Upgrading HSx 5.0 Cache Memory Instructions

Order Number: EK–SIMMS-IN. A01

This document describes the procedure for installing memory in a cache module to increase write-back cache capacity in single and dual-redundant controller configurations.

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Maynard, Massachusetts

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Restrictions apply to the use of the local-connection port on this series of controllers; failure to observe these restrictions may result in harmful interference. Always disconnect this port as soon as possible after completing the setup operation. Any changes or modifications made to this equipment may void the user's authority to operate the equipment.

Warning!
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

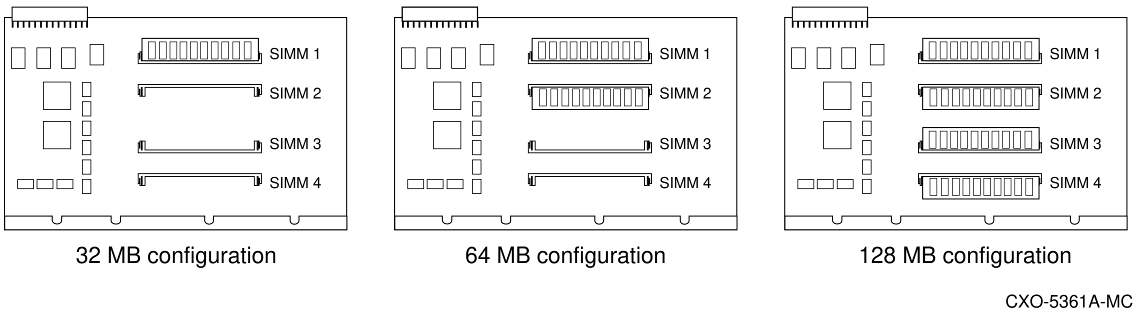
Achtung!
Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

Avertissement!
Cet appareil est un appareil de Classe A. Dans un environnement résidentiel cet appareil peut provoquer des brouillages radioélectriques. Dans ce cas, il peut être demandé à l' utilisateur de prendre les mesures appropriées.

Upgrading Cache Memory

You can increase cache module memory to a maximum of 128 MB using 4/32 MB SIMM cards. The slots you use when installing the SIMM cards depend on the amount of memory you are installing. Figure 1 shows the valid memory configurations.

Figure 1. SIMM card configurations



The following section contains the steps for installing memory in a cache module of a single or dual-redundant controller.

Installing SIMM Cards

To install SIMM cards:

1. Connect a maintenance terminal to the controller to which you are adding cache memory.
2. Shut down the controller that accesses the cache module you're upgrading.

   ```
   CLI> SHUTDOWN THIS_CONTROLLER
   ```

   If you are working with a dual-redundant configuration, shut down the second controller also.

   ```
   CLI> SHUTDOWN OTHER_CONTROLLER
   ```

3. After the controller shuts down, remove the maintenance terminal cable, and remove the power cord from the controller power supply.
4. Quiesce power to the ECB.
5. Place an ESD wrist strap around your wrist. Ensure that the strap fits snugly around your wrist.
6. Attach or clip the other end of the ESD strap to the cabinet grounding stud or a convenient cabinet grounding point (non-painted surface).
7. Remove the trilink connector. Do not remove the host cables from the trilink connector.
8. Loosen the controller module.
9. Remove the controller and place it on an ESD mat.
10. Remove the cache module and place it on an ESD mat.

11. Disconnect the battery cable from the SBB battery module.
12. Install as many SIMM cards in the cache module as you need (up to 4x32MB maximum).

    The cache board is marked with SIMM slot numbers as shown in Figure 1. Use this figure to determine the valid configuration for the memory you are installing.

    If you are working with a dual-redundant configuration and installing memory in both controllers, repeat this step for the second controller.
13. Reinstall the cache module.
14. Reinstall the controller.

    If you are using a single controller configuration, use the slot that is designated SCSI ID 7.
15. Connect one end of the battery cable to the cache module and the other end to the ECB.
16. Tighten the ECB cable mounting screws.
17. Tighten the two front panel captive screws on the cache module and the two captive screws on the controller module.

    Do not overtighten the front panel captive screws. Damage to the controller PC board or front panel may result.
18. Remove the program card from the controller.
19. Reconnect the power cord to the controller power supply.
20. Press and hold the Reset button (//) on the controller while pushing in the program card.

    The controller initializes. The reset light on each controller flashes at a rate of once every second when the initialization process is complete.

    If you are working with a dual-redundant configuration, simultaneously press and hold the Reset button on both controllers while pushing in the program cards.
21. Snap the ESD cover into place over the program card. Push the pins inward to lock the cover in place.
22. To check cache capacity of the module, attach a maintenance terminal to the controller. At the CLI prompt type:

    `CLI>` **`SHOW THIS_CONTROLLER`**

    The controller reports the following information:

    ```
    Controller:
        HSD50-AA ZG34901786 Firmware V03.0, Hardware F01
        Configured for dual-redundancy with ZG61000012
           In dual-redundant configuration
        SCSI address 7
        Time: 15 AUG-1995 16:32:54
    Host port:
        Node name: HSDA1, valid DSSI node 0
        Host path is ON
        MSCP allocation class  3
        TMSCP allocation class 3
        MAXIMUM HOSTS =4
    Cache:
    ```

```
128 megabyte write cache, version 3
Cache is GOOD
Battery is good
No unflushed data in cache
CACHE_FLUSH TIMER = DEFAULT (10 seconds)
CACHE_POLICY = B
NOCACHE_UPS
```

If you are working with a dual-redundant configuration, use the SHOW OTHER_CONTROLLER command to check the capacity of the second cache module:

```
CLI> SHOW OTHER_CONTROLLER
```

The OTHER_CONTROLLER reports the same information.