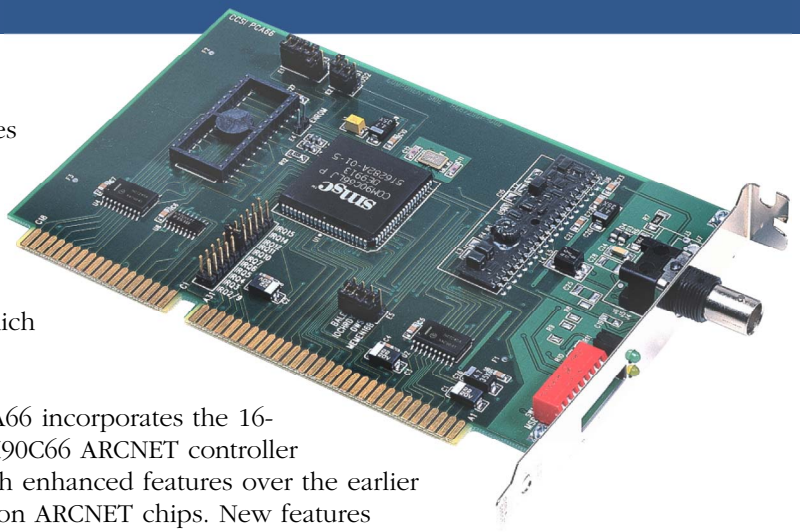
PCA66 Series

ARCNET® Network Interface Modules for ISA Bus Computers



Description

The PCA66 series of ARCNET network interface modules (NIMs) links ISA compatible computers with the ARCNET local area network.

ARCNET is classified as a token-bus LAN operating at 2.5 Mbps while supporting 255 nodes. Interfacing ARCNET to a host computer usually requires a NIM which plugs into the host computer's bus.

Benefits

- COM90C66 16-bit controller
- Interfaces ARCNET with ISA bus computers
- Zero wait-state arbitration typical
- Deterministic high speed 2.5 Mbps ARCNET token-passing local area network (LAN)
- COM90C26/90C65 software compliant
- Command chaining for enhanced performance
- Supports either memory mapped or I/O mapped RAM buffer
- Node address switch selects one of 255 possible station addresses
- Supports coaxial, fiber optic and twisted-pair cabling
- Boot ROM socket for diskless workstations
- Compatible with Contemporary Controls' MOD HUB and AI series active hubs
- CMOS design for low power consumption
- CE Mark

Applications

- Data Acquisition
- SCADA
- Communication Gateways
- Machine Control
- Operator Interface
- Process Control

The PCA66 incorporates the 16-bit COM90C66 ARCNET controller chip with enhanced features over the earlier generation ARCNET chips. New features include command chaining and sequential I/O mapping of the internal RAM buffer. There is usually no requirement for wait-state arbitration. The PCA66 is backward compatible with earlier generation 90C26 and 90C65 8-bit ARCNET controllers and will operate as a replacement. However, to utilize the expanded features of the COM90C66, an enhanced software driver is required.

Each PCA66 module has two LEDs on the board. The green LED indicates that the module is transmitting data on the network and the yellow LED indicates bus access to the module. The PCA66 also has an external DIP switch so that node addresses can be easily reassigned without removing the module.

There are five versions of the PCA66 ARCNET NIM. The PCA66-CXS supports coaxial star configurations requiring external active or passive hubs. The PCA66-CXB supports coaxial bus configuration usually requiring no hubs. Other versions include the PCA66-FOG which supports fiber optic cable with either ST or SMA connectors. The PCA66-TPB supports twisted-pair bus cabling using RJ-11 or screw terminal connectors.

Specifications

Environmental	
Operating temperature:	0°C to +60°C
Storage temperature:	–40°C to +85°C
Data Rate	2.5 Mbps
Dimensions	4.20" x 6.50" (106mm x 165mm)
Shipping Weight	1 lb. (.45kg)
Interrupt Lines	Supports strapping of IRQ2/9, 3, 4, 5, 6, 7, 10, 11, 12, 14 or 15
Compatibility	PCA66 series NIMs are compliant with ANSI/ATA 878.1 and IEEE P996 Personal Computer Bus Standard Draft 2.2, dated July 1990.

Memory Base Addressing*				
	Packet Buffer			**ROM**
C:0000	C:0800	C:1000	C:1800	C:2000
C:4000	C:4800	C:5000	C:5800	C:6000
C:C000	C:C800	C:D000	C:D800	C:E000
D:0000	D:0800	D:1000	D:1800	D:2000
D:4000	D:4800	D:5000	D:5800	D:6000
D:8000	D:8800	D:9000	D:9800	D:A000
D:C000	D:C800	D:D000	D:D800	D:E000
E:0000	E:0800	E:1000	E:1800	E:2000

*Packet buffer occupies a 2K page and the ROM an 8K page.

I/O Base Addressing*	
260	300
290	350
2E0	380
2F0	3E0

* I/O ports occupy 16 bytes.

Transceiver Specifications

Transceiver	**Description**	**Cable**	**Connectors**	**Cable Length**		**Max Nodes/ Bus Segment**
				Min	**Max**	
-CXS	coaxial star	RG-62/u	BNC	0	2000ft/610m	N/A
-CXB	coaxial bus	RG-62/u	BNC	6ft/2m[1]	1000ft/305m	8
-FOG	duplex fiber optic	50/125	SMA or ST	0	3000ft/915m	N/A
-FOG	duplex fiber optic	62.5/125	SMA or ST	0	6000ft/1825m	N/A
-FOG	duplex fiber optic	100/140	SMA or ST	0[2]	9000ft/2740m	N/A
-TPB	twisted-pair bus	IBM type 3	RJ-11	6ft/2m[1]	328ft/100m	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.

Power Requirements

Model	**+5V**	**–12V**
PCA66-CXS	200mA	20mA
PCA66-CXB	200mA	50mA
PCA66-FOG-SMA	300mA	N/A
PCA66-FOG-ST	300mA	N/A
PCA66-TPB	200mA	50mA

Ordering Information

Model	**Description**
PCA66-CXS	90C66 AT coaxial star NIM
PCA66-CXB	90C66 AT coaxial bus NIM
PCA66-FOG-SMA	90C66 AT SMA fiber optic NIM
PCA66-FOG-ST	90C66 AT ST fiber optic NIM
PCA66-TPB	90C66 AT twisted-pair bus NIM