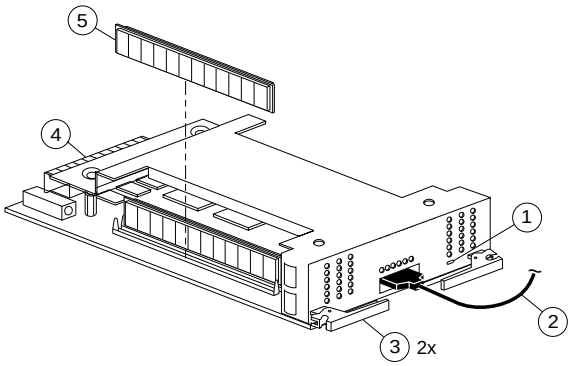
Installing an HSG80 Cache Memory Module

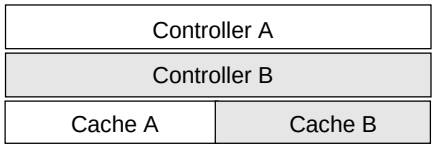
Follow these instructions to replace a cache module in a single or dual-redundant configuration. See the *HSG80 Array Controller ACS Version 8.0 User's Guide* for instructions on upgrading a subsystem to a dual-redundant configuration.

Figure 1. HSG80 Cache Module



1 Cache-memory power LED
2 External cache battery (ECB) cable
3 Retaining lever
4 Backplane connector
5 DIMM

Figure 2. Location of Cache Modules



Dual-Redundant Configurations

To remove the failed cache module...

1. Connect a local terminal to an operational controller.
2. Shut down the controllers. First shut down the "other controller," then shut down "this controller" with the following commands. The controller to which you're connected is "this controller;" the remaining controller is referred to as the "other controller."

   SHUTDOWN OTHER_CONTROLLER

   SHUTDOWN THIS_CONTROLLER
3. When the controllers shut down, their reset buttons and their first three LEDs are lit continuously. This may take several minutes, depending on the amount of data that needs to be flushed from the cache modules.
4. Turn off the power to the subsystem.
5. Unplug the subsystem's power cord.
6. Disconnect the ECB cable from the cache module you're replacing.
7. Disengage the two retaining levers and remove the "other controller's" cache module.

To install the new cache module...

1. Disable the ECB to which you're connecting the new cache module by pressing its shut-off button until the status light stops blinking—about 2 seconds.
2. Connect the ECB cable to the new cache module.
3. Plug in the subsystem's power cord.
4. Restore power to the subsystem. The ECBs automatically re-enable themselves to provide backup power to the cache modules.
5. Hold both reset buttons while inserting the program cards into the controllers, and replace the ESD covers.
6. When the CLI prompt reappears, display details about the controller. Use the following syntax:

   SHOW THIS_CONTROLLER FULL
7. If the display indicates "invalid cache," clear the error using the following command:

   CLEAR_ERRORS THIS_CONTROLLER INVALID_CACHE

   Specify NODESTROY_UNFLUSHED_DATA(default) to retain the cached data and discard controller information.

   Specify DESTROY_UNFLUSHED_DATA to retain the controller information and discard the cached data.

Single Configurations

To remove the failed cache module...

1. From the host console, dismount the logical units in the subsystem. (If you are using a Windows NT platform, shut

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down the PC.)

2. If the controller is operating, connect a local terminal to the controller to obtain the last failure codes, if desired.

   If the controller is not operating, you must turn off power to the subsystem before removing the controller. Go to step 4 to turn off power and proceed.

3. Shut down the controller with the following command:

   SHUTDOWN THIS_CONTROLLER

   When the controller shuts down, its reset button and the first three LEDs are lit continuously.

4. Turn off the power to the subsystem.

5. Disconnect the external cache battery (ECB) cable from the cache module.

6. Disable the ECB by pressing its shut off button until the status light stops blinking—about 2 seconds.

7. Disengage the two retaining levers, and remove the cache module.

To install the new cache module...

CAUTION: Make sure you align the cache module in the appropriate pedestal guide rails. If you do not align the modules appropriately, damage to the backplane can occur.

1. Insert the new cache module into its slot, and engage its retaining levers.

2. Connect the ECB cable to the new cache module.

3. Restore power to the subsystem. The ECB automatically re-enables itself to provide backup power to the cache module.

4. When the CLI prompt reappears, display details about the controller. Use the following syntax:

   SHOW THIS_CONTROLLER FULL

5. If the display indicates “invalid cache,” clear the error using the following command:

   CLEAR_ERRORS THIS_CONTROLLER INVALID_CACHE

   Specify NODESTROY_UNFLUSHED_DATA(default) to retain the cached data and discard controller information.

   Specify DESTROY_UNFLUSHED_DATA to retain the controller information and discard the cached data.

6. To restore a configuration saved with the SAVE_CONFIGURATION switch, hold button 6 while releasing the reset button.

   If the controller you’re installing was previously used in another subsystem, it will restart with the configuration that resides in its nonvolatile memory. If this differs from the subsystem’s current configuration, you can purge the controller’s old configuration with the following command:

   SET THIS_CONTROLLER INITIAL_CONFIGURATION

7. The controller shuts down after returning to its initial configuration. Press its reset button to restart the controller.

   To restore the configuration, use the CONFIGURATION RESTORE command.

8. Mount the logical units on the host. (If you are using a Windows NT platform, restart the PC.)