



Replacing an SFP Transceiver in the 6180 Array Module Configuration

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Revision History

Version and Date	Description of Changes
51574-00, Rev. A, May 2011	Initial release of the document.

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Replacing an SFP Transceiver in the 6180 Array Module Configuration

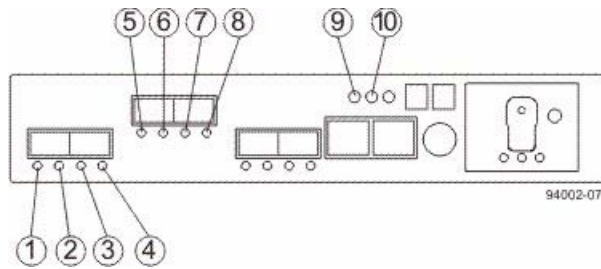
Before you replace a Small Form-factor Pluggable (SFP) transceiver in the an array module or drive module, gather antistatic protection and a replacement SFP transceiver.

NOTE The SFP transceivers for 8-Gb/s Fibre Channel array modules are different than the ones used for 2-Gb/s and 4-Gb/s Fibre Channel array modules, or the 10-Gb/s iSCSI array modules. The SFP transceivers look similar but behave differently.

ATTENTION Possible hardware damage – To prevent electrostatic discharge damage to the module, use proper antistatic protection when handling module components.

- 1** If possible, use the storage management software to create, save, and print a new storage array profile.
- 2** Did the Recovery Guru direct you to replace a failed controller CRU?
 - **Yes** – Go to step [3](#).
 - **No** – Run the Recovery Guru to identify the failed component, and go to step [3](#).
- 3** Put on antistatic protection.
- 4** Unpack the new SFP transceiver.
 - a** Make sure that it is the same type of SFP transceiver that you are replacing.
 - b** Set the new SFP transceiver on a flat, static-free surface near the array module or the drive module.
 - c** Save all the packing materials in case you need to return the SFP transceiver.
- 5** To locate a failed SFP transceiver in the 6180 array module, look at the Host Channel Speed LEDs on the rear of the controller canisters ([Figure 1](#)). Both Host Channel Speed LEDs for a particular port are off if an SFP transceiver has failed.

Figure 1 Host Channel Speed LEDs on the 6180 Controller CRU



- 1 Host Channel LED 0 for Port 1
- 2 Host Channel LED 1 for Port 1
- 3 Host Channel LED 0 for Port 2
- 4 Host Channel LED 1 for Port 2
- 5 Host Channel LED 0 for Port 3
- 6 Host Channel LED 1 for Port 3
- 7 Host Channel LED 0 for Port 4
- 8 Host Channel LED 1 for Port 4
- 9 Controller Service Action Allowed LED (Blue)
- 10 Controller Service Action Required LED (Amber)

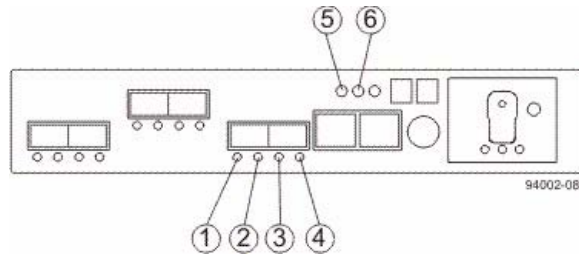
- **If both Host Channel LEDs are off for a particular port** – You must replace the SFP transceiver. Go to step 6.
- **If at least one Host Channel LED is on for a particular port** – The SFP transceiver is functional. The Host LEDs indicate a channel speed of 1 Gb/s, 2 Gb/s, 4 Gb/s, 8 Gb/s, or 10 Gb/s.

ATTENTION Potential degraded performance – To prevent degraded performance, do not twist, fold, pinch, or step on fiber-optic cables. Do not bend the fiber-optic cables tighter than a 5-cm (2-in.) radius.

