



Storage Controller Considerations

This chapter provides storage controller (RAID and HBA) information.

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Supported Storage Controllers and Cables

This server supports a single, PCIe-style controller that plugs into a dedicated internal riser.

This Cisco CSP 5200 supports the RAID and HBA controller options and cable requirements shown in the following table.

Controller	Cisco CSP 5200 Version/Maximum Drives Controlled	RAID Levels	Optional Supercap Backup?	Required Cables
Cisco 12G Modular RAID Controller with 2-GB cache	This controller is supported only in these Cisco CSP 5200 versions: <ul style="list-style-type: none">• SFF 10-drives: 10 front-loading SAS/SATA drives	10	Yes	Use SAS/SATA cable included with chassis to connect controller to drive backplane.

Storage Controller Card Firmware Compatibility

Firmware on the storage controller (RAID) must be verified for compatibility with the current Cisco IMC and BIOS versions that are installed on the Cisco CSP 5200. If not compatible, upgrade or downgrade the storage controller firmware using the Cisco Host Upgrade Utility (HUU) for your firmware release to bring it to a compatible level.

See the HUU guide for your Cisco IMC release for instructions on downloading and using the utility to bring Cisco CSP 5200 components to compatible levels: [HUU Guides](#).

RAID Backup (Supercap)

This Cisco CSP 5200 supports installation of one supercap unit. The unit mounts to a bracket in-line with the fan modules.

The optional SCPM provides approximately three years of backup for the disk write-back cache DRAM in the case of a sudden power loss by offloading the cache to the NAND flash.

For supercap unit replacement instructions, see [Replacing the Supercap \(RAID Backup\)](#).

Write-Cache Policy for Cisco 12G SAS Modular RAID Controller

For this Cisco CSP 5200 and other Cisco Generation M5 Cisco CSP 5200, the default write-cache policy for the Cisco Modular RAID controller is *Write Through* (irrespective of the presence of a charged supercap or “good BBU”). This utilizes the optimal performance characteristics of the controller.

The write policy can be set to *Write Back*, if preferred. You can set the write policy using the following methods:

- For standalone Cisco CSP 5200, use the Cisco IMC interface to set Virtual Drive Properties > Write Policy. See the “Managing Storage Adapters” section in your Cisco IMC Configuration Guide.
[Cisco IMC GUI and CLI Configuration Guides](#)
- For Cisco UCS-integrated Cisco CSP 5200, use the Cisco UCS Manager interface to set the write-cache policy as part of virtual drive configuration in your storage profile.
[Cisco UCS Manager Configuration Guides](#)
- Use the LSI Option ROM Configuration Utility.

Storage Controller and Backplane Connectors

This section describes cabling connections for the storage controllers and the backplane. The SAS/SATA cables are factory-installed and are used for all supported internal controllers in the SFF 10-drive servers.

This section also contains diagrams that show the cable-to-drive mapping.

Cisco 12G Modular SAS RAID Controller

This HW RAID option can control up to 10 SAS/SATA drives in the SFF 10-drive version.

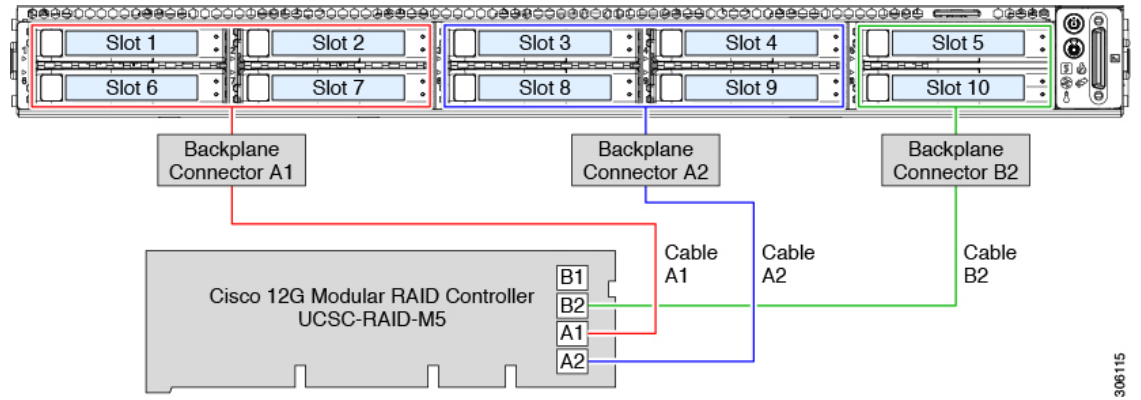
This option requires that you have a SAS RAID or HBA card installed in internal mRAID riser 3. Use the SAS/SATA cables that came with the server.

1. Connect SAS/SATA cable A1 from the A1 card connector to the A1 backplane connector.
2. Connect SAS/SATA cable A2 from the A2 card connector to the A2 backplane connector.
3. For SFF-10-drive servers only: Connect SAS/SATA cable B2 from the B2 card connector to the B2 backplane connector.



Note See the following figures that illustrate cable connections and which drives are controlled by each cable.

Figure 1: Hardware RAID Card Cable-to-Drive Backplane Mapping, SFF 10-Drive Version



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