

Sun Storage F5100 Flash Array Getting Started Guide

The Sun Storage F5100 Flash Array from Oracle® is a one rack unit solid state storage device with up to 80 Flash Modules (FMods). This document provides an overview of the steps required to install the Sun Storage F5100 Flash Array.

Detailed installation information can be found in the *Sun Storage F5100 Flash Array Installation Guide*, which is available online at:

<http://docs.sun.com/app/docs/prod/stor.f5100#hic>

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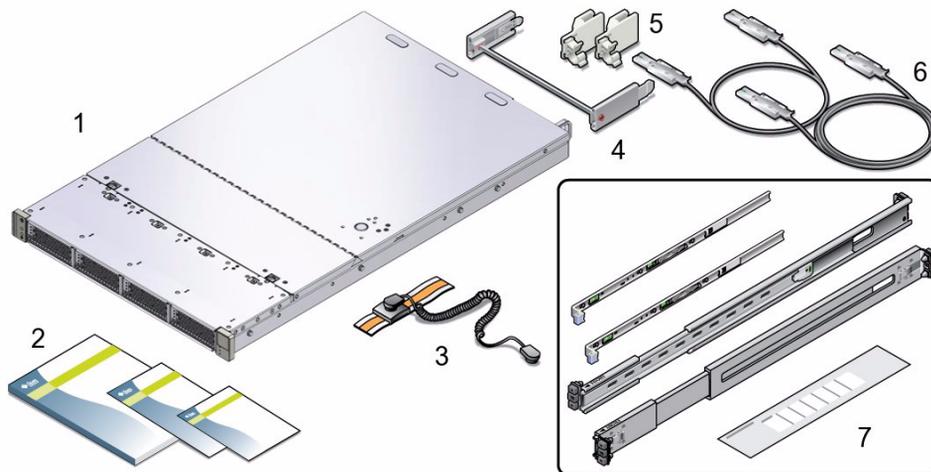


Figure Legend

1	Sun Storage F5100 Flash Array	4	Cable management arm	7	Rack rail kit
2	Safety documentation	5	Power cord retainers (2)	8	Cable tie (2) -- not pictured
3	Anti-static wrist strap	6	SAS Cables (2)		

1. Review Important Information

Before performing an installation, refer to the following documents for information regarding the Sun Storage F5100 Flash Array:

- *Important Safety Information for Sun Hardware Systems* – Printed document included in the ship kit.
- *Sun Storage F5100 Flash Array Safety and Compliance Manual* – Available online at <http://docs.sun.com>.
- *Sun Storage F5100 Flash Array Product Notes* – Available online at <http://docs.sun.com>.
- *Transporting Products With Class 9 Dangerous Goods Rating* – Printed document included in the ship kit.
- Review the informational labels on the system to familiarize yourself with components.

2. Download and Install Required HBA Firmware

The Sun Storage F5100 Flash Array requires specific HBA firmware. See the *Sun Storage F5100 Flash Array Product Notes* for information about downloading the required firmware.

3. Prepare Data Host

Confirm the data host hardware and OS support for the Sun Storage F5100 Flash Array. Load any required patches for each component. See the *Sun Storage F5100 Flash Array Product Notes* for more information about supported hardware and software.

4. Mount the System In a Rack

Use the rackmounting instructions included with the rail kit and available online in the *Sun Storage F5100 Flash Array Installation Guide*.

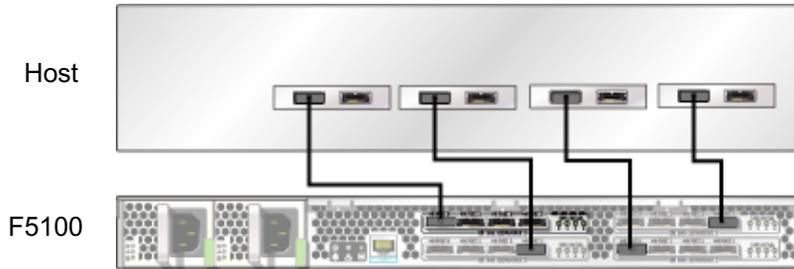
5. Install SAS Cables

Sun provides two SAS cables with the system. Additional SAS cables can be ordered separately from Sun or supplied by the customer. The images below show some possible Sun Storage F5100 Flash Array data configurations. To design your own configuration, see the cabling configuration rules in the *Sun Storage F5100 Flash Array Installation Guide*.

