

Siemens Profibus Network Set up with T1H–PBC

In This Appendix. . . .

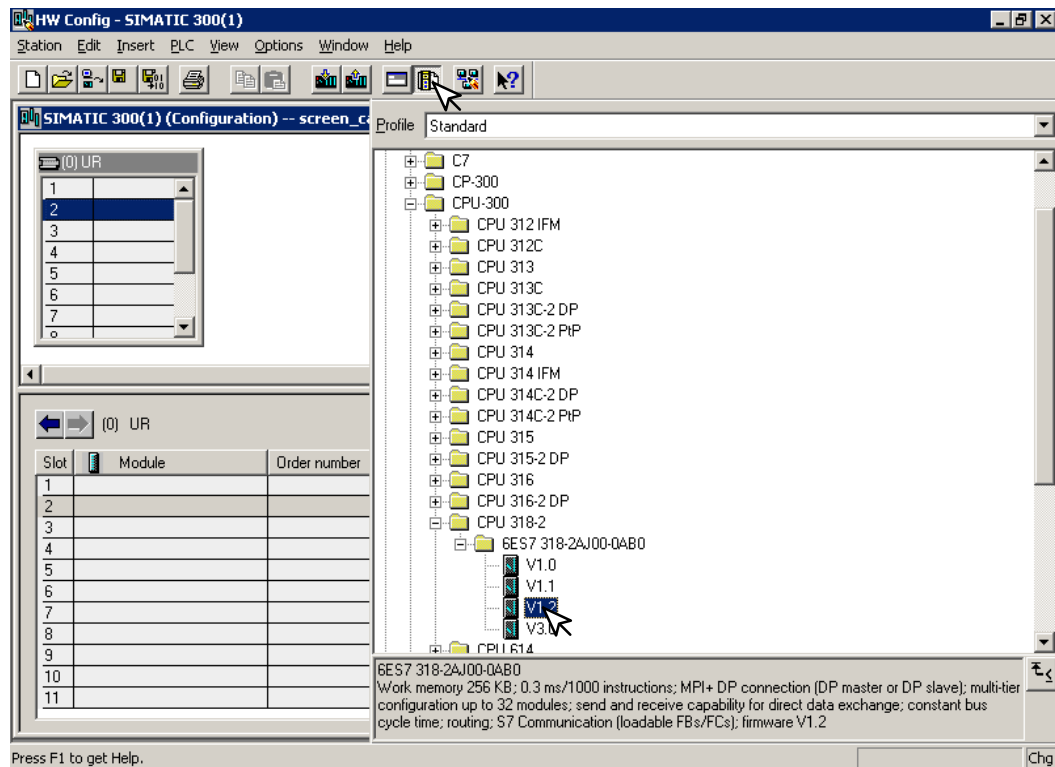
— Siemens Profibus Network Setup with a T1H–PBC

Setup a T1H-PBC on Siemens Profibus Network

For those who are using the T1H-PBC slave on a Profibus network with a Siemens PLC, the examples on the following pages will step you through the process of setting up your network. The PLC used as the Profibus master in this example is a Simatic 300.

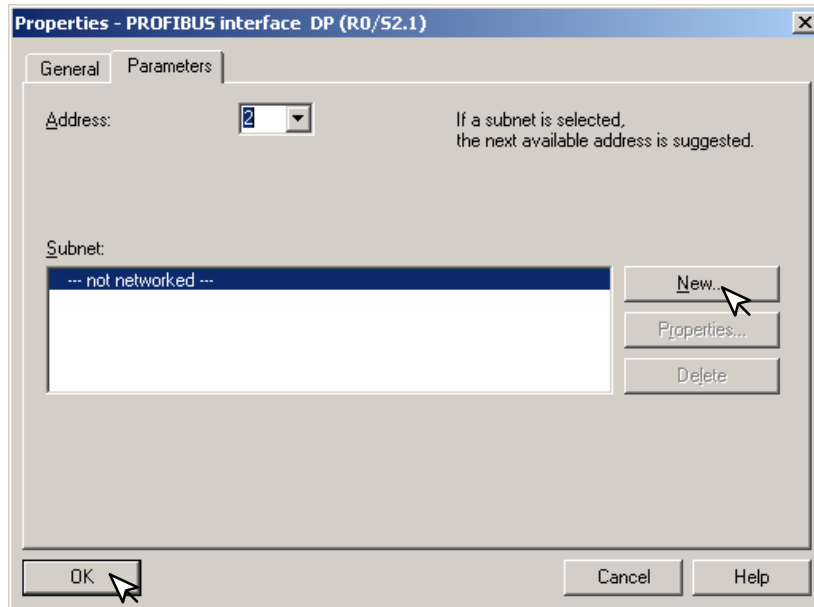
Simatic Manager Begin by opening your SIMATIC Manager to configure the Profibus driver.

