Siemens Profibus Network Set up with T1H–PBC

In This Appendix....

— Siemens Profibus Network Setup with a T1H–PBC

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

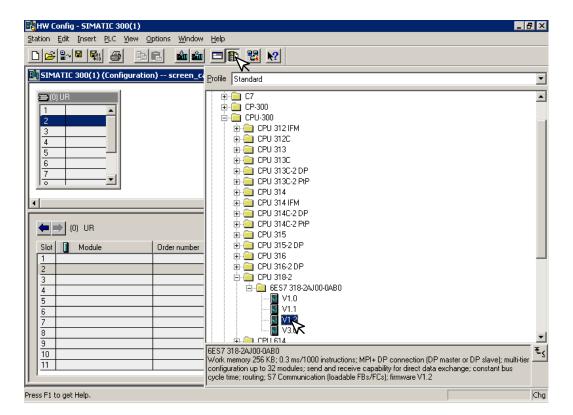


Setup a T1H–PBC on Siemens Profibus Network

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 <u>N</u>ew, and OK.

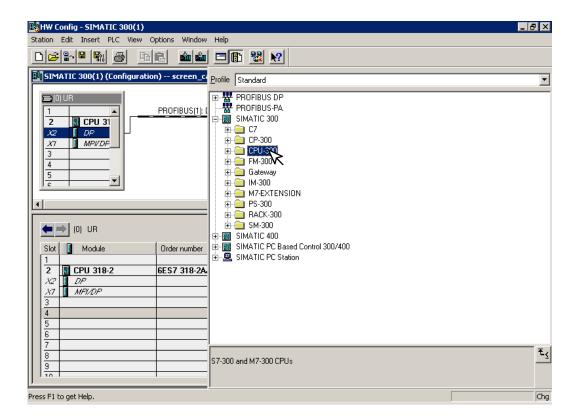
Properties	- PROFIBUS i	nterface DP (R0/52.1)			×
General	Parameters				
<u>A</u> ddress:			If a subnet is selected the next available add		
<u>S</u> ubnet:					
not	networked			<u>New</u> P <u>r</u> operties Delete	
	2		Ca	ncel Help	

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**.

Properties - New subr	net PROFIBUS	×
General Network Se	ttings	_,
<u>N</u> ame: <u>S</u> 7 subnet ID: Project path: Storage location of the project:	PROFIBUS(1) 0026 - 0004 screen_captures C:\Siemens\Step7\S7proj\screen_c	
<u>A</u> uthor:		
Date created: Last modified: <u>C</u> omment:	21.03.2002 17:10:54 21.03.2002 17:10:54	
ок 🙀	Cancel Help	

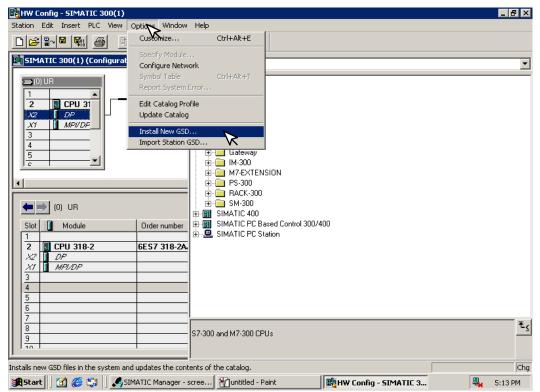
Once the processor has been selected and the DP network is enabled, the configuration window should look like the diagram below.



E–5

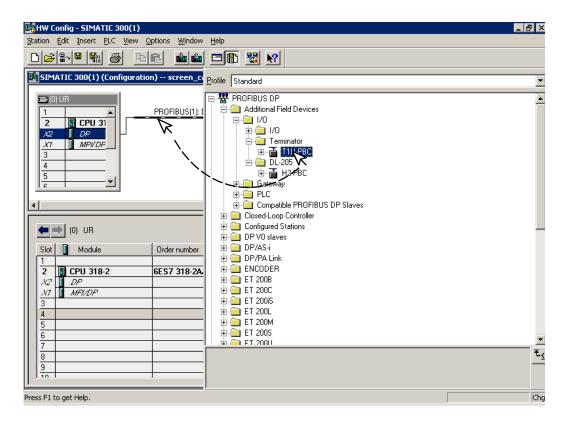
The GSD file will need to be installed now.

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.



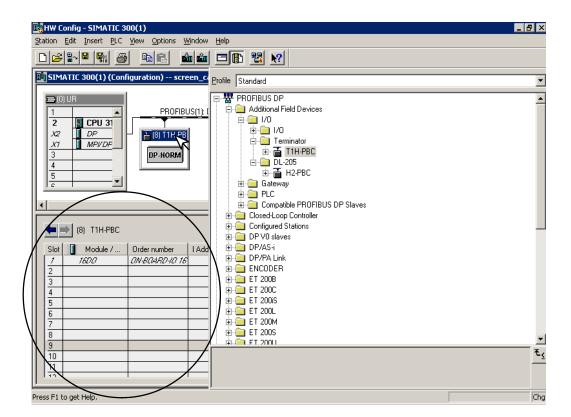
When the mouse button is released at the network node, the **Properties** window will appear so the correct node address can be entered. The transmission baud rate can be changed at this time also. Click **OK** when finished.

