

UP2000

Quick Start Installation Guide



Bus Connectors

(Section G)

PCI 64 Bits (2 Slots)

PCI 32 Bits (4 Slots)

ISA (1 Slot-Shared)

SCSI Connectors

(Section G)

Ultra2 LVD

Ultra Wide Single Ended

Disk Ports

(Section G)

Floppy Diskette Drive

EIDE

Configuration Jumper Blocks

(Section I)

System

System Speed

CPU Speed

L2 Cache Size

I/O Connectors

(Section F)

Indicators & Buttons

Power Indicator LED

Speaker

Slot B Secondary SROM LED

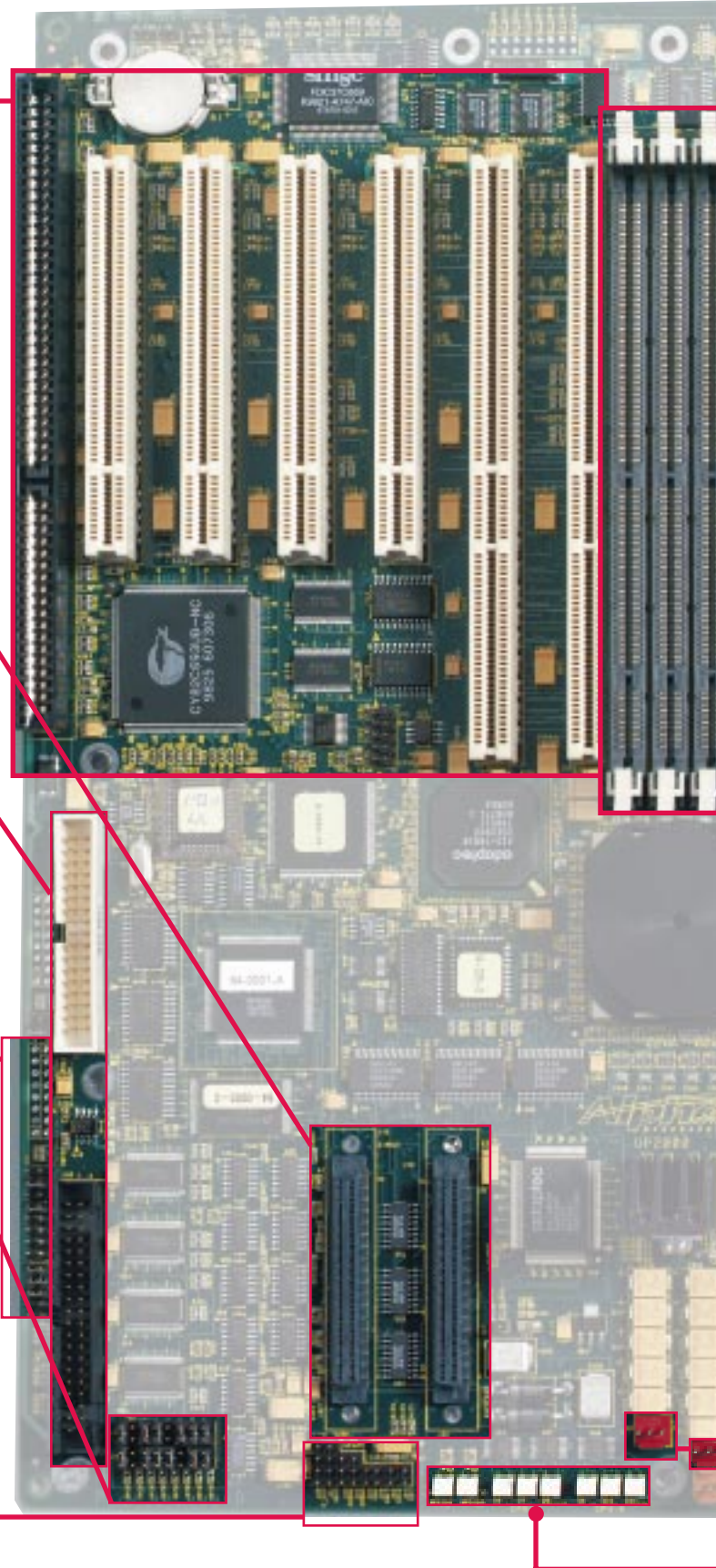
Slot B Primary SROM LED

Power Button

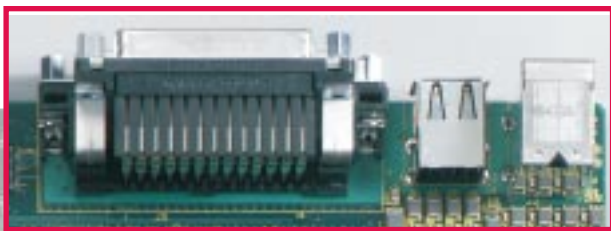
Halt Button

SCSI Indicator LED

Reset Button



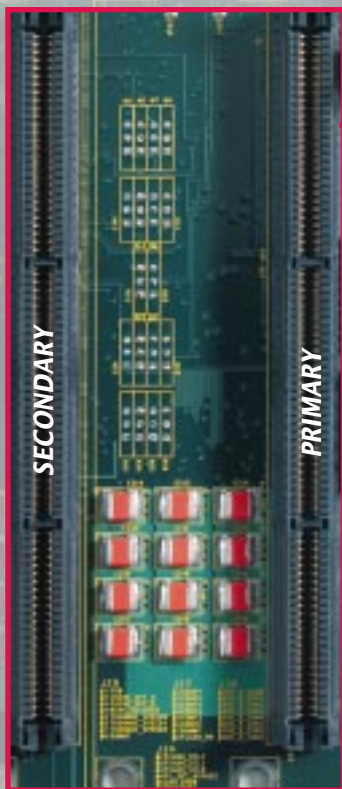
0 Motherboard



- **System Support Connectors**
(Section I)
 - Keyboard & Mouse (stacked)
 - USB
 - Parallel
 - Serial COM1
 - Serial COM2



- **Memory Module Slots**
(Section E)
 - Bank 0
 - Bank 1
 - Minimum: 256 Mbyte
 - Maximum: 2 Gbyte
 - Bank Slot Pattern: Alternating



- **Alpha Slot B Cartridge Connectors**
(Section H)
 - Primary Cartridge Slot
(for Single Processor System)
 - Secondary Cartridge Slot
(for Dual Processor System)



- **System Power**
(Section F)
 - Slot B Power
 - ATX Power
 - ATX Option (3.3 v)



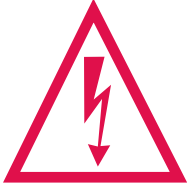
- **Fan Power Connectors**
(Section F)
 - Fan Power for Primary Slot
(Section F)
