

Think & Do Profibus Network Setup with the T1H–PBC

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- Think & Do Profibus Network Setup
- Hot-Swap Setup

NOTE: T1H-PBC Module is retired as of 08/20. No replacement is available.

Think & Do Profibus Network Setup with T1H-PBC

For those who are using the T1H-PBC as a slave with Think & Do, the following steps will guide you through the setup for your Think & Do Profibus network.

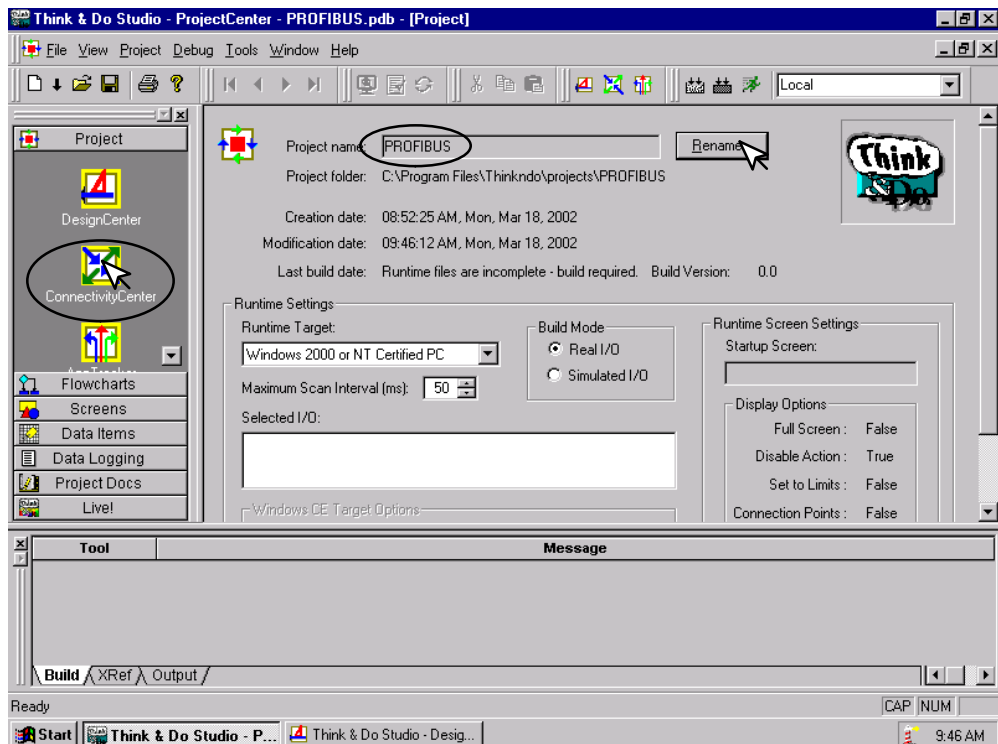
Getting the T & D Network Started

The first thing that will be needed for the Think & Do Profibus network is a Profibus interface card for your PC. We use the SST™ Interface Card for Profibus, produced by Woodhead Industries, Inc.. More information about the purchase of this card can be obtained from their website, www.mySST.com. The PC used for the setup procedure explained here uses this interface card. Whenever this card has been installed, run the SST Profibus Configuration Tool to configure the Profibus card before beginning the Think & Do setup. The following setup uses Think & Do Studio; however, if you have Think & Do LIVE installed on your PC, you will use I/O View instead of the Connectivity Center to setup the T1H-PBC DP Slave on the network.

