

LANJR ARCNET™ NETWORKING FOR THE IBM-PCjr™

From InterContinental Micro (ICM)

InterContinental Micro's LANJR provides a simplified interface between IBM-PCjrs and TurboLAN® Local Area Networks (LAN). The LANJR will also interface with other ARCnet systems and software. It contains the complete controller for an ARCnet modified token passing network. The board allows you to link IBM-PCjrs into any ARCnet LAN. An optional version, which includes 256 Kbytes of on-board RAM, is available. The additional on-board RAM provides expanded system memory to give you RAM capability and ARCnet on the same board.

The LANJR comes in an enclosure which attaches to the expansion slot on the side of the IBM-PCjr chassis. The LANJR enclosure matches the texture and color of the IBM-PCjr chassis.

The LANJR has been specifically designed to interface with other ICM hardware and TurboDOS™ Operating System using the revolutionary TurboLAN software drivers. TurboLAN protocols allow linking up to 255 nodes per network. These nodes can be a combination of other IBM-PCjrs, IBM-PCs™ and compatibles, intelligent workstations, diskless workstations, and S-100 BUS Systems, or any other computer with ARCnet capability. By using ICM's LANJR and other ICM products, a fast and reliable multi-user network of up to 4000 users can be designed.

STANDARD FEATURES

- 2/4/8 Kbyte EPROM with network related software.
- Fully interrupt driven.
- Compatible with ICM's LANPC (IBM-PC BUS ARCnet Controller), LANS100 (S-100 BUS ARCnet Controller), and other ARCnet Controllers.
- 16 bit CRC check and generation.
- No host processor overhead for link control.
- Optional 256 Kbytes of Dynamic RAM.
- Fast Memory Mapped Interface to Packet Buffer.

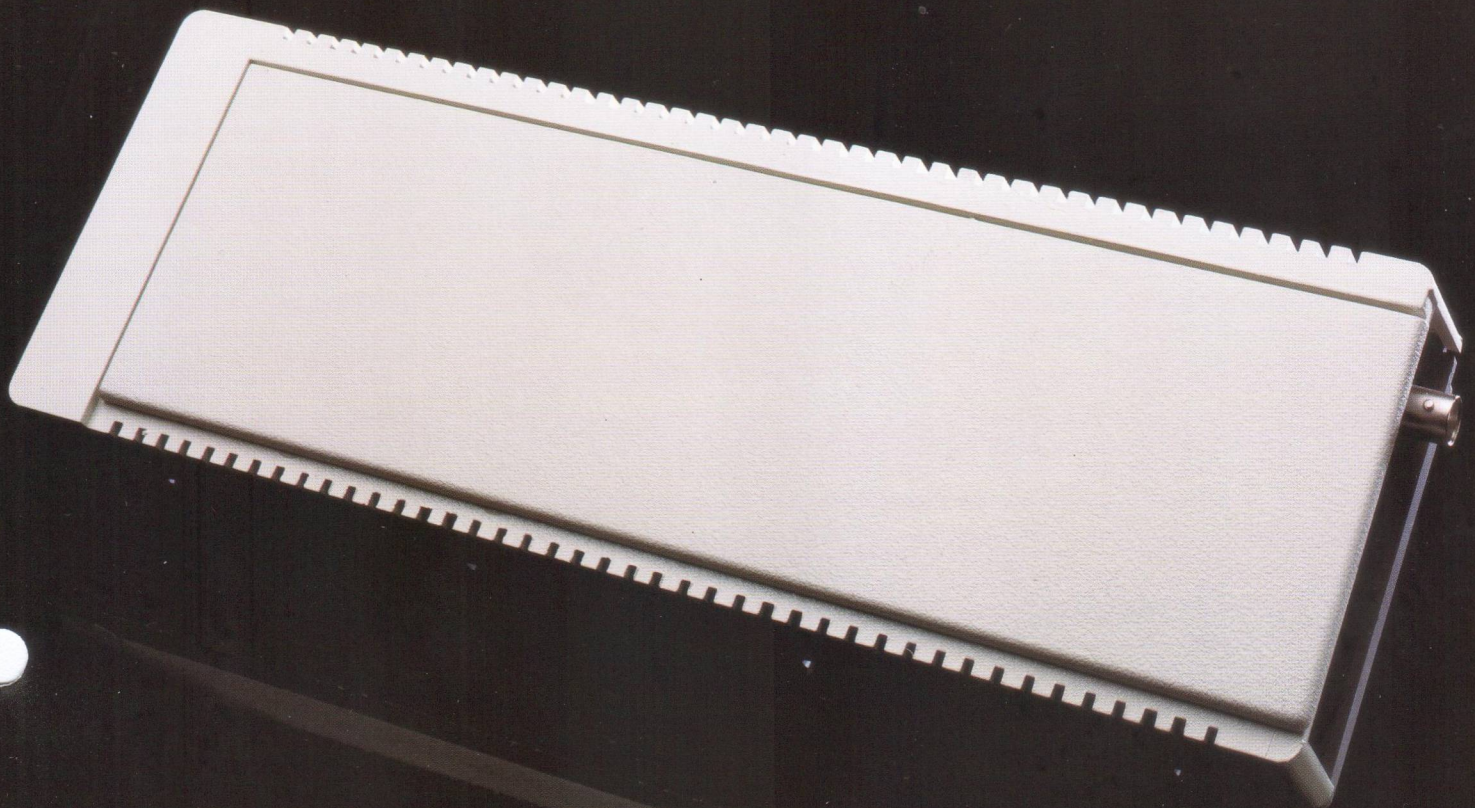
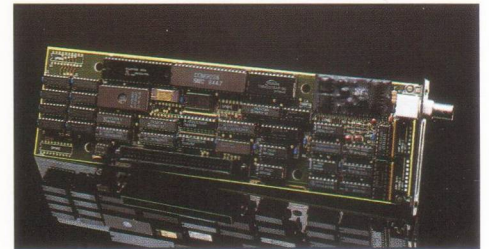
TurboLAN AND TurboDOS NETWORK ARCHITECTURE

