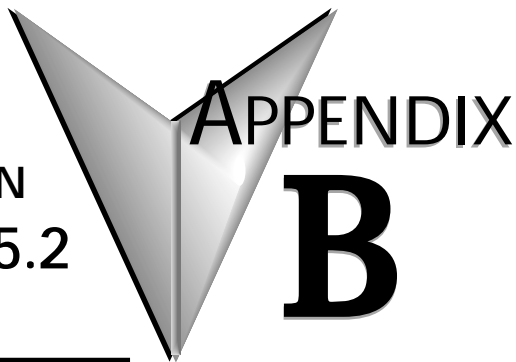


# SERIAL I/O MODULE INSTALLATION / OPERATION WHEN USING T&D VER. 5.2 OR 5.3

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## In This Appendix...

- H2-SERIO Overview .....B-2
- RS-232 Wiring .....B-2
- Using Think & Do to Set Serial Port Parameters .....B-3



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*Note: This Appendix only applies if you are using the Serial I/O Module with Think & Do versions 5.2 or 5.3. Use Chapter 3 if using the Serial I/O Module with Think & Do Studio version 6.0 or later.*

*Only Think & Do WinPLCs (H2-WPLC1-TD and H2-WPLC2-TD) support the H2-SERIO module.*

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## H2-SERIO Overview

### Add Serial Ports to Your WinPLC

The Serial I/O module plugs into the DL205 I/O base and is used exclusively with the WinPLC to provide additional RS232 serial ports. The WinPLC communicates with the H2-SERIO module across the DL205 backplane.

### As Many as Ten Serial Ports

The WinPLC has one built-in serial port. Now, you can add as many as nine additional serial ports for Think & Do applications requiring multiple serial devices, such as barcode scanners.

### Setting Communication Parameters Using Think & Do

Use I/O View to set baud rate, parity, data bits, and stop bits for each port. Choose from 300 to 57,600 baud communication speeds. Think & Do allows each port to be designated as a MODBUS slave or a generic serial device. Each port on the H2-SERIO module is capable of hardware handshaking.

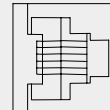


## RS-232 Wiring

### Pin Assignments for: H2-SERIO ports

1	0V	Power (-) connection (GND)
2	CTS	Clear to Send
3	RXD	Receive Data (RS232C)
4	TXD	Transmit Data (RS232C)
5	RTS	Request to Send
6	0V	Signal Ground (GND)

### RJ12 (6P6C) Female Modular Connector



**NOTE:** The serial port on-board the WinPLC has a different pinout from the H2-SERIO module. Refer to page 1-7 for the WinPLC serial port pin assignments.

### H2-SERIO Specifications

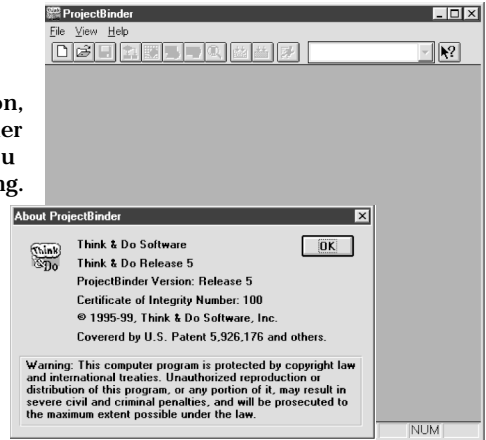
<b>Module type</b>	Intelligent module for use with H2-WPLC1-TD
<b>Maximum number of modules supported by one WinPLC</b>	3
<b>Recommended cable</b>	Belden 9729 or equivalent
<b>Connector</b>	RJ12 jack
<b>Power consumption</b>	230mA @ 5VDC
<b>Operating environment</b>	0° to 60°C (32°F to 140°F), 5% to 95% RH (non-condensing)
<b>Manufacturer</b>	Host Engineering

## Using Think & Do to Set Serial Port Parameters

### Check Think & Do Version First

You will need Version 5.2 of Think & Do, to recognize the H2-SERIO module. To determine whether you have the right version, open the Project Binder. As the Project Binder opens, you may notice a screen that tells you which Version of Think & Do you are opening. That screen disappears as the Project Binder opens.

