



# Tech Info Library

## Token Ring NB/c and 4/16 NB Cards: Description and Specs (6/95)

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TOPIC -----

This article provides the description and specifications for the Apple Token Ring NB/c Card and Apple Token Ring 4/16 NB Card.

DISCUSSION -----

The Apple Token Ring NB Cards (Apple Token Ring NB/c and Apple Token Ring 4/16 NB Card) provide Macintosh, Apple Workgroup Server, and Power Macintosh models equipped with a NuBus slot with the ideal Token Ring connectivity solution for all of your networking needs. They support a wide range of protocols including AppleTalk, TCP/IP, and IPX.

The Apple Token Ring NB/c Card is a compact (7-inch) network-interface card that provides exceptional performance at a highly affordable price. This card offers a cost-effective, flexible Token Ring solution for connecting Macintosh computers to Apple Workgroup Servers and mainframes, providing access to a variety of network services such as mainframe connections, electronic mail, data bases, and file and print services.

Benefiting from the same high performance network software, the Apple Token Ring 4/16 NB Card is a full size (12-inch) bus-master network interface card designed for any Macintosh computer with a NuBus slot. It includes its own microprocessor and operating system, allowing it to operate independently of the main Macintosh processor. This mode of operation is designed to support "gateway-style" SNA solutions such as SNA•ps 3270 and SNA•ps 5250, as well as a variety of third-party APPC products.

Both cards use the IBM Token Ring chip set, ensuring compatibility and interoperability with all IBM Token Ring networks. Combining the flexibility of a Power Macintosh with any one of these Token Ring cards and Insignia Solutions SoftWindows DOS/Windows emulation software, users get a seamlessly integrated cross-platform solution to all their application and network needs.

Features

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Ease of Use

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- Install quickly and easily in a single step
- Ships with multilingual software, which makes it ready for use with different language version of the system software

#### Compatibility

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- Works with all Macintosh models with a NuBus slot, including all Macintosh II, Macintosh Centris, Macintosh Quadra, and Workgroup Server models (except the Workgroup Server 95), as well as with the Power Macintosh line
- Complies with IEEE 802.5 and 802.2 standards
- Uses the IBM Token Ring chip set, which provides complete compatibility with IBM environments
- Supports a variety of popular networking protocols and software, including AppleTalk, TCP/IP, IPX, Apple Internet Router, Insignia Solution's SoftWindows, and SNA•ps 3270 and SNA•ps 5250 client software; the Apple Token Ring 4/16 NB Card also supports APPC and SNA environments through the SNA•ps 3270 and 5250 Gateway.
- Easily integrates into multi-vendor environments
- Adapts to any standard Token Ring cabling environment

#### High Performance

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- Allows concurrent execution of multiple networking protocols to optimize network performance
- Ships with new, re-engineered, high performance network software
- Can be used in configurations ranging from an individual card in a single system to multiple-card, server based configurations

#### Convenience

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- Makes it easy to create, expand, administer, and troubleshoot your network

#### Apple Token Ring NB/c Card Technical Specifications

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#### Connector

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- DB-9 connector for attaching to IBM Type 1 cabling

#### Transmit/receive data rate

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- 4- or 16-megabit per second maximum data rate

#### Token Ring controller

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- IBM Token Ring 9314

Power dissipation

- 
- Maximum 5 W, average 3.5 W

Environmental requirements

- 
- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
  - Humidity: 20% to 95% noncondensing

System requirements

- 
- One available NuBus slot or 7-inch expansion slot (requires NuBus adapter)
  - IBM Type 1 cabling (shielded twisted pair) or IBM Type 3 cabling (unshielded twisted pair) with use of an external adapter
  - Industry standard Token Ring Multistation Access Unit (MAU)

Apple Token Ring 4/16 NB Card Technical Specifications

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Connector

- 
- DB-9 connector for attaching to IBM Type 1 cabling

Transmit/receive data rate

- 
- 4- or 16-megabit per second maximum data rate

Processor

- 
- Motorola 68000 operating at 10MHz

Memory

- 
- 512K of RAM, expandable to 2.5 MB

Token Ring controller

- 
- IBM Token Ring 9314

Power dissipation

- 
- Maximum 6 W, average 4 W

Environmental requirements

- 
- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
  - Humidity: 20% to 95% noncondensing

## System requirements

- One available NuBus slot
- IBM Type 1 cabling (shielded twisted pair) or IBM Type 3 cabling (unshielded twisted pair) with use of an external adapter
- Industry standard Token Ring Multistation Access Unit (MAU)

## Ordering Information

### Apple Token Ring NB/c Card

Order No. M1769Z/A

- Apple Token Ring NB/c Card
- Network Software Installer Disk
- User's guide
- Limited warranty

### Apple Token Ring 4/16 NB Card

Order No. M0415LL/B

- Apple Token Ring 4/16 NB Card
- Network Software Installer Disk
- User's guide
- Limited warranty

### Macintosh Coprocessor Platform Memory Expansion Kit

Order No. M0145LL/A

To expand the memory of the Apple Token Ring 4/16 NB Card to 1 MB

To expand the memory of the Apple Token Ring 4/16 Card to 2.5 MB, you need the following parts:

- Toshiba Part No. TC514400z-10
- Texas Instruments Part No. TMS44400-12SD

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

## Support Information Services

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