 - Fan Power for Secondary Slot
(Section F)



- **System LEDs**

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 Processor Cartridges.



Remove the components carefully from their cartons and anti-static packaging bags.

Always take appropriate electrostatic discharge safety measures when handling boards or cartridges.

Contents of the **UP2000 Kit** are:

Carton 1

Hardware

- UP2000 Extended ATX Motherboard
- Alpha Slot B Cartridge Support Fixture (Goalposts) (2)
- Goalpost Covers (2) w/captive screw
- Installation Guide
- Product Warranty Card
- Read Me First sheet
- Documentation Floppy

Software

- NT HAL
- Linux boot and configuration software
- ATAPI driver
- Adaptec Onboard SCSI Driver
- Licensing Agreement

Carton 2 – for single processor systems

Hardware

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

Carton 3 – for dual processor systems only

Hardware

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

Components

Prepare for the UP2000 installation with the following components:

Level 1 – Required to Test Motherboard with Slot B Cartridge

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



Mounting Requirements

Chassis Mounting Holes

Identify the **ten** standard Extended ATX mounting holes.

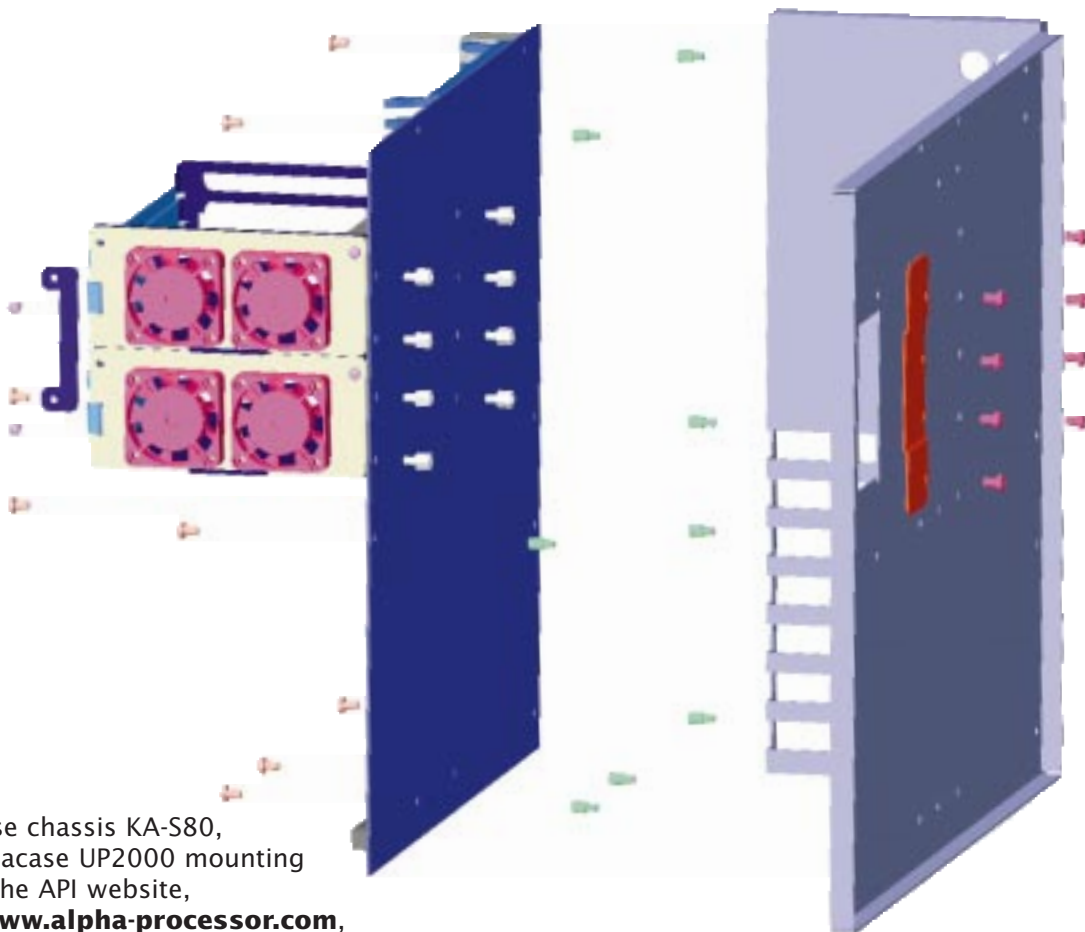
Check for the **eight** Slot B goalpost mounting holes.

