**d|i|g|i|t|a|l**

# 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
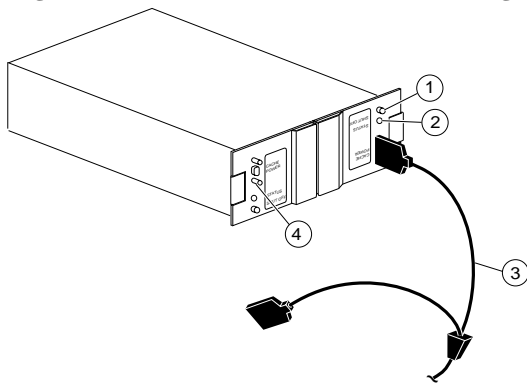dual-redundant configuration.

## 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
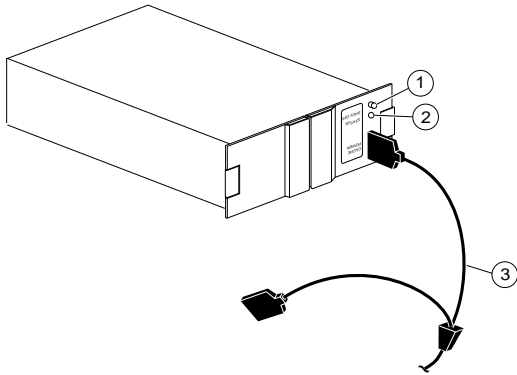   "this controller" to the "other controller."

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.

# 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.