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Intel® Server Board S875WP1-E Troubleshooting Guide

**A Guide for Technically Qualified Assemblers of Intel®
Identified Subassemblies/Products**

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Revision History		
Date	Rev	Modifications
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The Intel® Server Board S875WP1-E may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications before placing your product order.

Copies of documents which have an ordering number and are referenced in this document, or other Intel literature, may be obtained from:

> Intel Corporation
> P.O. Box 5937
> Denver, CO 80217-9808

or call in North America 1-800-548-4725, Europe 44-0-1793-431-155, France 44-0-1793-421-777, Germany 44-0-1793-421-333, other Countries 708-296-9333

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What is available for helping troubleshoot?

As part of Intel's commitment to provide outstanding technical support we have included in the accompanying Resource CD, several documents, drivers, and diagnostic tools as part of the purchase of the Intel Server Board S875WP1-E. These references and tools are combined with the most current information published to Intel's public support site (http://support.intel.com) to help minimize downtime if issues occur. Below is a summary of references and tools provided and where they are located.

Tested, Compatibility, and Supported Hardware and Operating Systems:

Intel Customer Support maintains tested, compatibility, and supported hardware and operating systems for customers to reference. These lists are updated monthly, please check for updates.

http://support.intel.com/support/motherboards/server/S875WP1-E/compat.htm

- **Tested Hardware and Operating System List**

- **Supported Processors**

- **Supported Memory**

- **Reference Chassis List**

Product Documentation:

The Intel Server Board S875WP1-E features are described in many documents. Below is a list summarizing the key documents, web locations, and information contained:

- The Intel® Server Board S875WP1-E **Product Guide** is shipped with the product on the resource CD. It is also posted on the web at: http://support.intel.com/support/motherboards/server/S875WP1-E/prod_guide.htm .

- The Intel Server Board S875WP1-E **Technical Product Specification** is available on the web at: http://support.intel.com/support/motherboards/server/S875WP1-E/spec.htm . This manual contains detailed technical information about the features of the Intel Server Board S875WP1-E.

- The Intel Server Board S875WP1-E **Quick Start User's Guide** is provided in the box and contains useful information to get your boxed Intel Server Board S875WP1-E up and running quickly.

Spares, Parts and Configuration Guide

This is a reference guide to assist customers in ordering the necessary components to configure the Intel Server Board S875WP1-E, Intel Server Chassis SC5250-E and SC5200, the document includes part numbers, order codes and spares available for integration.

The document is available at: http://support.intel.com/support/motherboards/server/S875WP1-E.

Beep Codes

If a issue exists, when your system is powered on, 'beeps' may be heard. These are "beep codes" and can identify system events, errors, or issues. They maybe associated with a PCI Card (example: Some Intel® RAID cards have beep codes). Before checking for a system beep code error make sure that it is not a PCI card beep code. Remove all PCI peripherals and power-on the server to ensure that the beep code is not a peripheral. If the beep code continues, use the table below (Table 1) to help isolate the issue.

These beep codes are generated by the system BIOS. The BIOS generates beep codes upon detection of a failure conditions listed in the following table (Table 1). Each digit in the code is represented by a sequence of beeps count is equal to the digit in the table below (Table 1). These are the most common beep codes.

POST Error Beep Codes

Table 1. POST Error Beep Codes

Beep	Description
1	Refresh failure
2	Parity cannot be reset
3	First 64 KB memory failure
4	Timer not operational
5	Not used
6	8042 GateA20 cannot be toggled
7	Exception interrupt error
8	Display memory R/W error
9	Not used
10	CMOS Shutdown register test error
11	Invalid BIOS (e.g. POST module not found, etc.)

In the case of a Bootblock update, where video is not available for text messages to be displayed, speaker beeps are necessary to inform the user of any errors.   For beep codes associated with a Bootblock update refer to the Intel Server Board S875WP1-E Technical Product Specification on the web at: http://support.intel.com/support/motherboards/server/S875WP1-E/spec.htm

Additional (Q & A) Questions & Answers

Processor Q & A

How do I disable hyper-threading?