For chassis or enclosures without this mounting hole pattern, obtain a drill template or chassis mounting tips from our website.



Slot B goalposts must be securely fastened to chassis backplate.

<http://www.alpha-processor.com>



For Macase chassis KA-S80, use the Macase UP2000 mounting kit. Visit the API website, <http://www.alpha-processor.com>, for ordering information for the Macase mounting kit and other UP2000 mounting information.

Attach to Chassis

Motherboard & Goalposts to Chassis Assembly

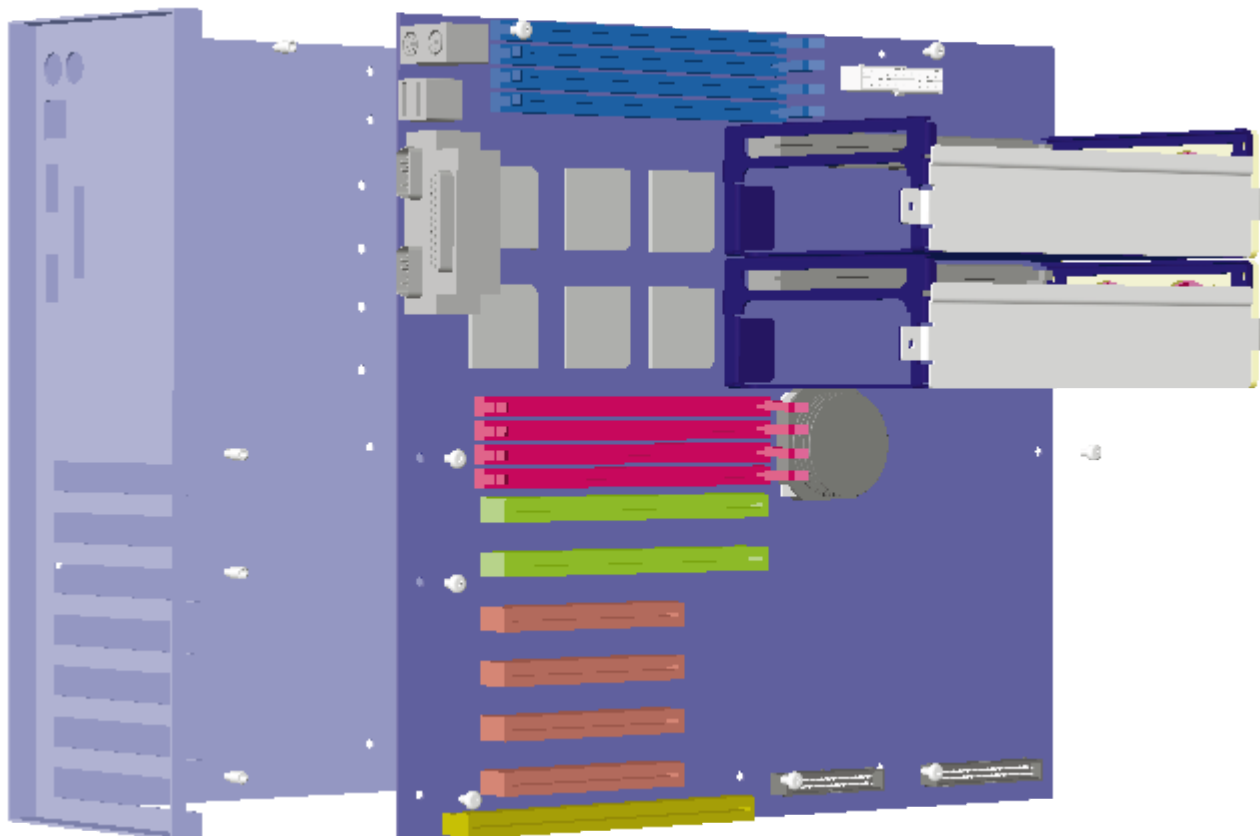
The goalposts hold Alpha Slot B cartridges securely in place on the UP2000 motherboard.

