

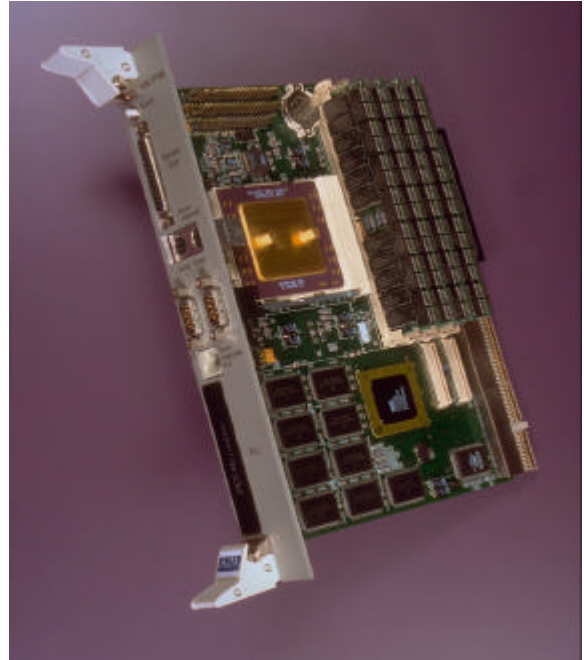


# SBC/P164™

## Alpha-based, CompactPCI™ Single Board Computer

The Alta Technology SBC/P164™ Single Board Computer (SBC) combines the high performance Digital 21164 Alpha microprocessor exceptionally fast 64-bit CompactPCI™ systems. The board is designed for embedded and scalable architectures requiring high computation matched with high bandwidth, low overhead communications.

The SBC/P164 takes advantage of the 21164's high performance interface chipset to access main memory through a 256-bit memory bus and the 33MHz 64-bit PCI data bus. On-board and external memory caches for data and instructions insure unrivaled performance for compute intensive applications. Industry standard PCI drivers and peripherals make these products especially well-suited for medical equipment, process control manufacturing automation, telecommunications and data acquisition applications.



### SBC/P164 Board Features

- High performance 64-bit CompactPCI™
- Microsoft NT® operating system
- CompactPCI (dual-slot 6U) board format
- From 64 to 1024 MB ECC protected DIMM memory (256-bit pathway)
- 1 or 2MB external cache
- 32-bit PCI mezzanine card (PMC) slot for add-in PCI capability
- 2 EIDE ports / 1 floppy drive port
- 2 Serial / 1 parallel Port
- PS/2 Mouse / keyboard

### Benefits

- Designed to meet high performance needs of embedded and parallel environments
- Digital's 64-bit Alpha architecture insures well known software and hardware expertise
- Industry standard PMC and CompactPCI interfaces and connectors mean multi-vendor interoperability
- Highest performance NT operating system in an SBC gives room to grow
- Meets high-performance needs of embedded and parallel environments
- Standard cooling / lower power requirements

### 366, 433, 500 MHz Processor Features

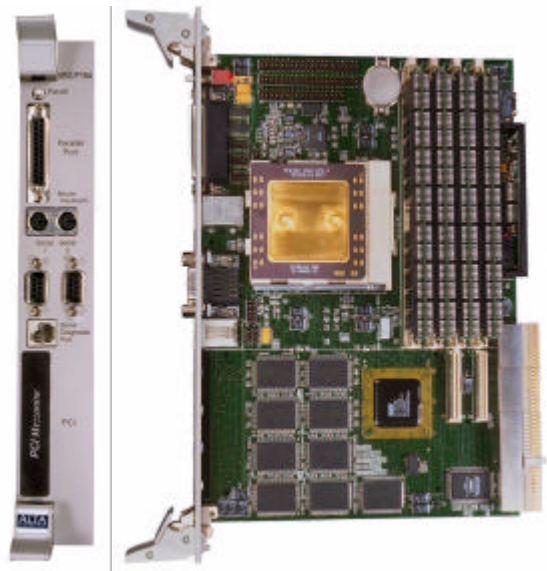
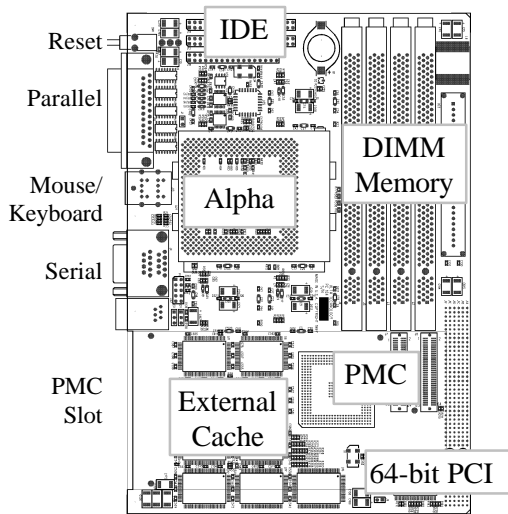
- Fully pipelined 64-bit advanced RISC architecture supports Microsoft NT
- Industry leading performance:

MHz	500	433	366
SPECint95	15.4	13.3	11.3
SPECfp95	21.1	18.3	15.4
BIPS	2.0	1.7	1.5

- Pipelined (7-stage) integer unit
- Pipelined (9 stage) floating-point unit
- Onchip, 8KB/8KB, direct mapped L1 instruction AND data caches (primary cache)
- Onchip, 96KB, 3-way, set-associative, write-back L2 unified instruction and data cache (secondary cache)
- Enhanced support for byte and word data types

### SBC/P164 Architecture

The SBC/P164 improves upon the high performance standards set by earlier Alpha products from Alta Technology. The CompactPCI SBC provides a 32 or 64-bit bus architecture for CompactPCI peripherals in embedded systems.



### Technical Information and Specifications

The layout of the board is shown to the left with the major board components identified.

Technical specifications for the SBC/P164 are available from Alta or on our website at:

<http://www.altatech.com/pralph.htm>.

For up-to-date information on the SBC/P164 and other high-performance Alpha-based products, visit Alta's home page on the World Wide Web at:

<http://www.altatech.com>

For More Information:

### Alta Technology Corporation

9500 South 500 West  
Suite 212  
Sandy, Utah 84070-6655 USA  
(801) 562-1010  
(801) 254-2020 (FAX)  
email: [sales@altatech.com](mailto:sales@altatech.com)