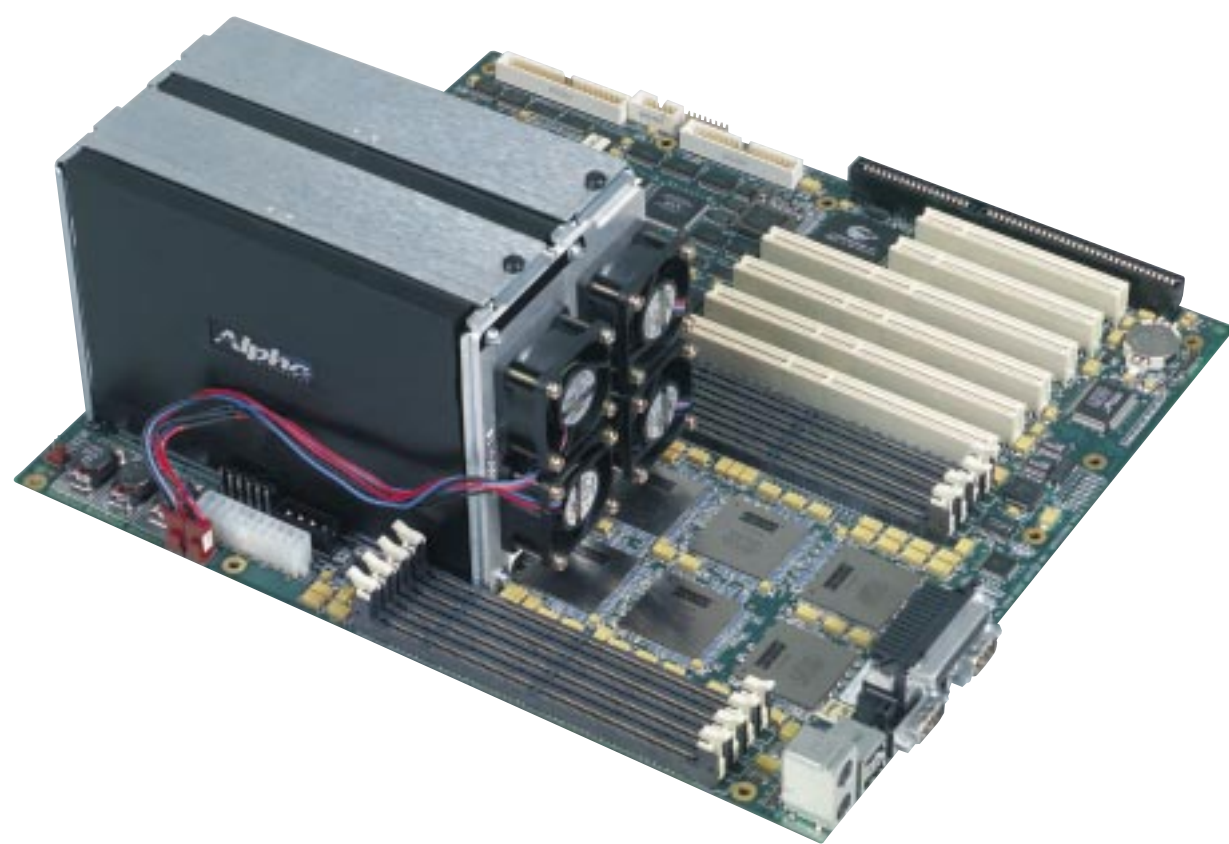


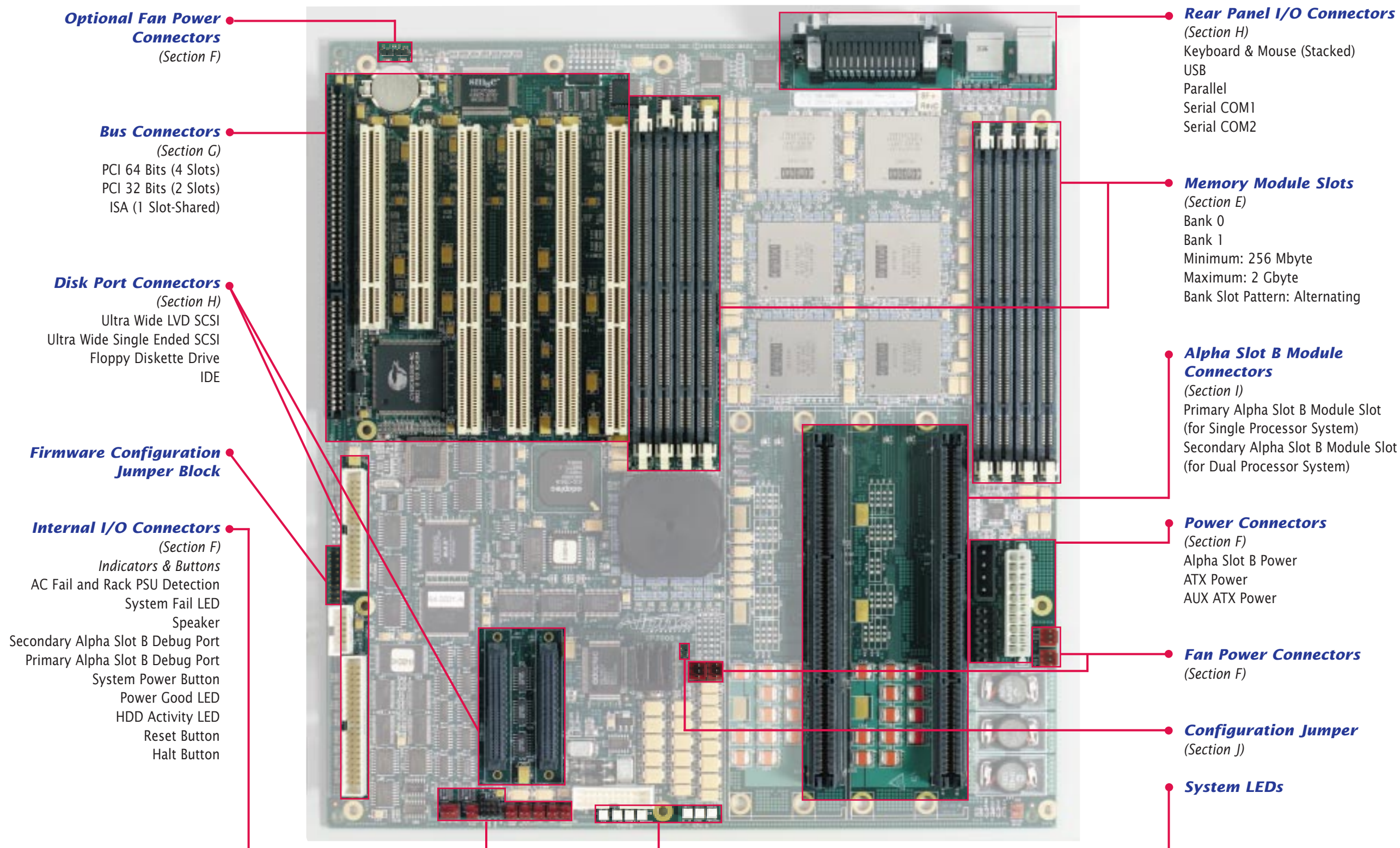
### UP2000+

#### Quick Start Installation Guide



www.alpha-processor.com

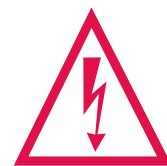
51-0041-2A



# B

## Unpack & Set Up

The UP2000+ Kit from Alpha Processor, Inc. is configured as a single or dual processor system. A single motherboard supports one or two Alpha Slot B Modules.