Requirements for attaching motherboard and goalposts fixture to the chassis are:

- Fastening Hardware – Eight Slot B captive nut shoulder screw and washers.
 - Eight M4x6mm long Phillips pan head screws.
 - 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:

1. Align the goalposts fixture holes with the corresponding motherboard clearance holes.
2. Affix goalposts to motherboard from the backside using captive nuts and torque to 8 inch/lbs.
3. Affix goalpost brace to goalpost assembly. Torque to 4 inch/lbs. (As shown in Section C Mounting Requirements.)
4. Secure this assembly to the chassis with the standoffs and screws supplied by the chassis vendor.
5. Secure M4x6mm screws through chassis to goalpost captive nuts.



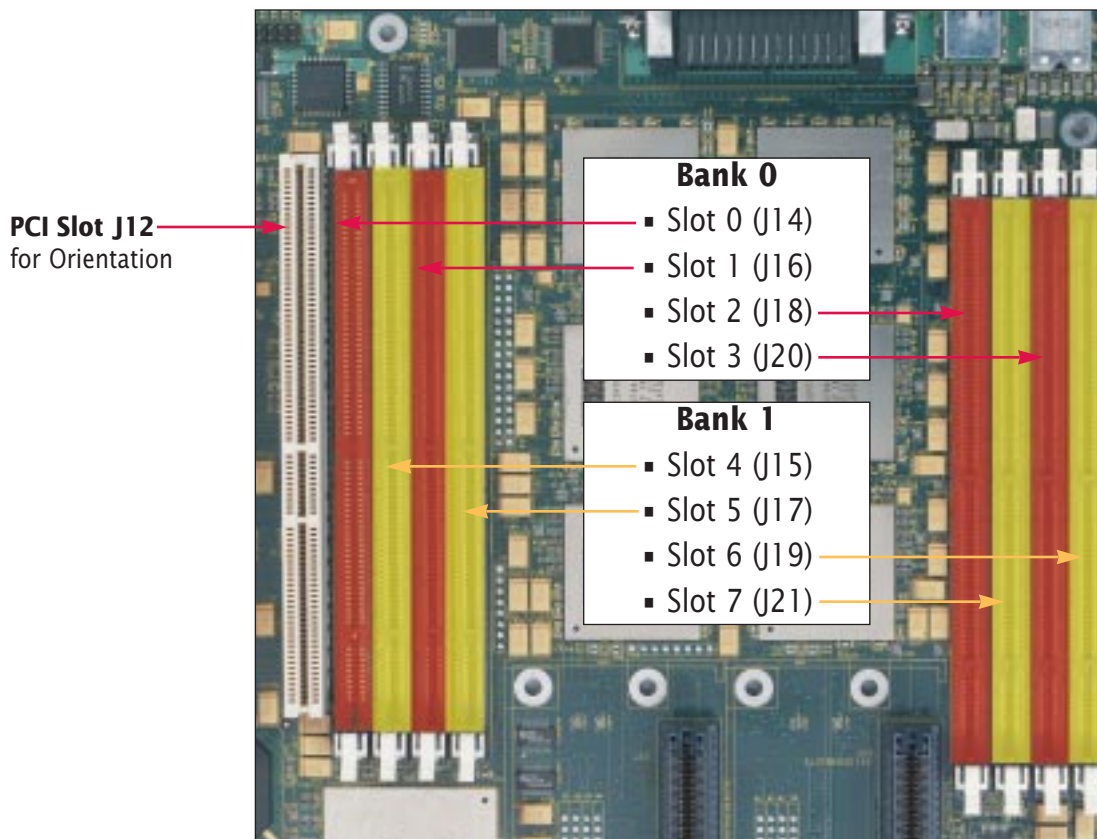
Install Memory DIMMs

Memory Configuration

The memory subsystem is comprised of:

- Two DIMM banks, designated Bank 0 and Bank 1.
- Each bank has four slots (sockets) that accept – 168 pin PC100 SDRAM PLL Register 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 assigned slots must be utilized).
- 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).

