

## Overview

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The Apple® Ethernet NB Card is a bus master network interface card that provides connectivity to IEEE 802.3 Ethernet networks for the Macintosh® II family of personal computers.

The Ethernet NB Card has its own 68000 microprocessor, memory, and real-time multitasking operating system. Operating independently of the main Macintosh processor,

the card supports the concurrent execution of multiple networking protocols while maximizing both system and network performance.

The Ethernet NB Card includes an Apple Ethernet port. With the addition of the appropriate Apple Ethernet Cable System media adapter, which plugs into the port, Ethernet NB Card users can connect to any stan-

dard Ethernet cabling environment: thin coax, standard coax, and unshielded twisted-pair. Because all Apple Ethernet Cable System components are IEEE 802.3 compliant, they can interoperate in multivendor environments.

This easy-to-install card lets you use a variety of networking protocols with a Macintosh computer, including AppleTalk®, TCP/IP, and DECnet®.

\* See Back page for FCC certification information.

# Features

# Benefits

- Compliance with IEEE 802.3 standards

- Allows the Macintosh II family of computers to connect to industry-standard Ethernet networks and interoperate in multivendor Ethernet environments.

- Apple Ethernet Cable System compatibility

- Can be used in any standard Ethernet cable environment with the appropriate Apple Ethernet media adapter.

- Includes EtherTalk® software

- Provides AppleTalk network system users with transparent access to network services.

- A/UX® local area networking support

- When used with the A/UX operating system from Apple, provides a complete solution for connecting to local area network environments based on the UNIX® operating system, including TCP/IP and the Network File System (NFS).

- Based on the Macintosh Coprocessor Platform<sup>s</sup>
- Multiprocessor, bus master architecture
- MC68000 microprocessor
- 512K RAM, expandable to 2.5MB

- Handles all communications processing for the Macintosh II family of computers. Allows concurrent execution of multiple networking protocols. Optimizes system and network performance.

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## Product Details

The Apple Ethernet NB Card provides physical and link level access to data communications networks meeting IEEE 802.3 and

802.2 Logical Link Control (LLC) type 1 standards. Several networking protocols can be used with

the Ethernet NB Card. The following table outlines configurations provided by Apple.

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<i>Protocol</i>	<i>Operating System</i>	<i>Product</i>	<i>Ordering Information</i>
AppleTalk	Macintosh	EtherTalk® software	Included with Ethernet NB Card
AppleTalk	A/UX	EtherTalk for A/UX software	Included with A/UX version 2.0 and later
TCP/IP	Macintosh	MacTCP® software	Available through Apple Software Licensing
TCP/IP and NFS	A/UX	B-NET software	Included with A/UX version 2.0

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## System Requirements

In addition to the Apple Ethernet NB Card and accompanying software, the following are required to connect one of the Macintosh II family of personal computers to an Ethernet network.

- One available NuBus<sup>s</sup> slot in the computer. Or, with the Macintosh IIsx, a

NuBus Adapter Card. Macintosh system software version 6.0.4 or later; or A/UX system software version 2.0 or later.

- If you are using Apple-Talk network services, the network must use Apple-Talk Phase 2 protocols.

- An Apple Ethernet Cable System media adapter. Each of the Apple Ethernet Cable System media adapters is described below.

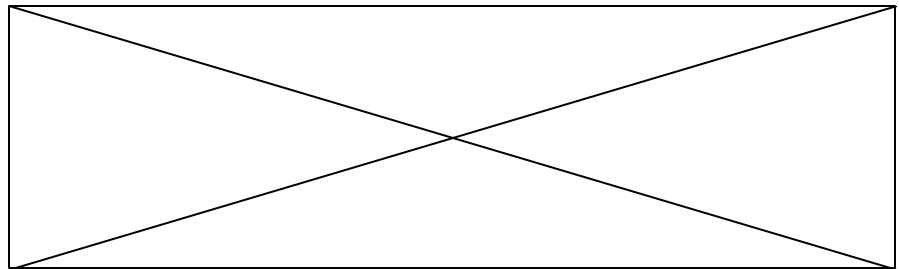
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### Apple Ethernet Thin Coax Transceiver\* (Order No. M0329LL/A)

The Apple Ethernet Thin Coax Transceiver provides "plug-and-play" networking in a high-performance Ethernet environment. The Ethernet NB Card, the

Apple Ethernet Thin Coax Transceiver, and the 2-meter segment of thin coaxial cable included with the Transceiver are all that you need to connect your Macintosh NB computer to an Ethernet network. No terminators or other Ethernet hardware is required.

