

ProfinetCommander User Manual

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ProfinetCommander User Manual V1.0

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1.0 Version History

Version 1.0: Release

2.0 Introduction

The PROFI Interface Center (PIC) in Johnson City, Tennessee has created the ProfinetCommander application, which runs as a PROFINET IO controller on a PC with an easy-to-use graphical user interface. With ProfinetCommander, the user can test a PROFINET network and the IO Devices connected to it. With the Windows graphical interface the user can view the configuration, I/O data, parameters, alarms, and diagnostic data. The output data to the IO devices can also be changed.

E ProfinetCommander - C:\Temp\pcstationpndemo.cfg					<u> </u>
Open Config File Read Diagnostics Configuration	Devices			Select Run Mode	 Operate Offline
□- [™] PCStation	Device Name	Input	Status	Output	Status
🖨 🚰 (007) IE-PB-Link-D77D	IE-PB-Link-D77D	0000	GOOD	0000	GOOD
🗄 押 (003) PROFIBUS to QC Port Gate	SCALANCE-X-208				
🖨 📰 (006) SCALANCE-X-208	abc-prt	0493 0000	GOOD GOOD	0073	GOOD
🛄 RJ45 Port	ILB-PN-DIO	0000 0000	GOOD GOOD	0000	GOOD
	FL-IL-BK	00e000000000000	GOOD GOOD	000000000000000000000000000000000000000	GOOD GOOD
	IM151-3PN-HF	00 00	GOOD GOOD	00	GOOD
 RJ45 Port RJ45 Port RJ45 Port RJ45 Port INPUT: 002 bytes INPUT: 002 bytes OUTPUT: 002 bytes OUTPUT: 002 bytes INPUT: 00	Properties Property Name IP Address Subnet Mask Slot Number 02/09/06 09:11:41 Device 4 is c 02/09/06 09:11:43 Device 3 is c 02/09/06 09:11:48 Device 3 is c	Property Value 192.168.1.51 255.255.255.0 2 nline nline omodule return at s nline	lot 1, subslot 1		
	02/09/06 09:11:52 Device 5, su 02/09/06 09:12:17 Device 1, dia 02/09/06 09:12:17 Channel Nu ◀	omodule return at s ignostic at slot 1, si imber: 0, Error: 17 (ilot 3, subslot 1 ubslot 1, Channel Sensor or load vo	Diagnostic, Itage missing)	v

3.0 Hardware and Software Requirements

The following items are required for the ProfinetCommander application to operate correctly.

- PC with Ethernet port
- Siemens "SIMATIC NET Networking for Industry" CD, version 11/2003 + SP1 or newer. The following software must be installed from the CD:
 - SOFTNET PN IO (PROFINET IO controller communications software for PC)
 - SIMATIC NCM PC (configuration tool). If Siemens STEP7 is already installed, it will be used instead (STEP7 V5.3 SP3 or newer is required).
- Windows operating system supported by the SIMATIC NET CD (Windows 2000/XP Professional, see CD).

Before running ProfinetCommander the SIMATIC NET CD must be installed.

Warning: If you have a firewall installed on your PC, it may block the SOFTNET PN IO communications on the Ethernet port. In this case ProfinetCommander will not be able to communicate with the PNIO devices.

4.0 Configuring the PC Station and the PROFINET IO Network

Before starting ProfinetCommander, the following configuration steps must be performed:

- Select the IP addresses for the PC and the connected PROFINET IO devices.
- Set up the PC station configuration using the Station Configuration Editor.
- Use the SIMATIC NCM PC (or STEP7) configuration tool to configure the PROFINET IO network.
- Download the configuration to the PC station.
- Download the device names to the PROFINET IO devices.
- Export the configuration to a file.