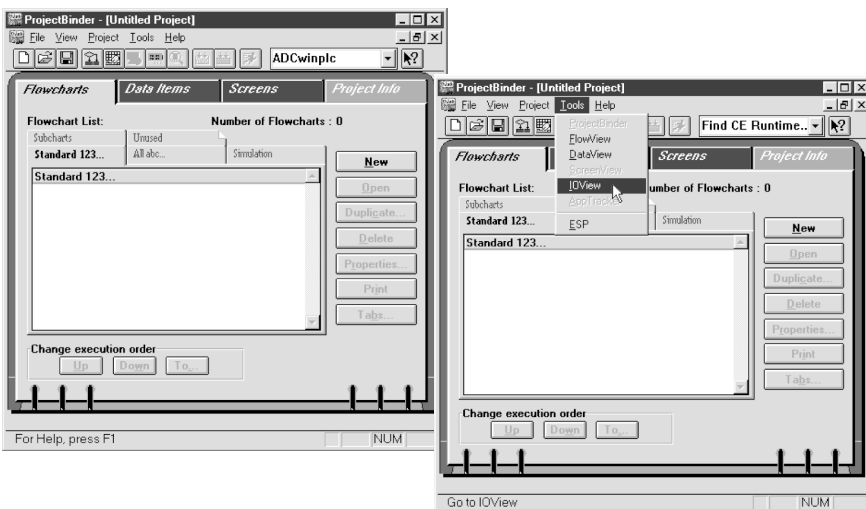
After the Project Binder is open, you can click on “Help,” and the bottom menu option, “About Project Binder,” will tell you which Version you are using.



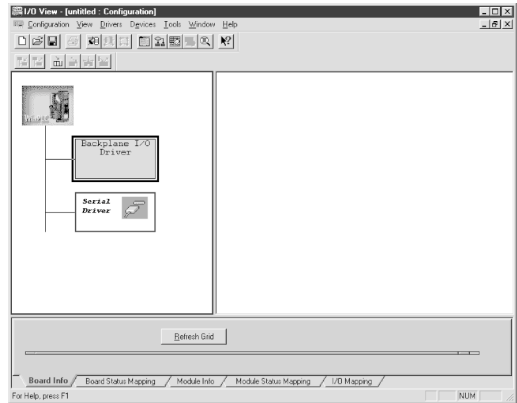
### New Project Using H2-SERIO Module

Start a new project by clicking on the blank document button. A dialog box will pop up asking you to “Choose Runtime Target.” Select “Windows CE - Think & Do WinPLC.”

You will see a new Untitled Project open. Next, click on the “Tools” menu and select I/O View.

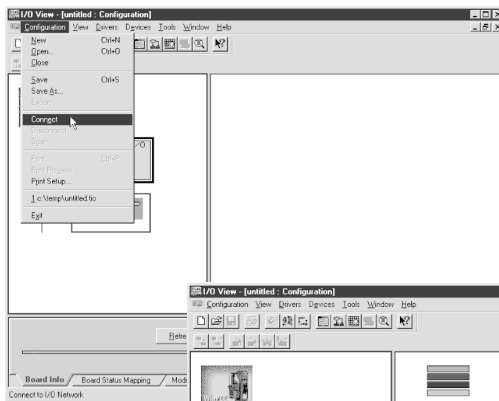


Notice in I/O View that the drivers for the DL205 backplane and the WinPLC serial port are already loaded. You will see them graphically represented in the left pane of the I/O View window.



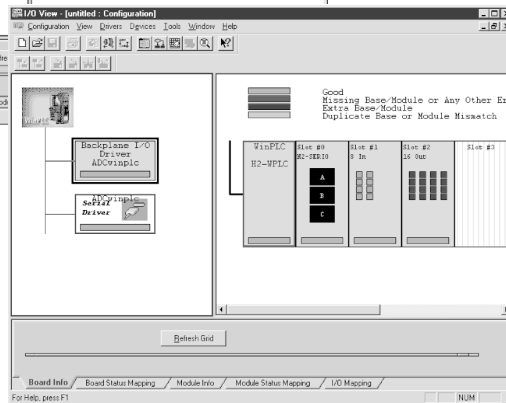
## Connecting to the WinPLC

Prior to the next step, you will need to install the H2-WPLC1-TD and the H2-SERIO module in your DL205 base. Please refer to the guidelines elsewhere in this publication for information about installation, power wiring, and Ethernet connections. The WinPLC must be recognized on the network to proceed. Use “Think & Do ESP” to establish your link to the WinPLC, as described on pages 1-12 through 1-15.



The next step is to click on “Configuration” and select “Connect.”