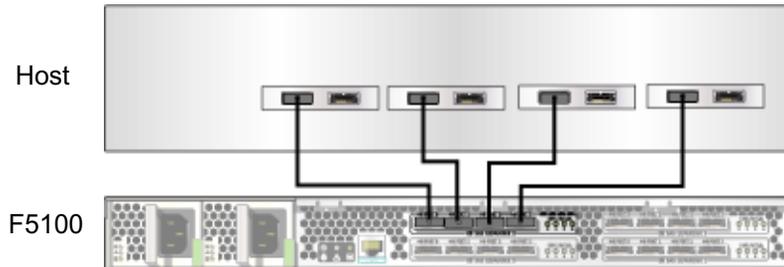
Data Configurations

The F5100 has four independent SAS domains (expanders) each with four ports. Connect from one to four HBAs per expander. Connecting more than one HBA per expander requires zoning. Cascading (array-to-array or expander-to-expander) is not supported.

Example 1



Example 2



Example Number	HBA Description	System Domain Description	Usage Scenario
1	Four HBAs	Each HBA connects to a different expander.	Use this configuration when HBAs are limited and maximum performance is not required. Can be used for mirroring if supported by the host.
2	Four HBAs	All HBAs connect to the same expander.	Scale this configuration model to all four expanders for maximum performance. Zoning is required for this configuration.

Zoning Support

The Sun Storage F5100 Flash Array supports zoning using Oracle's StorageTek Common Array Manager software. Zoning enables additional configurations. For more information see the *Sun StorageTek Common Array Manager User Guide for Open Storage (821-0820)*.

6. Connect Power Cords

a. (optional) Install power cord retention devices.

Use the instructions provided with the power cord retention devices.

b. Attach power cords to power supplies.

c. Connect power cords to power outlets.

Once AC power is connected to the system, the System Status OK LED illuminates to a standby blink (repeating short flash on, then long pause), indicating the system is ready to be powered on.

7. Power On the System

◆ **Press the power button on the front of the array.**

System Status OK LED illuminates to steady on when the system is operational. During power on, the green ESM OK LEDs change from blinking to steady on when the ESMs are fully charged.

8. Next Steps

a. Power on the data host.

During power on, the green ESM OK LEDs change from blinking to steady on when the ESMs are fully charged. To avoid potential data loss, wait until ESMs are fully charged before you use the array.

b. Confirm that the data host can see the Sun Storage F5100 Flash Array, using the appropriate OS command.

c. Download the appropriate version of StorageTek CAM and install the management software on your management host. For more information, see the *Sun StorageTek Common Array Manager User Guide for Open Storage* (821-0820)

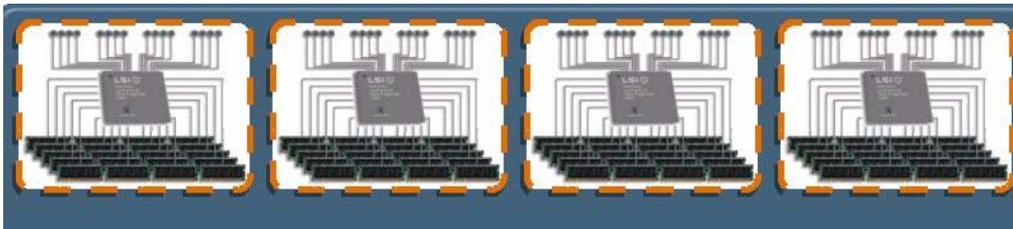
d. Configure your data host OS and applications to use Sun Storage F5100 Flash Array.

System Description

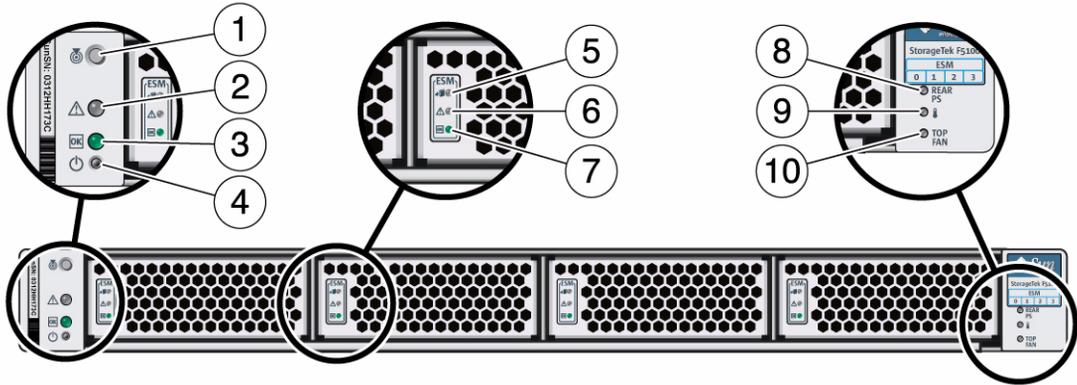
Oracle's Sun Storage F5100 Flash Array includes two 720 watt redundant power supplies, six fan modules, four energy storage modules (ESMs), and up to 80 Flash Modules (FMods). The FMods are divided into four independent domains, or expanders, that share an enclosure.