1. Use the hardware configuration to select the PLC processor.
2. Open the catalog window by clicking on the **Catalog** button, and select the proper S7 processor.



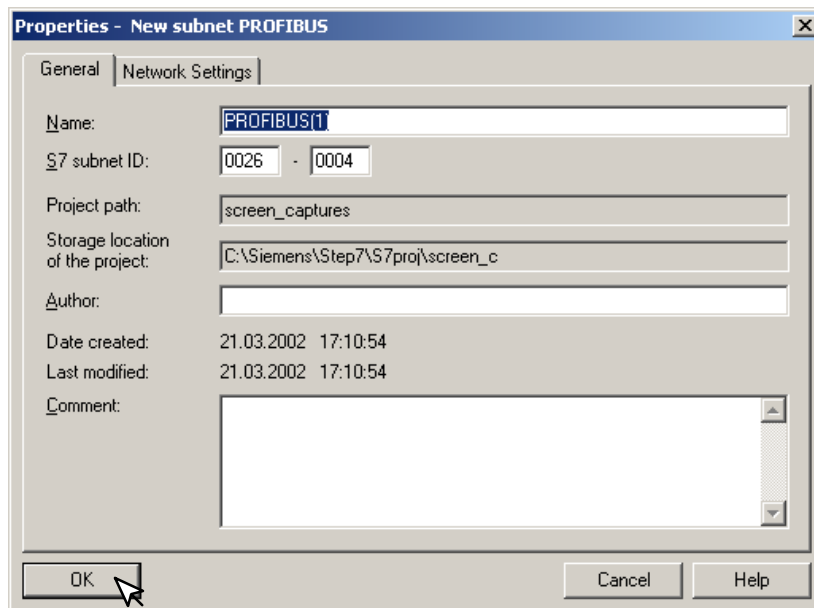
After selecting the processor, the DP interface properties window will pop-up.

3. Select **New**, and **OK**.

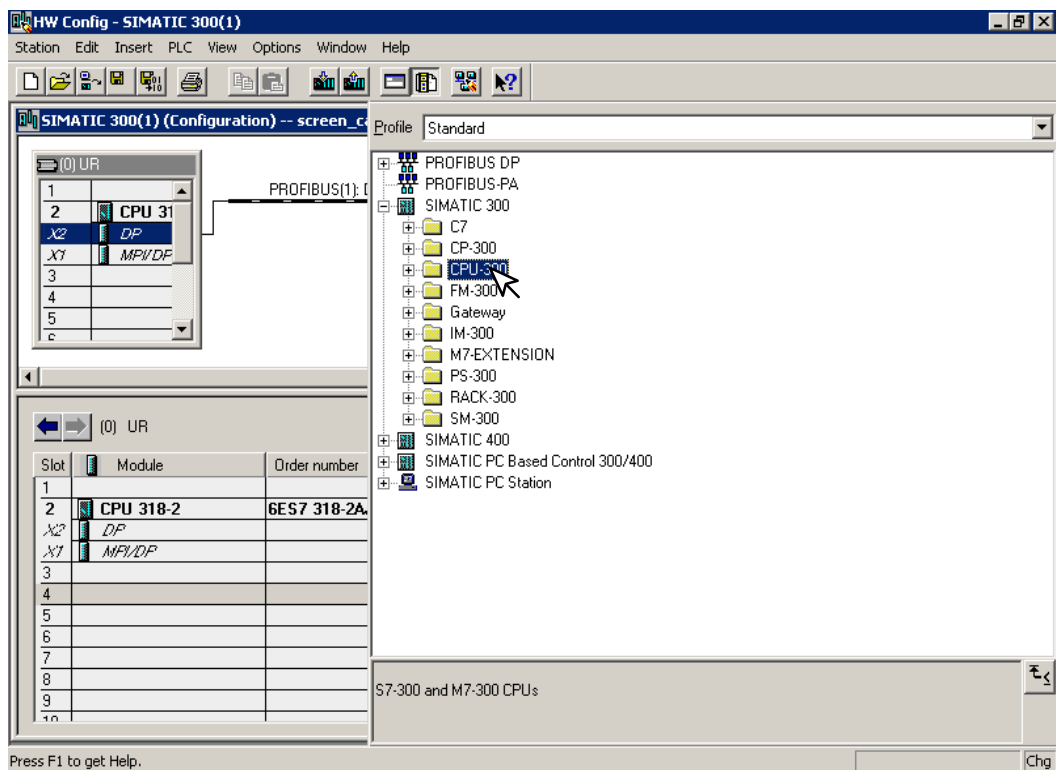


The New subnet window will appear allowing you to name the subnet. The new ID is also in the window.

