AlphaPC 164LX
Motherboard

Description

AlphaPC 164LX Motherboard provides an easy, cost-effective solution for companies entering the high-performance PC market by offering a pace-setting performance alternative to X86 and RISC platforms. AlphaPCs are designed with standard PC components such as SDRAM DIMMs, PCI option cards, power supplies, enclosures, and the Windows NT operating system.

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 3500 committed Windows NT applications. The AlphaPC 164LX also provides the Linux market with a high performance solution for the workstation, Beowulf cluster and webserver environments. AlphaPC 164LX Motherboard is available in 2MB or 4MB of on-board cache.

Hardware Features

- AlphaPC 164LX supports the 21164 Alpha microprocessor that operates at speeds of 533, 600, and 667 MHz.

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

- Synchronous DRAM (SDRAM) memory subsystem includes:
  - 32MB to 1GB memory
  - Two banks of 128bit memory
  - 168-pin unbuffered SDRAM DIMMs with ECC

- L3 cache subsystem supports:
  - 128bit data path
  - Synchronous SRAMs (SSRAMs)
  - 2MB cache size, using 128K x 18 SSRAMs or 4MB with 256K x 18

- PCI bus support (33MHz):
  - Two 64bit slots and two 32bit slots
  - PCI-to-ISA bridge using an Intel 82378B 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:
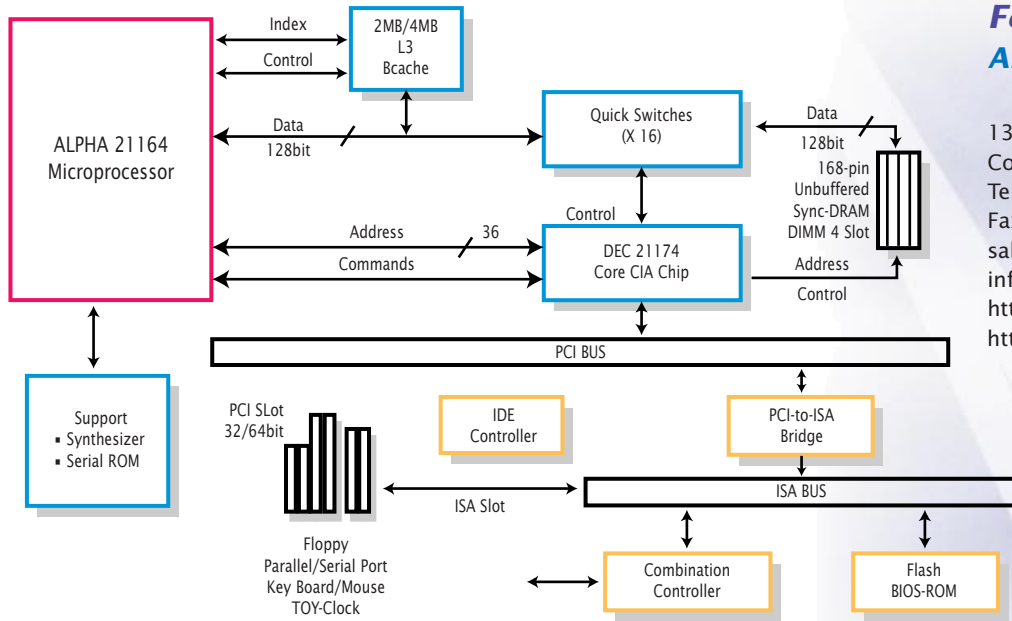 - Supports installation of Windows NT operating system (Version 4.0 or later)

Supporting OS

- Microsoft Windows NT (Version 4.0 or later)
- Linux

Documentation

- AlphaPC 164LX Motherboard Windows NT User's Manual
- AlphaPC 164LX Motherboard Technical Reference Manual

January, 1999

AlphaPC 164LX Block Diagram

CHARACTERISTICS

Power Supply	Standard ATX PC power supply
Operating Temperature	10˚ C to 40˚ C (50˚ F to 104˚ F)
Storage Temperature Range	-55˚ C to 125˚ C (-67˚ F to 257˚ F)
Dimensions	30.48 cm x 24.38 cm (12.0 in x 96 in)
Availability	NOW
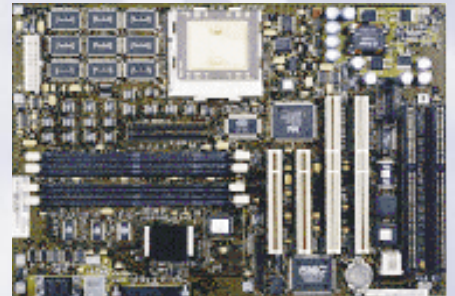
Samsung DIMM Part Number List for 164LX Motherboard:

Density	Part Number	Configuration	# of Banks	Base of Component
16MB	KMM374S203CT-GH/GL	2M X 72	(2 Bank)	16 Mbit
32MB	KMM374S403CT-GH/GL	4M X 72	(2 Bank)	16 Mbit
64MB	KMM374S823BT-GH/GL	8M X 72	(4 Bank)	64 Mbit
128MB	KMM374S1623BT-GH/GL	16M x 72	(4 Bank)	64 Mbit
	KMM374S1723T-GH/GL	16M x 72	(4 Bank)	128 Mbit
256MB	KMM374S3323T-GH/GL	32M x 72	(4 Bank)	128 Mbit