Introducing the new performance standard for Linux server solutions.

Suddenly, the world spins faster. API NetWorks' 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 833MHz and up to 8MB of L2 cache each. API NetWorks' new UP2000+ motherboard is the first of the series to support Double Data Rate (DDR) cache with up to 8.8GB/s of peak L2 cache bandwidth and 2.6GB/s of memory bandwidth to deliver consistent, balanced performance for virtually every application. No wonder API NetWorks' family of Ultimate Performance Series motherboards hold two of the fastest performances ever recorded on both SPECfp2000* and SPECint2000* — making them ideal for High Performance Computing (HPC) and Internet solutions.

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 NetWorks 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 solutions — and the only server platform available today that takes full advantage of Linux's 64-bit architecture. Use the UP2000+ as the foundation for High Performance Computing (HPC) clusters (including Beowulf clusters), Internet solutions, Rendering Farm solutions and for powerful Developer solutions. Or tap its power to build state-of-the-art, high-end workstation solutions for virtually any power-hungry Linux application.

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

API NetWorks — Delivering innovative high-performance Alpha Linux technologies into High Performance Computing (HPC) and Internet markets.

*http://www.spec.org/osg/cpu2000/results/

api NetWorks

U P 2 0 0 0 + MOTHERBOARD

Unmatched Alpha performance

- Accommodates one or two Alpha 21264 processors running at 667, 750 and 833MHz, with integrated 4 or 8MB L2 cache each
- 8.8GB/s peak L2 cache bandwidth
- 2.65GB/s peak memory bandwidth

Full expandability

- 256MB to 2GB PC100 SDRAM with ECC; 256-bit wide memory bus
- Up to 8 168-pin PC100 SDRAM PLL registered/buffered based SPD DIMMS
- High-speed 64-bit PCI I/O subsystem, including:
    - Dual independent peer 64-bit PCI buses
    - 532 MB/s total I/O bandwidth
    - 6 PCI slots: 4 64-bit and 2 32-bit
    - Automatic slot configuration
    - One shared ISA expansion slot
- Integrated Peripherals including:
    - Ultra2 LVD SCSI (80MB/s)
    - Single ended transceiver to allow use of SE peripherals without slowing bus
    - EIDE controller
    - 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
    - I²C bus for integrated system management
    - Thermal sensor
- ATX-extended form factor — 13" x 12"
- Rack-mountable with API NetWorks PowerRAC Chassis 320
- Compatible with industry standard memory and other standard ATX-extended chassis

Supporting OS and Software

- Linux for Alpha (most major distributions)

Warranty

- Three years

UP2000+ Functional Block Diagram
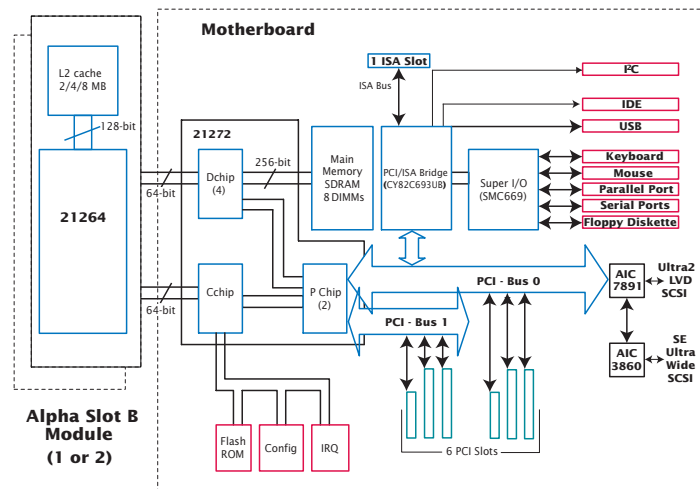
Physical Characteristics

Characteristic	Specification
Power	600W ATX Power Supply
Size	Extended ATX 30.48cm x 33.02cm x 12.70cm (12in 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
+12V	10A
-5V	0.1A
-12V	0.1A

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*Values calculated for motherboard and two Alpha Slot B modules only, no memory, AGP, PCI or ISA requirements are listed in above table.