

IBS PCI RI-LK

PCI Slave Controller Board With Fiber Optic Connection

Data Sheet

06/2004

Product Description

INTERBUS PCI slave controller board for IBM-compatible PCs with integrated PCI bus.

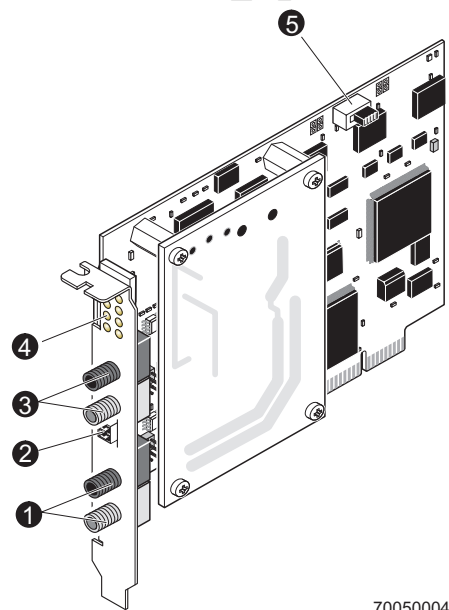
Features

- INTERBUS protocol (EN 50245)
- Remote bus interfaces
- Transmission speed of 500 kbaud and 2 Mbaud
- 24 data words in the I/O area, maximum (can be set)
- Parallel support of process data and parameter channel
- Optional external 24 V voltage supply
- Integrated watchdog circuit
- INTERBUS OPC server support
- 4 boards per PC, maximum
- Driver for Windows NT 4.0 and Windows 2000/XP

Applications

Integration of a PC at any point in the INTERBUS system, for example, to create visualization stations.

With 24 data words in the I/O area and the optional 24 V voltage supply, this powerful controller board is ideal for high-availability automation systems.



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Figure 1 IBS PCI RI-LK (fiber optic)

1. INTERBUS slave interface (Remote OUT, outgoing remote bus)
2. External 24 V voltage supply
3. INTERBUS slave interface (Remote IN 2, incoming remote bus)
4. Diagnostic and status indicators
5. DIP switch, 500 kbaud and 2 Mbaud

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Programming

Individual applications are created with the support of the corresponding drivers. The drivers execute the read and write operations on the I/O addresses. These drivers are available for the following operating systems:

Operating System	Driver
Windows [®] NT 4.0	Kernel mode driver
Windows [®] 2000/XP	WDM driver

Watchdog

An integrated watchdog timer on the controller board can be used to monitor the running of the application program on the PC. When the watchdog is triggered, the INTERBUS system is set to a defined state.

When a watchdog is triggered on the controller board, the controller board I/Os are set to zero. An I/O error is triggered.

Program Interfaces

A high-level language DLL driver is available for Windows.



Additional information can be found in the Driver Reference Manual (IBS PC SC SW UM E).

I/O data can be exchanged via the INTERBUS OPC server (IBS OPC SERVER) as an option.

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Technical Data

General Data	
Item (fiber optic)	IBS PCI RI-LK
Dimensions	134 mm x 107 mm x 20 mm (5.276 x 4.213 x 0.787 in.)
Weight	130 g, approximately
Power Supply	
V _{S, internal} (PC supply)	3.3 V DC and 5 V DC
V _{S, external}	24 V DC
External voltage supply	18 V DC to 30 V DC 2-pos. MINI-COMBICON connector
Current consumption	0.24 A at 24 V
Power consumption	2.5 W, approximately (typical)
Insulation resistance	0.5 kV
Host Interface	
Connection method	IBM-compatible PCI slot according to PCI specification 2.1 or later
Bus system	PCI bus, 33 MHz, 5/3.3 V
Data width	32 bits
INTERBUS	
Parameter channel (PCP)	0, 2 words
Process data	0 to 24 words
Remote Bus Interfaces	
Remote IN (fiber optic)	F-SMA connector
Remote OUT (fiber optic)	F-SMA connector

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Ambient Conditions	
Temperature (according to IEC 60068-2-1 Ad, IEC 60068-2-2 Bd)	Operation: 0°C to +55°C (+32°F to +131°F), storage and transport: -20°C to +70°C (-4°F to +158°F)
Humidity (according to IEC 60068-2-3 Ca, IEC 60068-2-30 Db)	Storage and operation: 95%, maximum without condensation
Air pressure	Up to 2500 m (8202 ft.) above sea level
Vibration (according to IEC 6006-2-6 Fc)	10 - 57 Hz/0.15 mm (0.006 in.); 1g/57 - 150 Hz

Conformance With EMC Directive 89/336/EEC

Noise Immunity Test According to EN 61000-6-2		
Electrostatic discharge (ESD)	EN 61000-4-2	Criterion A ±4 kV contact discharge ±8 kV air discharge
Electromagnetic fields	EN 61000-4-3	Criterion A Field strength: 10 V/m
Fast transients (burst)	EN 61000-4-4	Criterion A Signal/data lines: 2 kV
Surge test	EN 61000-4-5	Criterion A Signal/data lines: 1 kV (shield)
Conducted interference	EN 61000-4-6	Criterion A Test voltage 10 V
Noise Emission Test According to EN 61000-6-4		
Emitted interference	EN 55011	Class A

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Ordering Data

Description	Order Designation	Order No.
PCI slave controller board (fiber optic)	IBS PCI RI-LK	27 04 04 5
PCI slave controller board (copper)	IBS PCI RI/I-T	27 30 12 9
Datatrab surge protection	D-UFB-IB-S-RBO	27 48 36 0
Datatrab surge protection	D-UFB-IB-S-RBI	27 48 35 7
INTERBUS OPC server	IBS OPC SERVER	27 29 12 7
"Configuring and Installing INTERBUS" user manual	IBS SYS PRO INST UM E	27 43 80 2
Driver Reference Manual for PC Controller Boards	IBS PC SC SWD UM E	27 45 17 2
INTERBUS Fiber Optic Installation Guidelines	DB GB IBS SYS FOC ASSEMBLY	94 23 43 9
"Installing and Operating PCI Slave Controller Boards for PC Systems" user manual	UM EN IBS PCI RI	26 99 41 9
Driver software and documentation on CD-ROM (English and German)	CD IBS PCI SC	27 33 00 3



Make sure you always use the latest documentation. It can be downloaded at www.phoenixcontact.com.

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