NOTE The Controller Service Action Required LED comes on whenever a loss of a path occurs. The storage management software’s Tray Component information dialog provides both channel and port information to help you identify the components that are in the path.

- 6 Check the Drive Channel LEDs on the rear of the 6180 controller CRU to locate the failed SFP transceiver (Figure 2). Both Drive Channel LEDs for a particular port are off if an SFP transceiver has failed.

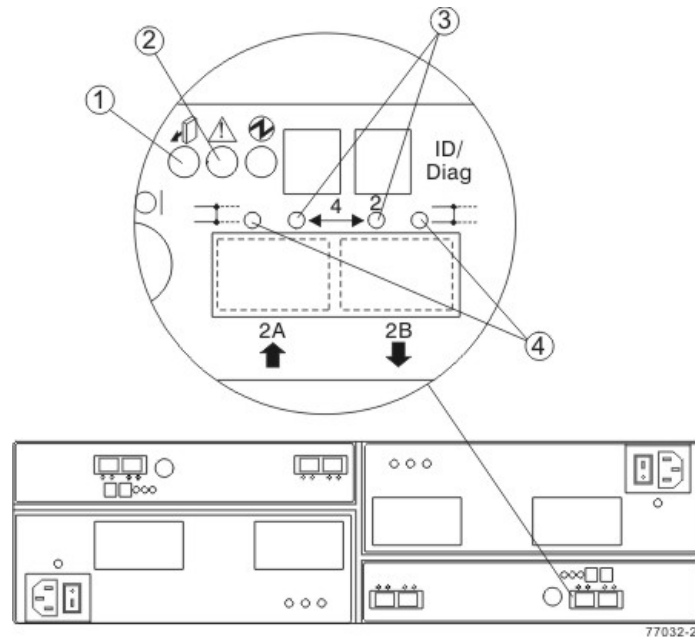
Figure 2 Drive LEDs on the 6180 Controller CRU



- 1 Drive Channel Link LED for Port 0 (Amber)
- 2 Drive Channel LED for Port 0 (Green)
- 3 Drive Channel LED for Port 1 (Green)
- 4 Drive Channel Link LED for Port 1 (Amber)
- 5 Controller Service Action Allowed LED (Blue)
- 6 Controller Service Action Required LED (Amber)

- **If all of the Drive LEDs are off for a particular port on the array module** – You must replace the SFP transceiver. Go to step 7.
 - **If any Drive Channel Speed LED is on** – The SFP transceiver is functional. The Drive Channel Speed LEDs indicate a channel speed of 1 Gb/s, 2 Gb/s, 4 Gb/s, 8 Gb/s or 10 Gb/s. The Drive Channel Link LEDs are amber when a link is not sensed. Go to step 7.
- 7** On the CSM200 drive module, check the Drive Channel Speed LEDs on the rear of the ESM/IOM CRU to locate the failed SFP transceiver (Figure 3). Both Drive Channel Speed LEDs for a particular port are off if an SFP transceiver has failed.

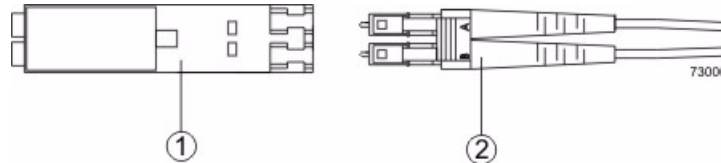
Figure 3 ESM/IOM LEDs on the CSM200 Drive Module



- 1 ESM Service Action Allowed LED (Blue)
- 2 ESM Service Action Required LED (Amber)
- 3 Drive Channel Speed LEDs
- 4 Link LEDs

- **If all of the Drive Channel Speed LEDs are off for a particular port on the drive module** – You must replace the SFP transceiver. Go to step 8.
 - **If any Drive Channel Speed LED is on** – The SFP transceiver is functional. The Drive Channel Speed LEDs indicate a channel speed of 1 Gb/s, 2 Gb/s, or 4 Gb/s. The ESM/IOM Link LED is amber when a link is not sensed.
- 8** If it is present, disconnect the fiber-optic cable from the failed SFP transceiver (Figure 4).

