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## Centris 610 & 650, Quadra 800: Memory Interleaving & DRAM (7/94)

Revised: 7/28/94  
Security: Everyone

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Article Created: 5 February 1993  
Article Reviewed/Updated: 28 July 1994

TOPIC -----

The Macintosh Centris 650 and Quadra 800 support memory interleaving. What is memory interleaving, and what DRAM can I use?

In this document, the Centris 650 and Quadra 650 can be used interchangeably.

DISCUSSION -----

Memory Interleaving occurs on the Centris 650 and Quadra 800 computers when same-size SIMM pairs are used: for example, two 8MB SIMMs. This allows the memory subsystem to perform certain operations faster. Basically, it allows the memory subsystem to write to the same memory address in different banks of memory before incrementing the address. Depending on how memory intensive the application, this can improve performance 5 to 10%. A system in the interleaved configuration will perform at its highest level.

The Centris 610, Centris 650, and Quadra 800 use 72-pin DRAM SIMMs, which are widely available in the Intel market and offer a full "bank" of DRAM on one SIMM.

The Centris 610 and 650 use 80ns SIMMs, and the Quadra 800 uses 60ns SIMMs. They are available in single- and double-sided formats, and are offered in many different sizes:

- 4MB (single sided, offered by Apple)
- 8MB (double sided, offered by Apple)
- 16MB (single sided)
- 32MB (double sided)

Here are the 72-pin SIMMs that these computers DON'T support:

- 1MB

- 2MB
- 64MB

Note: All of these systems -- Centris 610, Centris 650, and Quadra 800 -- have flexible memory systems. Any supported SIMM size can go into any SIMM socket in any order.

Do NOT use composite memory with any 610, 650 or 800 Macintosh.

#### Article Change History

28 Jul 1994 - Revised formatting, added Quadra name to document.

09 Mar 1993 - Removed statement that any size SIMM (4MB or greater) can go into any SIMM socket in any order, because 1MB, 2MB, and 64MB SIMMs aren't supported.

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Tech Info Library Article Number:11346