

Intel® Server Board SDS2 Quick Start User Guide

Start Here

Thank you for buying an Intel® Server Board. The following information will help you prepare your server board for integration with your selected server chassis. This Guide is for technically qualified persons. Expanded installation instructions and complete product information are available in the *Intel® Server Board SDS2 Product Guide* located on the Resource CD.

Translations of the *Intel Server Board Product Guide* are available at:
您可在下列网址上查阅到 Intel 服务器主板产品指南的译文:
La traducción de la Guía del Producto Intel Server Board se encuentra disponible en:
<http://support.intel.com/support/motherboards/server/SDS2>

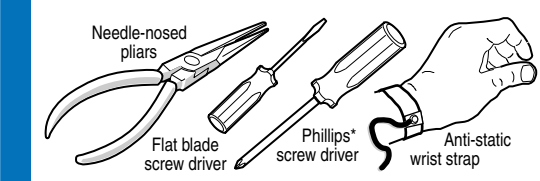
Minimum Hardware Requirements
To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:

- **Processor:** Minimum of one Intel® Pentium® III processor with 256K cache support.
- **Memory:** Minimum of two identical PC133 compliant, 3.3 V, ECC, registered SDRAM 168 pin DIMMs, of minimum size 64MB.
- **Power Supply:** Minimum of 275 W with 1.2 A +5 V standby current and +12 V CPU power support [ATX].

For a list of qualified memory and chassis components, see: <http://support.intel.com/support/motherboards/server/SDS2>

Before you begin

You will need the following tools and equipment:



See the *Intel Server Board SDS2 Product Guide* for product Safety and EMC regulatory compliance information.

If you are not familiar with ESD [Electro-Static Discharge] Procedures to be used during system assembly, complete ESD Procedures are described in your *Intel Server Board SDS2 Product Guide*.

Additional resources and support for your server board, including specifications and software updates, can be found at: <http://support.intel.com/support/motherboards/server/SDS2>

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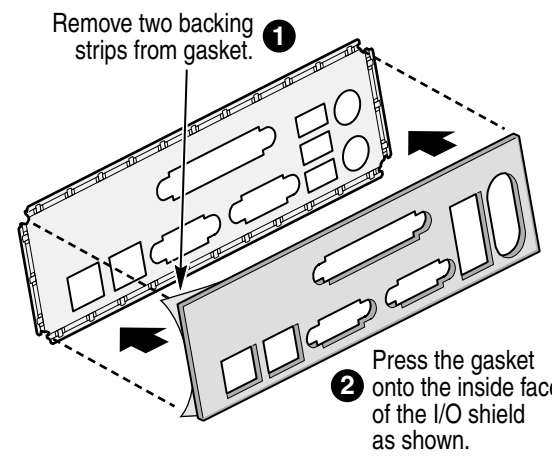
Intel ServerBuilder is your one-stop shop for information about all of Intel's Server Building Blocks such as:

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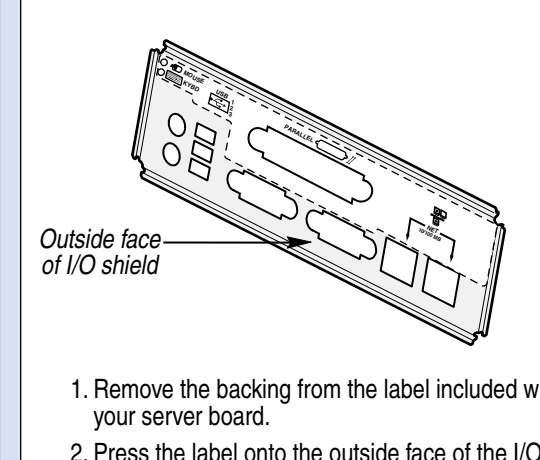
†Available only to Intel® Channel Program Members, part of Intel® e-Business Network.