4.1 Select the IP Addresses

Before starting the configuration process you should select the IP addresses for the PC and the PROFINET IO devices that will be connected so that they are all on the same network and have the same subnet mask. For example:

	IP Address	Subnet Mask
PC	192.168.1.51	255.255.255.0
IO Device 1	192.168.1.1	255.255.255.0
IO Device 2	192.168.1.2	255.255.255.0

If the Ethernet port on your PC is connected to a corporate network, it would be advisable to keep the PROFINET network separate. Some options are:

1. Use the existing Ethernet port:

- Disconnect the PC from the corporate network and connect it to the PROFINET network.
- Change the PC IP address and subnet mask to match the PROFINET network.
- Run ProfinetCommander software.
- When finished, connect the PC back to the corporate network.
- Restore the PC IP address and subnet mask back to their original settings.
- 2. Add a second Ethernet port to the PC:
 - Connect it to the PROFINET network
 - Set a fixed IP address and subnet mask to match the PROFINET network
 - Run ProfinetCommander software.

Set the IP address on the PC using the Windows software. Select **Start->Settings->Network Connections** and double-click on the appropriate Ethernet connection.

Setwork Connections				Double-click on the	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> oo	ls Adva <u>n</u> ced <u>H</u> e	elp		Ethernet connection	R
🕞 Back 👻 🕥 🗸 🏂 🔎 S	iearch 🛛 🔂 Folder	's 🕼 🎯	X 🔊		
Address 💊 Network Connections				-	🗲 Go
Name	Туре	51	Device Nar	ne	
LAN or High-Speed Internet					
Local Area Connection	LAN or High-Sp	Connected	Broadcom I	NetXtreme 57xx Gigabit Controller	
Local Area Connection 2	LAN or High-Sp	Connected	FEM656C-3	3Com Global 10-100+56K CardBus PC	Car
^{((P)} Wireless Network Connection	LAN or High-Sp	Not connected	Dell Wirele:	ss 1370 WLAN Mini-PCI Card	-
•					

Select the Properties button to bring up the IP Properties screen. Select "Use the following IP address" and enter the IP address and subnet mask. Select OK in all the dialogs.

🕹 Local Area Connection 2 SI	tatus ?X
General Support	Internet Protocol (TCP/IP) Properties
Connection	General Select button
Status: Duration: Speed:	You can get IP settings assigned automatically if your network support this capability. Otherwise, you need to ask your network administry for the appropriate IP settings.
	O Obtain an IP address automatically Use the following IP address: IP address: 192 . 168 . 1 51
Activity Sent –	Subnet mask: 255.255.0 Default gateway:
Packets: 29,1	691 Obtain DNS server address automatically
	Preferred DNS server: Enter IP address and Subnet mask Alternate DNS server:
<u>Properties</u> Disable	Advanced OK Cancel
Select Properties	

4.2 Edit the Station Configuration

- a) Execute the Station Configuration Editor by double-clicking its icon 🖳 in the Windows System Tray toolbar. It can also be called up from the desktop icon or the Start menu.
- b) Use the "Station Name..." button to set the station name as desired (remember the name because it must be used later when creating the PROFINET IO configuration).

s	Station:	PCStation		Mode	: RI	JN_P		
n Name	Index	Name	Туре	Ring	Status	Run/Stop	Conn	
	1							
	2							
	3							
	4							
	5							
	5							
	/ 0							
	a a							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
1	vew dia	gnostic entry arrived!						
		<u>A</u> dd	<u>E</u> dit		<u>D</u> elete		Ring <u>O</u> N	
	Ste	tion Name	Import Station				Disable Sta	tion

c) Select Index 1 and then use the "Add..." button to add an Application.

