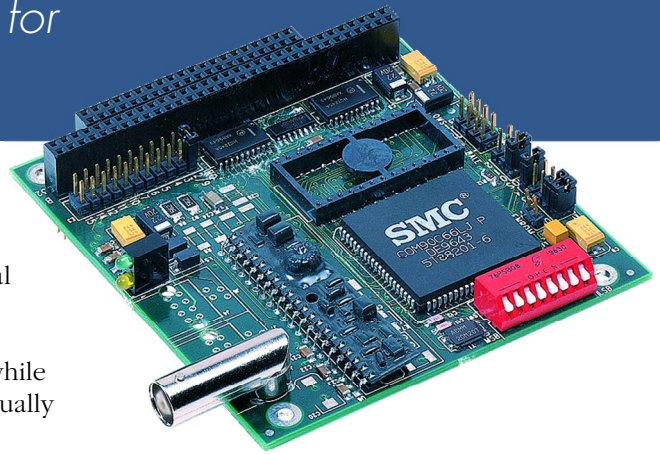# PC10466 Series

*ARCNET® Network Interface Modules for PC/104 computers*

## Description

The PC10466 series of ARCNET network interface modules (NIMs) links PC/104 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 PC/104 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

### Applications

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

The PC10466 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 PC10466 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 PC10466 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 PC10466 also has an external DIP switch so that node addresses can be easily reassigned without removing the module.

There are five versions of the PC10466 ARCNET NIM. The PC10466-CXS supports coaxial star configurations requiring external active or passive hubs. The PC10466-CXB supports coaxial bus configurations usually requiring no hubs. Other versions include the PC10466-FOG which supports fiber optic cable with either ST or SMA connectors. The PC10466-TPB supports twisted-pair bus cabling using RJ-11 connectors.

## Specifications

### Environmental

| | |
|---|---|
| Operating temperature: | 0°C to 60°C |
| Storage temperature: | −40°C to +85°C |
| **Data Rate** | 2.5 Mbps |
| **Dimensions** | 3.550″ x 3.775″ (90mm x 95mm) |
| **Shipping Weight** | 1 lb. (.45kg) |
| **Interrupt Lines** | Supports strapping of IRQ2/9, 3, 4, 5, 6, 7, 10, 11, 12, 14 or 15 |
| **Compatibility** | PC10466 series NIMs are compliant with ANSI/ATA 878.1 and PC/104 Specification 2.3 dated June1996. Interrupt sharing option is not implemented. |

### 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 Min | Max | Max Nodes/ Bus Segment |
|---|---|---|---|---|---|---|
| -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] | 400ft/122m | 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 |
|---|---|---|
| PC10466-CXS | 200mA | 20mA |
| PC10466-CXB | 200mA | 50mA |
| PC10466-FOG-SMA | 300mA | N/A |
| PC10466-FOG-ST | 300mA | N/A |
| PC10466-TPB | 200mA | 50mA |

## Ordering Information

| Model | Description |
|---|---|
| PC10466-CXS | 90C66 PC/104 coaxial star NIM |
| PC10466-CXB | 90C66 PC/104 coaxial bus NIM |
| PC10466-FOG-SMA | 90C66 PC/104 SMA fiber optic NIM |
| PC10466-FOG-ST | 90C66 PC/104 ST fiber optic NIM |
| PC10466-TPB | 90C66 PC/104 twisted-pair bus NIM |

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