

## HP Documentation

HP 9000 D Class Owner's Guide  
HP 9000 D Class Memory Upgrade Guide (A3262-90003)  
HP 9000 D Class System Installation Guide (A3262-90057)

## Determine System Memory Size

Reboot the system, at the Boot Console Interface prompt (PDC>), type *ma* to get the main menu. Then type *in* to get the information menu. Then type *me* to get the memory information. The memory status table provides the size of the cards installed in each slot and the system memory size.

## Determine the PDC Revision

At the Boot Console Interface prompt (PDC>), type *in* to get the information menu. Then type *fv* to get the current processor dependent code (PDC) revision number. For the D200, D210, and D310, to install the 64MB memory set, your PDC must be revision 36.12 or later. For the D250, D260, D350, and D360, to install the 256MB or 64MB memory sets, your PDC must be revision 26.20 or later. For the Dx70, to install the 512MB set, your PDC must be 37.28 or later.

## System Shutdown

Perform an orderly shutdown of the HP-UX operating system. Reference the Owner's Guide for detailed instructions.

## Power Down

Turn off the system power after the console indicates that the system has been halted. Disconnect the system power cable and the power cord of any peripheral devices from the ac wall outlets.

## Open the Unit

Unlock the front peripheral door. Remove the front bezel by gently pulling the grill forward and lifting up while pressing up on the locking tabs located on the bottom corners.

## Remove the Side Panel

Loosen the three captive side panel screws using a Torx-15 driver. Grasp the front edge of the side panel and swing it away from the system cabinet. Remove the panel by lifting it up so that its four hinge tabs come out of the slots at the rear of the cabinet. Carefully set the panel aside.

## Remove the EMI Cover (if the Hot-Swap Module is installed)

Attach the ESD Wrist Strap using the instructions on the 3M package. D Class servers that have the Hot-Swap Module installed will have an EMI cover installed over the Processor/Memory card. To remove the EMI cover:

1. Loosen the two notches at the bottom of the EMI cover from the tabs on the Processor/Memory card by pushing up and slightly flexing the EMI cover until the notches come loose.
2. Pull the EMI cover down slightly until the two notches at the top of the cover come loose from the tabs at the top of the server cabinet.
3. Loosen and remove the SCSI ribbon cable from the Fast/Wide SCSI card.
4. Remove the other end of the SCSI ribbon cable from the connector on the hot-swap backplane, and set the EMI cover and ribbon cable aside.

## Remove the Processor/Memory Card

1. Loosen and remove the two screws that secure the Processor/Memory card to the chassis.
2. Pull out the two plastic levers on the Processor/Memory card.
3. Pull the Processor/Memory card out of the system cabinet, and set it down on an anti-static mat.

## Installation Procedure

1. Remove the memory sets (DIMMs) currently installed. Push down the ejector handle(s) to eject the DIMMs.
2. Organize all the DIMMs into the following four groups: 512MB sets, 256MB sets, 128MB sets, 64MB sets, and 32MB sets.
3. Install the sets (2 DIMMs) using the following guidelines. Start with the largest size cards first and work down to the smallest size (e.g. first 256MB, then 128MB, then 64MB, then 32MB, and then 16MB). Install the sets in the lowest numbered available slots to the highest numbered slots (e.g. first 0A & 0B, then 1A & 1B, then 2A & 2B, then 3A & 3B, ...). For the D200, D210, and D310 the slots are labeled 0, 1, 2, 3, 4, 5, 6, 7 (e.g. first 0 & 1, then 2 & 3, then 4 & 5, then 6 & 7).

## Install DIMM into a Connector on the Carrier

Open the white ejector lever (press the ejector lever into the down position). Some systems will have a black ejector lever on the other side of the connector. If the black lever is present, press it into the down position. In order to install the DIMM correctly, the notched end (e.g. the side of the card where the card does **not** go straight up from the gold fingers) must be oriented toward the white ejector lever. Insert the DIMM into the connector. Line up the middle of the DIMM (see the semicircle cutout in the middle of the gold fingers) with the middle section of the connector. With the DIMM positioned correctly, **firmly and evenly** press or seat the card into the connector. **Do not "rocker" the DIMM into the connector!** This may damage the DIMM or the connector. When the DIMM is correctly seated, it will "snap" into the connector. At this point, press the ejector lever(s) into the up position.

## Verify DIMMs are Seated Correctly

After all the DIMMs have been installed, check to ensure that they are seated evenly and that all the DIMMs are the same height. An incorrectly seated DIMM may stick out above the other.

## System Reassembly

Place the Processor/Memory card back into the system cabinet so that the card rests on the metal rails with the large connector facing into the cabinet. Pull the extractor levers on the Processor/Memory card out away from the card. Slide the Processor/Memory card into the system cabinet until the large connector is properly seated in the corresponding system board connector. Push in the two extractor levers on the Processor/Memory card. Insert and tighten two screws to secure the Processor/Memory card in the cabinet.

If your server came with an EMI cover installed, and you removed it, you must reinstall it. Place the EMI cover and SCSI ribbon cable close enough to the upper cabinet to connect the upper end of the ribbon cable to the connector on the Fast/Wide SCSI card. Insert the two upper notches of the EMI cover onto the tabs at the top of the server cabinet. Flex the EMI cover slightly to insert the two notches at the bottom of the EMI cover onto the tabs of the processor/memory card. Connect the lower end of the SCSI ribbon cable on the EMI cover to the backplane connector on the Hot-Swap Module.

Replace the side panel. Position the hinge tabs of the side panel so that they go into the four slots at the rear of the system cabinet. Lower the side panel until the hinge tabs are firmly resting in the slots. Close the side panel. Align and tighten the three captive screws of the side panel into the holes at the front of the system cabinet.

Replace the front bezel. Place the top of the bezel down onto the top front of the system cabinet, and press the top of the bezel down until it clicks into place. Push the bottom of the bezel into the bottom of the system cabinet front until it clicks into place. Lock the peripheral door.

Reconnect the power cords.

## Verify the New System Memory

Power up the peripherals first, then power up the system. The system memory is automatically configured to the system by the software. If there is a problem with the installed memory, then the boot process could be halted, or the system could log warning messages and display hex codes on the LCD on the front of the system and at the bottom of the console.

Verify or diagnose the new system memory. Reboot the system and stop the system at the Boot Console Interface prompt (PDC>). Type *ma* to get the main menu. Then type *in* to get the information menu. Then type *me* to get the memory information. The memory status table provides the size of the cards installed in each slot and the system memory size.

If the system has errors or the memory status table does not reflect the expected configuration then the possible error sources are the DIMMs are not seated properly, the DIMMs are not sequenced correctly, the DIMMs are not paired, or the incorrect value matching of paired DIMMs. If errors exist or the table does not reflect the expected configuration, then repeat the installation procedure but take special care to seat the DIMMs properly and in the correct pair sizes and sequence.

## Newport Digital