**Remove the components carefully from their cartons and anti-static packaging bags. Always take appropriate electrostatic discharge safety measures when handling boards or modules.**

Contents of the **UP2000+ Kit** are:

#### Carton 1

##### Hardware

- UP2000+ Extended ATX Motherboard
- Alpha Slot B Module Support Fixture (Goalposts) (2)
- Goalpost Covers (2) w/captive screw

##### Documentation

- Installation Guide
- Product Warranty Card
- Read Me First sheet
- UP2000+ User Manual**

#### Carton 2 – for single or dual processor systems

- Alpha Slot B Module
- Installation Guide
- Product Warranty Card

#### Carton 3 – for dual processor systems only

- Alpha Slot B Module
- Installation Guide
- Product Warranty Card

## Components

Prepare for the UP2000+ installation with the following components:

#### Level 1 – Required to Test Motherboard with Alpha Slot B Module

- |   |  |                                    |
|---|--|------------------------------------|
| <input type="checkbox"/> Power Supply(s)            | <input type="checkbox"/> Memory Modules    | <input type="checkbox"/> Hard Disk |
| <input type="checkbox"/> Video Card                 | <input type="checkbox"/> Monitor           | <input type="checkbox"/> Speaker   |
| <input type="checkbox"/> Keyboard                   | <input type="checkbox"/> Mouse             |                                    |
| <input type="checkbox"/> Assorted Peripheral Cables | <input type="checkbox"/> Floppy Disk Drive |                                    |

#### + Level 2 – Required to Load Operating System

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> CD Drive | <input type="checkbox"/> Operating System CD |
|-----------------------------------|--|

# C

## Enclosure Requirements

Two enclosure styles are supported:

- Rackmount chassis for equipment room convenience

**NOTE:** If you use a 3U-size rackmount configuration, see the **PowerRAC Chassis 320 Quick Start Installation Guide (P/N 51-0040)** for chassis mounting information.

- Pedestal or tower enclosure for office environment

### Locate Chassis Mounting Holes

To use a pedestal configuration:

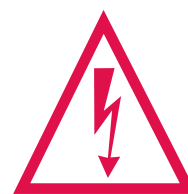
- Identify the **ten** standard Extended ATX mounting holes.
- Check for the **eight** Alpha Slot B goalposts mounting holes.

For chassis or enclosures without this mounting hole pattern,

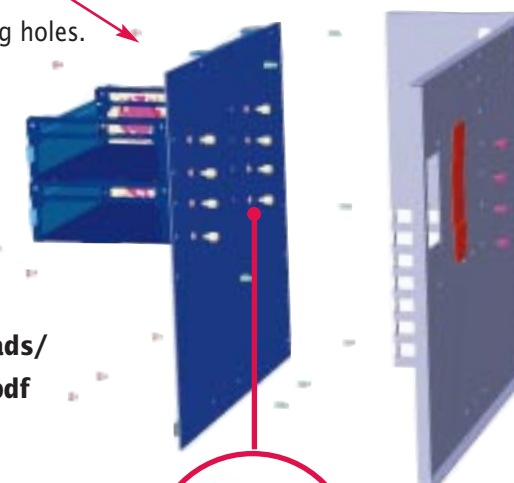
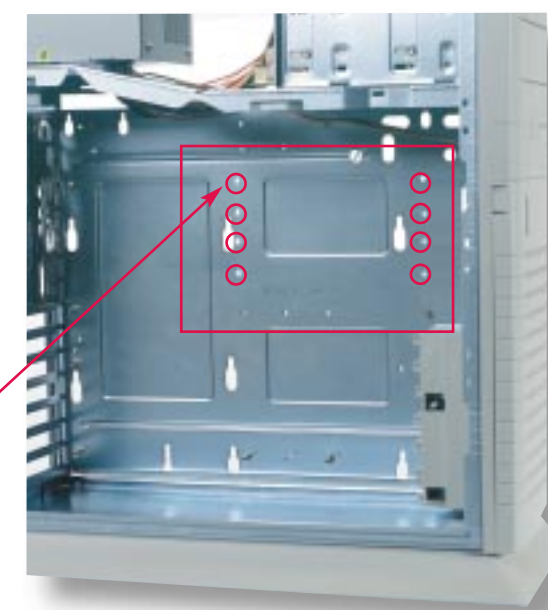
obtain a drill template or chassis mounting tips

from our website:

[http://www.alpha-processor.com/products/downloads/customer\\_support/UP2000/UP2000\\_drill\\_template.pdf](http://www.alpha-processor.com/products/downloads/customer_support/UP2000/UP2000_drill_template.pdf)



**Failure to correctly attach the motherboard and goalpost assembly to chassis backplate may damage the motherboard and may affect product warranty.**



Spacer washer and hex male/female spacer screw assembly

Chassis: Macase chassis KA-S80

# D

## Pedestal Assembly

### Motherboard & Goalposts to Chassis Assembly

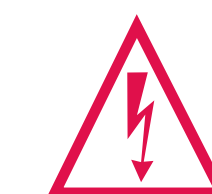
The goalposts hold Alpha Slot B Modules securely in place on the UP2000+ Motherboard.

**Requirements for attaching motherboard and goalpost fixture to the chassis are:**

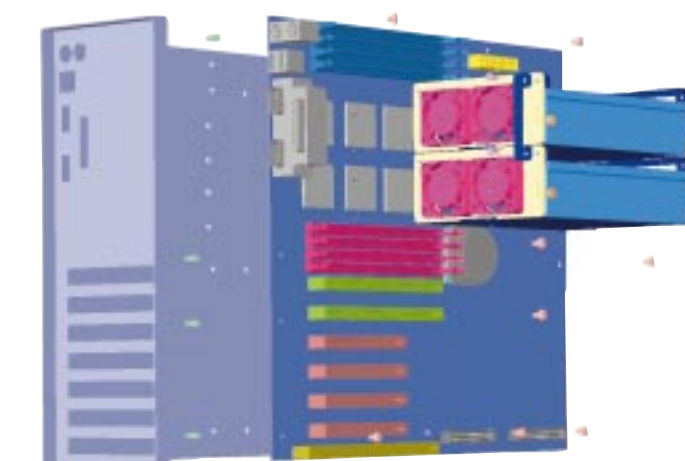
- Fastening Hardware – Eight Alpha Slot B hex male/female spacer screws and spacer washers
  - Eight M4x6mm long Phillips pan head screws
  - Two M3x8mm long pan head Phillips SEMS lock and flat
  - Brace for dual goalpost assembly
  - Assorted standoffs, screws, and miscellaneous hardware supplied by chassis vendor
- Tools – Phillips head screwdriver, Flat head screwdriver, torque wrench, nut driver (1/4")
- Proper chassis mounting holes drilled for goalpost captive nuts

**Use this mounting technique:**

- Install goalpost with fan cables labeled J37 and J39 over primary Alpha Slot B connector (J23). Install goalpost with fan cables labeled J35 and J38 over secondary Alpha Slot B connector (J22).
- Align the goalpost fixture holes with the corresponding motherboard clearance holes.
- Affix goalposts to motherboard from the backside using eight hex male/female spacer screws and spacer washers. Torque to 8 inch/lbs.
- Secure this assembly to the chassis with the standoffs and screws supplied by the chassis vendor.
- Secure M4x6mm screws through chassis to female thread of hex male/female spacer screws (eight places).
- Attach brace to top left corners of both goalpost's fan mounting plates with M3x8 pan head Phillips SEMS lock and flat.



**Alpha Slot B goalposts must be securely fastened to chassis backplate. Do not attempt to assemble a system without Alpha Slot B goalposts.**