	PCStation		Mode:	RI	JN_P	
Index	Name	Туре	Ring	Status	Run/Stop	Conn
2						
Add	Component					
	Type: 🛛	Application				
		pplication E General				
	Index:)PC Server				
ation	Name: A	pplication				
	1					
		8				
	Parameter assig.:					
	Parameter assig.:					
	Parameter assig.: [
	Parameter assig.: [Cancel	Help
	Parameter assig.: [OK				Cancel	Help
	Parameter assig.: [OK Add	Edit		Delete	Cancel	Help Ring QN
	Parameter assig.: [Edit		 Delete	Cancel	Help Ring ON

d) Select Index 2 and use the "Add..." button to add the Ethernet card, "IE General", and select the appropriate card if more than one exists as shown below.

Sta	tion Confi	guration Editor - [ONLINE]					×
C	omponer	its Diagnostics	Configuration Info		_			
	Station:	PCStation		Mode:	RI	UN_P		
	Index 1	Name Application	Type Application	Ring	Status	Run/Stop	Conn 🔺	
	2 Add Co	mnonent			Cance.		X	
		T						
		Туре:	IE General					
		Index:	2 💌					
Select IE General	_	Nome	IE Conorol					
	_	Name.	ic General					
	P	arameter assig.:	ISO Ind. Ethernet -> 3Cor	n 3C920 In a 3C920 In	tegrated		om 3C920 Inte	
			ISO Ind. Ethernet -> 3Con ISO Ind. Ethernet -> 3Con ISO Ind. Ethernet -> Dell \	n 3C920 Int Wireless V	tegrated VLAN 135	<board 2="">,TC <board 2="">,TC</board></board>	P/IP -> 3Com 3C9 CP/IP -> Dell Wire	
Select Ethernet Card			ISO Ind. Ethernet -> Xirco	m Cardbu	s Etherne	"TCP/IP -> Xir	com Cardbus Eth	
Select Ethemet Caru		ОК				Cancel	Help	
		Add	Edit		Delete		Ring ON	
	Sta	tion Name	Import Station				Disable Station	
		1						
_	OK						Help	

e) After hitting OK the component properties of your Ethernet Adapter appear. Check the IP address, subnet mask, and gateway. Select the Network Properties button if changes need to be made.

AC address:	00-0B-DB-23-4C-E5	Network Properties
Paddress:	161 . 218 . 183 . 191	Activate ISO protocol only (for H or interne)
Subnet mask:	255 . 255 . 254 . 0	(ior n systems)
Standard gateway:	161 . 218 . 182 . 1	

f) Check that the Run/Stop column has green indicators. If not, select the Diagnostics tab to determine the error.

tation:	PCStation		Mode:	RI	JN_P		1
Index	Name	Tyne	Bing	Status	Bun/Ston	Conn	
1	Application	Application	rang	Manao		001111	_
2	IE General	IE General		8	ŏ		
3		IE denoral		LIBERT?			
4							
5							
6							
7				/			
8							
9			7 /				
10							
11							
12	C	configuration	n OK				
13							
14							
15							
16							
17							
18							
19							
20							
- 21							
lew dia	gnostic entry arrived!						
	Add	<u>E</u> dit		<u>D</u> elete		Ring <u>O</u> N	
<u>S</u> ta	ation Name	Import Station				Disab <u>l</u> e Sta	tion

4.3 Configure the PROFINET IO Network

 a) Execute SIMATIC NCM PC Manager (or STEP7 SIMATIC Manager). Create a new project with File->New. Select "Insert->Station->SIMATIC PC Station". Change the name to match the PC station name in the Station Configuration Editor (e.g., PCStation) as shown below.

PN_IO_Project C:\Program File	s\Siemens\Step7\s7proj\te		[Station Configuration Editor - [ONLINE]
PN_IO_Project	💵 Configuration		Components Diagnostics Configuration Info
		_	Station: PCStation
			Index Name Type
			1 Application Application
			2 🎼 IE General IE General

b) Next, the configuration download interface is set up for the PC Ethernet card. Select "Options->Set PG/PC Interface".



c) Select the Ethernet card that is assigned to IE General in the Station Configuration Editor and hit OK.

