

### 6 Make Server Board Power Connections

• Main Power Cable, CPU Power Cable and Power Signal Cable

**CAUTION:** Note the location of the latch on each power cable connector and align it with the matching tab on each server board socket.

- Attach the main power connector to the server board.
- Attach the CPU power connector as shown.
- Attach the aux. signal power connector.

**IMPORTANT NOTE:** If you are using a non-Intel server chassis with an ATX power supply, see the documentation that came with your chassis for installation information.

### 7 Install Optical Drive and Hard Drive(s)

See the documentation that came with your server chassis for drive installation.

### 8 Connect Hard Drives/Optical Drive to Server Board

Connect SATA Data Cables to server board here. Begin cable connections at the SATA 0 location.

### 9 Attach Intrusion Switch Cable (optional)

Note: This connection is not used in an Intel® Server Chassis. For a non-Intel chassis, see your chassis documentation for intrusion switch requirements.

### 10 Front USB Connection (optional)

Note: This connection is not used in an Intel® Server Chassis. For a non-Intel chassis, see your chassis documentation for front panel features and server board connection requirements.

### 11 Second Serial Port Connection (optional)

Note: For a non-Intel chassis, see your chassis documentation for serial connection requirements.

### 12 Install I/O Expansion Module (optional)

**Remove Module Covers**  
Prior to installing the I/O Expansion Module and/or the Intel® RMM Module, you must remove the corresponding module cover(s).

**Install I/O Expansion Module**

- Install the three standoffs to the server board first.
- Attach module to the server board connector and matching standoff holes.

### 13 Install Intel® Remote Management Modules (optional)

**Install Intel® RMM NIC Module**

- Install the three standoffs to the server board first.
- Attach module to the server board connector and matching standoff holes.

**Install Intel® RMM Module**

- Insert the standoff into the hole labeled TH4 on the Intel® Remote Management Module. The standoff installs on the bottom side of the Intel® Remote Management Module.
- Attach the Intel® Remote Management Module to the server board connector and snap the standoff into the matching hole in the server board.

### 14 Chassis Fan Connections

Note: These connections are not used in an Intel® Server Chassis. For a non-Intel chassis, see the "Making Connections ... Quick Reference" section below, and the documentation accompanying your chassis for specific chassis fan connection requirements.

### 15 Install Add-in Cards

See the documentation that came with your server chassis for add-in card installation.

### 16 Finishing Up

Before installing your operating system, you must finish your chassis installation, make I/O connections and plug in AC power.

**CAUTION:** See your chassis documentation for AC power and grounding requirements.

**IMPORTANT NOTE:** You must download and install the latest Intel® RMM software for the Intel® RMM to work properly with your server board.

### 17 Software • BIOS, Drivers, and Operating System Installation

**A. Update the System Software:**

- Boot from the Intel® Server Deployment Toolkit 2.0 CD.
- Use the Wizard to access the latest versions on the Internet and update the BIOS, firmware, and FRUSDRs.

Note: Downloaded files on a USB Key may also be used.

**B. Configure your RAID Controller:** Use the instructions provided with the RAID controller.

**C. Install your Operating System:** Use the instructions provided with the RAID controller and with the operating system.

**D. Install Operating System Drivers:** With the operating system running, insert the Intel® Server Deployment Toolkit 2.0 CD. If using a Microsoft® Windows® operating system, the Express Installer will autoun and allow you to select the appropriate drivers to install. On other operating systems, browse the CD folders to locate and install the driver files.

**E. Install Intel® Remote Management Software:** If you installed the Intel® Remote Management Module and the ASMI NIC, download and install the Intel® Remote Management Software from <http://support.intel.com/support/motherboards/server/s5000pal>.

**F. Install Intel® SmaRT Tool (optional):** With the operating system running, insert the Intel® Server Deployment Toolkit 2.0 CD. The Express Installer will autoun. Click Intel® SmaRT Tool at the left side of the screen. Follow the on-screen instructions. For information about Intel® SmaRT Tool, see <http://developer.intel.com/design/servers/smarttool/index.htm>.