T & D Studio setup for PC control

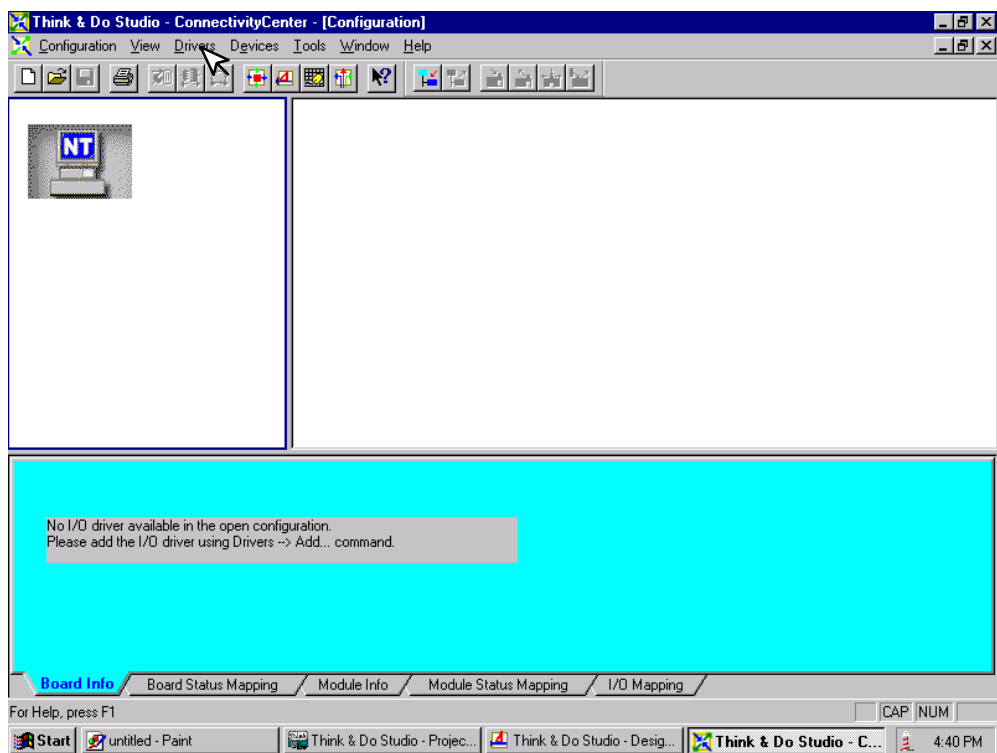
First, Be sure that the Node Address has been set to a proper address (3 to 126). Next, open Think & Do Studio and select **File > New** in the Project Center window. Use the following procedure to setup the T1H-PBC with Think & Do Studio. The procedure assumes that the Profibus cable is connected from the SST card to your T1H-PBC Profibus Base Controller with Terminator I/O installed.

1. Rename the project (the example name is PROFIBUS).
2. Click on the **ConnectivityCenter** button.



This window will appear with a note to add the I/O driver.

3. Click on **Drivers** > **Add** in the drop down window which appears.

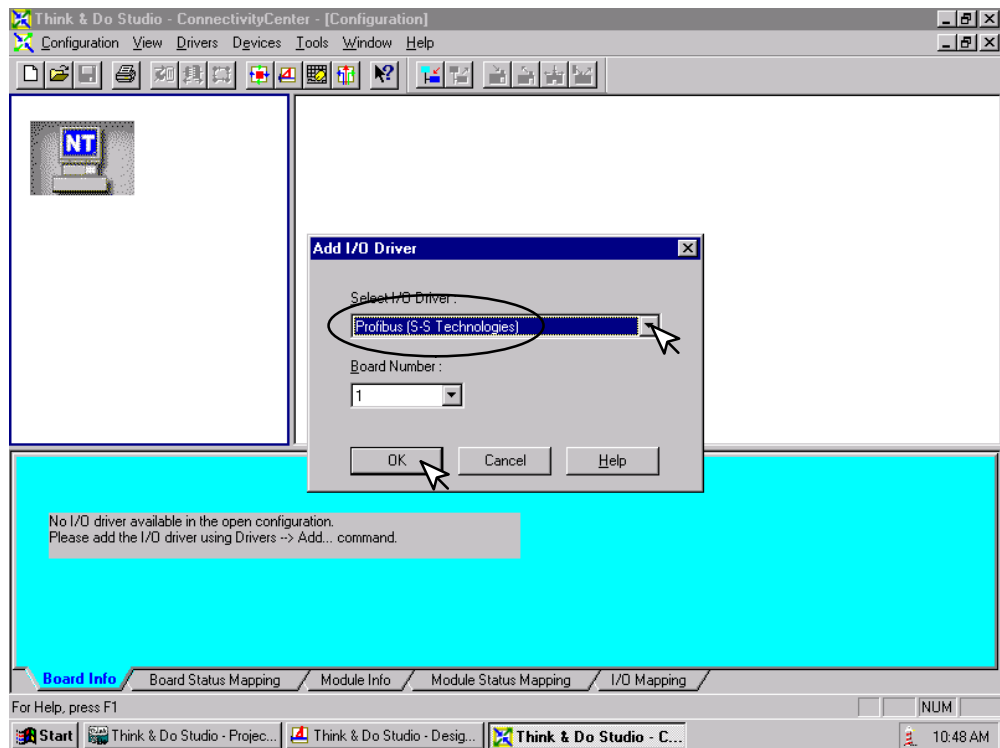


The **Add I/O Driver** window will drop down.