Set PG/PC Interface	×
Access Path	
Access Point of the Application: S70NLINE (STEP 7) -> TCP/IP(Auto) -> Xirco (Standard for STEP 7) Interface Parameter Assignment Used)	om Cardbus Etherne
TCP/IP(Auto) -> Xircom Cardbus Etherne	P <u>r</u> operties
ETCP/IP -> Xircom Cardbus Etherne Image: A stress of the st	Diagnostics Copy Dejete
(Assigning Parameters for the IE-PG access to your NDIS CPs with TCP/IP Protocol (RFC-1006))	
Interfaces	
Add/Remove:	Sele <u>c</u> t
Са	ancel Help

d) Select the PCStation and then double-click "Configuration" to bring up SIMATIC NCM PC Config (or STEP7 HW Config).



e) Insert the Application and IE General into the configuration matching the configuration previously set with the Station Configuration Editor as shown below.

HW Config - [PCStation (Configu	iration) PN_IO_CBA_PN_COMM	ANDER]					_ 🗆 ×
Station Edit Insert PLC View	Options <u>W</u> indow <u>H</u> elp						_ & ×
	al 🚵 💼 📼 🕺 м	1					
Image: Constraint of the second se		3	Ethernet(1)	PROFII	Eind: Profile: BIM SIM BIM SIM BIM BIM BIM BIM BIM BIM BIM BIM BIM BIM BIM	Standard ATIC 300 ATIC 400 ATIC 400 ATIC PC Based Control 3 ATIC PC Station Controller P Industrial Ethernet CP 1411 CP 1413 CP 1511 CP 1512 CP 1512 CP 1604 CP 1612 CP 1613 CP 1616 LF General	■x mt mi x 00/400
(1) IM151-3PN-HF				\mathbf{i}		···뷰바 SW V6.2 SP1 CP PROFIBUS HMI	
Slot 🚺 Module	Order Number	IAddress	Q address	D C	N 🗄 🧰 i	Jser Application	
0 1 1.151-3PN-HF 1 1.1 PM-E DC24V	6ES7151-38A20-0AB0 6ES7138-4CA00-0AA0			<i>818t</i> ▲ 8187		Application	
2 2DO DC24V/0.5A ST	6ES7132-4BB00-0AA0		0			🐂 🚺 SW V6.3	
	6ES7131-4BB00-0AA0	0				OPC Server	-
	0E37 131-48800-0AAU				PROFIBU	S-DP slaves for SIMATIC	S7 T
6					M7, and C	7 (distributed rack)	
7						, ,	
18				▼			
) Press F1 to get Help.					1)		

f) After inserting IE General the following properties screen is displayed. Select the 'New' button to create a new Ethernet network, normally called "Ethernet(1)", and hit OK. Now ensure that your IP address, subnet mask, and gateway address (if applicable) are set properly, as they <u>need to match</u> your current Windows settings, and select OK when done.

Properties - Ethernet inte	erface IE General (R0/S2)	×
General Parameters		
Set MAC address / us	e ISO protocol	
MAC address:		
IP protocol is being us	ed	
IP address: 192 Su <u>b</u> net mask: 255	.168.1.51 Gateway .255.255.0 ☑ bo not use router	
<u>S</u> ubnet:	<u>A</u> ddress:]192.168.1.51	
not networked Ethernet(1)	<u>N</u> ew <u>Properties</u> Delete	
,		
ОК	Cancel Help	
	Internet Protocol (TCV/IP) Properties General You can get IP settings assigned automatically if your network supp this capability. Otherwise, you need to ask your network administrate the appropriate IP settings. O Detain an IP address automatically • Use the following IP address: IP address: IP address: Subnet mask: Default gateway:	orts or for

g) Next, right click on the IE General Card and insert the PROFINET IO System.