## Reference

Accessories and Order Codes	
Slimline USB Floppy	AXXUSBFLOPPY
ATX I/O Shield and Gasket	AALIO
Dual Gig I/O Expansion Module	AXXGBIOMOD
External 4 Port SAS	AXXSASIMOD
Intel® Remote Management Module	AXXRMM

A complete list of accessories and spares can be found at:  
[www.intel.com/go/serverbuilder](http://www.intel.com/go/serverbuilder)

### Common Problems and Solutions

For a list of hardware components that have been tested with this system, see:  
<http://support.intel.com/support/motherboards/server/s5000pal/>

The system does not boot or show video at power-on.

- Check that +12V CPU power connector is plugged in. Without this cable the processor will not have any power.
- Beep code 4-3-2-1 in a system using a Dual-Core Intel® Xeon® processor 5000 sequence (minimum of 2.67 GHz) means you have unrecognized or bad memory.
- Remove and replace DIMMs one bank at a time to isolate which one is causing problems.
- Remember, all DIMMs must be:
  - FBDIMM 533/667 MHz compliant 240-pin DIMMs
  - The same speed.
  - From the same manufacturer.
  - Installed beginning with DIMM 1A.

The system sometimes works, but is exhibiting erratic behavior.

- This is typically the result of using an under-rated power supply.

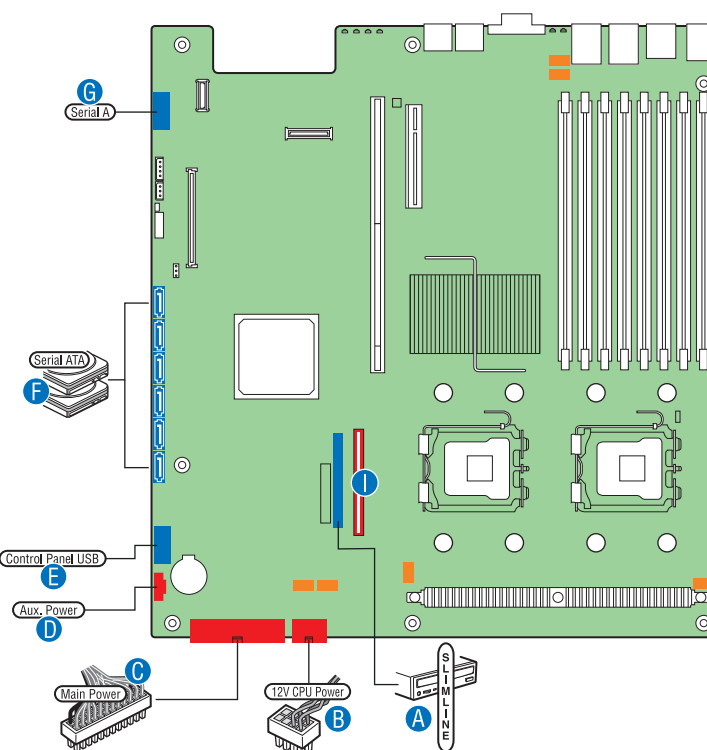
### Making Connections to the Server Board ... Quick Reference

Required Connections for Selected Chassis		SR1500	SR1550	SR2500
B. +12V CPU Power Connector				
C. Main Power Connector				
D. Auxiliary Power Connector				
I. Bridge Board Connector				

Optional Connections for Selected Chassis		SR1500	SR1550	SR2500
A. Optical Drive Connector				
E. Control Panel USB Connector				
F. Serial ATA Connector(s)				
G. Serial A Header				

**System Fan Connections**  
These fan connectors are NOT USED in an Intel® Server Chassis. For a non-Intel server chassis, see the documentation that came with your chassis for fan connection requirements.

Note: Not all optional connections are shown in this diagram. Refer to the Reference section of this Quick Start User's Guide, your Intel® Server Board S5000PAL Product Guide, and your server chassis documentation for additional connection information.



### Server Board Component Layout