4. Click on the down arrow and select the Profibus driver that is in your PC.

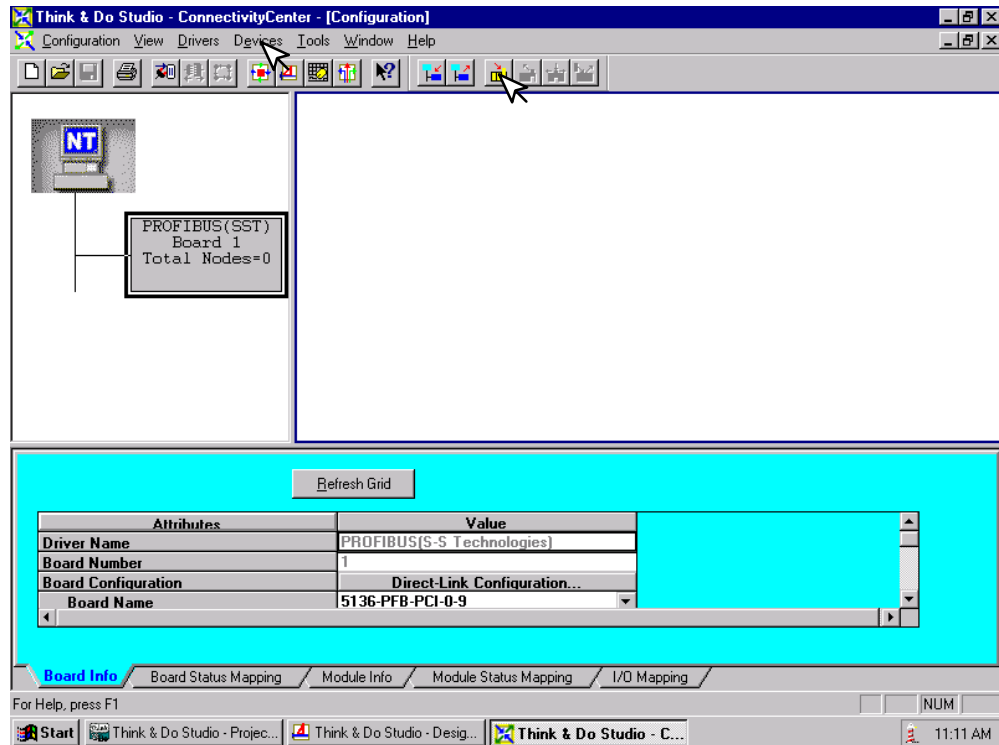
5. Click **OK**.

This installs the SST driver to Think & Do configuration.



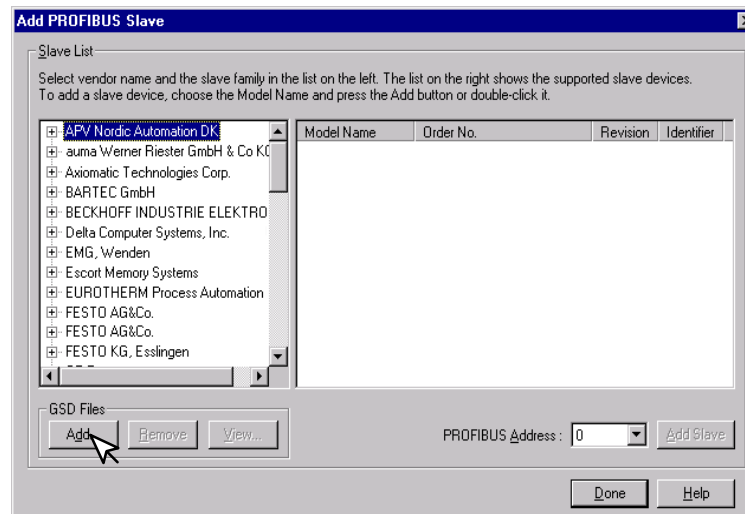
The T1H-PBC DP Slave must be added to the configuration next.