The Ethernet network should now be displayed as shown below.



 h) Drag and drop the desired PROFINET IO devices from the catalog in the right window (under the PROFINET IO category) to the Ethernet(1) line and insert the appropriate modules in the lower left window as shown below. Also, when a device is inserted, set the IP address as shown below.



 i) Double-click each PROFINET IO Device to display its properties and set the Device Name. The device name must match the name in the physical device. Downloading a name to an IO device is described later. If the IP address is not correct, select "Ethernet..." to change it. Make sure the IP address for IE General and the IP addresses for the IO devices are on the same network (addresses match through the subnet mask number of bits). Note: when the IO controller starts communication with the IO device, it will find the device by name and then set the IP address to this configured value.

Properties - ET 2005				×
General				
Short Description:	ET 200S Finely-graduated modular distributed I	VO device, protection type IP20	Ă	
Device Name	IM151-3PN-HF			
GSD File:	gsdml-v1.0-siemens-et200s-20051 C <u>h</u> ange release number	1007.xml		
- Node / PN IO system-				
De <u>v</u> ice Number:	1	PROFINET-IO-System (100)		
IP Address:	192.168.1.105	<u>E</u> thernet		
🔽 Assign [P address	via IO Controller			
<u>C</u> omment:				
				×
ОК			Cancel	Help

j) Save and compile the project HW configuration by selecting the icon shown.



4.4 Download the Configuration to the PC Station

- a) Warning: If you are changing an existing configuration, make sure that ProfinetCommander is not running before downloading or HW Config will lock up.
- b) Download the configuration by selecting the icon shown.



c) Select OK or Yes to all the dialog pop-ups. In the "Select Node Address" window, make sure that the "Station name" field has the PC Station name and the "CPU name" field has "IE General". If not, then there is a configuration mismatch between HW Config and the Station Configuration Editor, and the download will not work. Check the PC IP address in both configurations. Fix the mismatch and try again.

Select Target Module	Select Node Address	×
Target modules:	Over which station address is the programming device connected to the module Stationmanar	ger?
Module Index Application 1 IE General 2 Stationmanager 125	Back: 0 Station name Slot 125 m	me sent
	Target Station: Image: Local Image: Comparison of the comp	
<u>S</u> elect All	Enter connection to target station: IP address MAC address Module type Station name CPU name Plant designation I92.168.1.51 CP/IE PCStation IE General	
OK Cancel Help	Accessible Nodes "IE General " must be present	٦
Stop Target Modules		
The following modules will be stopped for loading of the system data. Module Index Application 1 IE General 2	OK Cancel H	lelp
	Download (13:4363) The module IE General [Index 2] is in the STOP mode. Do you want to start the module now (complete restart)?	
OK Cancel Help	Yes No	

d) If there is an error during the download, call up the Station Configuration Editor and select the "Diagnostics" tab. Check the messages at the top that correspond to the time of download.

mponen	ts Diagnostics Conf	iguration Info		
Station:	PCStation		All entries	-
No.	Time stamp	Subsystem	Event	
48	7/14/2006 9:07:01	Station Mana	ager The processing of the properties mod	lule
47	7/13/2006 5:28:17	' Station Mana	lager The processing of the properties mod	lule
46	7/13/2006 5:27:56	i Station Mana	lager The processing of the properties mod	lule
45	7/12/2006 5:22:49	I IE-Converter	r Index 2: The module was reconfigure	s b:
44	7/12/2006 5:22:15	i Proxy	A default SDB was created for the pr	оху
43	7/12/2006 5:22:14	Station Mana	lager The component was added at index	2 ir
42	7/12/2006 5:22:10	I IE-Converter	r Index 2: The module was entered for	co
41	! 7/12/2006 5:20:23	I Station Mana	ager The imported component with index 2	2 dc
40	7/12/2006 5:18:16	i Station Mana	lager The component at index 2 was delet	ed i
39	7/12/2006 5:18:16	i IE-Converter	r Index 2: The module was removed from the second secon	om
38	7/11/2006 10:51:5	i Station Mana	lager The processing of the properties mod	lule
37	7/11/2006 10:51:4	Station Mana	lager The name of the station was taken fr	om
36	7/11/2006 10:51:4	IE-Converter	r Index 2: The module was reconfigure	s b:
35	7/11/2006 10:51:4	Station Mana	lager The component was added at index	2 ir
34	7/11/2006 10:51:4	Station Mana	lager The component was added at index	1 ir
33	7/11/2006 10:51:2	Station Mana	lager The component at index 2 was delet	ed i
32	7/11/2006 10:51:2	IE-Converter	r Index 2: The module was removed to a second se	om
31	7/11/2006 10:51:1	Proxy	A default SDB was created for the pr	оху
30	7/11/2006 10:51:1	Station Mana	lager I he component at index 1 was delet	ed i ≚
The proc	essing of the properties	module of the cor	omponent with index 2 was aborted.	
Up	idate Cyc		Delete Export	