InterContinental Micro's revolutionary TurboLAN multi-user architecture uses the sophisticated cost effective TurboDOS Operating System. TurboLAN provides the flexibility of building multi-user systems with S-100 BUS structured networks and ARCnet protocol Local Area Networks.

TurboLAN offers:

- Ability to network IBM-PCs, XTs, ATs, Jrs, PC compatibles, Zenith Z-100s and Z-150s, most S-100 BUS Systems, and ICM's Diskless Workstations.

- Uses Fileserver (Master) such as ICM's CPZ-4800X (8-bit) or CPZ-186 (16-bit) Single Board Computers.
- Up to 4000 users per network with 255 nodes per circuit.
- Network self configures and efficiency increases as nodes are added.
- Up to 40 miles between processors at 2300 feet between Active HUBs.
- Up to 200 feet between processors using Passive HUBs.
- 2.5 Megabit per second data transfers.
- Communications across S-100 BUS, Coax cable, or twisted pair.



TurboDOS OPERATING SYSTEM

TurboDOS is a true multi-user Operating System because it was designed from its beginnings to handle multiple computers running simultaneously on one or more networks. Each user is assigned an individual PC or a terminal attached to a Single Board Computer/Processor. This PC or individual processor is called an Application Processor (Slave) in the TurboDOS architecture and acts independently of all other Application Processors on the network. A Master, also known as a Fileserver, controls the network by downloading the operating system to each Application Processor. The Fileserver also downloads system files and orchestrates the use of all common peripherals. With its modular architecture, TurboDOS can increase the number of users or add peripherals on the network with a general software command that "links and patches." TurboDOS is the most sophisticated, yet cost effective multi-user operating system available today.

It offers FEATURES such as:

- Compatibility with many OS's Application Software: CP/M,[™] CP/M-86,[™] PC-DOS,[™] MS-DOS,[™] MP/M,[™] MP/M 86,[™] CP/M PLUS,[™] and CONCURRENT CP/M 86.[™]
- Ability to mix Z-80, 8-bit; and 8086, 16-bit families of processors.
- Flexibility to build Bus Structured (Tightly Coupled) Networks and Local Area (Loosely Coupled) Networks using ICM's TurboLAN.
- Record and File Locking with File Sharing among multiple users.
- Typically 300% faster than CP/M, MP/M, Oasis, or similar multi-user, single-processor, multi-tasking Operating Systems.
- 16 Logical Disk Drives per Master Processor/ Fileserver.
- Up to 1000 MB drive and 134 MB per file.
- 32 user areas (file libraries) on each disk.
- 25% to 30% more floppy disk capacity.
- Sharing of costly peripherals and disk drives.
- Read after Write verification of Floppy Disks and Hard Disks.
- Logon/Logoff & Privileged/Non-Privileged security.
- Background processing & Archival Back-up files.
- Queueing of multiple tasks—processing or printing.
- Automatic Print Spooling.
- Each individual TurboDOS Operating System has 4 Circuit Drivers with 255 nodes (Application Processors) per circuit driver = 1020 users per Operating System.
- Multiple File Servers can be linked together with ICM's TurboLAN drivers—theoretically no limit to the number of users on a single network.

Performance Specifications

256 KBYTE DYNAMIC RAM:

Wait states none required

2/4/8 KBYTE EPROM:

Provided with monitor which signs on at reset. Also provided with software to integrate workstation into TurboDOS network.

NETWORK INTERFACE:

Modified Token Passing Local Area Network

(ARCnet Protocol).

Transmission Mode Baseband

Transmission Medium Coaxial Cable/RG62 (93 ohm)

Transmission Distance

Without repeaters 2300 feet (max)

With repeaters 40 miles (max)

Transmission Speed 2.5 Mbps, Typical

Transmission Voltage

Transmit Mode 20.1V P-P Typical

Receive Mode 6.7V P-P Typical

DATA PACKET BUFFER. . . 2 Kbyte × 8 Bit Status RAM

Memory transparent during message transfer mode

POWER REQUIREMENTS:

Voltages + 5 VDC @ 1.0 A (max)

– 5 VDC @ 25 MA (max)

Power 5.2 W (max)

OPERATING ENVIRONMENT:

Temperature 0 to 45 Degrees Celsius

Relative Humidity 0 to 95%

CONSTRUCTION:

Circuit Board Multi-layer Glass Epoxy

Vacrel[™] Solder over Bare Copper.

All ICs in Sockets.

DIMENSIONS 11 inches × 3½ inches

TESTING Completely Tested and

24 Hour burned-in

WARRANTY One Year Warranty

(Parts and Labor)

ARCnet is a Trademark of Datapoint.

CP/M, CP/M 86, MP/M, MP/M 86, CP/M PLUS, and Concurrent

CP/M 86 are Trademarks of Digital Research.

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