4. Make the necessary entries, then click **OK**.

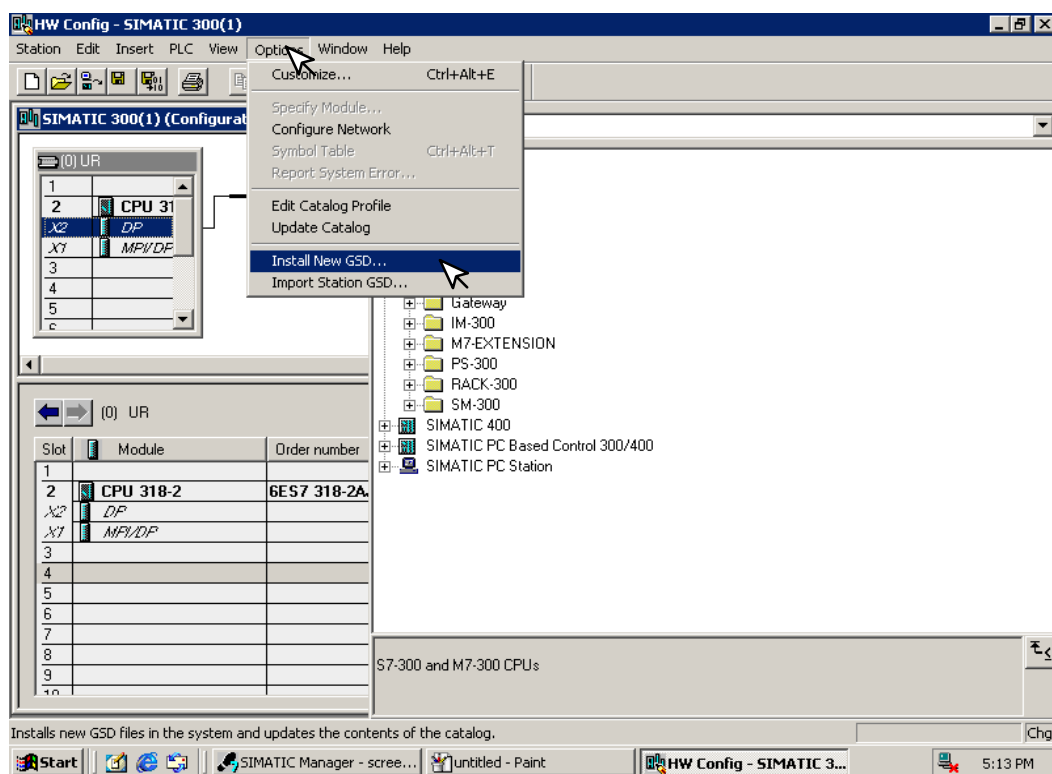


Once the processor has been selected and the DP network is enabled, the configuration window should look like the diagram below.



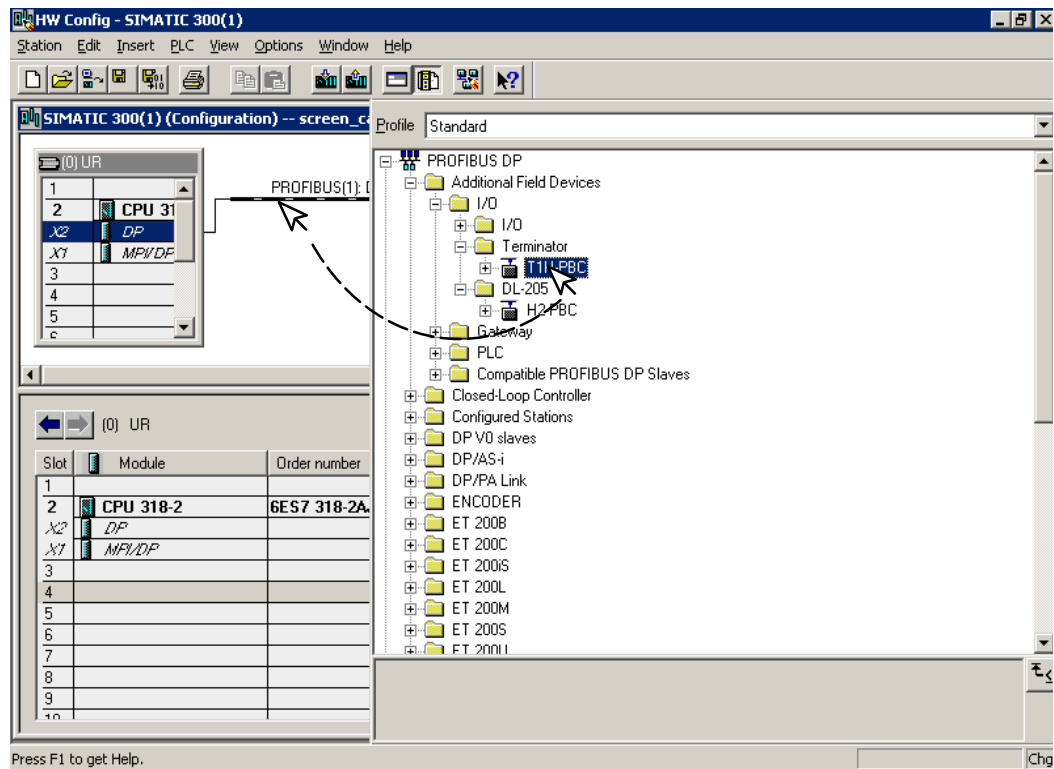
The GSD file will need to be installed now.