4.5 Download the PROFINET IO Device Names

- a) Warning: Before downloading PROFINET IO device names, make sure that ProfinetCommander is not running or HW Config will lock up.
- b) To assign PROFINET IO device names, the PC and the IO devices must be physically connected to the Ethernet network and operational.
- c) In HW Config select a PROFINET IO device and then select "PLC->Ethernet->Assign DeviceName...".

🔣 HW Config - [PCStatio	on (Configuration) PN_IO_CBA_P	N_COMMAN	DER]
🛄 Station Edit Insert	PLC View Options Window Help		
	Download Upload	Ctrl+L	
(0) PC	Download Module Identification Upload Module Identification to PG,.	,	-
2 HE General	Faulty Modules		Ethernet(1): P
<u>4</u> 5 6 7 8 9	Module Information Operating Mode Clear/Reset Set Time of Day Monitor/Modify	Ctrl+D Ctrl+I	
10	Update Firmware		
<u>p</u>	Save Device Name to Memory Card.		
	Ethernet	•	Edit Ethernet Node
	PROFIBUS	•	Verify Device Name
	Save Service Data		Assign Device Name

d) Check the "Device name" column to see if the name is not assigned or has the wrong name. If the name needs to be changed, select the appropriate name in the "Device name" pop-down box, select the device to be renamed in the "Available devices" window, and then select "Assign name".

		Select	Device Nam	ne Ex	tisting Device Na	me
ssign device name					×	
<u>D</u> evice name: Ava <u>i</u> lable device:	IM151-3PN-HF FL-IL-BK ILB-PN-DIO IM151-3PN-HF	evice type:	ET 200S		Assign na	ame
IP address	MAC address	Device type	Device name	<u>A</u> ssign name		
161.218.183.104 192.168.1.10 	00-30-11-02-38-66 08-00-06-96-9D-37 08-00-06-6B-FD-AD 08-00-06-6E-D0-CE 00-A0-45-02-FB-82 00-A0-45-02-FB-0E	ABC-PRT SCALANCE X-200 Switches ET 2003 IE/PB Link FL IL 24 BK-PN-PAC ILB PN 24 DI16 DI016I	abc-prt SCALAPCE-X-2 IM151-3PN-HF IE-PB-Link-D77 FL-IL-BK ILB-PN-DIO without na	-Node flashing test Duration (seconds): Flashing on	3 Elashing off	
<u>C</u> lose					Help	

4.6 Exporting the Hardware Configuration to a File

The hardware configuration must be exported to a file. The exported file provides the information for ProfinetCommander to display the configuration data and to communicate with the I/O devices. In HW Config select "Station->Export...".