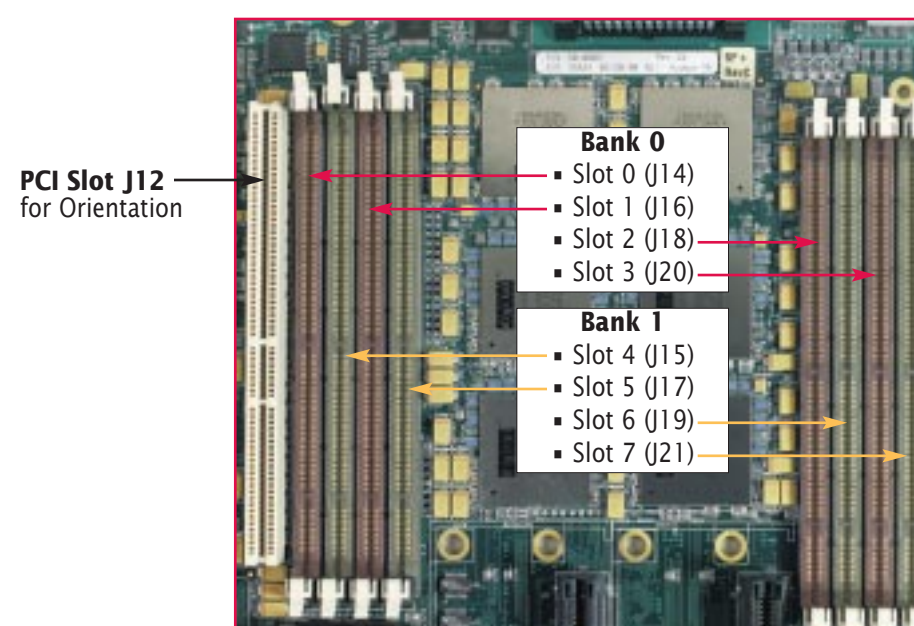


## Memory Configuration

The memory subsystem is composed of:

- Two DIMM banks, designated Bank 0 and Bank 1.
- Each bank has four slots (sockets) that accept **168-pin, PC100 SDRAM PLL Registered/Buffered based SPD DIMMs**.
- Slots are configured in an *alternating* pattern.

Before installing DIMMs, carefully review the picture and guidelines shown below.



## Memory Guidelines

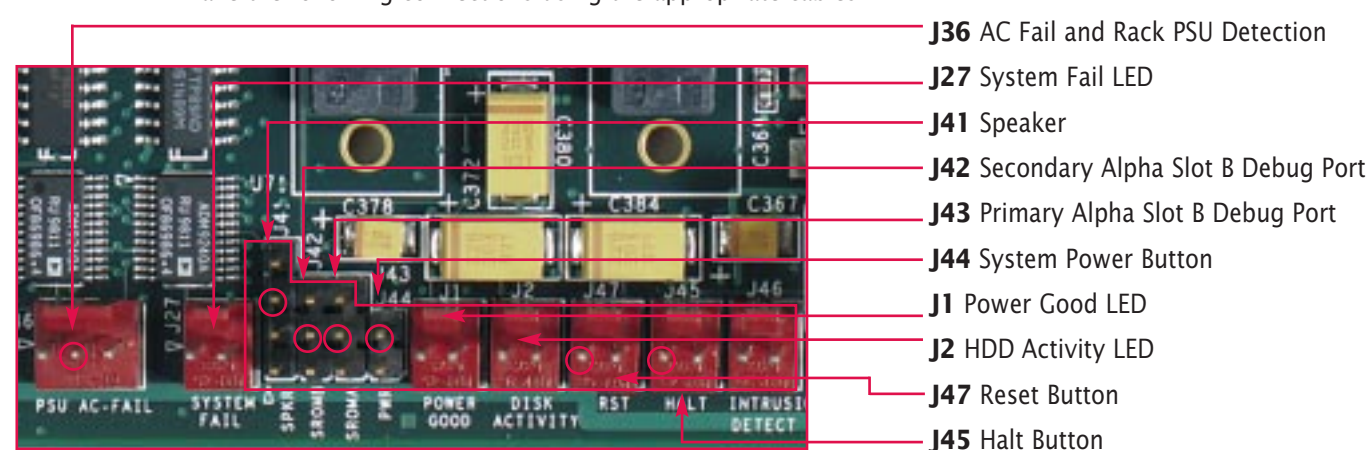
- A bank **must** be fully populated (all four slots in one bank must be filled).
- Bank 0 **must** be populated first.
- A bank **must** utilize the **same** type, size, and speed DIMMs.
- Bank 0 and Bank 1 do **not** have to have same type, size, and speed DIMMs.
- Memory is supported in a size range between 256 MB (min) to 2 GB (max).

