

**MEMORY OPTION  
INSTALLATION CARD**

Use this card as a quick reference to install MS340-XX memory options in AlphaServer / AlphaStation DS20 and DS20E systems.

*WARNING: CPU modules and memory modules have parts that operate at high temperatures. Wait 2 minutes after power is removed before touching any module.*

*CAUTION: Wear an antistatic wrist strap when working on this system.*

**Overview**

- Open the cabinet.
- Review the configuration rules.
- Locate the memory slots.
- Install the memory option.
- Verify the installation.

**Before You Begin**

Keep these points in mind when installing a memory option or replacing a memory module:

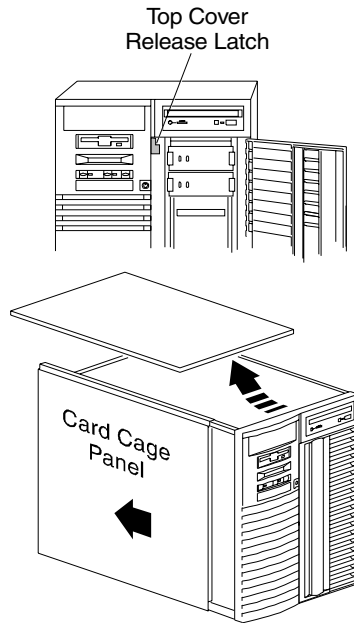
- The four modules in a memory option must be the same size. However, the options within a system box can be a mix of sizes.
- Memory options are installed in specific slots designated for each option.

**Open the Cabinet.**

**DS20 Systems**

1. Shut down the operating system and power down the system.
2. Unplug the power cord(s).
3. Remove the covers to gain access to the system card cage. See Figure 1.
  - a. Unlock and open the front door.
  - b. Pull the top cover latch down to release the latch.
  - c. Using the groove at the rear of the top cover, pull the cover back about two inches, and lift it off.
  - d. Pull the card cage panel back and lift it away from the cabinet.

**Figure 1 Opening the DS20 Cabinet**

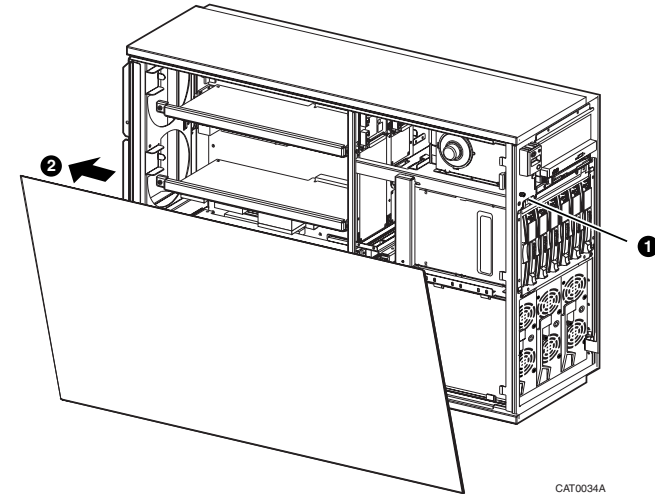


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**DS20E Systems**

1. Shut down the operating system and power down the system.
2. Unplug the power cord(s).
3. Remove the cover to gain access to the system card cage. See Figure 2.
  - a. Open the front bezel.
  - b. Loosen the captive screw ❶ attaching the side panel to the chassis.
  - c. Remove the panel with a rearward motion ❷.

**Figure 2 Opening the DS20E Cabinet**



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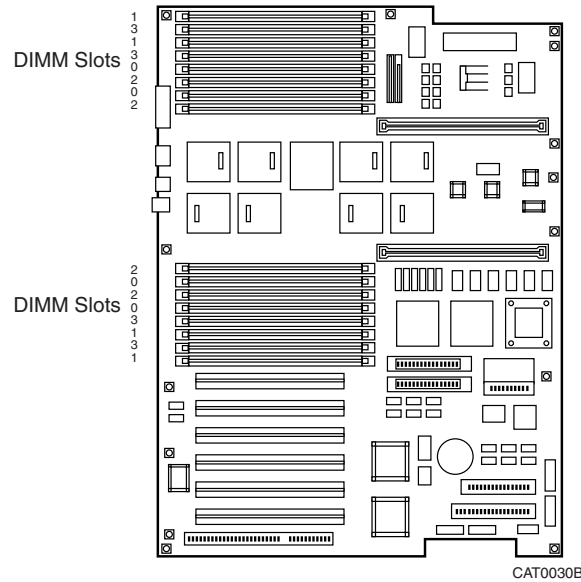
### Review the Configuration Rules.

- A memory option consists of four DIMMs.
- All four DIMMs in an option must be the same size.
- Convention places the largest memory option in slots marked 0 on the system board. See Figure 3. Convention also calls for other memory options to be the same size or smaller than the first memory option.
- Memory options must be installed in slots designated for each bank. The first bank goes into slots marked 0, the second bank into slots marked 1, and so on.

### Locate the Memory Slots.

Figure 3 shows the location of the 16 DIMM slots in DS20/DS20E systems. Two of the four DIMMs in each option go above the D chips and two go below the D chips. When installing additional memory, place DIMMs in the four slots labeled with the same slot number.

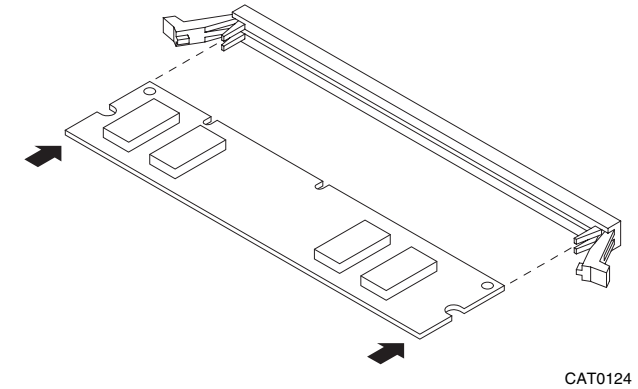
**Figure 3 Memory Slot Locations on the System Board**



### Install the Memory Option.

1. If necessary, remove either CPU to access the DIMM slots necessary for the installation.
2. Identify the slot locations for the option you are installing. See Figure 3
3. Open each memory connector by pushing the levers outward. See Figure 4.
4. Align each DIMM in the connector and press down. The connector levers close.

**Figure 4 Memory Card Installation**



### Verify the Installation.

- Issue the **show memory** command to display the status of the system memory.

Part numbers for options can be found on the Internet. Using a Web browser, follow links to the appropriate AlphaServer / AlphaStation DS20 and DS20E supported options list from the URL:  
<http://www.digital.com/info/alphaserver/products.html>