Woodhead Profibus Solution dramatically improves communication and the quality of the information you acquire and use.

Empowering you to access real-time information means fast data exchange, helpful diagnostics, full configurable and easy access to I/O data.
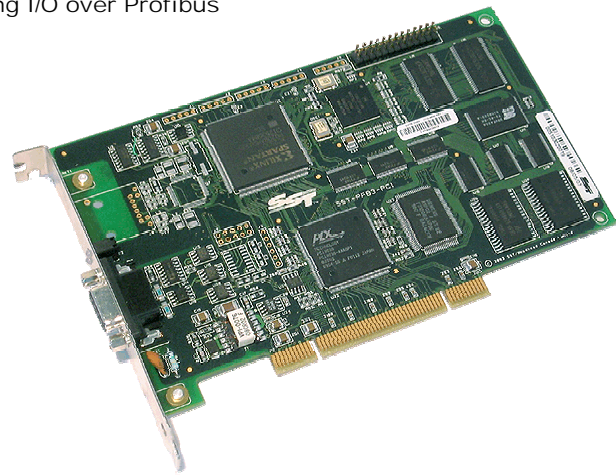
Profibus PB3 Interface Card

Best choice for controlling I/O over Profibus

Features

- **Simultaneous execution of Profibus protocols (DP Master, DP Slave and Send/Receive on FDL)**
- **Manages DP-V1 services**
- **OPC Data Access Server v3.0**
- **Easy portability to various operating systems through a dual port RAM interface**
- **Process-consistent data at the device level**
- **Internal Flash memory for configuration data storage**
- **Fast commissioning through DP Configuration and Network Diagnostic software**
- **Easy access to DP-V1 and PA variables from FDT frame applications**
- **MS-Windows 2000/NT/XP drivers**
- **24/7 Global technical support**

Protocols

- **Profibus-DP Master V0 Class1 & 2**
- **Profibus-DP Master V1 Class1 & 2**
- **Profibus DP Slave V0**
- **Profibus FDL (Layer 2)**

Typical applications

- **PC-Based Control, robot control**
- **Operator Interface, HMI / SCADA**
- **Network Configuration, Troubleshooting and Diagnostics**
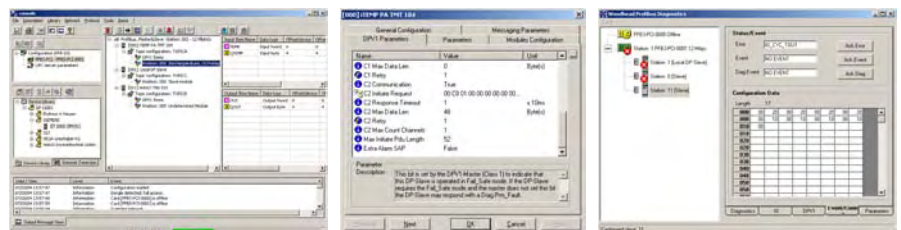- **Device Development**

Woodhead is a member of:
- PTO, PNO & France Profibus Trade organizations
- FDT Joint Interest Group

Overview

The SST™ Profibus Generation III (PB3) PCI interface card can connect your PCI bus computer to Profibus DP-V0, DP-V1 and FDL networks. It provides high-speed deterministic communication between automation systems and their decentralized peripherals.

The PB3 interface card has been developed for designers of automation and control systems looking for reliable and high performance communication solutions. Our products will enable you to shorten the design and startup times for your installations.

Configuration & Diagnostic tools

The *Profibus Console* is an optional Windows 32-bits application (P/N: SST-PB3-CNF), which allows easy commissioning of Profibus DP-V0 and DP-V1 networks. It offers a real productivity gain to the system integrators by reducing times of engineering and installation to obtain a short return of investment.

Very intuitive, the Console graphic interface makes possible to set up the Profibus devices thanks to the use of DP-V0 and DP-V1 GSD files supplied by the manufacturer. The Console also includes a device library (including a large number of GSD for frequently used devices) which the user can easily add new ones to. Thanks to this library, the devices are automatically detected during bus scanning, the user then has just to Drag & Drop the device in its active configuration.

