



AlphaPC 264DP

AlphaPC 264DP Product Brief

By offering unrivaled performance, the AlphaPC 264DP motherboard provides an easy, cost-effective solution for companies developing high-performance embedded products.

Alpha motherboards are designed to use standard PC components such as synchronous DRAM (SDRAM) DIMMs and PCI option cards. The AlphaPC 264DP offers PCI and ISA slots, onboard PCI IDE, a dual-port ultrawide SCSI controller, and 16 SDRAM DIMMs providing access to up to 4 gigabytes of memory. The mainboard contains the system chipset, main memory and all I/O logic. Each daughtercard contains a 500-MHz Alpha 21264 microprocessor and L2 cache. One or two daughtercards may be used for uniprocessor or dual-processor configurations.

The AlphaPC 264DP motherboard provides a dramatic performance advantage to embedded applications such as CAT, MRI, telecommunication switches, and simulators. At two times the performance of its nearest competitor, this product provides the ultimate in performance at a competitive cost. OEMs that implement the AlphaPC 264DP in their products position themselves as providers of the industry's most advanced technology solutions.

The AlphaPC 264DP motherboard integrates Compaq Computer Corporation's engineering excellence, quality, and performance, keeping Alpha products ahead of the competition.

Features

Hardware Features

- AlphaPC 264DP mainboard supports one or two daughtercards. Each daughtercard contains:
 - One Alpha 21264 microprocessor operating at a speed of 500 MHz
 - A 2MB, 128-bit L2 cache with late-write HSTL synchronous static RAM (SSRAM)
- The 21272 core logic chipset on the mainboard interfaces to the CPUs, main memory, and PCI buses.
- SDRAM memory subsystem includes:
 - 128MB to 4GB memory complement with 72-bit ECC
 - Four memory arrays, each consisting of four 200-pin, 72-bit buffered SDRAM DIMMs
 - Memory speed support of 83.3 MHz
- PCI bus support (33 MHz):
 - Six (6) 64-bit slots (one slot shared with ISA slot)
- Integrated PCI peripheral support:
 - Integrated Adaptec AIC-7895 dual-port, ultrawide SCSI controller
 - 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
- ISA bus support:
 - One dedicated ISA expansion slot (shared with one 64-bit PCI slot)
- Integrated ISA peripheral support:
 - SMSC FDC37C665 combination controller chip provides diskette control (2.88MB), two serial port UARTs with modem control (550), and a parallel port.
- Daughtercard has onboard 5.0-V to 2.2-V voltage regulation for CPU, and 3.3-V to 1.5-V voltage regulation for SSRAM.
 - The mainboard supplies +3.3 V.
 - A separate power connector supplies +5.0 V.
- Daughtercard has onboard flash ROM for 21264 Alpha microprocessor SROM support.

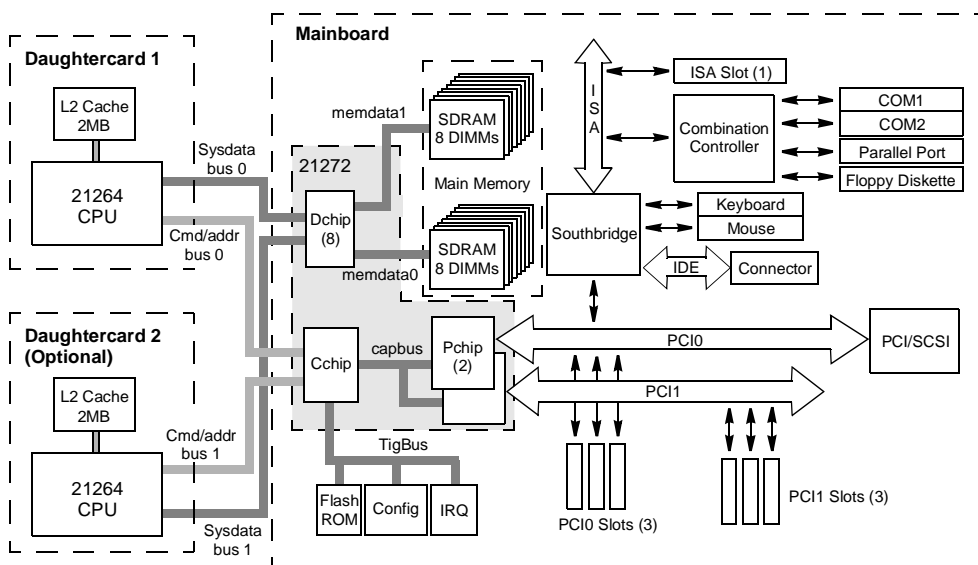
Software Features

- Windows NT Alpha BIOS firmware, which supports installation of Windows NT Server 4.0 (Windows NT Server operating system purchased separately)

Warranty

One year

AlphaPC 264DP Functional Block Diagram



For More Information

To learn more about the availability of the AlphaPC 264DP, contact your local sales office. To learn more about Compaq Computer Corporation's portfolio of Alpha board products, visit the Alpha OEM World Wide Web Internet site:

<http://www.digital.com/alphaoem>

The AlphaPC 264DP includes the mainboard and the daughtercard. Documentation and firmware are available separately.

Product	Order Number
AlphaPC 264DP Mainboard	21A06-B0
AlphaPC 264DP Daughtercard with 500-MHz CPU and 2MB L2 cache	21A06-M0

AlphaPC 264DP Characteristics

Characteristic	Specification
Power supply	630-W minimum PC power supply +3.3 V, +12.0 V, -12.0 V, and 2-V system bus termination for daughtercard derived from mainboard; +5.0 V supplied by separate power connector
Operating temperature range	10°C to 35°C (50°F to 95°F)
Storage temperature range	-55°C to 125°C (-67°F to 257°F)
Board sizes	
Mainboard	42.11 cm × 33.02 cm (16.58 in × 13.0 in)
Daughtercard	30.48 cm × 14.99 cm (12.0 in × 5.9 in)

Related Products and Documentation

Product	Order Number
Alpha Motherboards Software Developer's Kit (SDK)	QR-21B02-04
AlphaPC 264DP User's Manual	EC-RB0BA-TE
AlphaPC 264DP Technical Reference Manual	EC-RB0DA-TE

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