6. Click on **Devices** or the **Add Device** button in this window.



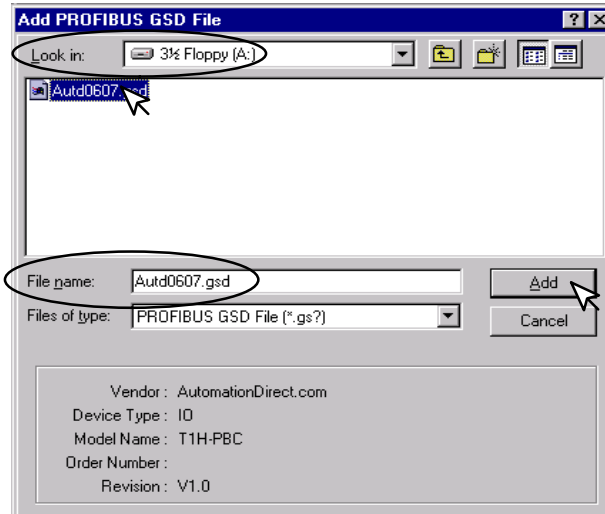
The following window will come into view. You will see a list of companies in the window on the left. Each of these have GSD files that are supported by Think & Do. If AutomationDirect is not in the list, you will need to install the GSD file from the diskette that was supplied with this manual.

7. Click the **Add** button.



When this window comes into view, insert the diskette and select the A: drive in the **Look in:** window slot.

7. Click on **Auto0607.gsd** file to select the **File name**, then **Add**.

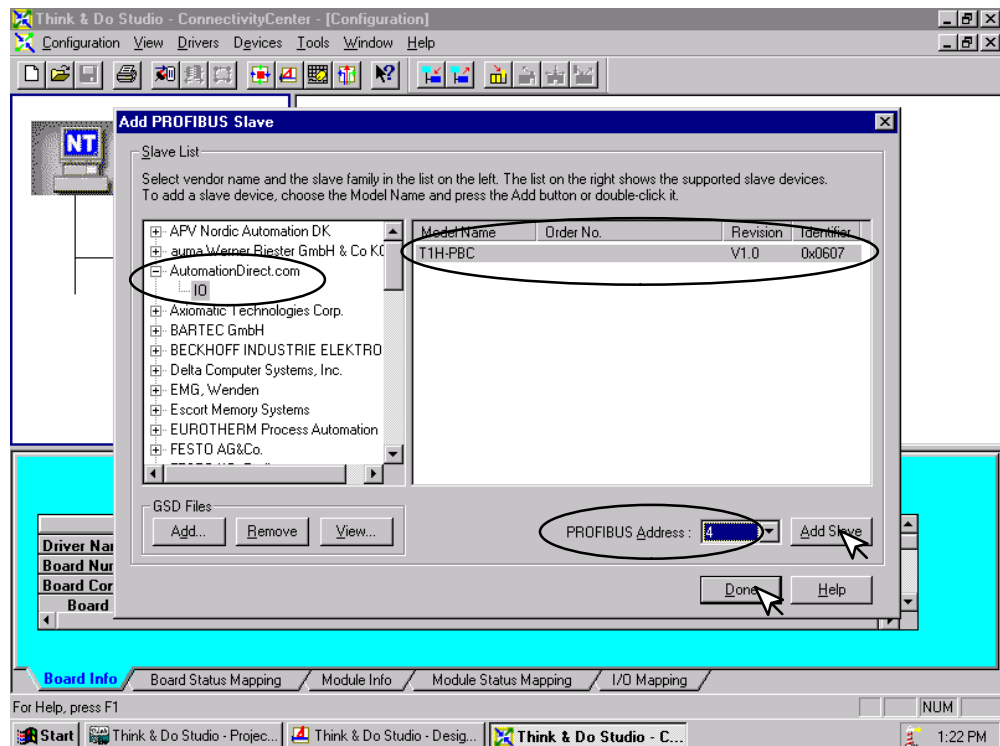


The window appears like the one shown below.