5. Click on **Options** and select **Install New GSD...** in the drop-down window.

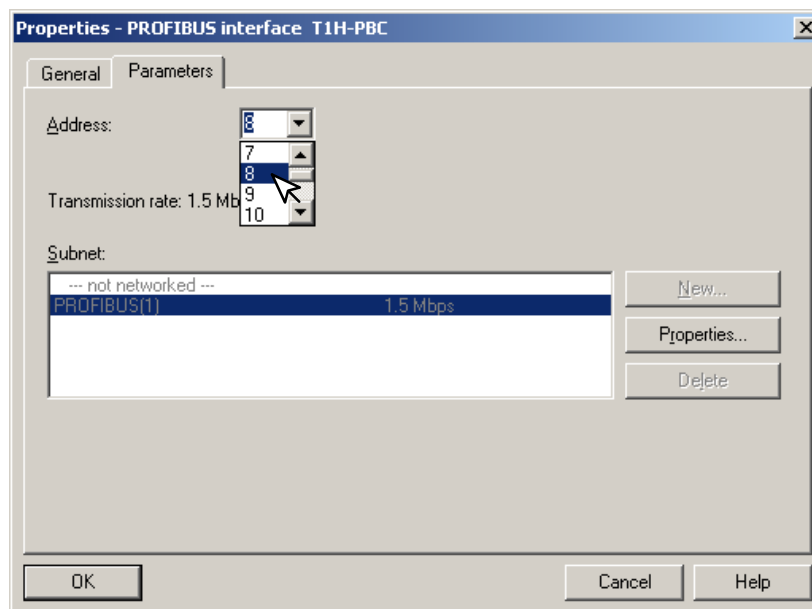


The Configuration window will look like the one below.