1 Installing the I/O Shield and Gasket

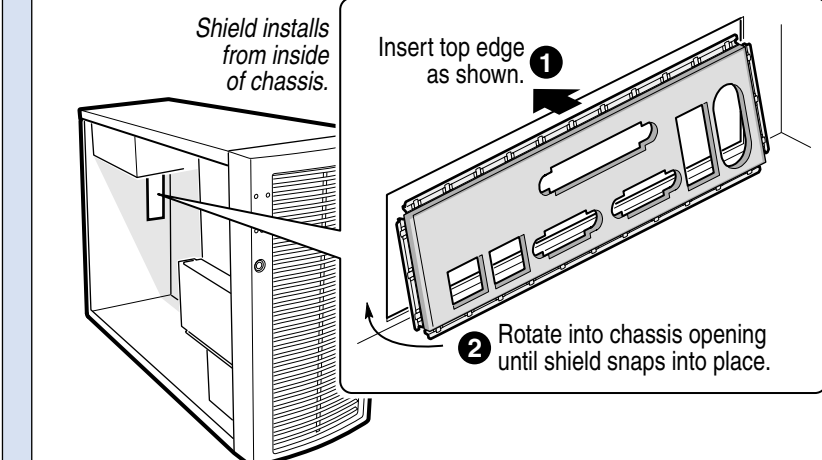
A Attaching the Gasket to the I/O Shield



B Attaching the Label to the I/O Shield



C Installing the I/O Shield

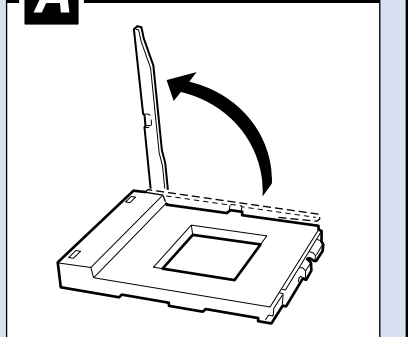


2 Installing the Processor[s]

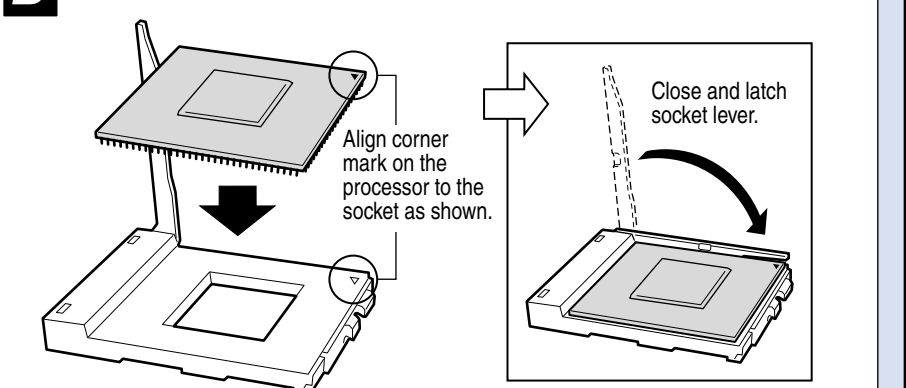
Notes and CAUTIONS:

1. If only ONE processor is to be used, it must be installed in Primary Processor Socket (#1) and a TERMINATOR must be installed in the Secondary Processor Socket (#2). See Step F "Installing a Processor Terminator".
2. When unpacking a processor, hold by the edges only to avoid touching the pins.
3. Do not mix processors of different types or frequencies.
4. This server board has "zero-insertion force" sockets. If processor does not drop easily into socket holes, make sure lever is in the full-up position.

