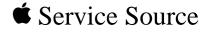
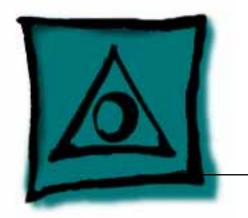


Token Ring Products







Specifications

Token Ring Products



Processor Motorola 68000 microprocessor operating at 10 MHz

Memory **Data Transfer Speed**

4 or 16 Mbps

1.5 A at 5 V

Power Requirements External Connector DE-9 (IBM Type 1 cable)

External adapters for Type 3 cable from third party

512K of RAM, expandable to 2.5 MB

LLC

Supports IBM source routing

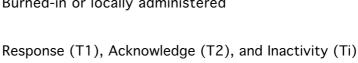
Routing Token Ring Address

Burned-in or locally administered

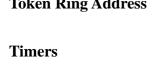












Maximum distance from MAU to device (lobe length) = 100

Maximum devices per ring = 260

meters Maximum distance between two MAUs (trunk length) = 120 meters Maximum devices per ring = 72

meters



Unshielded twisted-

pair:

Processor Memory

512K of RAM

Data Transfer Speed 4 Mbps

Application

Programming Interface











Specifications



TokenTalk NB Card - 5

Interface NuBus

Memory 64K SRAM, nonexpandable

ROM

32K ROM

G 1 4 40.1

Data Transfer Speed 4 or 16 M

Power Requirements 1.5 A at 5 V

4 or 16 Mbps, jumper selectable

Supports IBM source routing

Burned-in

Routing

Token Ring Address

Shielded twicted

Type 1 Cable

Sinciaca twistea-	Maximum distance from MAO to device (lobe length) = 300	
pair:	meters	
	Maximum distance between two MAUs (trunk length) = 200	
	meters	
	Maximum devices per ring = 260	

Type 3 Cable (4 MB only)

Unshielded twistedpair:

Maximum distance from MAU to device (lobe length) = 100 meters

Maximum distance between two MAUs (trunk length) = 120 meters

Maximum devices per ring = 72

Maximum distance from MAII to device (lobe length) = 300





Apple Token Ring PCI Card

Networking Supports a variety of popular networking protocols, including

Protocols AppleTalk, TCP/IP, IPX, SNA, and OSI

System One available PCI slot
Requirements IBM Type 3 cabling (u

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

Connector Type RJ-45 connector for attaching to Type 3 cabling

Data Transfer Speed

4 or 16 Mbps



IBM Token Ring chip set

Temperature 50—104° F (10—40° C)

Controller

Operating

Humidity

Power Dissipation

20—95% noncondensing

Maximum 5 W; Average 3.5 W





Troubleshooting

Token Ring Products



General

The Symptom Charts included in this chapter will help you diagnose specific symptoms related to your product. Because cures are listed on the charts in the order of most likely solution, try the first cure first. Verify whether or not the product continues to exhibit the symptom. If the symptom persists, try the next cure. (Note: If you have replaced a module, reinstall the original module before you proceed to the next cure.)

For additional assistance, contact Apple Technical Support.



Symptom Charts

Token Ring 4/16 NB Card

- Token Ring 4/16 icon missing from Network extension in Control Panel
- Switch off computer and reseat card.
- 2 If Token Ring 4/16 icon not in System folder, drag icon into System folder and restart computer. 3 Reinstall TokenTalk software using TokenTalk Installer disk.
- Reinstall system software. 4
- 5 Verify that only green diagnostic LED is on. If other condition exists, replace card.
- Can't select TokenTalk

icon

- Reinstall TokenTalk software using TokenTalk Installer disk.
 - Restart with another startup disk that contains TokenTalk software.





Token Ring 4/16 NB Card (Continued)

- Can't change network connection
- 1 Currently selected network is providing a service that computer is using.
- 2 Computer is providing a service that the network is using.



Run ConnectTest to verify proper operation of card.

missing from Chooser

TokenTalk icon

missing on startup

(file servers, print

servers, printers,

Network service

TokenTalk NB Card

TokenTalk icon Switch off computer and reseat card.

