Tech Info Library

Macintosh Quadra: How On-board Ethernet Differs from Ethernet NB

Revised: 8/6/92
Security: Everyone

Macintosh Quadra: How On-board Ethernet Differs from Ethernet NB

==========

Article Created: 19 December 1991
Article Last Reviewed: 5 August 1992
Article Last Updated:

TOPIC ----------

Does the built-in EtherTalk capability on the Quadra systems have the same functionality as the Ethernet NB Card?

DISCUSSION ----------

The Quadra's on-board Ethernet has the same functionality as the Ethernet or EtherTalk NB card. But it's about 15-20% faster because it uses DMA, doesn't rely on NuBus data transfers, and the chip is operating at the faster system bus clock rate.

The Quadra's on-board Ethernet is implemented using the National DP83932 SONIC Ethernet controller chip. This device includes an IEEE 802.3 encoder/decoder (ENDEC), media access control (MAC) unit, separate 32-byte send and receive FIFOs, and DMA controller in one device. SONIC is housed in a 132-pin PQFP package. A small ROM provides the Ethernet global address (which provides a unique 48-bit identity for each Quadra built). The SONIC controller includes DMA capability. It will request the bus and transfer data between its internal registers and main memory.

The Apple AUI (AAUI) connector provides outside connection. The AAUI connector is compatible with any of the FriendlyNet drop boxes that provide transceivers for thick net, thin net, or 10BaseT networks.

Tech Info Library Article Number:9491