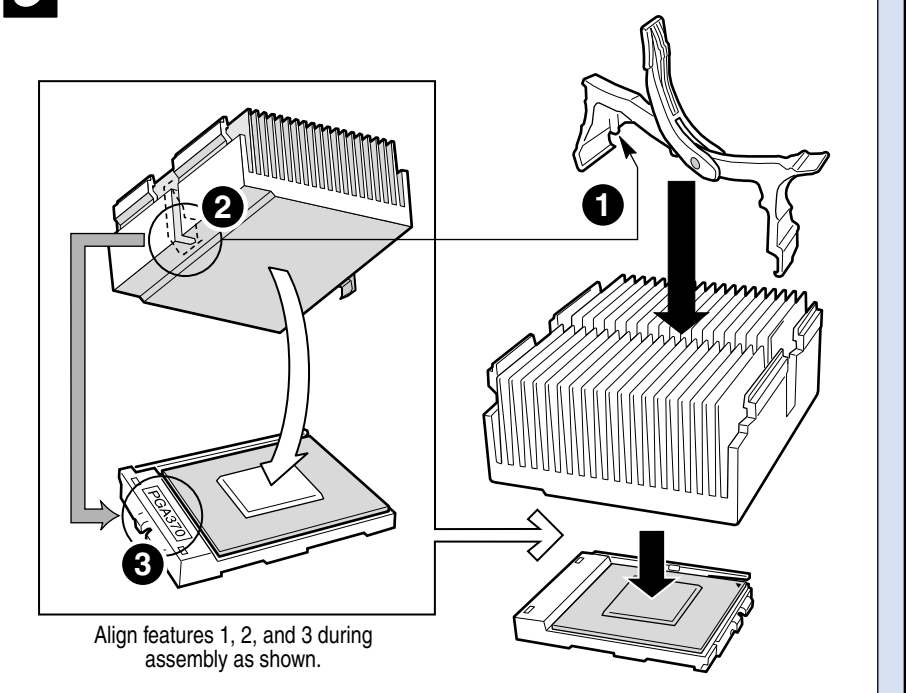
A Open the Socket Lever



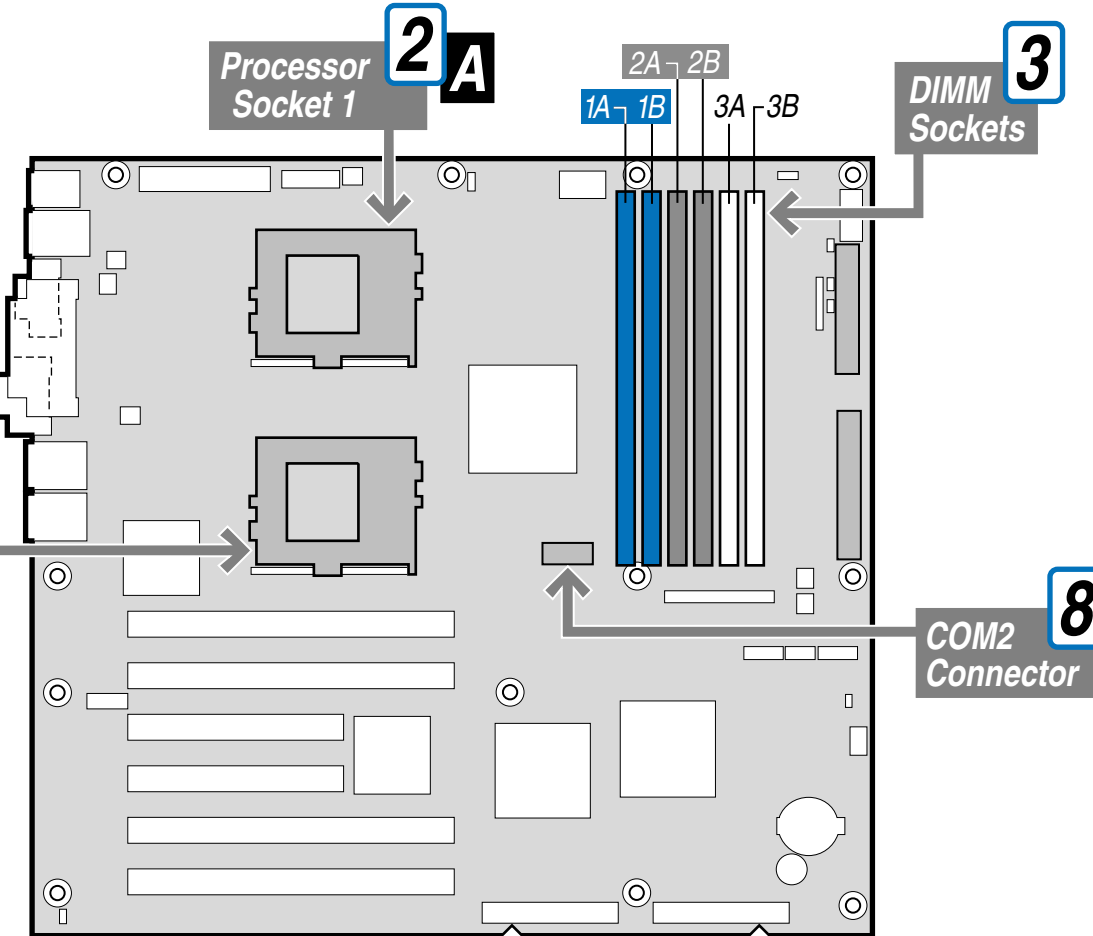
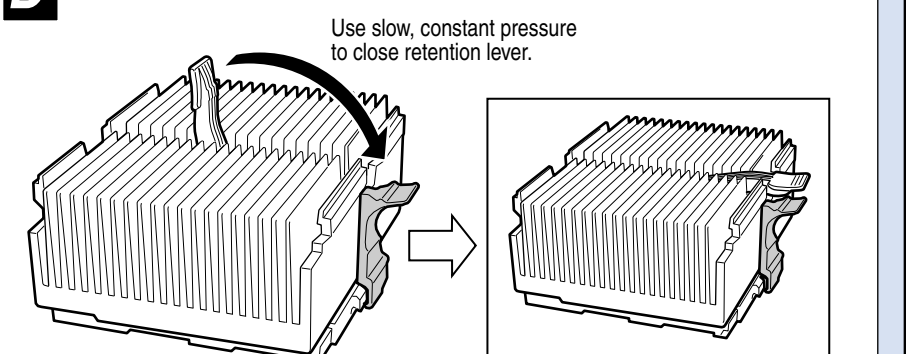
B Attaching the Processor to the Socket