Total System Memory	Bank 0	Bank 1
256 MB	64 MB x 4	
512 MB	64 MB x 4	64 MB x 4
768 MB	128 MB x 4	64 MB x 4
1 GB	128 MB x 4	128 MB x 4
2 GB	256 MB x 4	256 MB x 4

Some typical memory bank configurations

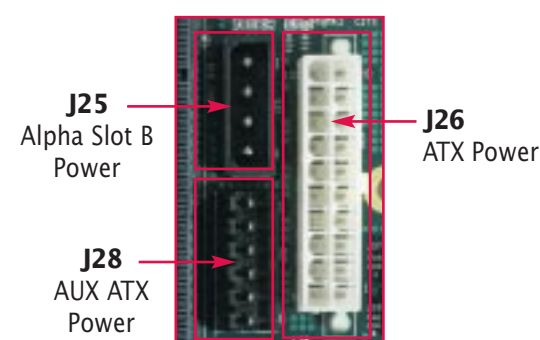
## Internal I/O Connections

Make the following connections using the appropriate cables:



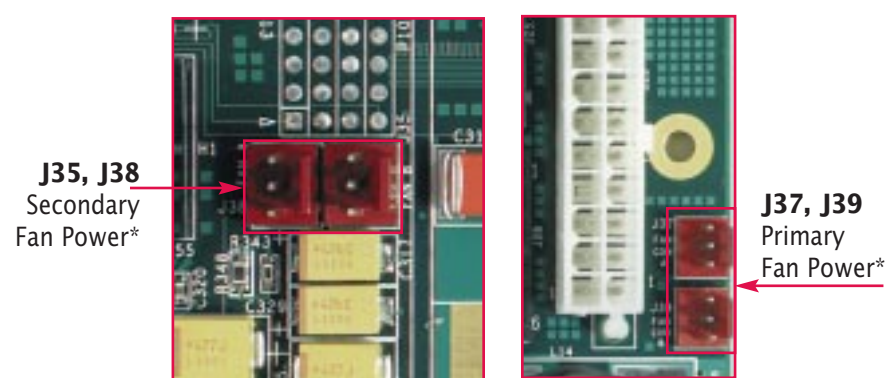
Circle indicates ground

## Power Connections



**NOTE:** Connect both J25 and J26 power leads. Connect AUX ATX Power lead (J28) if available. To mate with this socket, use cable connector Molex 90331-0010 or equivalent.

## Fan Power Connections



**NOTE:** \*For PowerRAC Chassis 320 installation, connect Primary fan power to Alpha Slot B Fans, and Secondary fan power to PCI slot fans.

For pedestal installation, connect Primary fan power to Primary Alpha Slot B and Secondary fan power to Secondary Alpha Slot B. Also connect optional fan power connectors J50 and J51 if chassis fans are available in the pedestal enclosure.