6. Now, click on the T1H-PBC and drag it to the Profibus network.

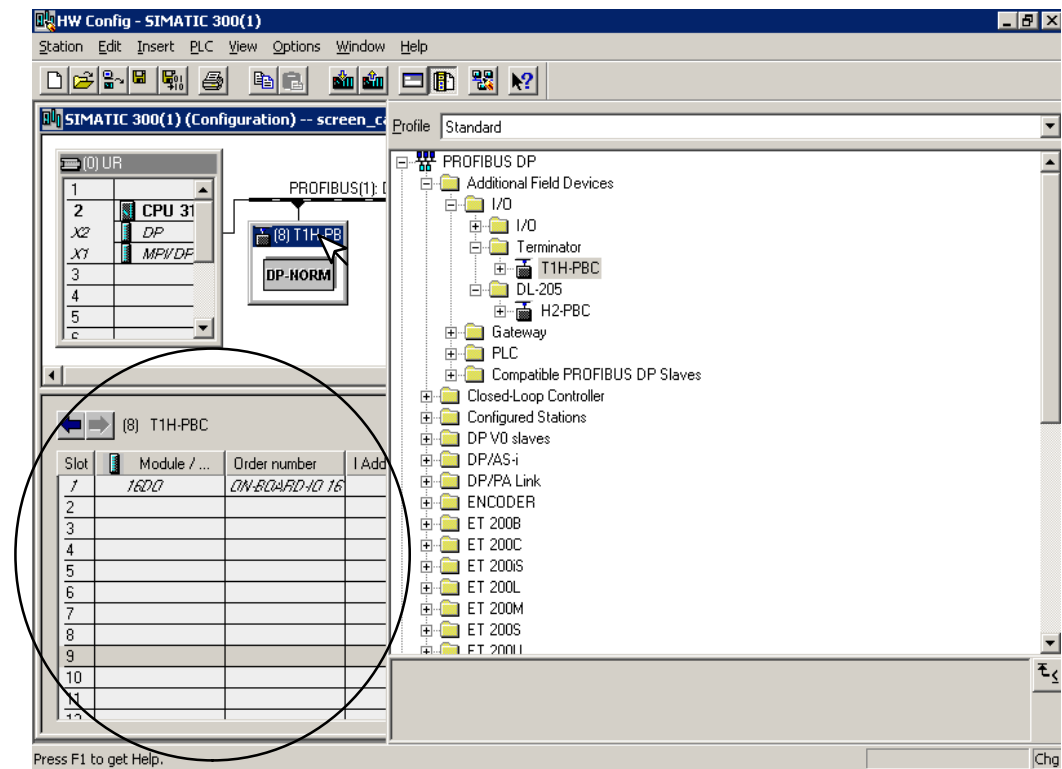


When the mouse button is released at the network node, the **Properties** window will appear so the correct node address can be entered. The transmission baud rate can be changed at this time also. Click **OK** when finished.



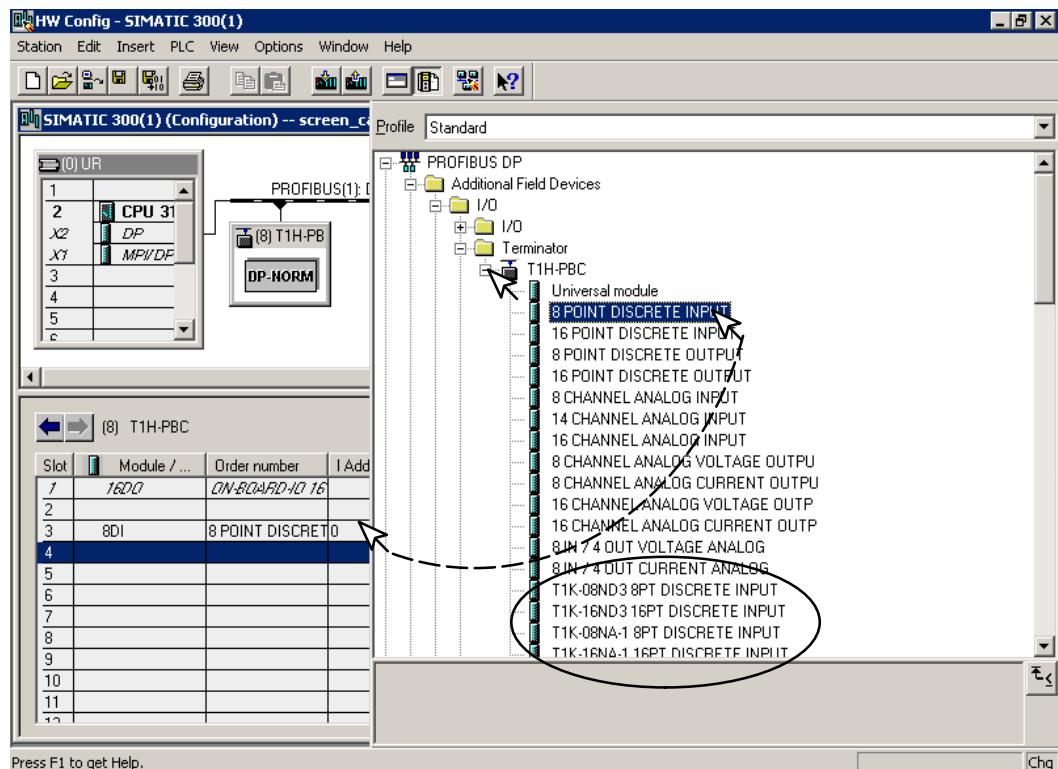
Now that the T1H-PBC is a node on the Profibus network, the Terminator I/O needs to be added to the DP Base Controller.

7. Open the T1H-PBC configuration window by clicking on T1H-PBC at the node.



Open the T1H-PBC I/O list by clicking on the + sign next to T1H-PBC. Now you can choose the I/O modules which are installed in your Terminator base. You have the option of selecting the generic I/O or the Terminator I/O part number. The generic name is selected in this example.

8. Either click on the I/O name that you want and drag it to the configuration table to the left or double click on the I/O name and it will automatically go to the configuration list.