8. Click on **AutomationDirect.com**, then **IO**. This puts the available GSD file names in the window on the right.

9. Select **T1H-PBC** and enter the **PROFIBUS Address** dialed on the rotary switch.

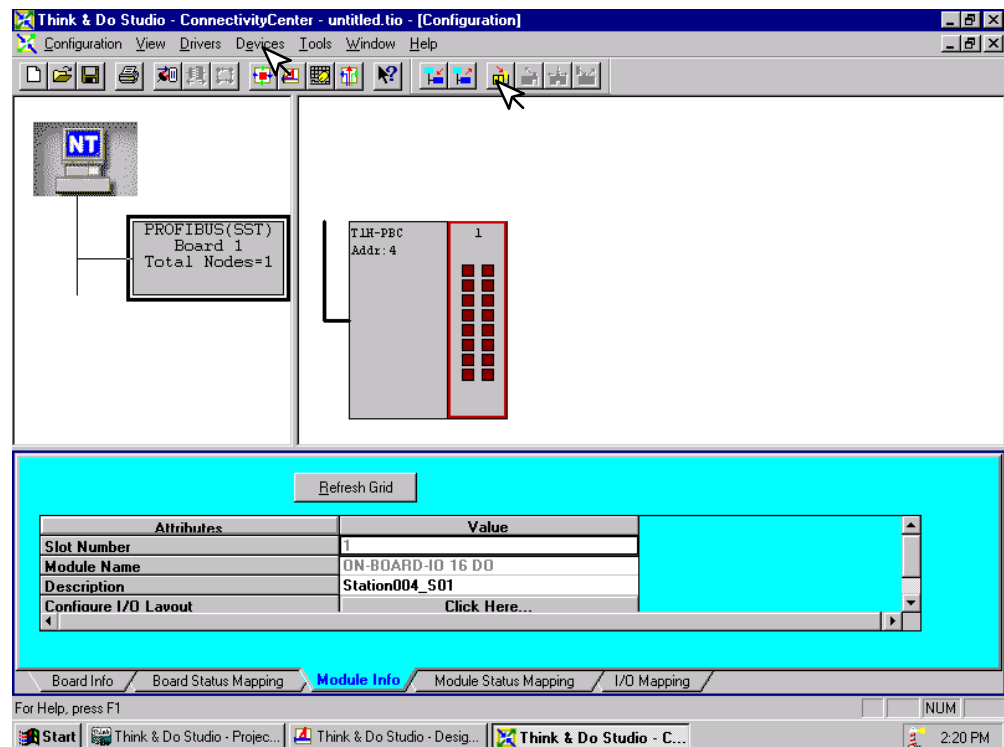
10. Click on **Add Slave**, then **Done**.





Once the GSD file has been added, simply click the Connect button after installing the Profibus I/O driver the next time that a slave is configured. Think & Do Studio will search the network for all connected slaves and the modules for each slave. You will need to select the name for each module found.

The window now displays the T1H-PBC DP Slave with 16 output indicators. These outputs are the first two output bytes which are reserved for system functions, such as, Hot-Swap manual I/O reconfiguration (refer to Memory Map, page 2-11). The module name is **ON-BOARD-IO 16 DO** which is the name given to the module in the GSD file.

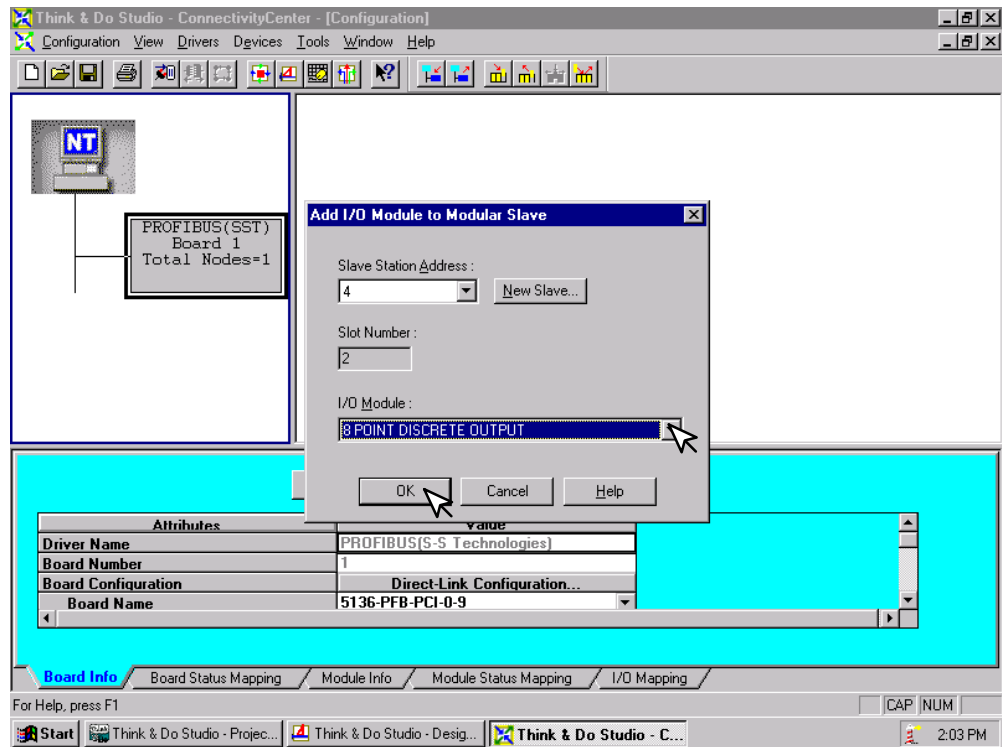


Now that the T1H-PBC DP Slave has been added to the configuration, add the Terminator I/O modules which are installed in the base.