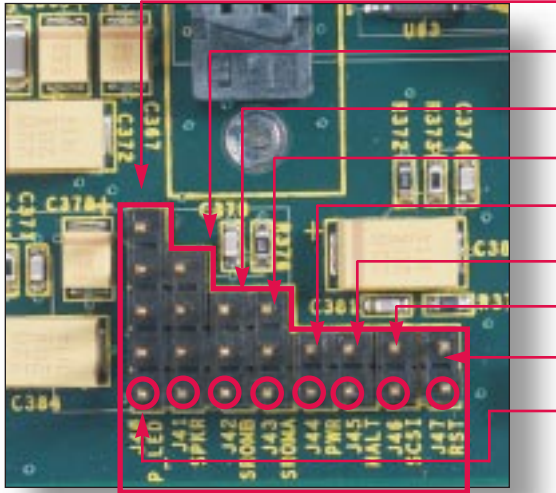
	Total System Memory	Bank 0	Bank 1
	256 MB	64 MB x 4	
	512 MB	64 MB x 4	64 MB x 4
	768 MB	128 MB x 4	64 MB x 4
	1 GB	128 MB x 4	128 MB x 4
	2 GB	256 MB x 4	256 MB x 4

Some typical memory bank configurations →

Attach Wires & Cables

I/O Connections

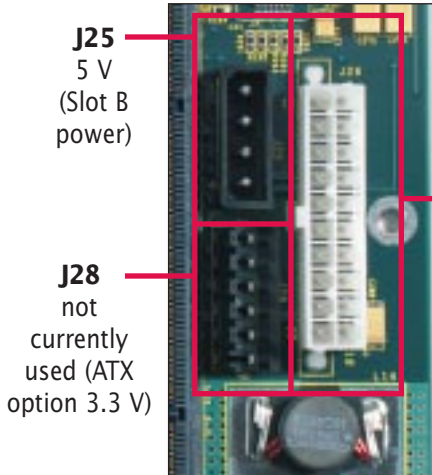
Make the following connections using the appropriate cables:



- J40** Power Indicator LED
- J41** Speaker
- J42** Slot B Secondary SROM Clock
- J43** Slot B Primary SROM Clock
- J44** Power Button
- J45** Halt Button
- J46** SCSI Indicator LED
- J47** Reset Button

Circle indicates Pin 1

Power Connections



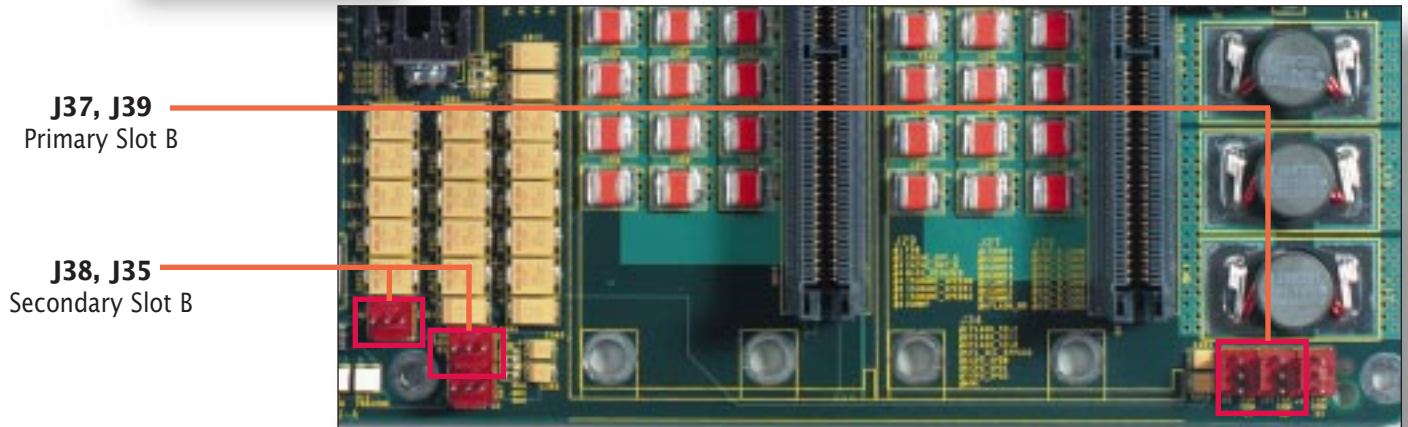
J25
5 V
(Slot B
power)

J28
not
currently
used (ATX
option 3.3 V)

Connect both 12 V and 5 V power leads

J26
12 V
(ATX power)