₽ ₽	HW Conf	fig - [f	PCStatio	on (Co	onfigui	ation)	PN_IO_C	BA_PN_COMM	1AN
801	Station	Edit	Insert	PLC	View	Options	Window	Help	
	New. Open Open Close	 ONLIM	١E					Ctrl+N Ctrl+O	
1 2 3 4 5	Save Save Prope	and Co erties	ompile					Ctrl+5	
6 7 8	Impor Expor	rt rt							
9 1(11	Consi Check	istency k.CiR.C	Check iompatib	lity				Ctrl+Alt+K Ctrl+Alt+F	
	Print. Print I Page	 Previe Setup	w					Ctrl+P	

Designate an export file name, select the "Readable" format, and select Save.

Export	×
Export File: C:\Temp\PCStation.cfg	<u>B</u> rowse
Options Format □ Export default values	
Save	el Help

5.0 Using ProfinetCommander

5.1 Starting ProfinetCommander

Start ProfinetCommander either from the Windows Desktop icon or by selecting Start->Program->PROFI Interface Center->ProfinetCommander->ProfinetCommander.

5.2 Opening the HW Config Export File

Select the "Open Config File" button and then use the dialog to find and open the HW Config export file that was previously generated for the PC Station.

Configuration		Devices				
		Device Name	Input	Status	Output	St
Select Hardw	are Config Expor	ted File			?	×
Lool	k in: 🔀 SampleH	WConfigExports	•	🗢 🖻 💣 🖽	•	
2	#pcstationp	ndemo.cfg				
Recent						
Desktop						
						-
My Documer	nts					
My Compute	er					
My Network	< File name:	postationpndemo.	cfg	•	Open	
Places	Files of type:	Config Files		•	Cancel	

5.3 Configuration Display

ProfinetCommander reads the HW Config export file and displays the configuration in a tree view in the Configuration window. The tree can be expanded to show all the configured items (e.g., PCStation, PNIO devices, I/O modules, PROFINET/PROFIBUS proxies, PROFIBUS slaves). When a tree item is selected its properties and I/O data are displayed as shown below.



5.4 Setting the Run Mode to Operate

After clicking the "Operate" button, ProfinetCommander functions as a PNIO controller and establishes communication with the PNIO devices. The Alarms window logs each device as it comes online. The I/O data and status is displayed in the Devices window. Note that the I/O data for all the modules under the selected tree item is displayed. When in Operate or Clear mode, the I/O data and status, and also the alarms, are updated every 500 ms.



5.5 Setting IO Device Outputs

As shown in the figure above, double-click a cell in the Output column of the Devices window to change the output. The following dialog will appear. Enter a value in the edit window to send constant output values to the IO device. Select "Increment" to make the output count up starting from its current value each 500 ms display cycle. Note that there may be multiple output values in the display separated by spaces. Each one can be edited for the Manual mode (leave the spaces between entries). If "Increment" is selected, all of the listed outputs will be incremented.

Edit Outputs	×
© Increment (00FF) ☞ Manual	OK Cancel
0000	

5.6 Displaying Diagnostic Alarms

When a diagnostic alarm is received from a PNIO Device, it is displayed in the Alarms window as shown below. At startup, ProfinetCommander reads the GSD files for all the devices to get text for the diagnostic error codes. The text for the diagnostic error is also displayed if it is available. If not, consult the manufacturers documentation.