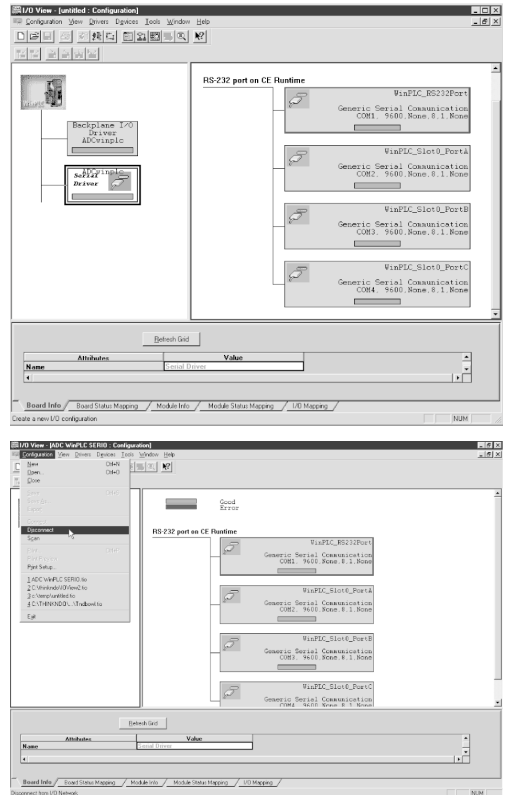
Think & Do recognizes the DL205 base as you have configured it. The WinPLC is displayed in the CPU-slot, and the Serial I/O module is displayed in the slot where you have installed it.



Click on the Serial Driver in the left pane of the I/O View window. You will see a port configuration box for each serial port Think & Do recognizes. In our example to the right, Think & Do sees four serial ports. One is on the WinPLC and the other three are on the Serial I/O module.

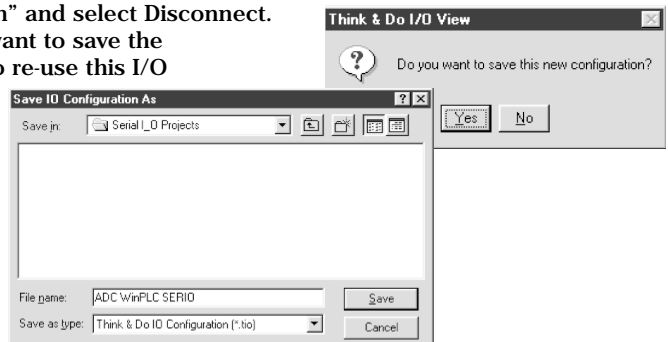
Notice that the ports are numbered COM 1 through COM 4 in Think & Do. COM 1 is on the WinPLC. COM 2 through COM 4 are on the first Serial I/O module in the base. Think & Do counts the serial ports from top to bottom (on the Serial I/O module) and from left to right in terms of slot position.

If you install additional Serial I/O modules at a later time, be aware that the module's slot position determines its COM number. If you install a Serial I/O module between an existing Serial I/O module and the CPU, your port settings will remain the same, but the COM number will change.



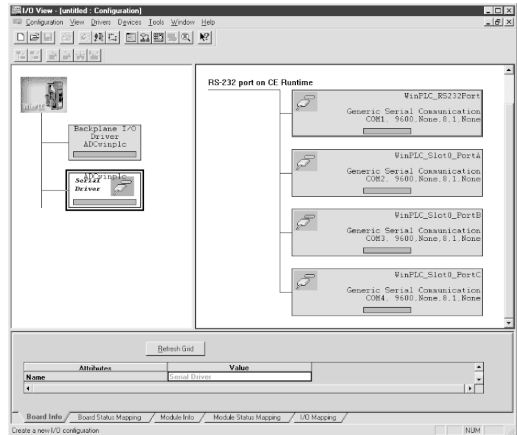
**NOTE:** You must be disconnected from the WinPLC and the I/O base in order to change the serial port parameters on the H2-SERIO module. To disconnect, you have two choices. You can click on Configuration/Disconnect as shown above, or you can physically disconnect the WinPLC by removing power or by removing the Ethernet cable.

Now, click on “Configuration” and select Disconnect. Think & Do will ask if you want to save the configuration. If you want to re-use this I/O Configuration later, click yes. If you click yes, you will see the “Save I/O Configuration As” screen. Name the configuration and click save.



## Setting Serial Port Parameters

To set the serial port parameters, click on the Serial Driver in the left pane of the I/O View window. You will see a port configuration box for each serial port Think & Do recognizes. In our example to the right, Think & Do sees four serial ports. One is on the WinPLC and the other three are on the Serial I/O module.



## Expand the Window Pane

Position your cursor on the line that separates the upper window panes from the lower window pane. Move this line up by dragging your mouse. Click on the tab at the bottom of the lower window pane marked Module Info. You will see a screen that looks similar to the one shown here. Pull-down menus allow you to change the serial port parameters.

Select the port whose parameters you want to change by clicking on that port in the upper right pane. Make the changes in the lower pane, and save the changes using the Ctrl + S keys.

