Installing an HSZ70 External Cache Battery (ECB)

Follow these instructions to replace an ECB in a single or dual-redundant configuration. See the *HSZ70 Array Controller HSOF Version 7.0 Service Manual* for instructions on upgrading a subsystem to a dual-redundant configuration.

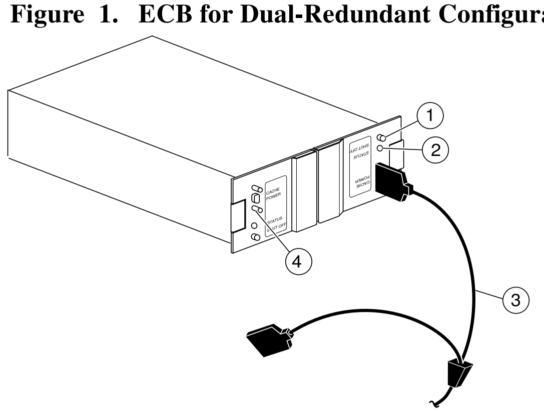
VHDCI Cable Precautions

All of the cables to the controller, cache module, and ECB use very-high density cable interconnect connectors (VHDCI). These connectors have extraordinarily small mating surfaces that can be adversely affected by dust and movement. Follow these precautions when you're connecting VHDCI cables:

- Clean the mating surfaces with a blast of clean air.
- Mate the connectors by hand, then tighten the retaining screws to 1.5 inch-pounds—approximately 1/4 additional turn after the connectors have fully mated.
- Test the assembly by gently pulling on the cable, which should not produce visible separation.

Dual-Redundant Configurations

Figure 1. ECB for Dual-Redundant Configurations



1 Shut off button
2 Status LED
3 ECB cable
4 Faceplate and controls for second battery (to backup two cache modules in dual-redundant configurations)

To remove the failed ECB...

1. Connect a local terminal to the controller with the operational ECB. The controller to which you're connected is "this controller;" the controller whose ECB you're replacing is the "other controller."
2. Disable failover and take the controllers out of their dual-redundant configuration with the following command:

   SET NOFAILOVER
3. Start FRUTIL, the field-replacement utility, with the following command:

   RUN FRUTIL
4. Choose option 3 from the FRUTIL Options menu to begin the replacement procedure.
5. Confirm that you want to replace the ECB.

To install the new ECB...

1. Insert the new ECB into an empty slot.
2. Connect the open end of the ECB cable to the new ECB, then press Return.
3. Restart the "other controller" with the following command:

   RESTART OTHER_CONTROLLER
4. Re-establish the dual-redundant configuration with the following command:

   SET FAILOVER COPY=THIS_CONTROLLER

   This command copies the subsystem's configuration from "this controller" to the "other controller."
5. Wait until the new ECB's status light is on continuously, then disconnect the ECB cable from the old ECB.

   CAUTION: Do not disconnect the old ECB until the batteries in the new ECB are fully charged. The new ECB's status light will be lit continuously to indicate that its batteries are fully charged. A blinking status light indicates that its batteries are charging.
6. If you want to backup both cache modules with the new ECB, repeat this procedure for other controller and its cache module.

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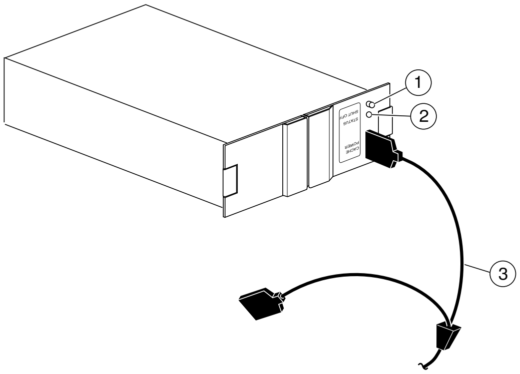
Single Configurations

Figure 2. ECB for Single Configurations



1 Shut off button
2 Status LED
3 ECB cable

To remove the failed ECB...

1. If the controller and cache module are not operating, go to step 4 below. Otherwise, go to the next step.
2. Connect a local terminal to the controller.
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.

To install the new ECB...

1. Insert the new ECB into its slot.
2. Connect the open end of the ECB cable to the new ECB.
3. Restore power to the subsystem. The controller automatically restarts.
4. Wait until the new ECB’s status light is on continuously, then disconnect the “y” cable from the old ECB.

   CAUTION: Do not disconnect the old ECB until the batteries in the new ECB are fully charged. The new ECB’s status light will be lit continuously to indicate that its batteries are fully charged. A blinking status light indicates that its batteries are charging.
5. Remove the old ECB.