ProfinetCommander - C:\Temp\pcstationpndemo.cfg Open Config File Configuration	Devices			Select Run Mode	Operate Offline
□-₩ PCStation	Device Name	Input	Status	Output	Status
🖕 📰 (007) IE-PB-Link-D77D	IE-PB-Link-D77D	0000	GOOD	0000	GOOD
💼 🐖 (003) PROFIBUS to QC Port Gate	SCALANCE-X-208				
🖨 🚰 (006) SCALANCE-X-208	abc-prt	0493 0000	GOOD GOOD	0073	GOOD
	ILB-PN-DIO	0000 0000	GOOD GOOD	0000	GOOD
RJ45 Port	FL-IL-BK	00e000000000000	GOOD GOOD	000000000000000000000000000000000000000	GOOD GOOD
RJ45 Port	IM151-3PN-HF	00 00	GOOD GOOD	00	GOOD
	Properties Property Name IP Address Subnet Mask Slot Number	Property Value 192.168.1.51 255.255.255.0 2			
Diagnostic Alarm	Alarms 02/09/06 09:11:41 Device 6 is o 02/09/06 09:11:41 Device 4 is o	nline nline		fr	error Text om GSD File (if it exists)
	02/09/06 09:11:43 Device 5, sul 02/09/06 09:11:48 Device 3 is c 92/09/06 09:11:48 Device 5, sul 02/09/06 09:11:45 Device 5, sul 02/09/06 09:12:17 Device 1, dia 02/09/06 09:12:17 Channel Nt ↓	omodule return at s nline omodule return at s omodule return at s ignostic at slot 1, su mber: 0, Error: 17 (lot 1, subslot 1 lot 2, subslot 1 lot 3, subslot 1 ibslot 1, Channel I Sensor or load vo	Diagnostic, Itage missing)	•

5.7 Reading Diagnostics

A diagnostic alarm is sent from the IO device to the controller only when the error occurs. Once the controller acknowledges the alarm, it is not sent again. The diagnostic information is stored in the IO device and can still be read until the error goes away. To read the diagnostic errors stored in the IO devices, first select a Configuration tree item. The diagnostics for all of the devices under the tree item selected will be read. Then select the "Read Diagnostics" button.



The Diagnostic dialog shown below appears. Select the "Read Diagnostics" button in this dialog each time you want to read the diagnostics. The diagnostics have time stamps and are listed in reverse order, with the latest message at the top. A blank line is inserted each time "Read Diagnostics" is selected.

Diagnostics Read Diagnostics Stored in IO Devices	
Read Diagnostics	Close
Diagnostics	
07/14/06 10:46:56 Device 2, Ouput Address: 9, 0K 07/14/06 10:46:56 Device 2, Input Address: 1, 0K 07/14/06 10:46:56 Device 2, Input Address: 9, 0K 07/14/06 10:46:56 Device 1, Ouput Address: 0, 0K 07/14/06 10:46:56 Device 1, Input Address: 0, 0K 07/14/06 10:46:56 Device 2, Input Address: 1, 0K 07/14/06 10:46:56 Device 2, Input Address: 1, 0K 07/14/06 10:46:56 Device 1, diagnostic at slot 1, subslot 1, Channel I Number: 0, Error: 17 (Sensor or load voltage missing)	▲ Diagnostic, Channel
07/14/06 10:46:55 Device 2, Ouput Address: 9, 0K 07/14/06 10:46:55 Device 2, Input Address: 1, 0K 07/14/06 10:46:55 Device 2, Input Address: 9, 0K 07/14/06 10:46:55 Device 1, Ouput Address: 0, 0K 07/14/06 10:46:55 Device 2, Input Address: 1, 0K 07/14/06 10:46:55 Device 1, Input Address: 0, 0K 07/14/06 10:46:55 Device 1, Input Address: 0, 0K 07/14/06 10:46:55 Device 1, diagnostic at slot 1, subslot 1, Channel 0 Number: 0, Error: 17 (Sensor or load voltage missing)	Diagnostic, Channel
07/14/06 10:46:44 Device 2, Ouput Address: 9, 0K 07/14/06 10:46:44 Device 2, Input Address: 1, 0K 07/14/06 10:46:44 Device 2, Input Address: 9, 0K 07/14/06 10:46:44 Device 1, Ouput Address: 0, 0K 07/14/06 10:46:44 Device 1, Input Address: 0, 0K 07/14/06 10:46:44 Device 2, Input Address: 1, 0K 07/14/06 10:46:44 Device 2, Input Address: 1, 0K 07/14/06 10:46:44 Device 1, diagnostic at slot 1, subslot 1, Channel I Number: 0, Error: 17 (Sensor or load voltage missing)	Diagnostic, Channel