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AlphaPC 164LX

Digital Semiconductor
AlphaPC 164LX Motherboard
Product Brief

ALPHA ™
GENERATION

By offering a pace-setting performance alternative to *x*86 and RISC platforms, the AlphaPC 164LX provides an easy, cost-effective solution for companies entering the high-performance PC market.

Alpha PCs are designed with standard PC components such as SDRAM DIMMs, PCI option cards, power supplies, enclosures, and the Windows NT operating system. Using standard PC components allows Alpha PCs to be produced at a competitive cost while still maintaining leadership performance.

The AlphaPC 164LX is perfect for performance-focused applications such as mechanical CAD, graphics and animation, and desktop publishing. Alpha provides a rich complement of over 2500 committed Windows NT applications.

The AlphaPC 164LX motherboard integrates Digital Semiconductor's engineering excellence, quality, and performance, keeping Alpha systems ahead of the competition.

Features

Hardware Features

- AlphaPC 164LX supports the Digital Semiconductor 21164 Alpha microprocessor that operates at speeds of 466, 533, and 600 MHz.

- Digital Semiconductor 21174 core logic chip interfaces to the CPU, system memory, L3 cache, and PCI bus.

- Synchronous DRAM (SDRAM) memory subsystem includes:
  – 32MB to 512MB memory
  – Two banks of 128-bit memory
  – 168-pin unbuffered SDRAM DIMMs

- L3 cache subsystem supports:
  – 128-bit data path
  – Synchronous SRAMs (SSRAMs)
  – 2MB cache size, using 128K X 18 SSRAMs

- PCI bus support (33 MHz):
  – Two 64-bit slots and two 32-bit slots
  – PCI-to-ISA bridge using an Intel 82378ZB Saturn I/O chip
  – PCI IDE using CMD PCI0646

- ISA provides an expansion bus with two dedicated ISA expansion slots and the following system support functions:
  – SMC FDC37C935 combination controller chip provides diskette control, two UARTs with modem control, parallel port, mouse control, keyboard control, and time-of-year clock
  – 1MB of flash ROM

Software Features

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

Documentation

- *AlphaPC 164LX Motherboard User's Manual*

Warranty

- Three years

Applications

The AlphaPC 164LX enables OEMs to create AlphaPC systems for the high-performance PC market. This ATX motherboard fits into standard ATX enclosures and utilizes standard ATX power supplies. OEMs can position these systems in multiple markets such as CAD, financial analysis, and Internet servers.

AlphaPC 164LX Kit includes:

Product	Order Number
AlphaPC 164LX Motherboard with 2MB L3 cache for Windows NT (no CPU)	21A04-C0
AlphaPC 164LX Documentation	
Windows NT Alpha BIOS Firmware	

Alpha microprocessor options:

Product	Order Number
21164 Alpha microprocessors: • 466 MHz • 533 MHz • 600 MHz	 • 21164-IB • 21164-P8 • 21164-MB

AlphaPC 164LX Characteristics

Characteristic	Specification
Power supply	Standard ATX 3.3-V PC power supply
Operating temperature range	10°C to 40°C (50°F to 104°F)
Storage temperature range	–55°C to 125°C (–67°F to 257°F)
Size	30.48 cm X 24.38 cm (12.0 in X 9.6 in)

Other Digital Semiconductor Products

Product	Order Number
Motherboard Software Developer's Kit (SDK) and Firmware Update	Available Summer, 1997

For More Information

To learn more about the availability of the AlphaPC 164LX, contact your local semiconductor distributor. To learn more about Digital Semiconductor's product portfolio, visit the Digital Semiconductor World Wide Web Internet site:

http://www.digital.com/semiconductor

or you can contact the Digital Semiconductor Information Line:

United States and Canada
  1–800–332–2717
Outside North America
  1–510–490–4753

For technical support, contact the Digital Semiconductor Customer Technology Center:

Phone (U.S. and international)
  1–508–568–7474
Fax
  1–508–568–6698