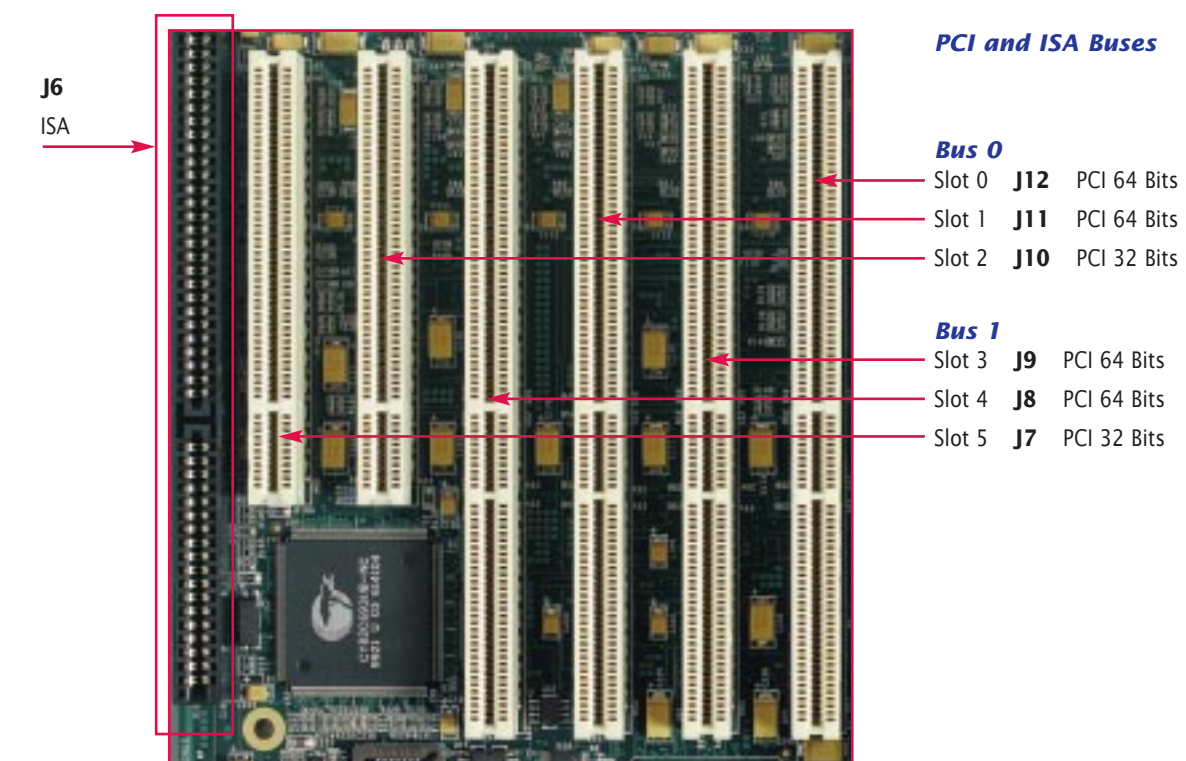
## Optional Fan Power Connections



## Bus Connections

Use slots J6 through J12 for access to ISA and PCI bus support.

