# Apple Token Ring 4/16 NB Card: Compared to TokenTalk Card

Article Created: 13 November 1991
Article Last Reviewed:
Article Last Updated:

TOPIC -----------------------------------------------------------

1) What are the differences between the Token Ring card and the earlier TokenTalk card?

2) Is an upgrade available?

3) Why did Apple change the name from TokenTalk Card to Token Ring Card?

4) What kind of speed increases can I expect at 16Mbps?

DISCUSSION -----------------------------------------------------

1) There are three main differences between Apple's previous Token Ring card and this one:

   - Transmission speed
     The old card supported only 4 Mbps transmission, and the new card supports both 4 and 16 Mbps.

   - On-board memory capacity
     The old card came with 512K RAM on the card, but there was no expansion capability. The new card comes with 512K standard, expandable to 1 or 2.5MB.

   - Token Ring technology
     The old card used the Texas Instruments TMS380 Token Ring chip set. The new card uses the industry-standard IBM Token-Ring chip set.

2) There's no upgrade program at this time.

3) Both of the cards are based on IEEE 802.5 standards for Token Ring, and will therefore work in all standard Token Ring environments. You can use multiple protocol stacks with the cards, including SNA and AppleTalk. In fact, because both cards are based on the Macintosh Coprocessor Platform architecture, you can run multiple network protocols simultaneously. Still, some customers found the name

TokenTalk confusing, thinking that the card only supported AppleTalk protocols. We have changed the name to reflect the broad range of applications possible with the card, and to complement its standards-based design.

4) That depends on your network configuration. We find that in low-traffic situations, the increase in throughput is not astronomical. Generally, this is because the bottleneck is not how much information can be transferred over the wire, but how much can be processed in and out of the Macintosh. As the total amount of traffic on the ring increases, the capacity of the network becomes more important and 16Mbps token ring begins to perform better than 4Mbps Token Ring.

Operation at 16 Mbps also provides a feature called "Early Token Release," whereby more than one frame may exist on the ring at once. This provides an additional improvement in throughput, especially on large rings carrying a significant number of small frames.



Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 9421