, and an EZTouch/Text panel graphic symbol will be located under the I/O base next to the EBC.

Using Monitor I/O to Verify Panel Operation

Re–connect to the I/O in ConnectivityCenter by clicking on the Configuration menu > Connect or by clicking on the Connect toolbar button. Then Scan the I/O by clicking on the Configuration menu > Scan or by clicking on the Scan toolbar button. Doubleclick on the EZ panel box graphic to launch the Monitor I/O Dialog Box. The Monitor I/O tool allows the user to update the fields at any moment, but the panel continuously updates the fields with any changes as well. All of the "Value" fields in the Monitor I/O Dialog Box are read/write and updates from the the Monitor I/O Dialog box take precedence over updates from the panel.

The user can update bit values (Input, Output and Flag) immediately by one mouse click or by pressing the "space bar".

When typing in numbers, the grid enters the "edit mode", which blocks off any conflicting updates from the panel. The "edit mode" entry completes after pressing "Enter", any arrow key or selecting a new line.

Monitor I/O
Dialog Box