C Installing the Heat Sink and Retention Clip



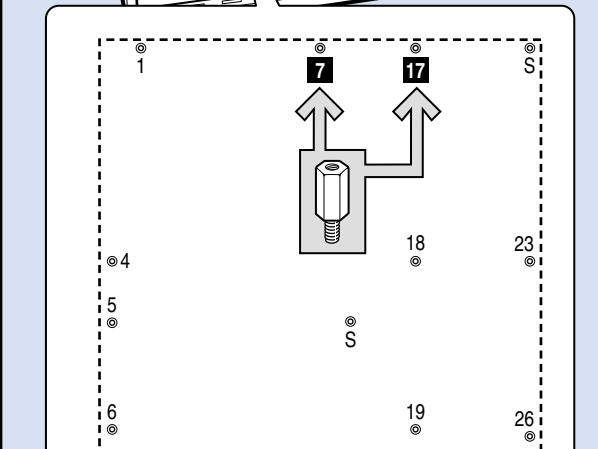
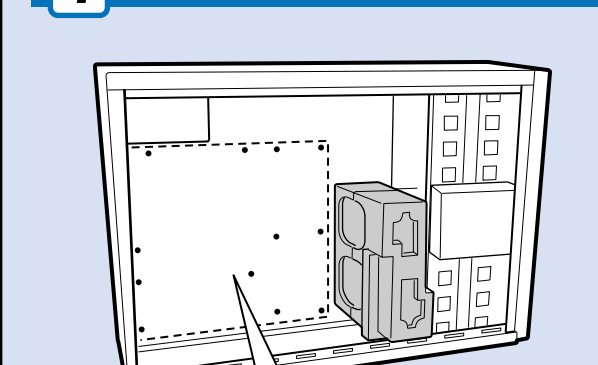
D Locking the Heat Sink Retention Clip



2F Terminator goes here if only one processor is used

DID YOU KNOW?
You can use the bag from your server board as an anti-static pad while installing and configuring components.

4 Installing Chassis Standoffs



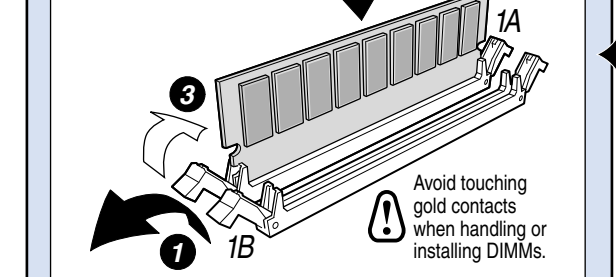
For installation in the SC5100 chassis, install additional standoffs in positions 7 and 17. Standoff numbering in other chassis may be different. Standoffs are included with your chassis.

3 Installing Memory

DIMM Memory Modules

Memory banks must be populated in pairs. Support for 2-way memory interleaving requires the use of identical memory modules.

