Identifying Server Components

Front Panel Components
SL170s G6 Server Front Panel Components

Server Configuration Resources

In addition to this Installation Sheet, other resources are available for more information regarding the configuration and maintenance of your server:

- For safety information and detailed procedures relating to installation of options, refer to any installation instructions that come with the option, as well as the HP ProLiant SL170s G6 Server Maintenance and Service Guide.
- For safety information, regulatory notices, and detailed procedures related to the rest of the steps listed in the “Configuring the Server” section, refer to the relevant chapter of the HP ProLiant SL6500/6550 Scalable System User Guide.
- For information relating to system BIOS configuration and operating system installation, refer to relevant section of the HP ProLiant SL170s G6 Server Software Configuration Guide.
- Refer to the HP ProLiant SL170s G6 Server Easy Setup CD for additional information and updates not provided in this installation sheet. You can also access additional information and documentation from the HP website at www.hp.com, either by connecting to it directly or through the Easy Setup CD.

Server Configuration Overview

The steps listed below give an overview of the necessary setup procedures for preparing the HP ProLiant SL170s G6 Server for operation:

1. Connect the AC power cord and peripheral devices.
2. Power up the server.
3. Press “F10” to enter BIOS setup.
4. Note the server BIOS version.
5. Verify the server BIOS version against the latest BIOS version listed for this server on the HP website: www.hp.com.
6. If you do not have the latest BIOS, update the BIOS now. Refer to the HP ProLiant SL170s G6 Server User Guide available on the HP website: www.hp.com.
7. Install a supported operating system of your choice. For detailed procedures, refer to the documentation provided by the operating system vendor. For a list of supported operating systems supported by your ProLiant server, go to www.hp.com/go/supportos.

Pre- and Post-installation Procedures

When installing additional options in your HP ProLiant SL170s G6 Server, observe the following procedures:

Pre-installation procedures

1. Turn off the server and all the peripherals connected to it.
2. Remove the server from the chassis by following the procedure described later in the “Removing the server” section.
3. Disconnect all external cables to the system.
4. Reinstall the server into the chassis.
5. Reinstall the PCI riser, peripherals, and system cables that you have removed.
6. Check to make sure you have not left loose tools or parts inside the server.

Post-installation procedures

1. Be sure all components are installed according to the described step-by-step instructions.
2. Power up the server.
3. Check to make sure you have not left loose tools or parts inside the server.
4. Reinstall the PCI riser, peripherals, and system cables that you have removed.
5. Reinstall the server into the chassis.
6. Connect all external cables to the system.
7. Press the power button on the front panel to turn on the server.

Removing the Server

You need to remove the server from the chassis before you can remove or replace a server component.

1. Release the handle.
2. Extend the server from the chassis until the release latch catches.
3. Firmly holding the server, press the release button.
4. Remove the server from chassis.
5. Install the server blank in the server slot.

Installing the Hard Disk Drive

One SL170s G6 server tray can accommodate up to 2 UFF or 4 SFF hard disk drives, or the server can accommodate 8 server trays for up to 16 UFF or 32 SFF hard disk drives. The server supports both SAS and SATA hard disk drives and SSDs.

CAUTION: Drives can be damaged by static electricity. Before handling drives, touch an unpainted metal surface to discharge static electricity.

To install UFF hard disk drive on one side of server tray:

1. Unlock the HDD carrier latches.
2. Rotate the HDD carrier handle up.
3. Insert the HDD carrier and align the pins.
4. Rotate the HDD carrier handle down.
5. Lock the HDD carrier latches.

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Installing the Memory Module

The following guidelines must be followed when memory modules are being added or replaced:

1. Up to 256GB, using PC3-8500R DDR3 Registered (RDIMM) memory, operating at 1066MHz when fully populated in 16 slots. Up to 240GB, using PC3-10600R DDR3 Unbuffered (UDIMM) memory, operating at 1066MHz when fully populated on 2 D IMM per Channel in 12 slots.

2. Sixteen D IMM, eight D IMM sockets per processor, three per first two channels and third channel with only two.

3. Supported configuration:
   - One D IMM per processor: 8A for CPU1; 8A for CPU2.
   - Two DIMMs per processor: 8A, 5B, 2C for CPU1; 8A, 5B, 2C for CPU2.
   - Six DIMMs per processor: 8A, 7D, 5B, 4E, 2F for CPU1; 8A, 7D, 5B, 4E, 2F for CPU2.
   - D IMM population order processor socket 1: 8A, 5B, 2C, 7D, 4E, 1F, 6G, 3H.
   - D IMM population order processor socket 2: 8A, 5B, 2C, 7D, 4E, 1F, 6G, 3H.