Conceptual System Diagram

This diagram shows how the four expanders act as separate domains, much like four separate systems enclosed in the same box.

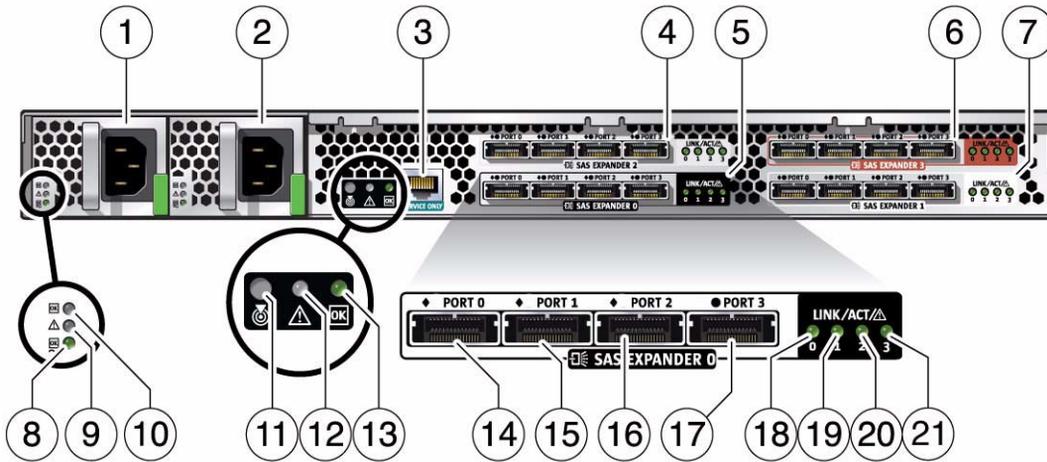


Front Panel Diagram



- | | | |
|----------------------------|-------------------------------|-------------------------------|
| 1 System Locate LED/button | 5 ESM Ready to Remove LED | 9 System Over Temperature LED |
| 2 System Fault LED | 6 ESM Fault LED | 10 Top Fan Fault LED |
| 3 System OK LED | 7 ESM OK LED | |
| 4 System ON/Standby button | 8 Rear Power Supply Fault LED | |

Rear Panel Diagram



- | | | |
|---------------------|-----------------------------|--------------------|
| 1 Power supply 0 | 8 Power supply AC OK LED | 15 SAS port 1 |
| 2 Power supply 1 | 9 Power supply fault LED | 16 SAS port 2 |
| 3 Service only port | 10 Power supply OK LED | 17 SAS port 3 |
| 4 SAS expander 2 | 11 System Locate LED/button | 18 SAS port0 LED 0 |
| 5 SAS expander 0 | 12 System Fault LED | 19 SAS port0 LED 1 |
| 6 SAS expander 3 | 13 System OK LED | 20 SAS port0 LED 2 |
| 7 SAS expander 1 | 14 SAS port 0 | 21 SAS port0 LED 3 |

Documentation for This Product

You can find the most up-to-date, and translated versions of all the documents online at:

<http://docs.sun.com/app/docs/prod/stor.f5100#hic>

Document	Task	Part Number
Sun Storage F5100 Flash Array Safety and Compliance Guide	Review the safety information.	(820-5875)
Important Safety Information for Sun Hardware Systems		(816-7190)
Transporting Products With Class 9 Dangerous Goods Rating		(820-6558)
Product Notes	Review any known issues and workarounds.	(820-6091)
Installation Guide	Prepare data host and environment, cable the system, learn about managing your array.	(820-6089)
Service Manual	Remove and replace hardware components. Troubleshoot and isolate system problems.	(820-5874)

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