

# Introducing the new performance standard for Linux server solutions.

UP2000 MOTHERBOARD



*Suddenly, the world spins faster. API's UP2000 dual-processor motherboard combines the 64-bit power of Alpha — the world's fastest processor, bar none — with enabling technologies that make state-of-the-art Alpha servers easier to build and more cost effective than ever before.*

## ***Get balanced, benchmark-shattering performance.***

The UP2000 accommodates up to two Alpha 21264 processors with speeds as high as 750MHz, with up to 8MB L2 cache each; its high level of cache (3.2GB/s) and memory (2.6GB/s) bandwidths deliver consistent, balanced performance for virtually every application. No wonder UP2000 recently recorded one of the fastest performance ever measured in the SPECcpu95 benchmark — outperforming systems that cost up to ten times as much.

## ***Build Alpha servers easily and economically.***

With its revolutionary Alpha Slot B technology — the first-ever slot technology for Alpha — the UP2000 brings x86-style modularity, openness, and economy to Alpha server design. Its ATX Extended form factor easily fits standard server enclosures as well as the API PowerRAC Chassis 320. The UP2000 is also compatible with industry standard power supplies, memory, and more — allowing you to offer your customers the server performance they need, with the upgradability and investment protection they demand.

## ***Deliver the true 64-bit solutions your customers need.***

The UP2000 is the most powerful, most cost-effective platform available for Linux and Tru64 UNIX™ solutions — and the only server platform available today that takes full advantage of Linux's 64-bit architecture. Use it as the foundation for high-performance technical computing (HPTC) clusters (including Beowulf clusters), high availability Web servers, digital content creation (DCC) and render farm solutions. Or tap its power to build state-of-the-art, high-end workstation solutions for virtually any power-hungry Linux and Tru64 UNIX application.

***API — Developing innovative products that bring unprecedented ease to Alpha system design. API leverages the resources of Samsung to deliver products at competitive prices. By partnering with leading Linux vendors, API is helping customers bring business solutions to the market with key Linux applications — TODAY.***

***API — Delivering next generation high-performance Alpha Linux solutions into new and emerging markets.***



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## Unmatched Alpha performance

- Accommodates one or two Alpha 21264 processors running at 667, or 750MHz, each with integrated 2, 4, or 8MB L2 Cache
- 3.2GB/s L2 Cache bandwidth
- 2.65GB/s memory bandwidth

## Full expandability

- 256MB to 2GB RAM with ECC; 256-bit wide memory bus
- Up to 8 168-pin PCI100 SDRAM PLL registered/buffered based SPD DIMMS
- High-speed 64-bit PCI I/O subsystem, including
  - Dual independent peer PCI buses
  - 400 MB/s total I/O bandwidth
  - 6 PCI slots: 2 64-bit and 4 32-bit
  - One shared ISA expansion slot
  - Floppy controller
  - Two serial ports with modem control
  - Parallel port
  - Dual USB ports
  - 2MB flash ROM

## Unprecedented ease of engineering

- Alpha Slot B modular design. Each module includes processor and cache, plus
  - I<sup>2</sup>C bus for integrated system management
  - Thermal sensor
- ATX-extended form factor — 13" x 12"
- Rack-mountable with API PowerRAC Chassis
- Compatible with industry standard memory and other standard chassis

## Supporting OS and Software

- Linux for Alpha (most major distributions)
- Tru64 UNIX
- SRM Firmware

## Warranty

- Three years

For more information on the UP2000, or any of API's products, contact:

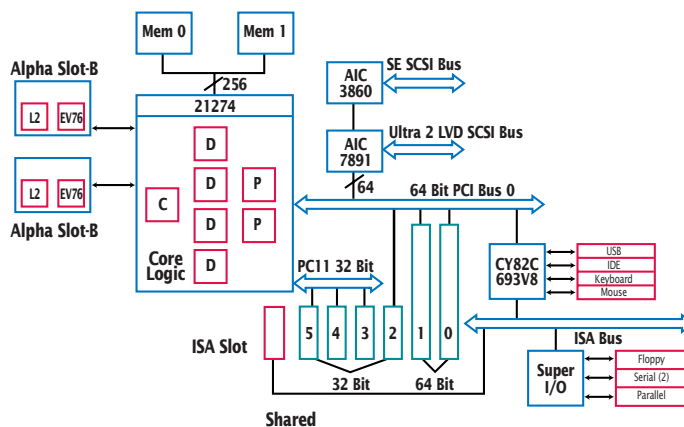
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UP2000 Functional Block Diagram



## Physical Characteristics

Characteristic	Specification
Power	600W ATX Power Supply
Size	Extended ATX 30.48cm x 33.02cm x 12.70cm (12 in x 13in x 5in)
Operating temperature range	5°C to 35°C (41°F to 95°F)
Storage temperature range	-35°C to 85°C (-31°F to 185°F)
Electrical	Specification
+3.3V	30A
+5V	25A plus up to 12A additional for PCI slots
+12V	10A plus up to 3A additional for PCI slots
-5V	0.1A
-12V	0.6A



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