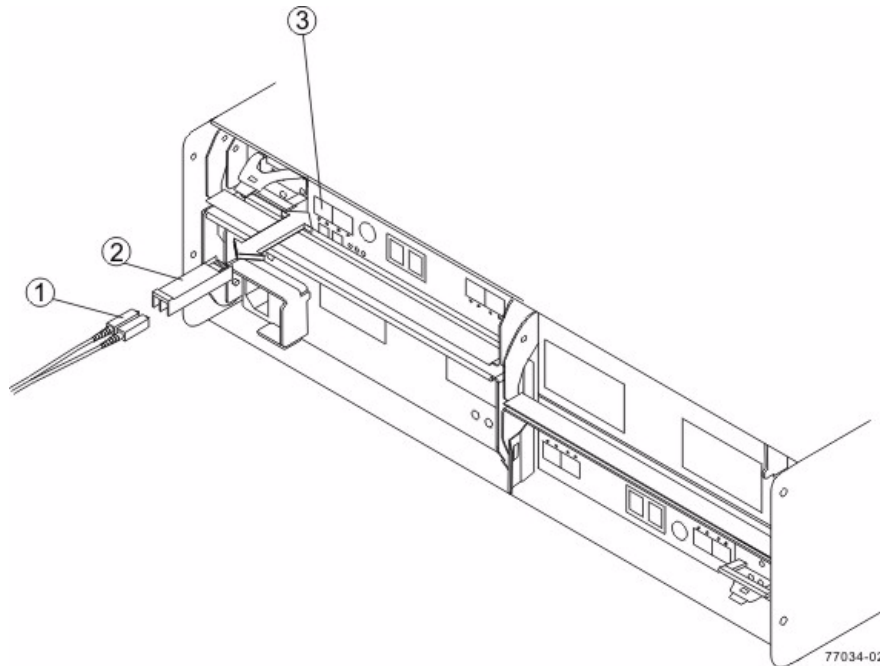
Figure 4 SFP Transceiver and Fiber-Optic Cable



- 1 SFP Transceiver
- 2 Fiber-Optic Cable

- 9** Remove the failed SFP transceiver from the appropriate interface port (Figure 5).

Figure 5 Removing an SFP Transceiver – CSM200 Drive Module



- 1 Fiber-Optic Cable
- 2 SFP Transceiver
- 3 Drive Interface Port

- 10** Install the new SFP transceiver into the interface port.
- 11** Reconnect the fiber-optic cable.
- 12** Look at the Host Channel LEDs, the Drive Channel LEDs, and the Service Action Required LEDs on the array module.
- 13** Based on the LED status, perform one of these actions:

- **At least one of the Host Channel LEDs or Drive Channel LEDs on either a 6180 array module or an CSM200 drive module for each port is on, and the Service Action Required LED is off** – Go to step 15.
 - **Both of the Host Channel LEDs or Drive Channel LEDs on either a 6180 array module or a CSM200 drive module for a particular port are off, and the Service Action Required LED is on** – Check that the SFP transceiver has been installed correctly. Reinstall the SFP transceiver if necessary. Go to step 14.
- 14** Did this action correct the problem?
- **Yes** – Go to step 15.
 - **No** – If the problem is not resolved, contact your Sun Customer Care Center representative.
- 15** Complete any remaining Recovery Guru procedures, if needed.
- 16** Using the LEDs and the storage management software, check the status of all of the modules in the storage array.
- 17** Does any component have a Needs Attention status?
- **Yes** – Click the **Recovery Guru** toolbar button in the Array Management Window, and complete the recovery procedure. If the problem is not resolved, contact your Sun Customer Care Center representative.
 - **No** – Go to step 18.
- 18** Remove the antistatic protection.
- 19** Create, save, and print a new storage array profile.

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