The Console offers **comprehensive diagnostic helps**. When this mode is selected, all the status of the devices are cyclically refreshed and presented under animated icons informing of the right execution of data exchanges. For devices in error, the cause is directly accessible through plaintext. Additional functions are included as: *data flow control, statistic counters, read/write to process variable, access to DP-V1 services, etc.*

Configuration console   DP-V1 parameters   Diagnostic and Test tools -

Profibus PB3 Interface Card

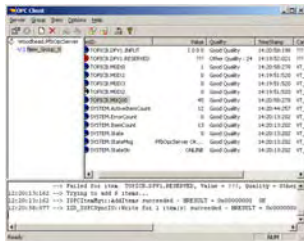## Software interfaces

▪ **API Library (DLL)**
The standard package includes an open documented memory map interface with C source code example of Windows 32-bit DLLs and drivers. This library enables you to develop powerful control application for Windows environment or any other operating system.
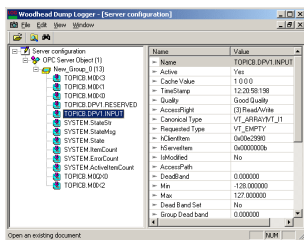
▪ **OPC Server DA 3.0**
The OPC server is an optional component (S/N: SST-PB3-OPC) that allows direct connection to all Windows applications supporting OPC Client.
OPC Server is compliant with v3.0 and v2.05a Data Access specifications.

OPC Server features includes:
- ✓ OPC Tag Browsing
- ✓ Automatic optimization of Data Exchange
- ✓ Easy access to DP-V1 Class1 & Class2 variables
- ✓ Diagnostic tools
- ✓ OPC Client for testing purpose

- OPC Tag Browser -

- OPC Diagnostic Tool -

▪ **FDT CommDTM**
Woodhead supplies a communication DTM in accordance with FDT (Field Device Tool) 1.2 specifications.

SST CommDTM allows setting up Profibus DP-V1 and PA networks using existing FDT engineering tools such as: Pactware, FieldCare, MM Container, etc.

Technical Data

Bus interface	32-bit short PCI compatible (operates on PCI 2.2 and 2.3 compliant systems and PCI 2.1 compliant systems that have implemented the optional 3.3V supply voltage)
Interruption	Supports standard PCI interrupts
DPRAM Address	Shared RAM with Host interface
Flash Memory	1Mbytes SDRAM; Store network parameters
Profibus ASIC	Siemens ASPC2 LAN controller for Profibus functions
Dimensions (L x W)	175mm x 107mm (6.89" x 4.21")
Consumption	300mA at 5V typical, 450mA at 3V typical
Operating T°	0 to +60º C (32 to 140º F)
Storage T°	-40 to +85º C (-40 to 185º F)
Hardware Watchdog	Detect control application freezing
CE Compliance	EN 61326:1998 including amendments A1 and A2

1 Profibus port

Port Type	RS485, optically isolated (EN 50170)
Connector type	Standard Profibus 9-pin Sub-D connector
LED indicators	Diagnostic LED for instantaneous status of network error
Speed	9.6 kbit/s to 12 Mbit/s (Auto baud rate detection)

Protocol specifications

Master or Master/Slave DPV0 Class 1 & Class 2	
▪ Active station, ▪ Direct access to Data Exchange buffer ▪ Data Word or Device consistency ▪ Automatic or Manual I/O Mapping ▪ Max. Slave number=126 ▪ DP master cycle time configurable	▪ Max. Mapped data ➜ In=16 Kb, Out=16 Kb ▪ Network, Slave and Master Events ▪ Slave Diag and Extended Slave Diag ▪ Max. Local Slave Size ➜ In=244 bytes, Out=244 bytes

Slave DPV0 only	
▪ Passive station	▪ Max. Local Slave Size ➜ In=244 bytes, Out=244 bytes

Master DPV1 Class 1 & Class 2	
▪ MSAC1_Read ▪ MSAC1_Write ▪ MSAC2_Initiate	▪ MSAC2_Read ▪ MSAC2_Write ▪ MSAC2_Abort

DPV0 and DPV1 samples in C source code; Full documented DPRAM and DLL library.

Ordering information

Part Number	Description
SST-PB3-PCU	Profibus PB3 interface card (DPM/DLL only), Universal PCI bus
SST-PB3-PCU-B25	Profibus PB3 interface card (DPM/DLL only), Universal PCI bus, Bulk of 25
SST-PB3-OPC	OPC Server for Profibus PB3 interface card (link to a card "serial number")
SST-PB3-CNF-U	Development platform & Stand alone Console (USB key)
SST-PB3-CNF-P	Development platform & Stand alone Console (Paralell key)

Related products

Part Number	Description
PA9D01-42	Profibus metal connector sub-D 9 with integrated Diagnostic, vertical
PA9S01-42	Profibus metal connector sub-D 9 without Diagnostic, vertical

For more information or to order, contact your local Authorized Woodhead Software & Electronics Distributor or Woodhead representative.

Network Interface

Woodhead

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