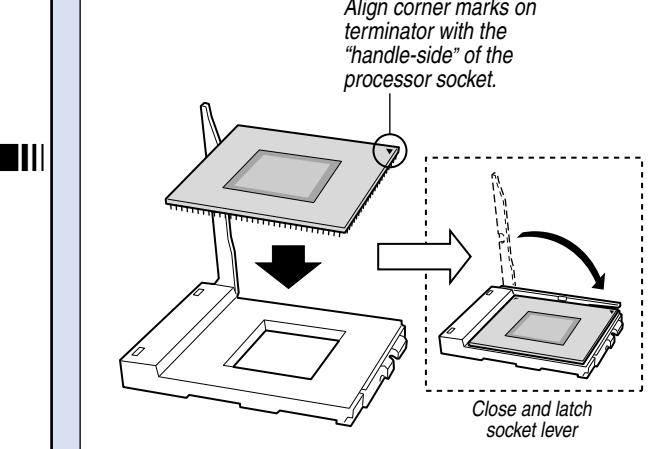
- Step #1: Open both DIMM Socket Levers.
- Step #2: Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
- Step #3: Check that socket levers are securely latched.



Note: See "Minimum Hardware Requirements" in the Start Here box above left for correct DIMM specifications.

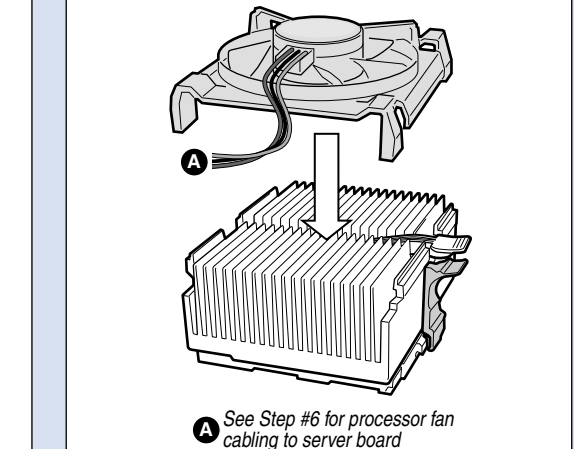
F Installing a Terminator

If only ONE processor is to be installed, a terminator must be installed in the Processor Socket 2 as shown below.



E Attaching the Fan

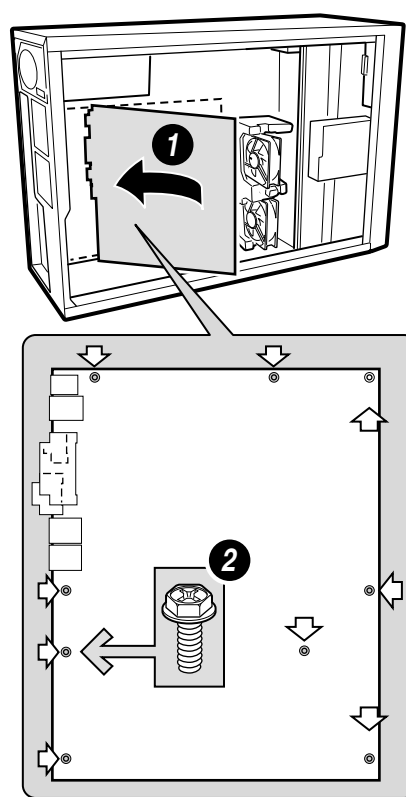
Install the heat sink fan by snapping it onto the top of the heat sink as shown.



Go to SIDE 2 to finish configuration



5 Installing the Server Board

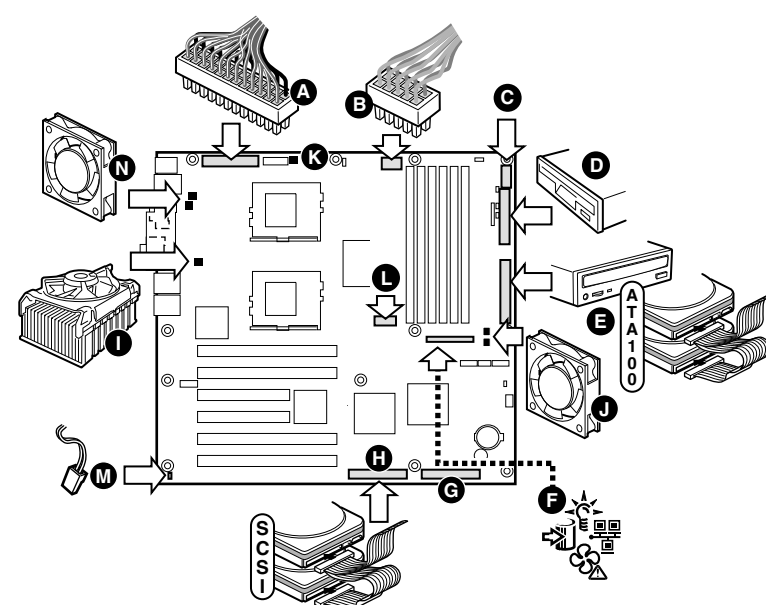


- For installation in the Intel SC5100 chassis:
- Place the board into the chassis, making sure that the back panel I/O shield openings and chassis standoffs align correctly.
 - Attach the board with the screws included with your chassis.