Properties - PROFIBUS interface T1H-PBC	×
General Parameters	
Address:	
Subnet:	
PROFIBUS(1) 1.5 Mbps	<u>N</u> ew
	Properties
	Dejete
ОК	ncel Help

F-

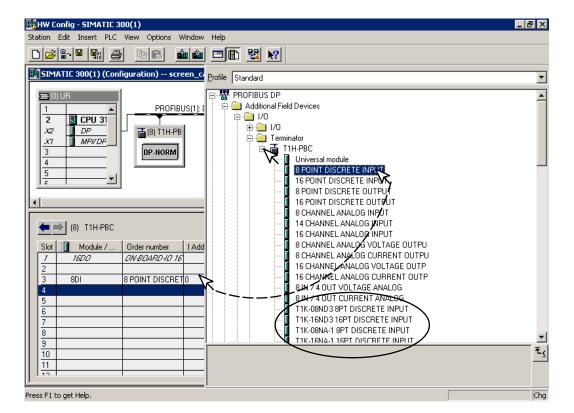
Now that the T1H–PBC is a node on the Profibus network, the Terminator I/O needs to be added to the DP Base Controller.

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 chose 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.

🔣 HW Config - SIMATI	300(1)				_	8 ×
Station Edit Insert Pl	C <u>V</u> iew <u>O</u> ptions <u>V</u>	<u>M</u> indow <u>H</u> el	р			
	5 <u>r</u>	10 🛍 🖻	1	?		
III SIMATIC 300(1) (C	onfiguration) scr	een_captur	es			
(0) UR 1 2 CPU 31 X2 DP X7 MPVDP 3 4 5 c c		ROFIBUS(1):) T1H-PB -NORM	DP master syste	<u>m (1)</u>	▲ ▼	
(8) T1H-PB	;					
Slot 🚺 Module / .	Order number	I Address	Q Address	Comment		
1 16DD	ON-BOARD-IO 16		a1		<u> </u>	
2 8DI	T1K-08NA-1 8PT [
<u>3 8D0</u>	T1K-08TA 8PT DI	9	2			
4						
5						
7			+			
9						
10						
11					_	
112		1				
Press F1 to get Help.						

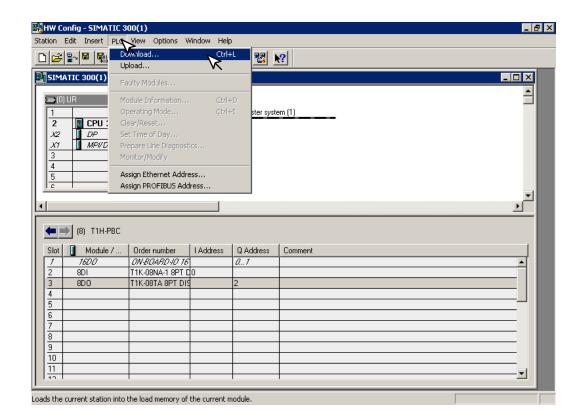
Q

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

🖳 HW Config - SIMATIC 300(1)		_ 8 ×
Station Edit Insert PLC View Options Window	w Help	
New Ctrl+N		
Open Ctrl+O Open ONLINE	aptures	- D ×
Close	aptures	
Save	-	
Save and Compile Ctrl+S	JS(1): DP master system (1)	
Properties	-	
	- 28	
Import Export		
	- <u>P</u>	
Consistency Check Ctrl+Alt+K		
Print Ctrl+P		
Print Preview Page Setup		
Print Setup		
1 screen_captures\SIMATIC 300(1)	dress Q Address Comment	
2 Host_product\SIMATIC 300(2)		
3 temp_vm\SIMATIC 300(2)		
4 h2-pbc\SIMATIC 300(1)	2	
Exit Alt+F4		
6		
8		
9		
<u> </u>		

Appendix E Siemens Network Saves and creates all system data in the current station

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 proceedure. 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.

🖳 HW Config - SIMATIC 3	00(1)			_ 8	X
Station Edit Insert PLC	<u>V</u> iew <u>O</u> ptions <u>V</u>	√indow <u>H</u> el;	5		
				<u>N?</u>	
IN SIMATIC 300(1) (Conf	iguration) scre	en_captur	es		
🚍 (0) UR				±	
1 A	Pf	ROFIBUS(1):	DP master syste	tem (1)	
X2 DP		THUDD			
<u>X1 MPI/DF</u>		T1H-PB			
4 5	DP-	NORM			
•				×	
(8) T1H-PBC					
Slot 🚺 Module /	Order number	I Address	Q Address	Comment	
1 1600	ON-BOARD-IO 16		Q., 1	_	
2 8DI 3 8D0	T1K-08NA-1 8PT D T1K-08TA 8PT DIS		2		
4			2		
5					
6					
7					
8					
9					
10 11					
1					
Press F1 to get Help.					

Properties - DP slave		X
General Parameter As	ssign vent	
Module Order Number: Family: DP Slave Type:	I/O T1H-PBC	GSD file (type file): AUTD0607.GSD
Designation:	T1H-PBC	
Addresses Diagnostic <u>A</u> ddress:	8189	Node/Master System PROFIBUS 8 DP master system (1)
	abilities	
☑ SANC	M EREEZE	✓ Watchdog
<u>C</u> omment:		
		A V
OK		Cancel Help

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.

Parameters	Value	-
🗉 🔄 Station parameters		
🖕 🔄 Device-specific parameters		
– System Use	0	
– Hot-Swap Mode	Auto	K
–≝ Reserved	0	\sim
–≝ Reserved	0	
- Reserved	0	
–≝ Reserved	0	
–≝ Reserved	0	
– Reserved	0	
–)≝ Reserved	0	
– 🗐 Reserved	0	
– 🗐 Reserved	0	
– 🗐 Reserved	0	
– 🕮 Reserved	0	
- 🗐 Reserved	0	
- 🗐 Reserved	0	
- 🖼 Reserved	0	



For manual Hot–Swap I/O reconfiguration to work properly, the user program will need to use 0bject Blocks 82, 86 and 122. Refer to the Siemens S7 manual for the proper use of these object blocks.