11. Either click on **Devices** or the **Add Device** button.

The **Add I/O Module to Modular Slave** window will drop down. Select the module for Slot 2 by clicking on the down arrow next to the **I/O Module**. Then select the module description or the Terminator part number for the module located in that slot.

12. Click the **OK** button.



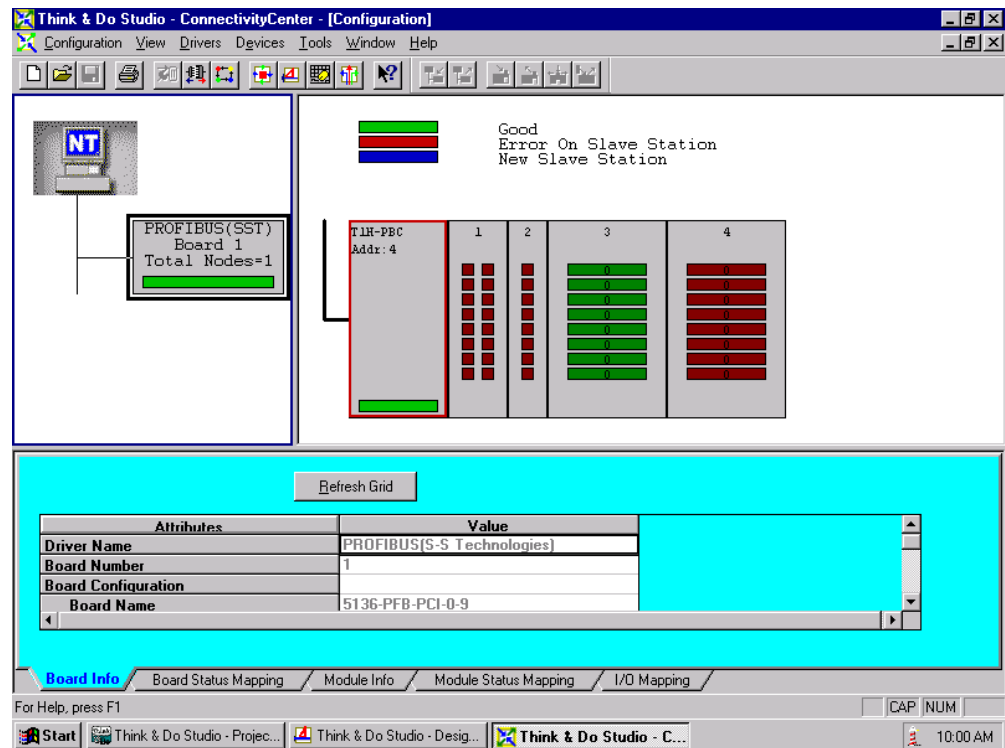
Continue these steps for each slot until all of the Terminator I/O modules for your T1H-PBC DP Slave have been configured.

The configuration window now shows the complete T1H-PBC DP Slave Terminator I/O base connected to the Think & Do network. It can now be connected and put on line.

13. Either click on **Configuration > Connect** or on the **Connect** button.

14. After it is connected either click on **Configuration > Scan** or the **Scan** button.

The system should now be running.