6 Making Connections to the Server Board

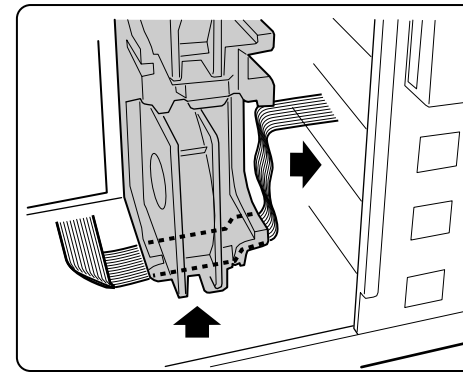
Server Board Connection Quick Reference:

- | | | | |
|--------------------|----------------------|----------------------|------------------|
| A. Main Power | D. Floppy Disk Drive | G. SCSI B | J. Epack Fans[2] |
| B. +12V CPU Power | E. ATA100/IDE | H. SCSI A | K. CPU1 Fan |
| C. Front Panel USB | F. Front Panel | I. CPU2 Fan | L. COM2/EMP |
| | | M. Chassis Intrusion | N. Chassis fans |



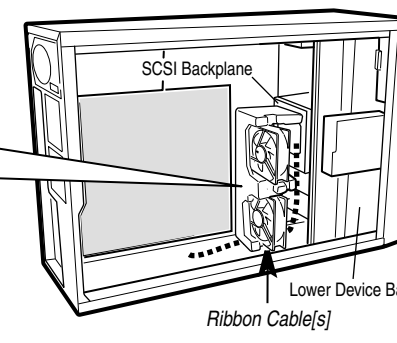
7 Cable Routing

A IDE and SCSI Cables



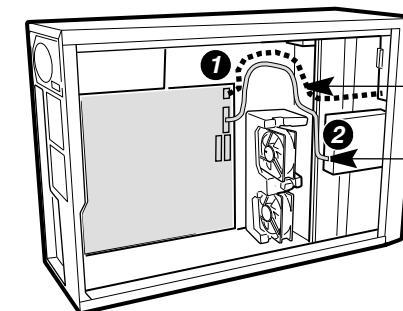
- IDE and SCSI cables that connect to devices in the lower device bays should be routed around the epac as shown.

Cabling to Lower Device Bay



- Remove the top half of the epac.
- Route cable(s) as shown.
- Replace the top half of the epac.

B Floppy Drive and Front Panel USB Cables

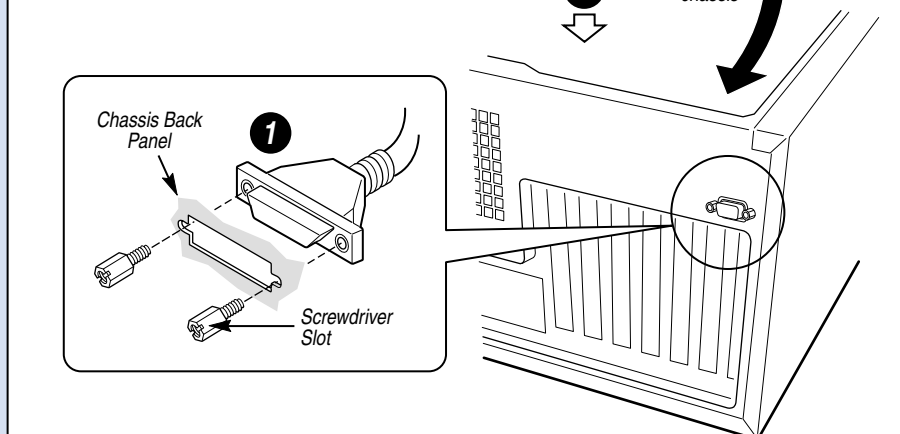


- Route the floppy drive cable and the front panel USB cable as shown.

