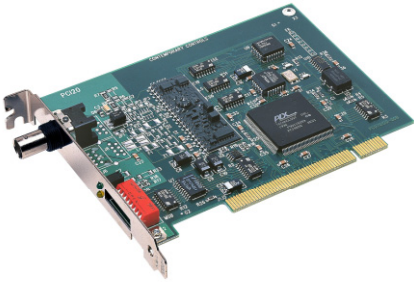


ARCNET® Network Interface Module for PCI Bus Computers



Benefits

- Interfaces ARCNET with PCI bus computers
- COM20020 controller
- Occupies any 16-bit I/O address
- Variable data rates up to 5 Mbps
- Node address switch selects one of 255 possible station addresses
- Supports coaxial, fiber optic and twisted-pair cabling, including EIA-485
- Compatible with Contemporary Controls' MOD HUB and AI Series Active Hubs
- High-speed I/O access to the COM20020
- Plug and Play
- Jumperless configuration
- Drivers for Windows 95/98/ME/NT/2000/XP and Linux
- Software compatible with COM20020-based series of network adapters for the ISA PC/104 and PC Card bus systems
- Automatic configuration of I/O and interrupt

Applications

- Data acquisition
- Machine control
- Process Control
- SCADA
- Operator Interface
- Communication gateway

The PCI20 Series of ARCNET network interface modules (NIMs) link PCI bus compatible computers with the ARCNET local area network. The PCI bus allows for jumperless configuration and Plug-and-Play operation. Drivers are available for Windows 95/98/ME/2000/NT/XP and Linux. The PCI20 incorporates the COM20020 ARCNET controller chip with enhanced features over the earlier generation ARCNET chips. New features include command chaining, sequential access to internal RAM, duplicate node ID detection and variable baud rates up to 5 Mbps. Bus contention problems are minimized since the module's interrupt level and I/O base address are assigned through Plug-and-Play. There is no requirement for wait-state arbitration.

Each PCI20 module has two LEDs for monitoring network operation and bus access to the module. The PCI20 also has an external DIP switch so that node addresses can be easily reassigned manually without removing the module.

There are several versions of the PCI20 ARCNET NIM. The PCI20-CXS supports coaxial star configurations requiring external active or passive hubs. The PCI20-CXB supports a multidrop or coaxial bus configuration usually requiring no hubs. Other versions include the PCI20-FOG which supports fiber optic cable with either ST or SMA connectors. The PCI20-TB5 supports multidrop twisted-pair cabling using RJ-45 and screw terminal connectors. The PCI20-485 supports EIA-485 DC-coupled backplane mode, while the PCI20-485D supports non-backplane mode DC EIA-485. The PCI20-485X provides transformer-coupled AC EIA-485 operation.

Performance enhancements are realized by using the PCI20 instead of traditional ISA bus adapters. The PCI20 utilizes the 33 MHz PCI bus to reduce message handling time and improve data throughput.



Contemporary Control Systems, Inc. • 2431 Curtiss Street • Downers Grove, Illinois 60515 • USA

Telephone 1-630-963-7070 Fax 1-630-963-0109 E-mail info@ccontrols.com Web www.ccontrols.com

Contemporary Controls Ltd • Sovereign Court Two • University of Warwick Science Park •

Sir William Lyons Road • Coventry CV4 7EZ UK

Telephone +44 (0)24 7641 3786 Fax +44 (0)24 7641 3923 E-mail ccl.info@ccontrols.com Web www.ccontrols.eu

Specifications

Environmental	
Operating temperature	0°C to +60°C
Storage temperature	-40°C to +85°C
Data Rates	
PCI20 Series	5 Mbps, 2.5 Mbps, 1.25 Mbps, 625 kbps, 312.5 kbps, 156.25 kbps
Dimensions	
	4.2" x 5.5" (107 mm x 140 mm)
Shipping Weight	
	1 lb. (.45 kg)
I/O Mapping	
	COM20020 occupies 16 bytes of I/O space
Interrupt Lines	
	Supports PCI INTA
Compatibility	
	PCI20 Series NIMs are fully compatible with all PCI bus computers and Contemporary Controls' ARCNET products

Transceiver Specifications

Transceiver	Description	Cable	Connectors	Cable Length		Max Nodes/ Bus Segment
				Min	Max	
-485 ³	DC coupled EIA-485	IBM type 3	RJ-45, screw	0	900 ft(274 m)	17
-485D	DC coupled EIA-485	IBM type 3	RJ-45, screw	0	900 ft(274 m)	17
-485X	AC coupled EIA-485	IBM type 3	RJ-45, screw	0	700 ft(213 m)	13
-CXB	coaxial bus	RG-62/u	BNC	6 ft(2m ¹)	1000 ft(305 m)	8
-CXS	coaxial star	RG-62/u	BNC	0	2000 ft(610 m)	N/A
-FOG	duplex fiber optic	50/125	SMA or ST	0	3000 ft(915 m)	N/A
-FOG	duplex fiber optic	62.5/125	SMA or ST	0	6000 ft(1825 m)	N/A
-FOG	duplex fiber optic	100/140	SMA or ST	0 ²	9000 ft(2740 m)	N/A
-TB5	twisted-pair bus	IBM type 3	RJ-45, screw	6 ft(2m ¹)	400 ft(122 m)	8

¹ This represents the minimum distance between any two nodes or between a node and a hub.

² This minimum can only be achieved by removing a jumper on the transceiver circuitry.

³ Backplane mode invoked via application software.

Power Requirements

Model	+5 V	-12 V
PCI20-485	400 mA	N/A
PCI20-485D	400 mA	N/A
PCI20-485X	400 mA	N/A
PCI20-CXB	400 mA	50 mA
PCI20-CXS	400 mA	20 mA
PCI20-FOG-SMA	500 mA	N/A
PCI20-FOG-ST	500 mA	N/A
PCI20-TB5	400 mA	50 mA

Ordering Information

Model	Description
PCI20-485	20020 PC Card DC-coupled EIA-485 (backplane)
PCI20-485D	20020 PC Card DC-coupled EIA-485 (non-backplane)
PCI20-485X	20020 PC Card AC-coupled EIA-485 (non-backplane)
PCI20-CXB	20020 PCI coaxial bus NIM
PCI20-CXS	20020 PCI coaxial star NIM
PCI20-FOG-SMA	20020 PCI SMA fiber optic NIM
PCI20-FOG-ST	20020 PCI ST fiber optic NIM
PCI20-TB5	20020 PCI twisted-pair bus NIM

Contemporary Controls, ARC Control, ARC DETECT, EXTEND-A-BUS and CTRLink are registered trademarks or trademarks of Contemporary Control Systems, Inc. Specifications are subject to change without notice. Other product names may be trademarks or registered trademarks of their respective companies.

©Copyright 2004
Contemporary Control Systems, Inc.