Hyper-threading can be disabled in BIOS Setup program, under the "Advanced" menu.   This may cause performance degradation on applications optimized for hyper-threading technology. Check with your software vendor for what setting best suits your applications.

Memory Q & A

What memory is supported?

The board supports DDR unbuffered ECC, and Non ECC, PC3200 (400 MHZ), PC2700 (333 MHZ), and PC2100 (266 MHZ) SDRAM memory modules. Registered (buffered) memory is not supported.

A list of qualified memory modules is available on the Intel Server Board S875WP1-E support website at: http://support.intel.com/support/motherboards/server/S875WP1-E/compat.htm .

Note: that all memory modules are supported by design, but only qualified DIMMs included in the tested memory document are supported.

How should memory be populated?

There are two banks of DIMMs, bank A and B. Bank A contains DIMM locations 1A and 2A and bank B contains 1B and 2B. DIMM socket identifiers are marked with silkscreen near the DIMM socket on the baseboard. Note that the sockets associated with any given bank are located next to each other.

One, two, or four DIMMs can be installed. When a single DIMM is used, it must be installed in the socket labeled DIMM1A. For dual-channel interleaved operation a minimum of two DIMMs must be installed and they must be in DIMM 1A and DIMM 1B. The DIMM size, speed and vendor must be the same.

What is the minimum Memory Configuration?

The minimum supported memory size is 128 MB (single DIMM populated in DIMM socket 1A).

What is the maximum Memory Configuration?

The largest size DIMM supported is 1 GB. A total of 4GB of memory is possible if all four DIMM sockets are populated with 1 GB DIMMs.

How do I disable the integrated components?
Onboard controllers can be disabled through the server board BIOS Setup Program. To enter BIOS setup, press the _Delete_ key when prompted during the boot up process. For further details refer to the Intel Server Board S875WP1-E Technical Product Specification on the web at:
http://support.intel.com/support/motherboards/server/S875WP1-E/spec.htm

Devices Not Recognized Under Device Manager in Windows* 2000 or Windows XP

After installing Microsoft* Windows 2000 or Windows XP, Device Manager displays unrecognized devices. This is due to the operating system not having all drivers for the Intel® E7505 chipset, and on-board NICs. The operating system is detecting the additional hardware devices, but cannot identify each device without the chipset drivers installed. Installing the Intel Chipset Utility (INF files) and NIC Drivers located on your Resource CD and posted at http://support.intel.com/support/motherboards/server/S875WP1-E allows the operating system to properly recognize these devices.

Jumpers

For jumper details refer to the Intel Server Board S875WP1-E Technical Product Specification on the web at: http://support.intel.com/support/motherboards/server/S875WP1-E/spec.htm

When this occurs…

My system appears to power on, however there is no video.

Check the following:

- Make sure the monitor is turned on and the video cable is plugged in completely. If you are using a switch box to share a monitor between multiple servers, ensure switching to the proper server.
- Remove all add-in cards and retry booting with just the on-board components. If successful, try adding the add-in boards in one at a time with a reboot in between to try to pinpoint a suspect card.
- Remove and reseat memory modules and processors. Try using memory and processors from a known working system.
- Video can be disabled on the S875WP1-E via add-in video board. If you are using an add-in video card, make sure your monitor is plugged into the add-in video card.
- If you are using a non-Intel chassis, ensure that stand-offs are only located below the grounded mounting holes. Stand-offs in other locations may contact the back of the board and short out certain features, including video, causing it to operate improperly or unreliably.

If you are unable to get a video image, please fill out the included customer support issue report form and call your customer support representative. Please note the answers to the following questions below.

Other things to try

Check on the following:

- Update the BIOS to the latest version and clear the CMOS upon completion. Update files can be downloaded from the S875WP1-E Support webpage: http://support.intel.com/support/motherboards/server/S875WP1-E
- Download and apply the latest drives used in your installation. These drivers may include video, network adapter, Serial ATA (SATA) and chipset.