8 Installing the COM2 Cable

For the Intel SC5100 chassis, you can connect the COM2 serial port cable to either the front or back panels. Connecting it to the back panel is illustrated below.

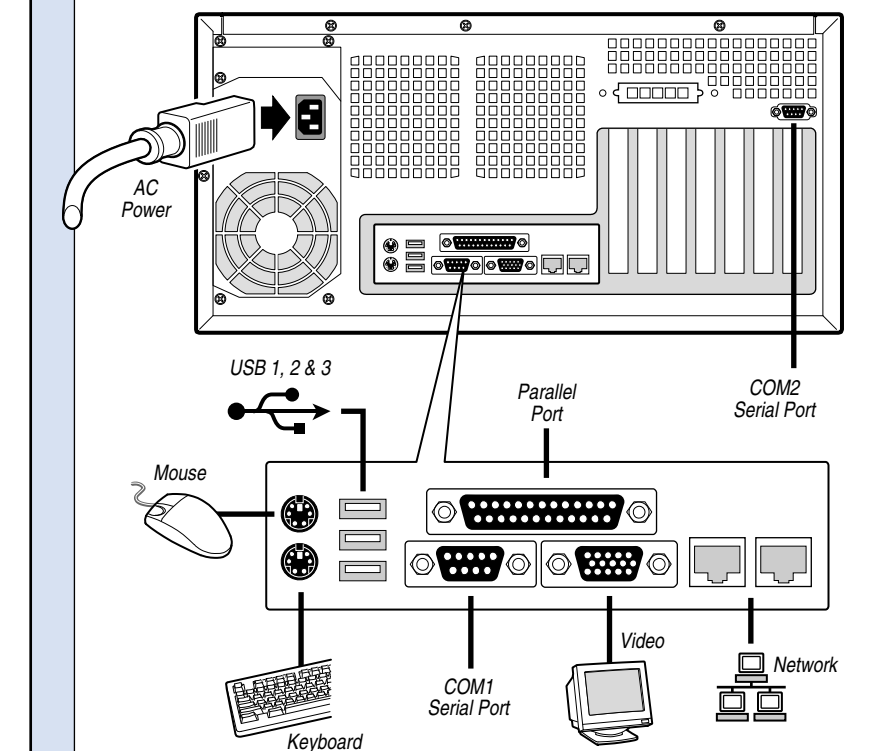
- Install the COM2 cable by inserting into the chassis back panel cutout and attaching with two hex screws as shown. Note that it installs from the inside and the screws fasten from the outside. Use a small flat-blade screwdriver.
- Attach the other end to the COM2 connector located on your server board between the CPU2 Processor socket and the DIMMs. See step 6 for exact COM2 connector location on the server board.



9 Finishing Up

Before installing your operating system, you must finish your chassis installation and connect I/O connectors and AC power.

- Replace the chassis cover.
- See your chassis documentation to complete rack or pedestal installation.
- Connect your keyboard, mouse, video and other I/O cables as shown. Then connect the AC Power cable.



10 Getting Started with Intel® Server Management [Optional]

Intel® Server Control and the hard drive Service Partition provide real-time monitoring and alerting for your SDS2 server hardware, emergency remote management, and remote server setup. Intel Server Control is implemented by installing it within client-server architecture.

The Service Partition provides you with the ability to remotely access a local partition on the server and to identify and diagnose server health issues. Remote access is provided through either a modem or network connection.

To get started with Intel Server Management, you install the Service Partition first, then the system's operating system, and finally Intel Server Control. The information here describes installation on a system running a Microsoft Windows* operating system.

Installing the Service Partition

Installing the Service Partition consists of three tasks:

- Preparing the server to boot from the CD-ROM drive
- Creating the Service Partition
- Formatting the Service Partition

Preparing the Server to Boot from the CD-ROM Drive

- Insert the Intel® Server Board SDS2 Resource CD into the server's CD-ROM drive.
- Restart the server.
- Press <F2> at the prompt to enter the BIOS setup utility during the boot cycle.
- Select **Boot Menu**.
- In **Boot Device Priority**, press the <+> key to move ATAPI* CD-ROM device higher in priority than the system hard drive.
- Press the <F10> key to save the settings. After pressing this key, the system resets and boots from the CD-ROM drive.