4. CAUTION: D IMM can be damaged by improper handling. Always use an anti-static wrist strap and grounding mat, and discharge static electricity before touching D IMM.

5. NOTE: The D IMM should be installed from the furthest A channel slot.

NOTE: It is recommended to install memory in pairs. The D IMM should be installed from the furthest A channel slot.

Figure 7 Installing the memory module

To install a memory module:

1. Align the notch on the bottom edge of the module with the latched surface of the D IMM slot.
2. Press down firmly until the module clicks into place.
3. CAUTION: If the memory module does not fit easily into the slot, you may have inserted it incorrectly. Reverse the orientation of the D IMM and insert it again.

4. CAUTION: D IMM slots are structured to ensure proper installation. If you insert a D IMM but it does not fit easily into the slot, you may have inserted it incorrectly. Reverse the orientation of the D IMM and insert it again.

Installing the Processor

The HP ProLiant SL170s G6 server supports Nehalem Processors High Wattage 95W (Dual CPUs 64-bit), Nehalem Processors Low Wattage 65W (Dual CPUs 64-bit), and Nehalem Processors Low Wattage 65W (Dual CPUs 64-bit).

NOTE: If one processor is being installed, it should be installed in the socket furthest from the IOH/chipset.

3. Install the processor into the tool.
4. Align the processor installation tool with the socket and install the processor.
5. Press down firmly until the processor installation tool clicks and separates from the processor.
6. Close the processor socket retaining bracket and the processor retaining latch.

CAUTION: Use the processor install tool to insert the processor into the socket. The processor and system board space part kits contain the processor install tool and instructions on how to use the tool. It is important to follow the instructions to prevent damage to the pins in the processor socket.

To install the processor:

1. Insert the processor in the tool.
2. Align the processor installation tool with the socket and install the processor.
3. Press down firmly until the processor installation tool clicks and separates from the processor, and then remove the processor installation tool.
4. Close the processor socket retaining bracket and the processor retaining latch.

CAUTION: To prevent the heat sink from tilting to one side during installation/removal, turn each screw a couple of turns, alternatively between both of them, and then apply the final torque. Do not over tighten the spring loaded screws to prevent them from breaking off.

To install the heat sink:

1. Properly align the heat sink mounting pins to the system board mounting holes.
2. Tighten the mounting pins clockwise to secure the heat sink connection to the system board.

CAUTION: To prevent the heat sink from tilting to one side during installation/removal, turn each screw a couple of turns, alternatively between both of them, and then apply the final torque. Do not over tighten the spring loaded screws to prevent them from breaking off. A maximum torque of 4.5 inch-lb is set for each screw.

To install the heat sink:

1. Properly align the heat sink mounting pins to the system board mounting holes.
2. Tighten the mounting pins clockwise to secure the heat sink connection to the system board.

CAUTION: To ensure that the heat sink sits squarely on the processor, or overheating and damage to the processor may occur.

Installing the raid controllers with Battery-backed write cache

CAUTION: Do not over tighten the heat sink’s spring loaded screws to prevent them from breaking off.

To install the BBWC:

1. Unfasten the screws and lifting the plastic BBWC bracket out.
2. Align the BBWC bracket to the tray and fasten the screws.
3. Install the BBWC into the tray and slide it in the direction of the arrow.

CAUTION: If the heat sink has been removed for any reason, it is critical that you apply more thermal interface material to the integrated heat spreader on the processor to ensure proper thermal bonding between the processor and the heat sink. Clean the contact surface of both the processor and heat sink with an alcohol pad, then re-apply an HP-approved thermal interface material before reinstalling the processor. Use a pattern of five dots when applying the thermal interface material—one dot in the center, and one dot at each corner.

NOTE: Do not over tighten the heat sink’s spring loaded screws to prevent them from breaking off.

To install the BBWC:

1. Unfasten the screws and lifting the plastic BBWC bracket out.
2. Align the BBWC bracket to the tray and fasten the screws.
3. Install the BBWC into the tray and slide it in the direction of the arrow.
4. Connecting the BBWC cable with the smart array controllers.

Figure 10 Removing the plastic BBWC bracket from the metal bracket

Figure 11 Installing the BBWC bracket

Additional Documentation

For additional documentation, refer to HP ProLiant SL170s G6 Server Easy Setup CD. You can also access additional information and documentation from the HP external website, either by connecting directly or through the Easy Setup CD.