Hot-Swap Setup

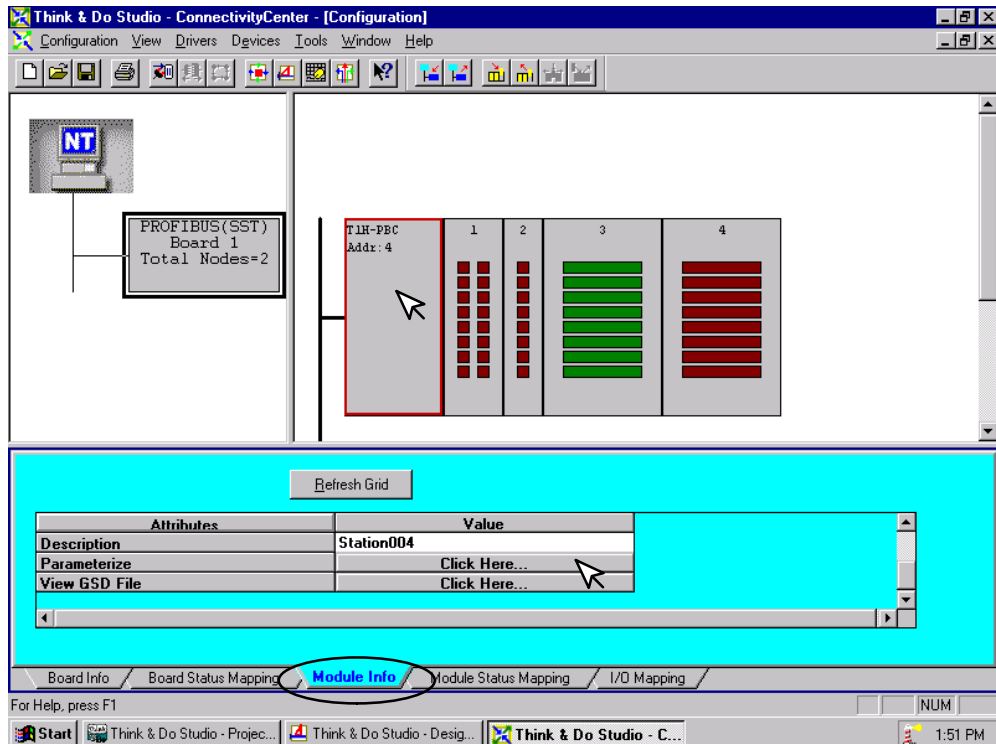
Hot-Swap: Automatic Mode

The Hot-Swap feature for the T1H-PBC DP Slave is set to Auto in the GSD parameters by default(refer to 2-11). Auto Hot-Swap I/O reconfiguration allows a Terminator I/O module to be removed from the base and replaced with a identical module without turning OFF the power to the Terminator base power supply. The T1H-PBC and the I/O will be automatically rescanned once a module has been "Hot Swapped".

Hot-Swap: Manual Mode Reset

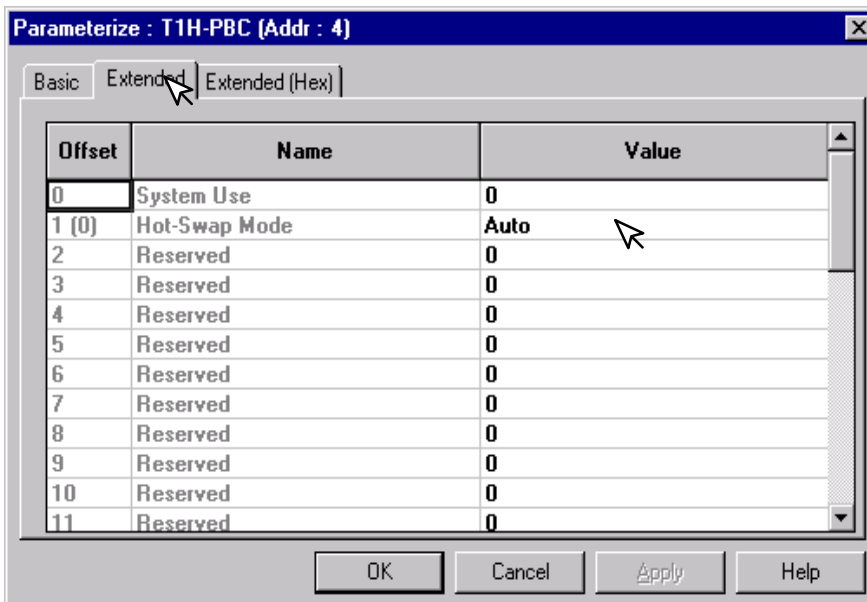
If your system requires the Manual Hot-Swap I/O reconfiguration feature, it will need to be selected during this initial setup process. This is done in the ConnectivityCenter window. The T1H-PBC must not be running. If the unit is running:

1. Either click on the **Disconnect** button or on **Configuration > Disconnect**.
2. Click on the **Module Info** tab, then **Click Here...** on the **Parameterize** line.