Creating the Service Partition

- From the CD-ROM menu, select **Utilities** and press the <Enter> key.
- Select **Run Service Partition Administrator** and press the <Enter> key.
- From the list of available items, select **Create Service Partition-first time**.
- Follow the instructions that appear on the screen. These instructions prompt you to reboot the server. It will reboot from the CD-ROM.

Formatting the Service Partition

- After the system reboot, select the **Utilities** menu and press the <Enter> key.
- Select **Run Service Partition Administrator** and press the <Enter> key.
- Select **Format Service Partition and Install Software**.
- Remove the System Resource CD from the CD-ROM drive and exit from the menu screen. You can now install the server's operating system.

Installing your Operating System

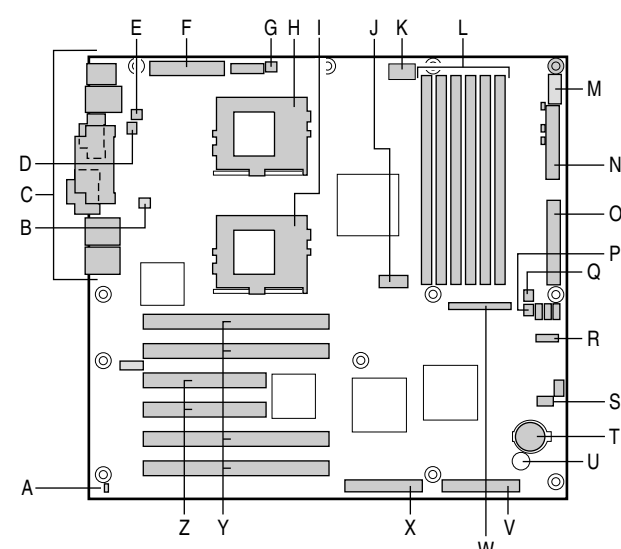
Install your operating system now.

Installing Intel Server Control

- Insert the Intel Server Board SDS2 Resource CD into the system's CD ROM drive and wait for the auto-launcher to display a start-up web page local to the Intel Server Board SDS2 Resource CD.
- From the start-up web page, open **server management** in the blue menu on the left side of the screen.
- Open **make a selection** in the green box.
- Choose to either view the Intel® Server Control Installation Guide or to proceed with the software installation.
- To continue with the installation, click on Intel Server Control and then on run installer. After clicking on run installer, follow the screen instructions.

Reference

Server Board Component Layout



Component Descriptions:

- | | |
|-------------------------|---------------------------|
| A. Chassis Intrusion | O. IDE |
| B. CPU Fan 2 | P. Fan 2 |
| C. Back Panel I/O Ports | Q. Fan 1 |
| D. Fan 4 | R. Jumper Block CN42 |
| E. Fan 3 | S. Jumper Block CN46-CN49 |
| F. Main Power | T. Battery |
| G. CPU Fan 1 | U. Speaker |
| H. CPU 1 | V. SCSI B |
| I. CPU 2 | W. Front Panel |
| J. COM2/EMP | X. SCSI A |
| K. +12V CPU Power | Y. 64/66 MHz PCI |
| L. DIMMs | Z. 32/33 MHz PCI |
| M. USB | |
| N. Floppy | |

Common Problems and Solutions

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

- If configuring with only one processor verify that the processor is in the Primary Processor socket (CPU 1) and that the processor terminator module is installed in the Secondary Processor socket (CPU 2).

- Beep code 1-3-3-1 means you have unrecognized or bad memory. Remove and replace DIMMs one at a time to isolate which one is causing problems.

Remember, all DIMMs must be:

- Registered PC133 compliant
 - The same speed
 - From the same manufacturer
 - Installed beginning with DIMM 1
 - Installed with no empty sockets in between
- Your power supply must provide 1.2 A of +5 V Standby current to support WOL. If the standby current is not present, your board will not boot.

The system sometimes works, but is exhibiting erratic behavior.

- This is typically the result of using an under-rated power supply. Make sure you are using at least a 275 W power supply.

Accessories and Order Codes

Item	Product Code
Intel® Server Board SDS2	SDS2
Intel® SC5100 Server Chassis Base Chassis	KHD2BASE300
Intel® SC5100 Server Chassis Redundant Power Chassis	KHD2HSRP350
Intel® SC5100 Server Chassis Rack Optimized Redundant Power Chassis	KHD2HSRP350R
Intel® SC5100 Server Chassis spares kit	FHD2SPRS
Intel® RAID Controller SRCMR	SRCMR