AlphaPC 264DP
Motherboard

Description

The AlphaPC 264DP Motherboard, along with the Alpha 21264 microprocessor, provides a new solution for high-end workstations and enterprise-class servers. Supporting up to 2 processors, each starting at 500MHz with 2 or 4MB of Late Write Cache per processor, the AlphaPC 264DP provides today's most powerful Windows NT and Linux solution available in the server and workstation markets.

Hardware Features

- AlphaPC 264DP supports up to Two Alpha 21264 microprocessor daughtercards, each containing:
  - A 2MB or 4MB, 128bit L2 Cache of Late-Write HSTL Synchronous Static RAM (SSRAM)
  - Processor speed starts at 500MHz
- Compaq 21272 Core Logic Chipset provides the interface to the CPUs, main memory and PCI buses at:
  - Up to 83MHz System Bus
  - Two 256bit Memory Bus
  - Two 64bit/33MHz PCI Bus
- 128MB to 4GB SDRAM Memory:
  - Four memory banks, each consisting of four 200pin DIMMs totaling 16 Slots
  - Supports 72bit ECC SDRAM

- PCI Bus Support (33MHz)
  - Six 64bit PCI Slots
  - 1 Shared ISA Slot
- Dual Channel Ultra-Wide SCSI 3 Controller
  - Integrated Adaptec AIC-7895
  - 2 connectors on-board
- PCI-to-ISA Bridge using a Cypress 82C693UB HyperCache chip
  - PCI IDE for two devices (PIO mode 4)
  - Keyboard/Mouse control and time-of-year clock
- Integrated ISA peripheral support:
  - SMC FDC37C665 combination controller chip provides diskette control (2.88MB), two serial port UARTs with modem control (550) and a parallel port.

Operating Systems

- Windows NT (Version 4.0 or Later)
- Linux for Alpha (Available mid 1999)

Warranty

- One Year

Documentation

- AlphaPC 264DP Motherboard Windows NT User's Manual

- AlphaPC 264DP Motherboard Technical Reference Manual

Software Features

- Windows NT Alpha BIOS firmware, supports the installation of Windows NT operating system (Version 4.0 or later)
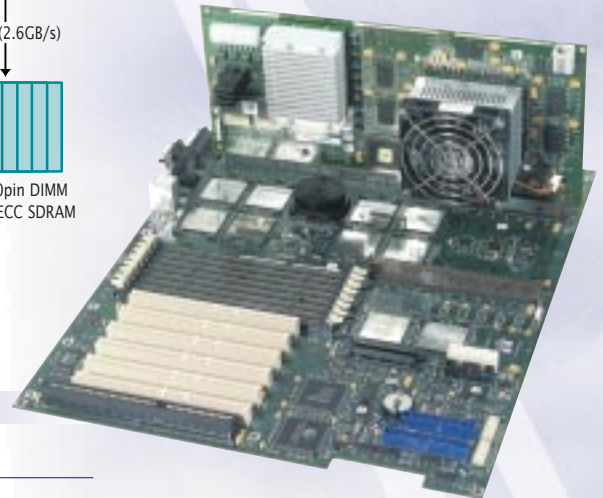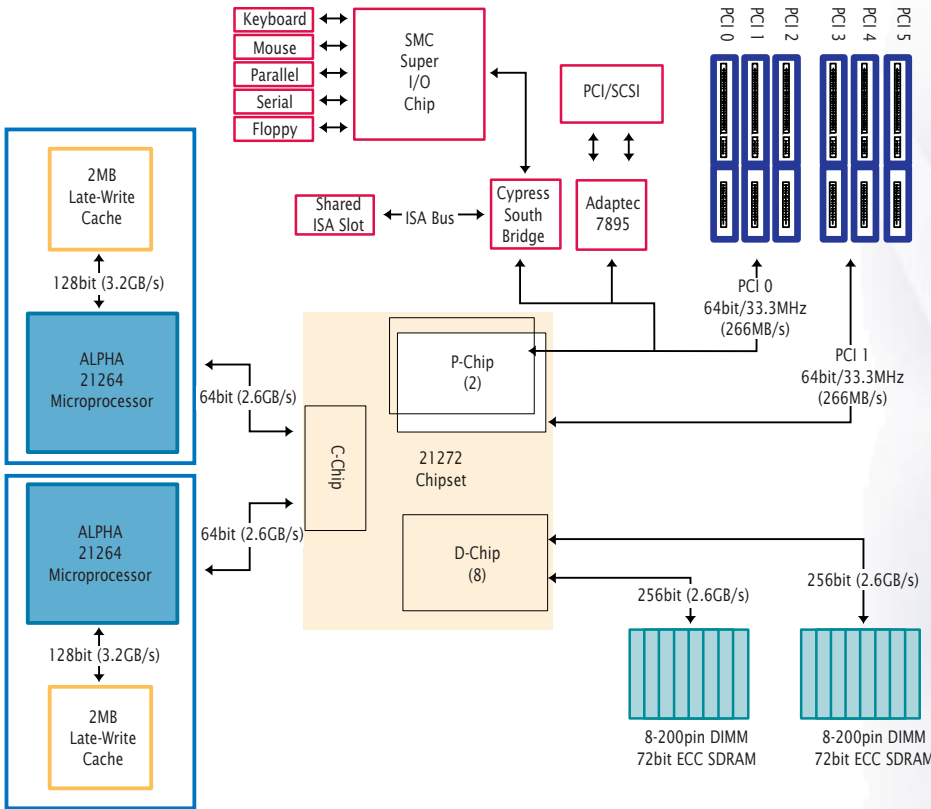
- Also supports Alpha SRM BIOS firmware for the installation of Digital UNIX

January, 1999

Block diagram labels:

Keyboard ↔
Mouse ↔
Parallel ↔
Serial ↔
Floppy ↔

SMC Super I/O Chip

PCI/SCSI

Shared ISA Slot ← ISA Bus →

Cypress South Bridge

Adaptec 7895

PCI 0 · PCI 1 · PCI 2 · PCI 3 · PCI 4 · PCI 5

2MB Late-Write Cache

128bit (3.2GB/s)

ALPHA 21264 Microprocessor

64bit (2.6GB/s)

P-Chip (2)

21272 Chipset

C-Chip

PCI 0 64bit/33.3MHz (266MB/s)

PCI 1 64bit/33.3MHz (266MB/s)

ALPHA 21264 Microprocessor

64bit (2.6GB/s)

128bit (3.2GB/s)

2MB Late-Write Cache

D-Chip (8)

256bit (2.6GB/s)

256bit (2.6GB/s)

8-200pin DIMM 72bit ECC SDRAM

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For More Information
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CHARACTERISTICS

Power supply	630-Watt Minimum PC Power Supply
Operating Temperature	10º C to 35º C (50º F to 95º F)
Storage Temperature Range	-55º C to 125º C (-67º F to 257º F)
Dimensions	
Mainboard	42.11 cm x 33.02 cm (16.6 in x 13.0 in)
Daughtercard	30.48 cm x 14.99 cm (12.0 in x 5.9 in)

Product	Part Number
AlphaPC 264DP Motherboard and a Daughtercard with 500MHz CPU and 2MB L2 Cache	MB264DP2-500
AlphaPC 264 Daughtercard with 500MHz CPU and 2MB L2 Cache	264DC2-500
AlphaPC 264 Motherboard and a Daughtercard with 500MHz CPU and 4MB L2 Cache	MB264DP4-500
AlphaPC 264 Daughtercard with 500MHz CPU and 4MB L2 Cache	264DC4-500
Availability	February 25, 1999