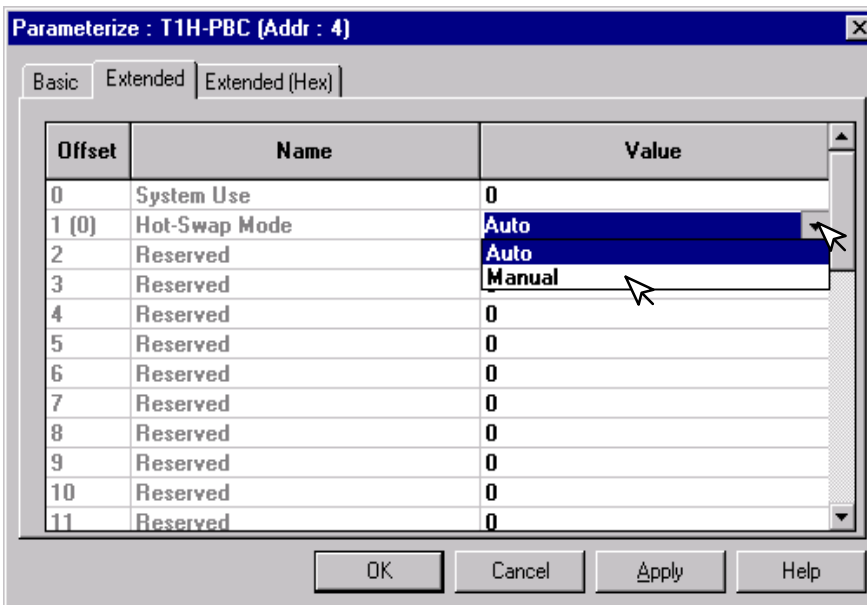


The Parameterize: T1H-PBC window will appear with Auto being the value of the Hot-Swap Mode.

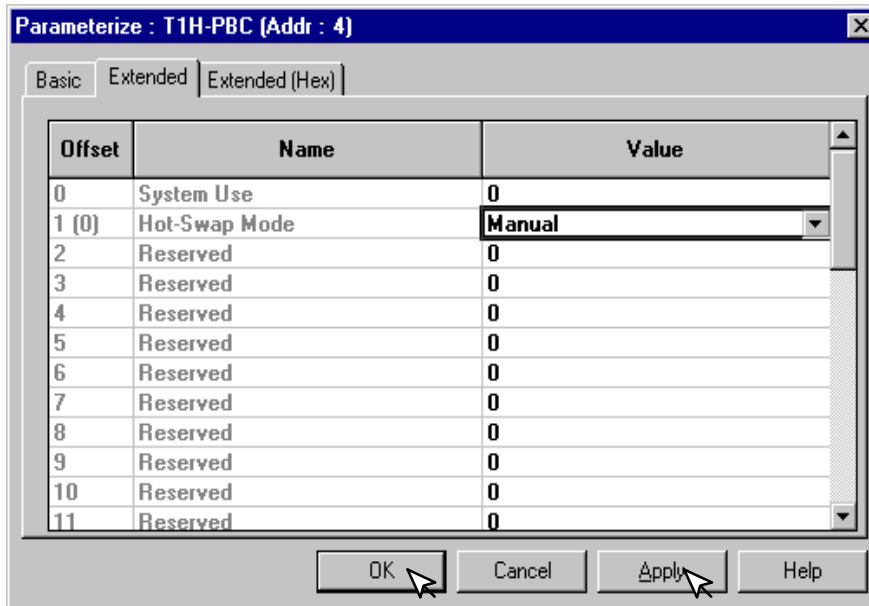
3. Click on the **Extended** tab.
4. Click on Auto to select the Manual Mode.



5. Now click on Manual.



6. Click on **Apply**, then **OK**.



Now put the T1H-PBC on line by either clicking on the **Connect** button or on **Configuration > Disconnect**, then **Scan**.

With the T1H-PBC slave running, a I/O module can be Hot-Swapped. Whenever this is done, the Module Status led will continue to blink. To reset the condition and allow the Hot-Swapped module to be scanned again:

7. Toggle the first bit in the first output byte by clicking on the upper right-hand output indicator in slot 1. The indicator will turn ON and the Module Status led will turn ON. Click the indicator again to turn the indicator OFF. In normal operation, the first bit will be mapped to a tag in the user program. This bit will be used to toggle a safe I/O reconfiguration after a module has been Hot-Swapped.

The Hot-Swapped module is back in operation again.