After you have finished configuring the I/O for the T1H-PBC DP Slave, the configuration window will look like the example below.

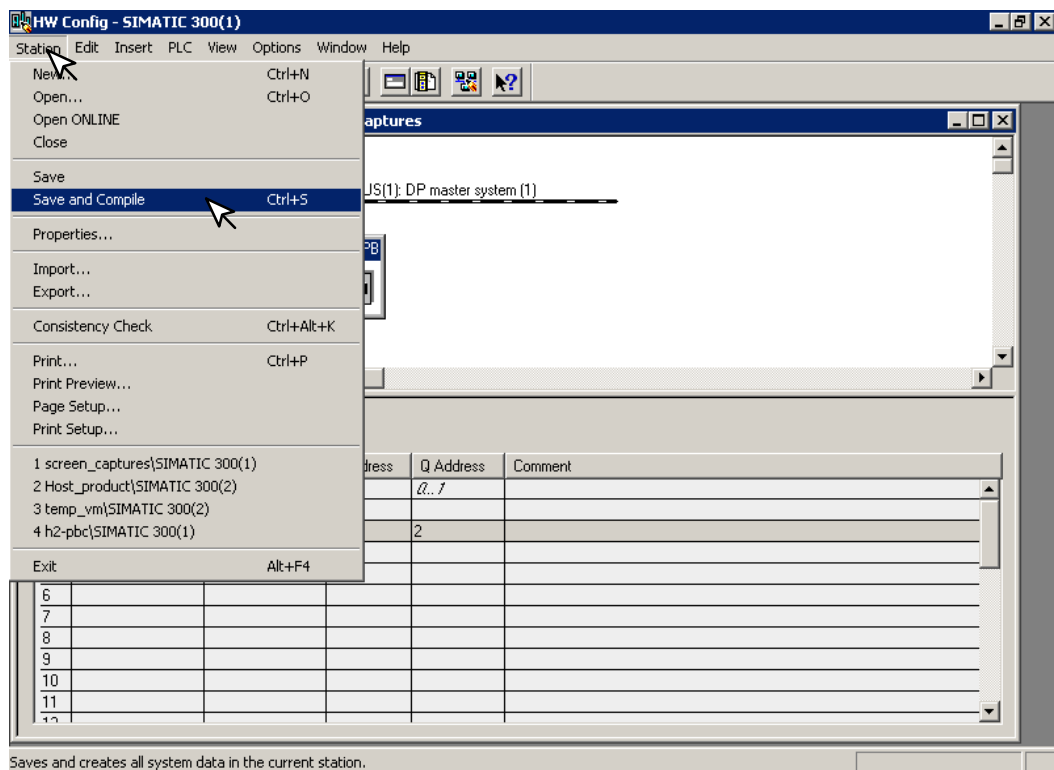
The screenshot displays the HW Config software for a SIMATIC 300(1) PLC. The hardware rack configuration is as follows:

| Slot | Module / ... | Order number | I Address | Q Address | Comment |
|------|---------------|---------------------|-----------|-----------|---------|
| 1 | 16DO | 6ES7-344-1EX30-0AB0 | | 0...1 | |
| 2 | CPU 314C-2 DP | 6ES7-314-6CG03-0AB0 | | | |
| 3 | MPI/DP | 6ES7-312-7CG03-0AB0 | | 2 | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |

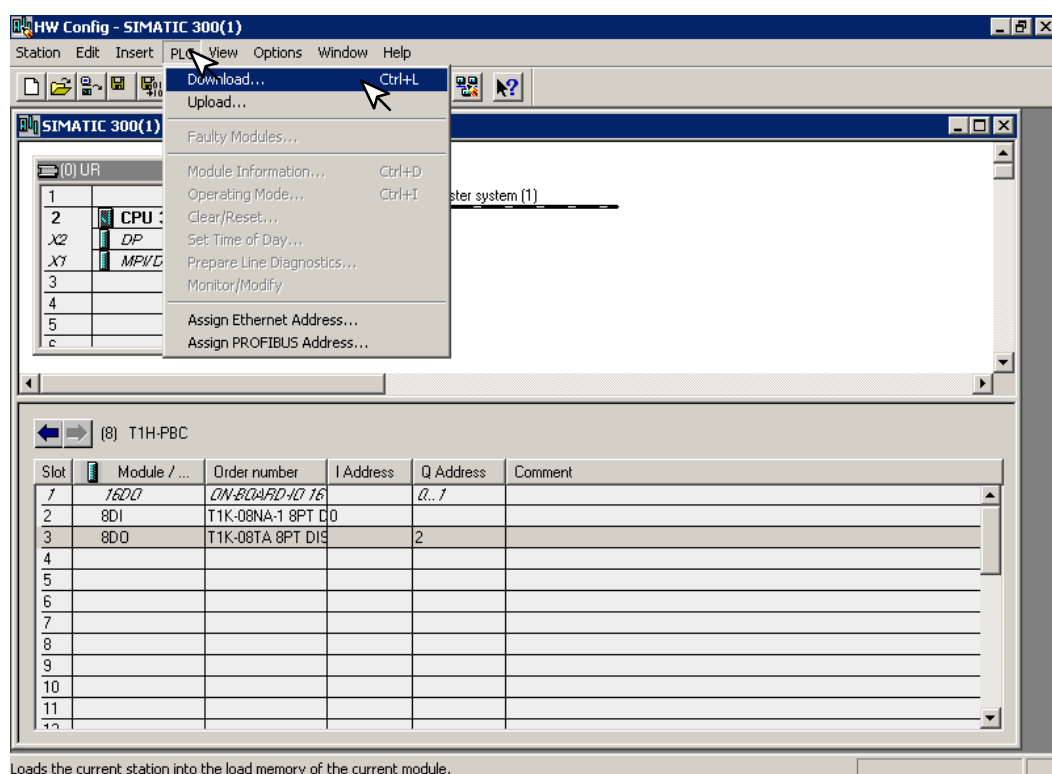
The detailed view of the T1H-PBC module shows the following configuration:

| Slot | Module / ... | Order number | I Address | Q Address | Comment |
|------|--------------|---------------------|-----------|-----------|---------|
| 1 | 16DO | 6ES7-344-1EX30-0AB0 | | 0...1 | |
| 2 | 8DI | T1K-08NA-1 8PT DI | | | |
| 3 | 8DO | T1K-08TA 8PT DI | | 2 | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |

8. Now, click on **Station**, then click on **Save and Compile** update your project. This will save the project for downloading to the PLC.