Fan Connections



J37, J39
Primary Slot B

J38, J35
Secondary Slot B

Install Cards & Cables

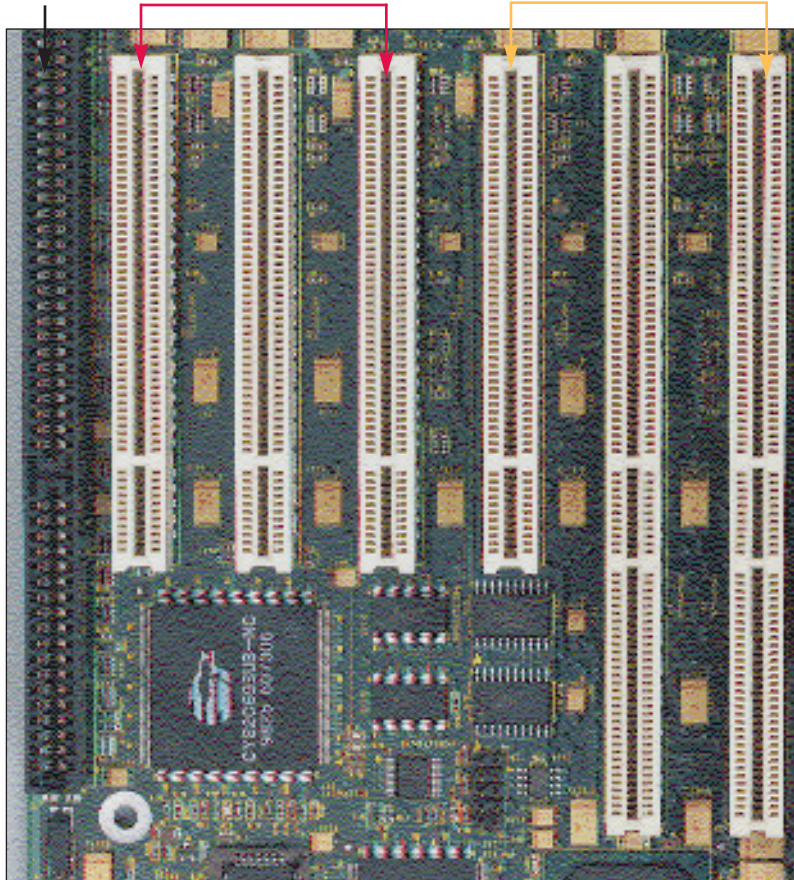
Bus Connections

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

ISA Slot

PCI Bus 1

PCI Bus 0



VIDEO OPTION MUST BE INSTALLED ON PCI BUS 0

J6 ISA (shared slot)

J7 PCI 32 bit

J8 PCI 32 bit

J9 PCI 32 bit

J10 PCI 32 bit

J11 PCI 64 bit

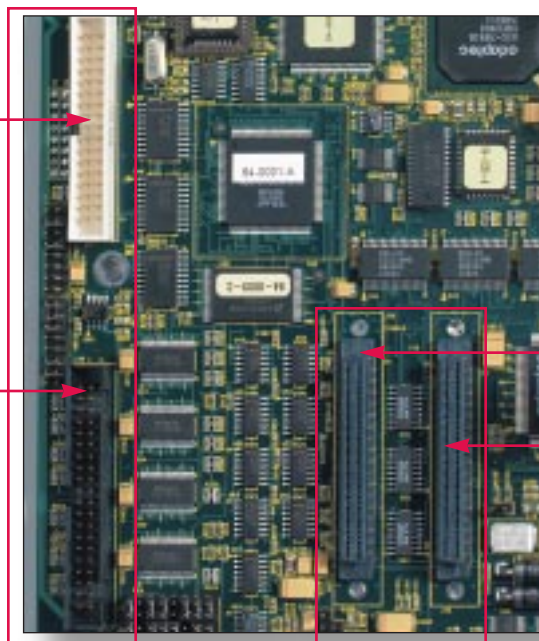
J12 PCI 64 bit

I/O Ports

Use sockets J24, J30, J31, J32, J33 to connect various disk peripheral devices.

Floppy (**J24**)
Connector

IDE (**J30**)
Connector



Ultra Wide Single Ended (**J32**) SCSI Connector

Ultra2 LVD (**J33**) SCSI Connector

Install Cartridges



Alpha Slot B Processor Cartridges

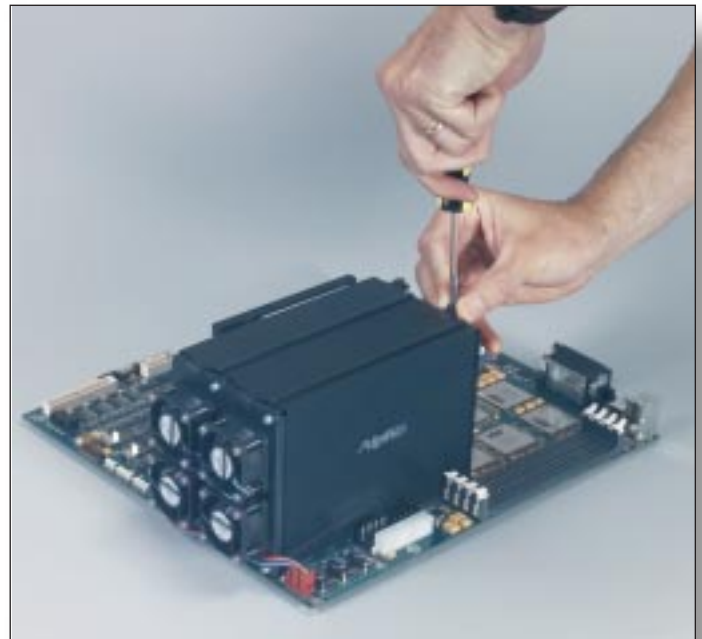
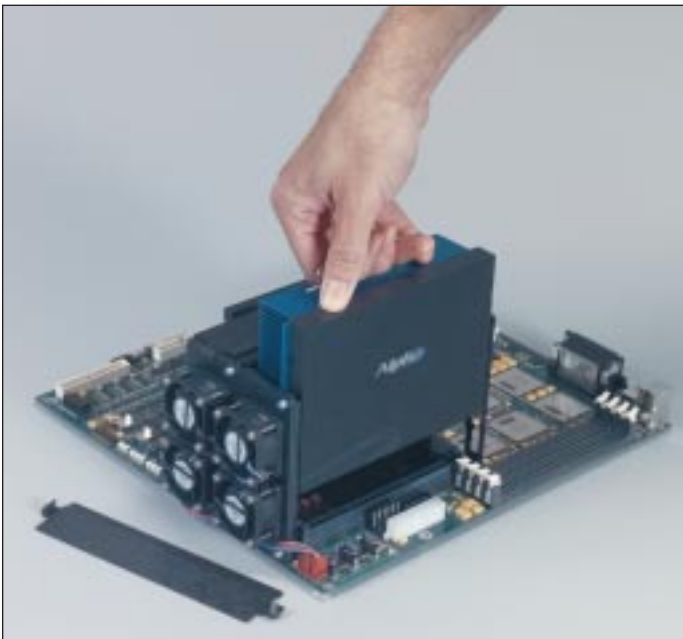
Use these components with special care. They weigh approximately three pounds each. A wire handle provides a convenient mechanism for safely inserting them.

