

HP Documentation

HP 9000 Model 720/730 Owner's Guide (A1946-90001)
HP 9000 Model 720/730 Service Handbook (A1946-90609)

Determine System Memory Size (optional step)

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

Reboot the system. Before the system boots HP-UX, the CPU firmware will display the amount of memory recognized by the system. If the autoboot flag is set ON, then the system will wait 10 seconds then boot HP-UX automatically. In order to get a more detailed listing on the memory, press any key within 10 seconds after the system displays the memory size. At the "boot from primary boot path (Y or N)?" prompt, type *n*. At the "boot from alternate boot path (Y or N)?" prompt, type *n*. At the "enter boot path, command, or ?" prompt, type *info* to get the PDC information. The memory status table provides the size of the cards installed in each slot and the system memory size. Note HP has an error in the CPU firmware, if more than 1GB is installed in the system, the firmware only displays 1GB but HP-UX recognizes and uses the total memory.

System Shutdown

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

If the system is connected to an UPS, put the UPS output switch in the OFF (0) position. Disconnect the system power cable and the power cord of any peripheral devices from the ac wall outlets or UPS.

Remove Cables from the Back of the System

Label each cable and its corresponding point of attachment to make it easier to reconnect it after you have finished the installation. Remove all the cables from the back of the system.

Remove the Core I/O Card

Attach the ESD Wrist Strap using the instructions on the 3M package. The Core I/O is the card with the I/O connectors (Keyboard, Audio, Parallel, RS-232, SCSI Single Ended, Thin LAN and AUD). Unscrew the four screws that secure the I/O card to the chassis. Slide the I/O card out of the computer.

Remove the CPU Card

Pull the ejector handles on the Processor card and slide the card out of the computer. Place the Processor card on an antistatic bag or pad. Position the card with the backplane connector on your right and the 130-pin memory connectors running from left to right.

Rules for Installing Memory Cards

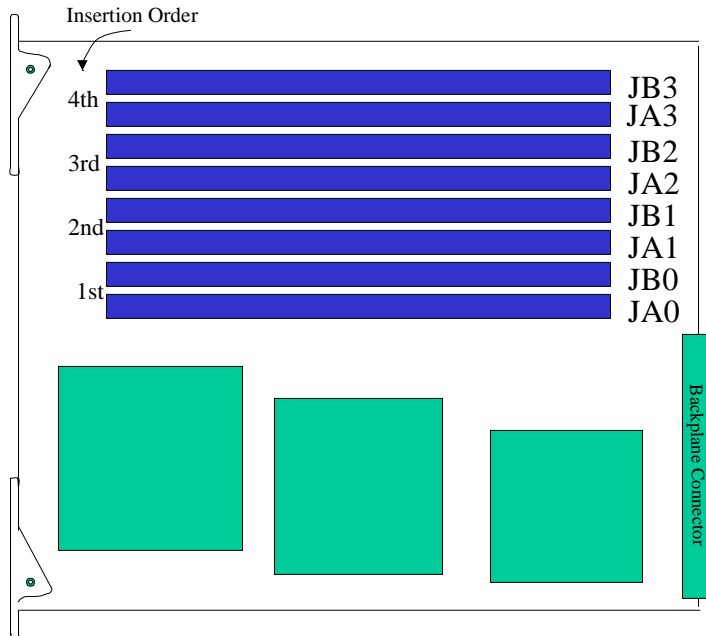
The **rules** are as follows:

- [1] The memory modules must be installed as pairs where each card in the pair is the same size (capacity).
For example, a 128MB set consists of two 64MB modules.
- [2] The memory sets must be installed in the following order.
The first memory pair must be installed in slots 0A & 0B
The second memory pair must be installed in slots 1A & 1B
The third memory pair must be installed in slots 2A & 2B
The fourth memory pair must be installed in slots 3A & 3B.
- [3] The memory pair sizes do not have to go in any special.

Installing Memory Cards

Position the Processor card with the backplane connector on the right side and the 130-pin memory connectors running from left to right. Examine the Processor card and identify the location and numbering of the connector slots to determine where you will install each pair. Remember to follow the rules outlined above.

Select a pair of modules for installation. Verify that the modules are the same memory size. Pick up one of the two cards. Position the card so that the 130-pin connector is down and facing towards you. Slide the card down the guide rails for the specific JA# slot you have chosen. The card should mate with the connector on the Processor card. Visually verify that the card is positioned correctly. If so, press the memory module **down firmly** until you feel it seat into the connector slot. You must apply enough force to snap the card into place. You may need to use both hands to exert enough force to properly seat the card. The most common problem encountered when installing memory in these systems is not applying enough force to seat the card properly. Pick up the other card. Slide the card down the guide rails for the corresponding JB# slot. Press the memory module down firmly until you feel it seat. Repeat until all the cards have been installed.



System Reassembly

Slide the Processor card back into the top slot of the system unit cabinet. Slide the Core I/O card into the middle slot of the system unit cabinet. Firmly press both cards into the system backplane connector. Secure the Core I/O card using the four screws. Reconnect the I/O cables. 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.

Before the system boots HP-UX, the CPU firmware will display the amount of memory recognized by the system. If the Autoboot flag is set ON, then the system will wait 10 seconds then boot HP-UX automatically. In order to get a more detailed listing on the memory, press any key within 10 seconds after the system displays the memory size. At the "boot from primary boot path (Y or N)?" prompt, type *n*. At the "boot from alternate boot path (Y or N)?" prompt, type *n*. At the "enter boot path, command, or ?" prompt, type *info* to get the PDC information. The memory status table provides the size of the cards installed in each slot and the system memory size. Note HP has an error in the CPU firmware, if more than 1GB is installed in the system, the firmware only displays 1GB but HP-UX recognizes and uses the total memory (this can be verified once HP-UX is running).

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

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