9. Select **PLC** and **Download...** the hardware setup that was saved.



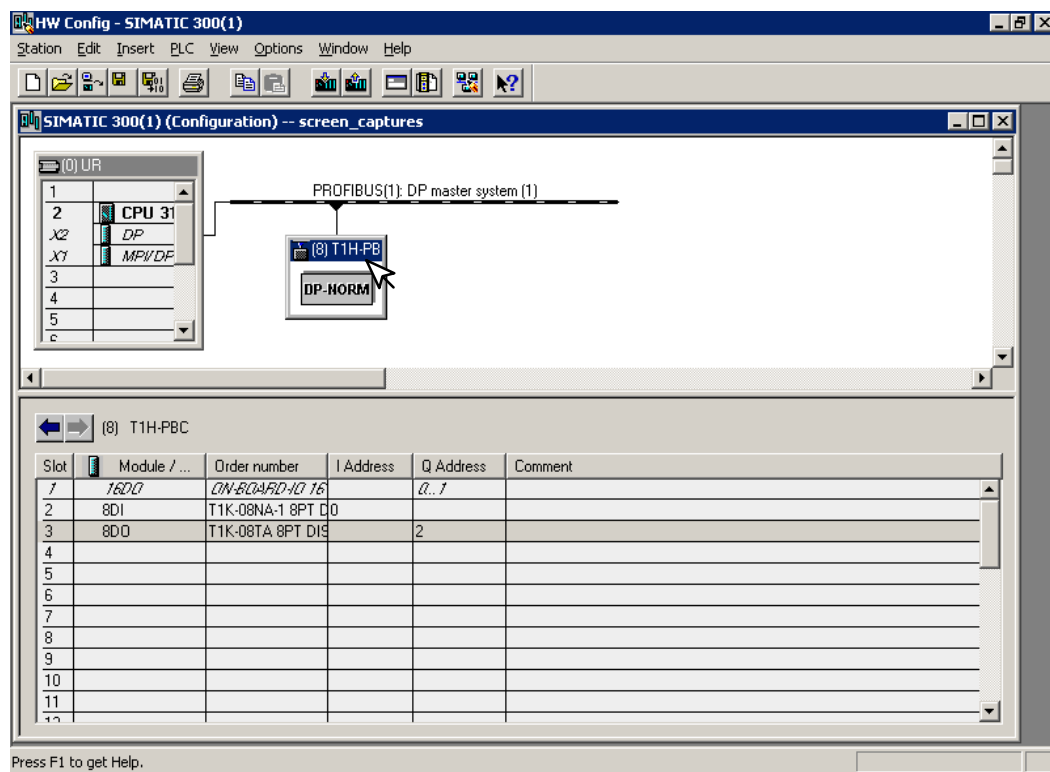
Hot-Swap Setup

Hot-Swap: Automatic Mode

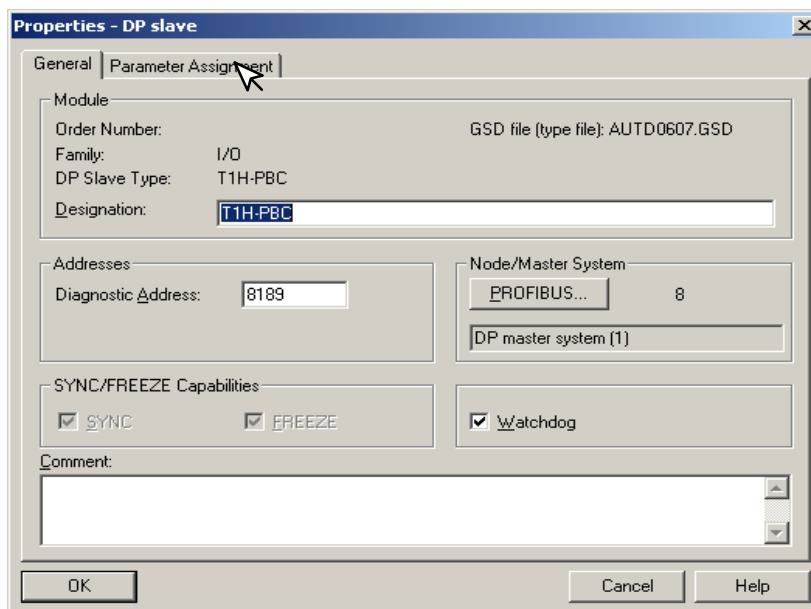
The Hot-Swap feature for the T1H-PBC DP Slave is set to Auto I/O reconfiguration in the GSD parameters by default (refer to 2-11). Auto Hot-Swap allows a Terminator I/O module to be removed from the base and replaced with a identical module without turning OFF the power to the Terminator base power supply.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

Hot-Swap: Manual Mode Reset

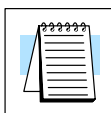
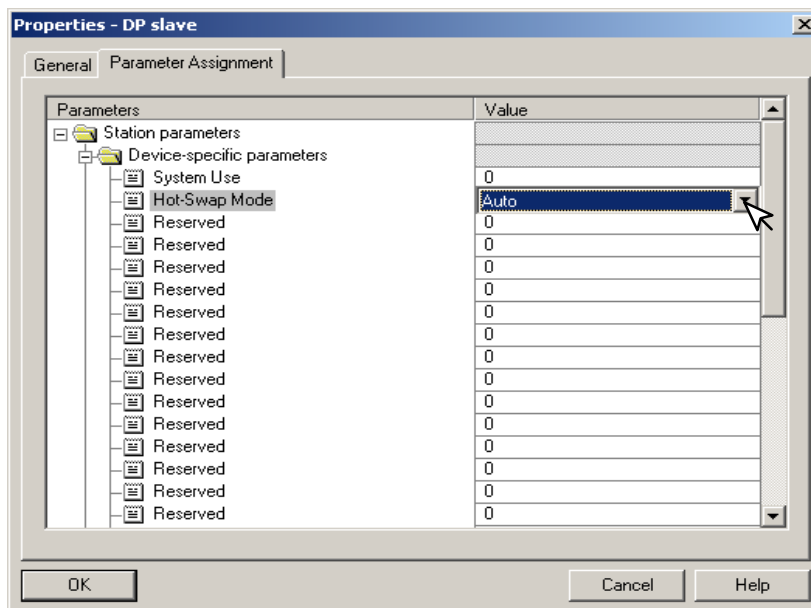
If your system requires the Manual Hot-Swap I/O reconfiguration feature, it will need to be selected during this initial setup procedure. This is done in the DP slave properties window. To do this, double click on the T1H-PBC node in the Configuration window to open the Properties window.



Now select **Parameter Assignment** to open the window.



In the window **Parameter Assignment** window, click on **Hot-Swap Mode**. **Auto** will appear in the **Value** row opposite the selection. Click on the down arrow for a drop-down window to appear so that **Manual** can be selected. Click on **OK**. The T1H-PBC is now in the manual Hot-Swap Mode.



For manual Hot-Swap I/O reconfiguration to work properly, the user program will need to use Object Blocks 82, 86 and 122. Refer to the Siemens S7 manual for the proper use of these object blocks.