Use this procedure to install Alpha Slot B cartridges:

- Remove the Primary goalpost cover.
- Insert a Cartridge in Primary Slot (J23) for a single processor system.
- Use an insertion force of 35 pounds to seat the cartridge just below the goalpost.

Note: A single processor system **must** use the Primary Slot.

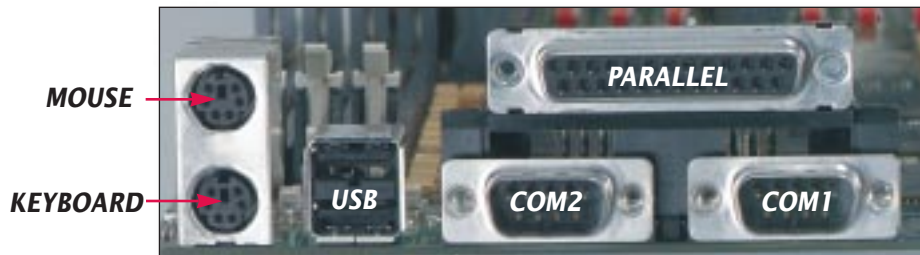
- Remove the Secondary goalpost cover.
- Insert a second Cartridge in Secondary Slot (J22) for a dual processor configuration.
- Place a processor cover over each Cartridge installed.
- Fasten each processor cover using its captive screw.





