



Emulate or monitor 1 to 125 Profibus-DP devices on one physical Profibus connection▲

Profibus-DP Multi-Slave For PCI Computers

Features

- **Monitor up to 125 connected Profibus-DP devices**
 - Avoids 244 bytes in and 244 bytes out limitation
 - Connects as a passive station, does not affect existing network traffic
 - View input and output data for each slave
 - View slave diagnostic and parameterization data for each slave
- **Emulate up to 125 Profibus-DP devices**
 - Virtually any Profibus-DP slave device (e.g. drives, motors, and I/O) can be emulated to any Profibus Master including DCS, PLC and PC Control
 - Use with SST PICS Simulation software and other third party simulation software
 - Several DP Class 1 Masters can communicate to one SST Profibus Multi-Slave card
- **Minimal set up and configuration required**
- **Custom application development**



The SST Profibus-DP Multi-Slave interface card allows users to connect their PCI bus computer to a Profibus-DP network to emulate or monitor 1 to 125 Profibus-DP devices, using only one physical connection. Applications include connecting your operator interface or HMI software to Profibus, I/O emulation, network monitoring, and fully loaded network testing of Profibus-DP masters and other Profibus products. This interface card when used to monitor other nodes will not affect network traffic. It also allows several DP Class 1 Masters to communicate to one SST Multi-Slave interface card▲

SST Profibus-DP Multi-Slave PCI Interface Card

Benefits

Minimal to no impact on I/O scan time

- Since the card listens passively on the network, an HMI system can monitor all I/O on the network without affecting the scan time

Ethernet alternative

- HMI users can pass large amounts of data without impacting the network or PLC scan time, or any additional cost for Ethernet connectivity

No devices or wiring required

- Have a completely functional Profibus network of slaves contained in one card in minutes!
- Using simulation to duplicate the behavior of the actual process and I/O on the plant floor will identify and correct network bottlenecks before they become expensive plant floor problems
- Quickly differentiate between wiring, device, and network problems by comparing real-world results with the emulation

Ease of use

- Using the SST Profibus Configuration Tool, quickly set up a fully loaded network emulation in just a few steps

Open solution for customized applications

- OS Drivers:
 - Microsoft 32-bit driver (Windows NT4, 2000, XP)
 - Open documented memory map interface with sample C source code for custom driver development
- Software Components:
 - Windows 32-bit DLLs and drivers

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Profibus-DP Multi-Slave



Applications

- **Connect HMI and Operator Interface software running on a PCI computer to Profibus-DP**
- **Fully loaded network testing of DP Masters and other Profibus products**
- **I/O emulation**
- **Network monitoring**

Examples of Applications

Emulated I/O Reduced Commissioning Time

When a large power generation company decided to modernize their coal conveyor systems, they brought in Brock Solutions, a large automation engineering firm, to develop and test the new coal tracking system. The system, which must run 24/7 to generate electricity, uses ABB PLCs and Profibus-DP IO. To ensure high availability and minimize downtime, Brock Solutions used simulation software to test the coal conveyors and control gates which route and divert coal to different locations where it is blended with other types of coals or fed into bunkers (power generation units).

To emulate the Profibus-DP devices in the field, Brock Solutions used the SST Profibus Multi-Slave card. By emulating many slaves, this one card replaced the entire network for the initial testing phase and enabled Brock Solutions to thoroughly test the security and emergency logic repeatedly without risk. By reducing commissioning time, the power generating company was able to use their system with minimal delays and the transition was smooth.

Vigorous Testing for Better Product Development

A leading multinational developer and manufacturer of industrial products required a tool to test their Profibus-DP master and slave products. To determine the products' capabilities and limitations on a fully loaded Profibus network, the customer wanted to set up stress tests to evaluate the maximum for the baud rate, and the number of slave and I/O supported. The customer also wanted to test the I/O mappings to ensure what was read/written on the network was written in the host memory mapped to the product.

Using the SST Profibus Multi-Slave card, the manufacturer was successful in completing the stress tests and verifying the products' stability and compatibility on a Profibus network. By emulating 125 Profibus-DP slaves, the customer worked with different GSD files and device types without actually buying the devices. Understanding their products' capabilities, the customer avoided costly future hardware and firmware changes.

Hardware Specifications

- 32 bit, short card (see PCI specification) PCI interface card
- 512 Kbytes shared 16 bit RAM, accessible from the host in 16 Kbyte pages
- 512 Kbytes sectored flash memory for storage of card firmware
- Occupies 64 Kbytes of host memory, 16 I/O port addresses
- Supports baud rates from 9.6 Kbaud to 12 Mbaud
- Standard Profibus DB-9 connector
- 5-pin Phoenix connector (no bus connector required)
- Built-in termination can be added by making connections on the Phoenix connector
- Diagnostic LEDs give instantaneous status of network error, DP master, DP slave, and FDL
- Operating temperature: 0 to 50C (32 to 122°F)
- Storage temperature: -25 to 70C (-13 to 158°F)
- Power requirements: maximum 700 mA at 5 V

Ordering Information

Part No.	Description
SST-PBMS-PCI	Profibus-DP Multi-Slave PCI Interface Card

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