**NOTE:** Video option **must** be installed on PCI Bus 0.



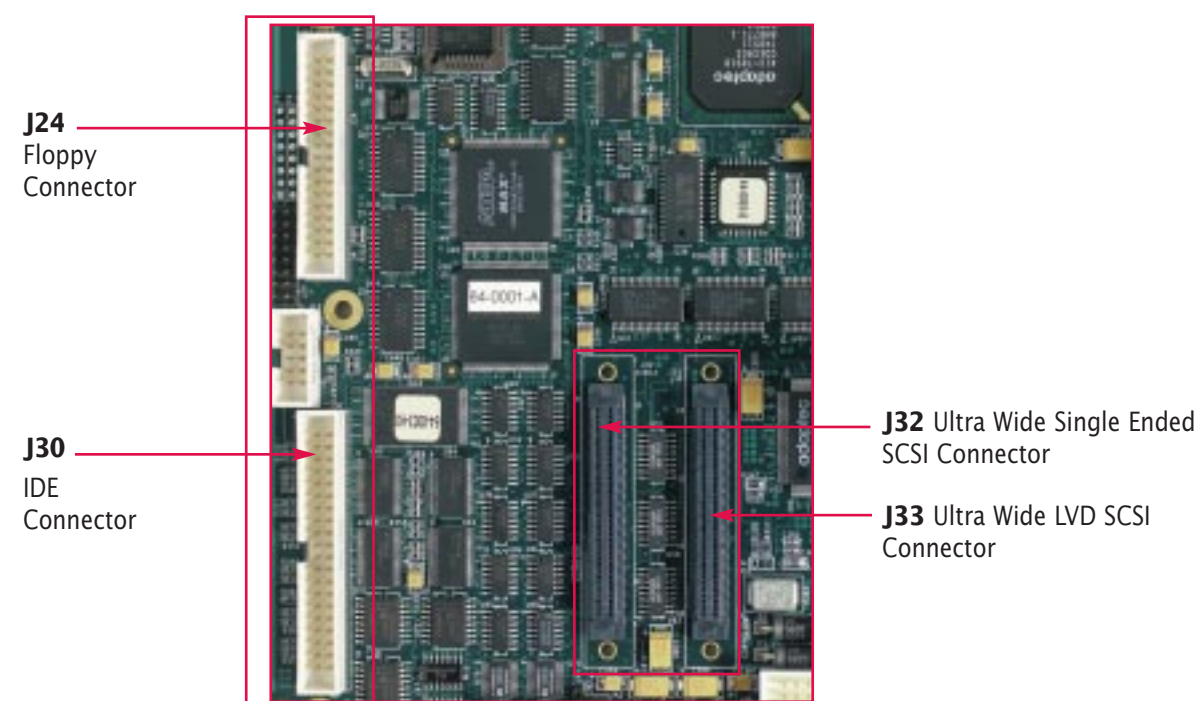
PCI and ISA Buses

**Bus 0**  
Slot 0 **J12** PCI 64 Bits  
Slot 1 **J11** PCI 64 Bits  
Slot 2 **J10** PCI 32 Bits

**Bus 1**  
Slot 3 **J9** PCI 64 Bits  
Slot 4 **J8** PCI 64 Bits  
Slot 5 **J7** PCI 32 Bits

## Disk Ports Connections

Use sockets J24, J30, J32, and J33 to connect various disk peripheral devices.



## Alpha Slot B Modules

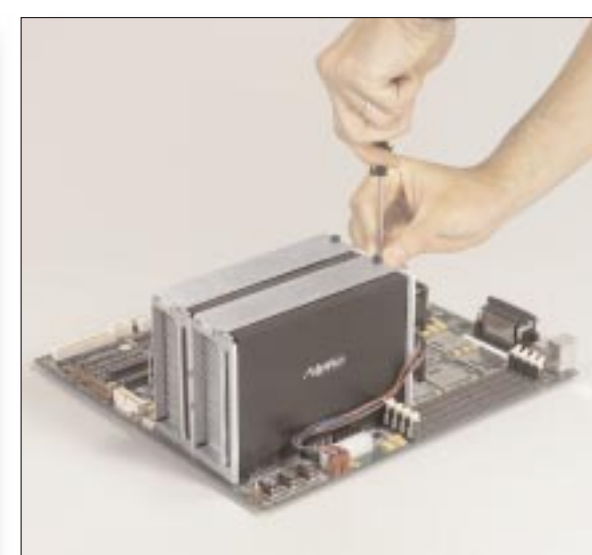


**Install these components with special care.**  
**They weigh approximately three pounds each.**  
**A wire handle provides a convenient mechanism for safely inserting them.**

**Use this procedure to install Alpha Slot B Modules:**

- Remove the Primary goalpost cover.
- Insert a module in Primary Slot (J23) for a single processor system.
- Use an insertion force of 35 pounds to seat the module just below the goalpost level.
- Remove the Secondary goalpost cover.
- Insert a second module in Secondary Slot (J22) for a dual processor configuration.
- Place a processor cover over each Module installed.
- Fasten each processor cover using its captive screw.

**NOTE:** A single-processor system **must** use the Primary Slot (J23).  
A dual-processor system **must** use the same type, speed and size of Alpha Slot B Modules in both slots (J23, J22)



## Jumper Configuration

Set configuration jumper J31 according to the type of Alpha Slot B Modules used. Configuration options are:

- Do not install a jumper for 21264/21264A processors.
- Install a jumper for 21264B processors.

The type of processor contained in each Alpha Slot B Module is identified in information supplied with the module.

## Initial System Test

Follow this procedure to confirm the proper installation of the UP2000+ system:

- Ensure that all cables and modules are seated properly.
- Plug enclosure into power source.
- Turn on enclosure power.

Your console screen will list the initialization messages.

The following command line prompt will appear:

P00>>>>

**NOTE:** If the command line prompt does not appear, refer to the **UP2000+ User Manual (P/N 51-0041)**, for troubleshooting information.

## Reference Materials

For procedures on booting the UP2000+ and other information, see the **UP2000+ User Manual (P/N 51-0042)**.

A copy of the UP2000+ User Manual is also available from our website: <http://www.alpha-processor.com>

Also, refer to the AlphaLinux website: <http://www.alphalinux.org>

## Rear Panel I/O Connections