2

- 2 Run ConnectTest to verify proper operation of card.
- Switch off computer and reseat card.
- Verify correct TokenTalk zone is selected.
- Check cables and connections.

etc.) missing



TokenTalk NB Card (Continued)

Computer hangs when you select TokenTalk in chooser

- 1 Wait 30–40 seconds. A delay may be normal; it can take up to 30 seconds for network to respond.
- 2 Switch off computer and reseat card.
- 3 Verify that only green diagnostic LED is on. If other condition exists, replace card.
- 4 Run ConnectTest to verify proper operation of card.



Token Ring NB/c Card

Token Ring NB/c icon missing from **Network Control**

icon in Network

Control Panel

Panel

- Switch off computer and reseat card. 2 If Token Ring NB/c icon is not in System folder, reinstall
 - Token Ring NB/c software from Network Software Installer disk and restart computer.
- 3 Verify that diagnostic LED on card is on. If not, replace card.
 - Verify that speed selected on card matches speed of ring to which computer is attached. If computer is attached to 4 MB ring, LED should be yellow. If computer is attached to 16 MB ring, LED should be green.

Reinstall Token Ring NB/c software from Network Software

Can't select TokenTalk

4

- Installer disk and restart computer. Restart computer with another startup disk that contains
- Token Ring NB/c software.



in Network Control

Panel

Token Ring NB/c Card (Continued)

- Computer hangs when 1 Wait 30–40 seconds. Delay may be normal; it can take up to you select TokenTalk 30 seconds for network to respond.
 - 2 Switch off computer and reseat card.
 - 2 Switch on computer and reseat card
 - Verify that diagnostic LED on card is on. If not, replace card.
 Verify that speed selected on card matches speed of ring to
 - which computer is attached. If computer is attached to 4 MB ring, LED should be yellow. If computer is attached to 16 MB ring, LED should be green.

Symptom Charts/Token Ring NB/c Card (Continued) - 8

Network icon missing
from Network
Control Panel
Switch off computer and reseat card.
Startup disk has wrong version of software. Install Token
Ring NB/c software from Network Software Installer disk
that shipped with card (or later version) and restart
computer.



Token Ring NB/c Card (Continued)

- Network service (file servers, print servers, printers, etc.) missing
- 1 Verify correct AppleTalk zone is selected.
- 2 Check cables and connections.
- 3 Verify that speed selected on card matches speed of ring to which computer is attached. If computer is attached to 4 MB ring, LED should be yellow. If computer is attached to 16 MB ring, LED should be green.
- Can't change network connection
- 1 Currently selected network is providing service that computer is using. Quit any network applications or extensions that are providing network services.
- 2 Computer is providing service that network is using. Quit any network applications or extensions that are providing network services.



software.

Can't select

TokenRing in

Control Panel

AppleTalk or TCP/IP

System can't load the

Token Ring driver at

Verify network cable is properly attached. Reinstall driver software.

The system file may be damaged or the Token Ring driver installation was unsuccessful. Reinstall the driver software.

startup and reverts to LocalTalk

Troubleshooting		Symptom Charts/Apple PCI Token Ring Card (Continued) - 11		
	Apple PCI Token Ring Card (Continued)			
Network services	1	Check the network connection.		
don't appear in the Chooser	2	Open the AppleTalk control panel and choose Token Ring from the popup menu. Restart the computer and then open the Chooser to check the available services.		
	3	If you can access some services but can't access a particular service, the device providing that service might be located in a different AppleTalk zone, or it might be malfunctioning, switched off, or disconnected from the network. There may also be a break somewhere in the network cables between your Macintosh and the missing service.		
Two or more Token Ring items appear in	1	There may be more than one Token Ring card installed. Select the slot number of the card you want to use.		
the AppleTalk control panel's popup menu	2	There may be earlier versions of the TokenTalk software on the system. Open the Extensions folder and drag older versions of the TokenTalk file to the Trash.		

Apple PCI Token Ring Card (Continued)

System won't let you change the network connection

- 1 Essential services (such as file sharing) or programs may be in use that prohibit the change. Quit the service named in the system's alert message and try switching the network connection again.
- 2 Try quitting all application programs.
- 3 If it's OK to disrupt current services, shut down the Macintosh, using the Shut Down command. Restart the computer, change the network connection, and start the service or program again.

Token Ring item doesn't appear in the AppleTalk or TCP/IP control panel popup menu Reinstall the driver software.