The Apple Ethernet Self-Terminating Cable--5 Meter (Order No. M0833LL/A) and Apple Ethernet Self-Terminating Cable--13-Meter Plenum (Order No. M0436LL/A), or other RG 58 A/U thin coaxial cable, can be used to connect devices that are more than 2 meters apart.

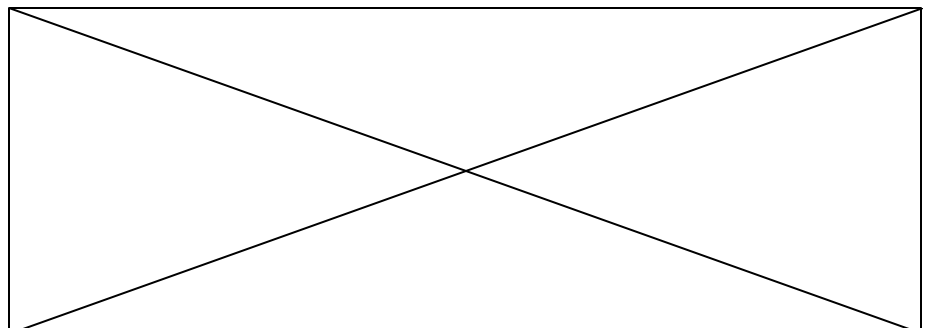


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### Apple Ethernet Twisted-Pair Transceiver\* (Order No. M0437LL/A)

The Apple Ethernet Twisted-Pair Transceiver is used to connect the Ethernet NB Card to an

Ethernet network using unshielded twisted-pair cable. To use Ethernet with unshielded twisted-pair media, you need an IEEE 802.3 10BASE-T-compatible hub, sold separately from third-party vendors.



\* See Back page for FCC certification information.



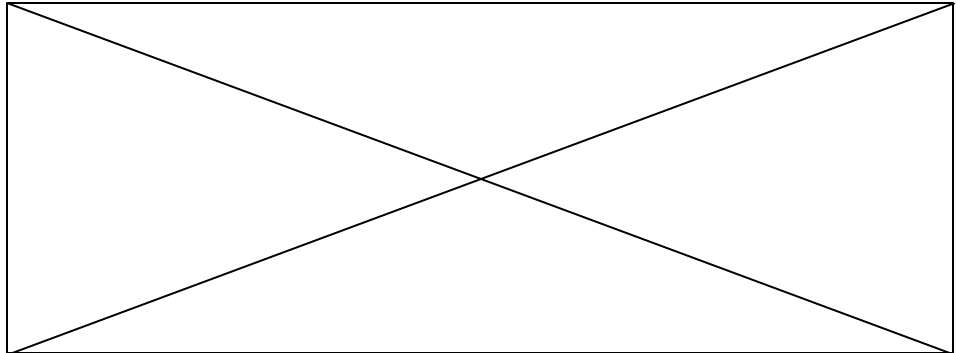
# Apple Ethernet NB Card

## System Requirements

**Apple Ethernet AUI Adapter (Order No. M0432LL/A)**

The Apple Ethernet AUI Adapter provides the Ethernet NB Card with a standard IEEE 802.3

Attachment Unit Interface (AUI). The AUI can be used to connect the Ethernet NB Card to an external transceiver.



## Technical Specifications

- *Connector:* Apple Ethernet
- *Transmit/Receive data rate:* 10-megabits-per-second maximum data rate
- *Processor:* Motorola Corporation 68000 running at 10 megahertz

- *RAM:* 512K standard, expandable to 1MB with Apple Order No. M0145LL/A, or 2.5 MB with third-party memory expansion modules
- *Environmental requirements:* Operating temperature: 50° to 104° F

(10° to 40° C); Humidity: 20% to 95% noncondensing at a temperature range of 25° to 40° C

- *Ethernet controller:* National Semiconductor DP83932 (SONIC)

## Ordering Information

**Apple Ethernet NB Card**

Order No. M0417LL/A

With your order you receive:

- Apple Ethernet NB Card
- *EtherTalk Installer* disk
- *Ethernet NB Card User's Guide*
- Limited warranty statement

\* This device has not been approved by the Federal Communications Commission. This device is not, and may not be offered for sale or lease, or sold or leased until approval of the FCC has been obtained.

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