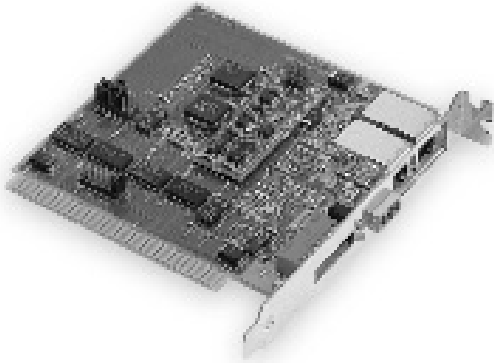


Network Interface Modules for PC/XT/AT Bus Computers



- Utilises COM20020 ARCNET controller
- Interfaces ARCNET with XT/AT (ISA) bus computers
- I/O-only mapping reduces bus contention problems

- No requirement for wait-state arbitration
- Enhanced software capabilities over earlier generation ARCNET controllers
- Supports coaxial, fibre optic, and twisted-pair cabling including EIA-485
- Node address switch selects one of 255 possible station addresses
- Variable data rates up to 5 Mbps
- Suitable with all Contemporary Controls MOD HUB and AI Series active hubs
- CMOS design for low-power consumption
- CE Mark
- RoHS

PRODUCT OVERVIEW

The PCX20 Series of Network Interface Modules (NIMs) offers dependable ARCNET connectivity for XT/AT compatible computers.

This product is designed with the COM20020 ARCNET controller chip. Features include command chaining, sequential access to internal RAM, duplicate node ID detection, and variable data rates up to 5 Mbps. There is no requirement for wait-state arbitration.

Each PCX20 module has two LEDs on the board for monitoring network operation and bus access to the module. It also has an external DIP switch so that node addresses can be easily reassigned without removing the module or opening the computer case.

There are eight models within the PCX20 Series.

The PCX20-CXS supports coaxial star configurations requiring external hubs if other than point-to-point communication is needed. The PCX20-CXB accommodates a multidrop or coaxial bus configuration, typically without any hubs. Other versions include the PCX20-FOG-ST for fibre optic cable with ST connectors. The PCX20-TPB supports multidrop twisted-pair cabling using RJ-11 and screw terminal connectors. Two units provide DC-coupled EIA-485 operation: the PCX20-485 allows backplane mode to be controlled by the user's software, while the PCX20-485D forces backplane mode via hardware for those users having legacy software that is incapable of invoking backplane control. The PCX20-485X offers transformer-coupled EIA-485 operation with the backplane mode forced through hardware.

Specifications

Environmental

Operating temperature	0°C to +60°C
Storage temperature	-40°C to +85°C

Functionality

Data rate	
PCX20-CXB, -CXS, -TPB	2.5 Mbps
PCX20-FOG-ST, -485, -485D	5 Mbps, 2.5 Mbps, 1.25 Mbps, 625 kbps, 312.5 kbps, 156.25 kbps
PCX20-485X	5 Mbps, 2.5 Mbps, 1.25 Mbps
Dimensions	3.9" x 4.3" (99 mm x 109 mm)
Shipping weight	1 lb. (0.45 kg)
I/O mapping	Supports I/O mapping on any 16-byte boundary
Interrupt lines	Supports strapping of IRQ 2/9, 3, 4, 6 or 7
Compliance	PCX20 Series NIMs are fully compatible with all of Contemporary Controls' ARCNET products and PC/XT/AT computers.

Transceiver Specifications

Transceiver	Description	Cable	Connectors	Cable Length		Max Nodes/ Bus Segment
				Min	Max	
-CXB	Coaxial bus	RG-62/u	BNC	6ft/2m ¹	1000ft/305m	8
-CXS	Coaxial star	RG-59/u	BNC	0	1500ft/457m	N/A
-CXS	Coaxial star	RG-62/u	BNC	0	2000ft/610m	N/A
-FOG	Duplex fibre optic	50/125	ST	0	3000ft/915m	N/A
-FOG	Duplex fibre optic	62.5/125	ST	0	6000ft/1825m	N/A
-FOG	Duplex fibre optic	100/140	ST	0 ²	9000ft/2740m	N/A
-TPB	Twisted-pair bus	IBM Type 3	RJ-11, screw	6ft/2m ¹	400ft/122m	8
-485 ³	DC-coupled EIA-485	IBM Type 3	RJ-11, screw	0	900ft/274m	17
-485D	DC-coupled EIA-485	IBM Type 3	RJ-11, screw	0	900ft/274m	17
-485X	AC-coupled EIA-485	IBM Type 3	RJ-11, screw	0	700ft/213m	13

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 operation.

Power Requirements

Model	+5 V	-12V
PCX20-485	200 mA	N/A
PCX20-485D	200 mA	N/A
PCX20-485X	200 mA	N/A
PCX20-CXB	200 mA	50 mA
PCX20-CXS	200 mA	20 mA
PCX20-FOG-ST	300 mA	N/A
PCX20-TPB	200 mA	50 mA

Ordering Information

Model	Description
PCX20-485	20020 DC-coupled EIA-485 NIM allows software control of backplane mode
PCX20-485D	20020 DC-coupled EIA-485 NIM forces backplane mode via hardware
PCX20-485X	20020 AC-coupled EIA-485 NIM forces backplane mode via hardware
PCX20-CXB	20020 coaxial bus NIM
PCX20-CXS	20020 coaxial star NIM
PCX20-FOG-ST	20020 ST fibre optic NIM
PCX20-TPB	20020 twisted-pair bus NIM

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