Assembly Instructions for Lopoco LP-2230/4250 Servers

No Power Supply version

Parts and Tools List

Requisite parts in every model:

1. Case
2. Motherboard
3. Processor
4. Processor Heat Sink and backing bracket
5. SATA cables
6. Drives (SSD or HDD)
7. Memory

Optional parts, either by case designation or customer specified configuration:

1. 2 port SATA controller
2. Ethernet LAN PCIe card
3. PCIe flexible extender cable
4. Extension 4-wire power cable
5. SATA DOM (Disk On Module) and DOM power cable
6. Bluetooth USB Dongle

Tools:

1. Phillips #2 screw driver. Power screw driver may be used, however with no more than 5 ft/lbs of torque.

Assembly Instructions

1. Chassis preparation

   i. Remove top panel from the case, and put aside

   ii. Remove existing PSU and case fans using screw driver; put removed fans & PS in bag or box

   iii. Prepare plastic motherboard shield for type of motherboard

   iv. Remove unneeded motherboard mounting points from case

   v. Add needed motherboard mounting points to case

2. Install motherboard in chassis

   i. Install processor heat sink backing bracket on bottom of motherboard before fastening motherboard into the chassis.

3. Install processor

4. Install processor heat sink

   i. Start each of the four heat sink screws just a couple of turns in each captured nut of the heat sink backing bracket.

   ii. Continue by turning each screw just a few turns and then moving on to the next screw, until finally all screws are hand-tight.

5. Install SSDs, HDDs, and/or DOM modules

   i. If a hot plug drive chassis, remove plastic disk spacers from drive caddies

   ii. Install SSD or HDD into each caddy as per configuration of system; double check the disks are installed in the caddy with the correct orientation for proper interface with the backplane. Often, disks can be inserted into the case even though they are installed backwards or upside down in the caddy, so merely inserting the disk is not a verification of correct orientation.

   iii. If a DOM is being used, insert the DOM into the first available SATA port on the motherboard, then connect the DOM power cable (if necessary) to the DOM and the proper header on the motherboard.

6. Connect front panel cable to motherboard header

7. ~~Insert memory modules on motherboard if memory modules are available~~

8. ~~Install case fans according to the number of drives and the processor and memory configuration~~

9. ~~Connect case fan power cables to motherboard headers~~

10. Route and connect SATA cables.

    i.   Connect SATA cables to SATA ports on the motherboard and then to the internal drives or hot plug backplane SATA ports.

    ii.   In the case of hot plug drives, facing the front of the chassis, the drives should be connected to the lowest numbered SATA port on the motherboard, starting from the upper left drive slot, then progressing to the next lower slot. When all the drives in a vertical are connected, then progress to the top most drive in the next vertical stack of drive slots to the right.

11. ~~Connect any necessary 4-wire power extension cables to bring power from the DC/DC adapter to the hot plug backplane or internal drives.~~

12. Install any PCIe expansion cards (LAN or SATA controllers; FC controllers; SAS controllers) utilizing PCIe flex extender cable.

    i.   LAN expansion cards must be installed in the external card bracket to allow LAN cables to be connected w/o removing the case covers.

13. Connect a spare power supply to the system, and power on the system.

    i.   Verify that system boots to BIOS screen

    ii.   If memory is installed other than for testing, verify on the BIOS setup screen that the amount of memory is correct

14. Verify that all components and cable connections are working. If any are not functioning, diagnose and fix the problem before continuing

    i.   Front panel cable – verify lights are indicating the proper thing for the proper function; verify that the buttons are properly working for the correct function.

    ii.   SATA cables – verify drives, if any installed, are detected and connected to the proper port

    iii. If fans are installed, make sure they are all spinning

15. ~~Dress all SATA cables, power cables and PCIe flex extender cables in the chassis.~~

16. ~~Affix the serial number stick to the appropriate place inside the chassis (outside on 2U or larger chassis).~~

17. Install the top cover panel on the case

18. Remove any pre-existing case badges from the case, and replace with the correct Lopoco case badge if they have been supplied.

19. System is now ready for Software Installation, but only on select systems with disks or DOM.

20. Finished.