Final Tasks

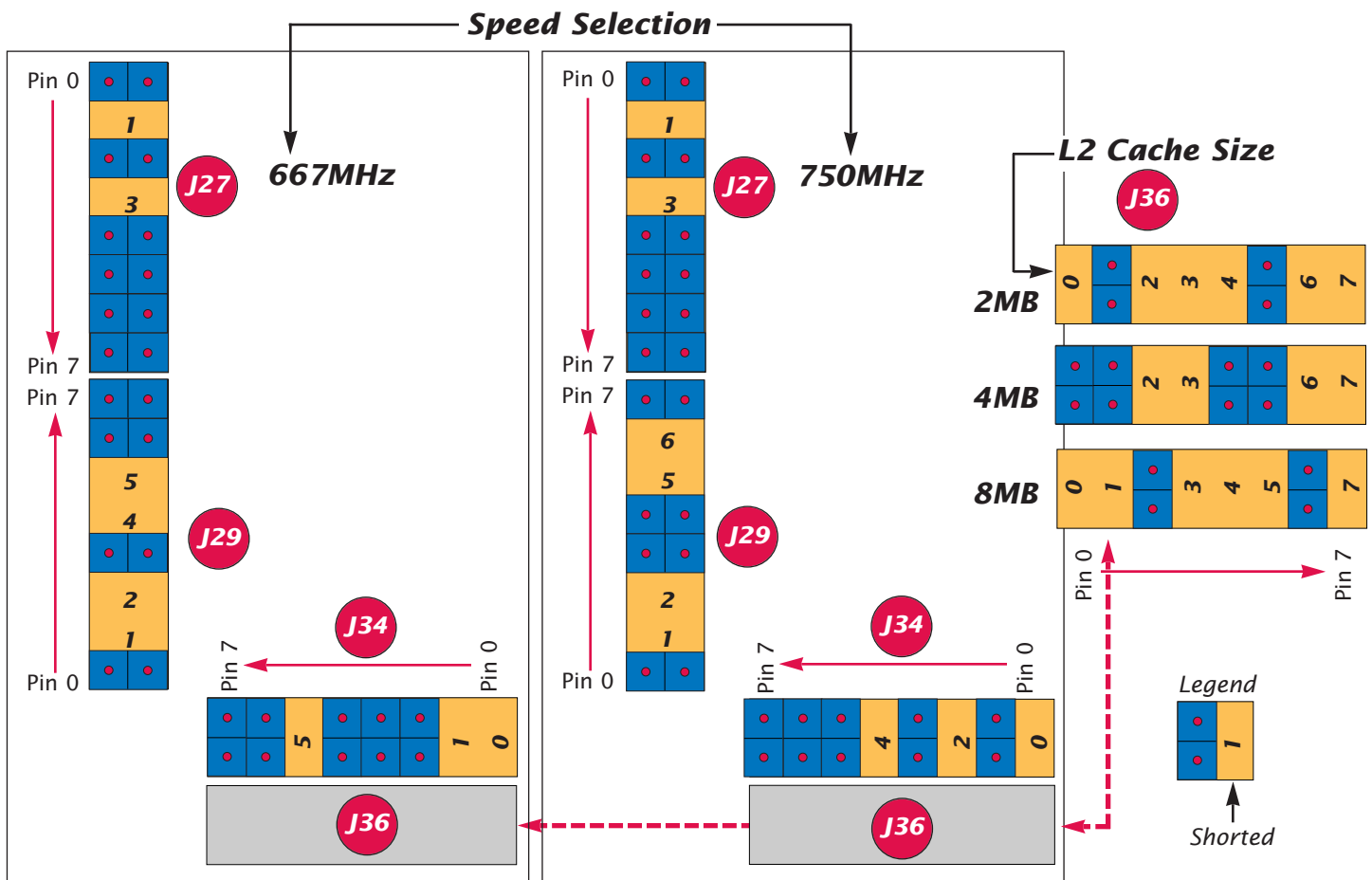
System Support



Jumper Configuration

Four jumper blocks must be configured. Use the following diagrams to set up the UP2000 System.

Note the pin numbering orientation of each jumper block.



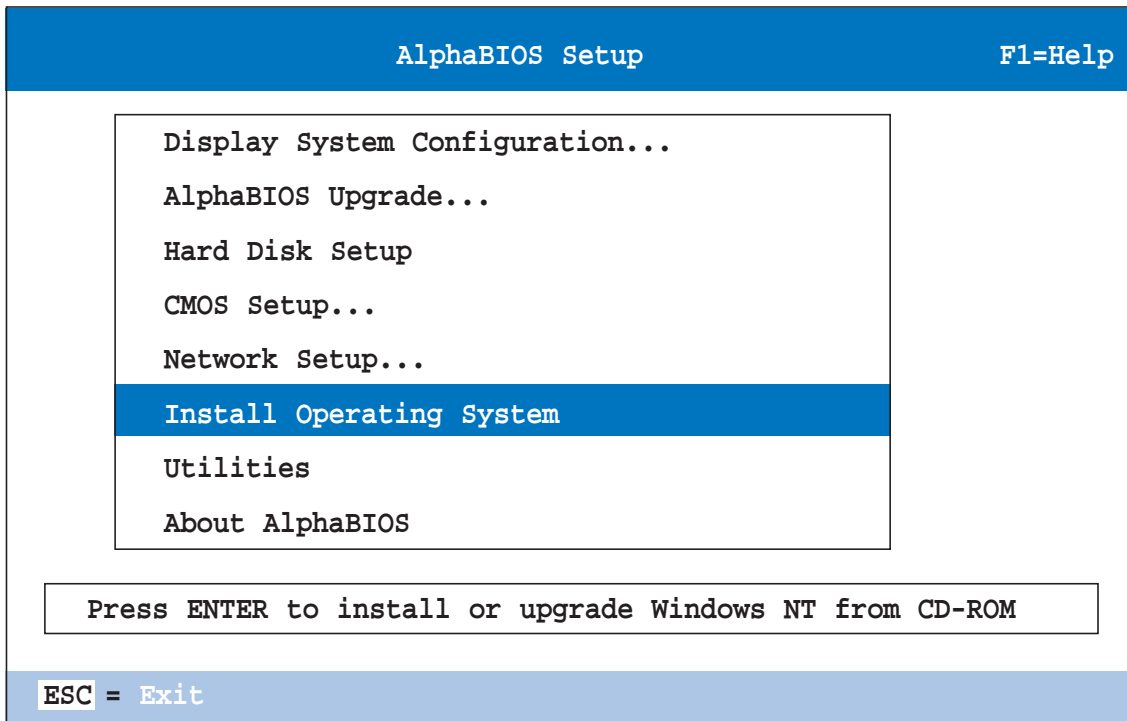
Initial System Test

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

- Ensure that all cables and modules are seated properly.
- Insert setup diskette in floppy drive.
- Turn on power.
- During the AlphaBIOS system initialization process, press F2 to enter Setup.

AlphaBIOS Setup Screen

The AlphaBIOS Setup screen appears. User is ready to load the operating system.



Reference Materials

For additional information, see the *UP2000 User Manual*.

It is available from our Web site: <http://www.alpha-processor.com>