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DayStar Digital: nPOWER - PowerPC Coprocessor Card (3/94)

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TOPIC -----

This article describes the nPower PowerPC Coprocessor Card for selected Macintosh Models from DayStar Digital. The nPower card differs from other PowerPC upgrades in that multiple PowerPC chips can be added to a single card, accelerating important functions in image processing software.

DISCUSSION -----

DayStar Digital has licensed core system-level ROM code from Apple. DayStar's nPower PowerPC Coprocessor Card will connect to the Processor Direct Slot (PDS) on the following Macintosh models:

- Macintosh Centris 650.
- Macintosh Quadra 650, 700, 800, 900, 950.

The rest of this article details the card's specifications. The card is expected to ship upon the official introduction of Apple first PowerPC based Macintosh models.

nPOWER PowerPC Coprocessor Card

Processor

- 66 MHz or 80 MHz clock speed option
- 64-bit data bus
- 32-bit address bus
- Mother board interface:
 - Processor Direct Slot (PDS) with proprietary multiplexed pipeline data path processor.
- Processor performance:
 - SPECint92 >60 (integer)
 - SPECfp92 >80 (floating point) at 66 MHz

Processor Cache

- Built in 32 Kbyte unified instruction and data cache
- Optional write-back mode

Memory

- 2 banks with two 72-pin SIMM slots each for a total of four.
- SIMM sizes: 1M x 32, 2M x 32, 4M x 32, 8M x 32.
- RAM speed: 60 ns (nanoseconds) or faster.
- RAM Type: non-parity or parity (parity is not used)

Memory Configurations

- Capacity range: 0 MB to 128 MB
- on board configurations: 0 MB, 8 MB, 16 MB, 27 MB, 32 MB, 40 MB, 48 MB, 64 MB, 72 MB, 80 MB, 96 MB, 128 MB, 0 MB

Memory Data Transfer Rates

- With interleaving: 92 MB per second reads, 118 MB per second writes.
- Without interleaving: 76 MB per second reads, 92 MB per second writes.
- Data transfer modes: 64-bit cache line transfers
- Data transfer rates: 20 MB per second and higher, depending on host platform.
- Power consumption: 3.0 amps at 5V (with 8 MB of RAM)

Software

- nPOWER Control Panel (CDEV)
- Adobe PhotoShop 25 nPOWERed extension

Environmental Conditions

- 50 to 104 degrees F (10 to 40 degrees C)
- Humidity: 10 to 80 percent (non-condensing)
- Altitude: Sea level to 10,000 feet.

To locate a vendor's address and phone numbers, use the vendor name as a search string.

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