

## Cisco Video Surveillance Storage Series

Cisco® Video Surveillance Storage Series next-generation storage systems enables organizations and enterprises to increase capacity while lowering overall power, space, and cost requirements. Ideal for organizations faced with increasing power or space limitations, the Cisco Video Surveillance Storage Series offers up to 60 drives in 4 racks unit in both the standard and the extended chassis, along with up to an 85% savings in energy costs. The end result is a storage system that is up to three times as dense as a typical array while consuming a fraction of the power. Innovative ease-of-use functionality greatly simplifies deployment and management. Two models are currently available: the 60-Bay Chassis (CPS-SS-4RU) and the 60-Bay Expansion Chassis (CPS-SS-4RU-EX).

**Figure 1.** 60 Bay Cisco Video Surveillance Storage System



The Cisco Video Surveillance Storage Series offers a variety of benefits, including:

- **Reliability.** A high-availability architecture with multipathing support and dual redundant, hot-swappable active components helps ensure no single point of failure. With 4 GB of battery-backed and flash-protected cache per controller, the Cisco Video Surveillance Storage Series mirrors cache between controllers in a dual-controller configuration.
- **Availability.** Active Drawer Technology overcomes the challenges of other high-density offerings by allowing a single drawer of drives to be easily pulled out and serviced while the system remains online.
- **Scalability.** The 60-Bay Expansion Chassis (60 disks in 4 RU) can be attached to the 60-Bay Chassis via up to four 6 GB SASx4 (24 GB) connectors for uncompromising performance and resilience against any single point of failure.
- **Performance.** Dual raid engines per controller deliver wire-speed read/write throughput and high IOPS performance for varying workloads. The active/active dual controller configuration provides twice the I/O ports and increases system performance.
- **Management.** The systems come preconfigured and can be up and running in 10 minutes or less using the QuickStart Wizard. The Storage Manager makes management easy, with a single interface to manage and monitor all local and remote storage systems from disk provisioning, RAID hardware management, LUN

masking and binding, host data path services, failover/failback, data migration, RAID set builds, and power management.

- **Power efficiency.** AutoMAID technology delivers up to 85% energy savings. When a disk group has not been accessed for a specified time period, it can be placed into progressively lower states of power consumption.

## Features

Table 1 describes the features of the Cisco Video Surveillance Storage Series Platforms.

**Table 1.** Cisco Video Surveillance Storage Series Platform Features

Item	Specification
<b>Industry-Leading Storage Density</b>	The 60-Bay Chassis and 60-Bay Expansion Chassis provide up to 60 drives in just 4 units of rack space, or 15 drives per rack unit.
<b>High Availability</b>	All active components are redundant and hot-swappable, including power supplies, fans, disks, and controllers.
<b>Battery-Backed and Flash-Protected Cache</b>	Cache memory is protected via a battery built into the storage system. The battery has sufficient power to push all data from cache DDR3 RAM into flash memory, where it will be preserved indefinitely. Cache data is synchronously mirrored between controllers to protect uncommitted writes in the event of controller failure.
<b>Anti-Vibration Design</b>	State-of-the-art vibration dampening maximizes reliability and performance.
<b>Cool Drive Technology</b>	Push/pull fans, modules, and specially designed air channels optimize drive cooling and reliability.
<b>Dual Active/Active Storage Controllers</b>	Dual controllers provide additional horsepower and add additional I/O ports. All LUNs may be made visible on any or all connections.
<b>Two RAID Engines per Controller</b>	Two RAID engines reside on each controller to accelerate RAID operations, resulting in improved sequential and random I/O performance.
<b>Host Data Path Services</b>	Utilize multiple paths from a server to a LUN for increased bandwidth, as well as ensuring there is no single point of failure between the servers and their storage.
<b>RAID Hardware Management</b>	Sets RAID levels and manages the caches in single or dual active/active controller configurations.
<b>Disk Provisioning</b>	Place hard drives into RAID sets; determine the RAID type; establish hot spares and the RAID set auto-rebuild policies; and expose RAID sets as one or more LUNs.
<b>LUN Masking and Binding</b>	Ensures that only the hosts that are supposed to have access to a virtual disk get it. Hosts must authenticate before being granted access.
<b>AutoMAID Power Management</b>	Each RAID set can have its drives progressed into deeper levels of sleep when they have not been accessed for a specified period of time, saving power. There are four levels of power management to balance power savings and responsiveness to first I/O request for varying applications. No changes need to be made to applications to take advantage of this capability.

## Management

Table 2 provides management features for the Cisco Video Surveillance Storage Series Platforms.

**Table 2.** Cisco Video Surveillance Storage Series Platform Management Features

Item	Specification
<b>Single Management Console</b>	Remotely manage one or many systems. Cisco storage systems find each other and appear in the management console, which displays their health using red/yellow/green indicators. Easily move between systems to administer them.
<b>Embedded Web-Based Management</b>	A web server residing in the storage system presents the management GUI in the web browser. Administer storage systems remotely. There is no need to install management software on a client computer and keep it updated.
<b>QuickStart Wizard</b>	Get the storage system up and running in 10 minutes or less.
<b>Alerts</b>	Alerts are sent via SNMP or email and are logged in the storage system as well as transmitted to the web-browser-based management console.
<b>Automatic RAID Set Maintenance</b>	In the event of a drive failure, spare drives are automatically added to a RAID set and a RAID set rebuild is run—without requiring any manual intervention.

Item	Specification
<b>Active Drawer Technology</b>	Active drawers hold the drives to enable easy, hot-swappable management of extreme density without heavy lifting or having to power down.
<b>Easily Deployable System</b>	Includes active drawers, mounting kit, and management software.

## Specifications

Table 3 describes the specifications of the Cisco Video Surveillance Storage Series Platform.

**Table 3.** Cisco Video Surveillance Storage Series Platform Specifications

Specification	CPS-SS-4RU	CPS-SS-4RU-EX
<b>Storage Density</b>	60 drives in 4 RU	60 drives in 4 RU
<b>Expand with Cisco CPS-SS-4RU-EX Expansion Chassis</b>	Yes	—
<b>Number of Active Drawers</b>	3	3
<b>Redundant Power Supplies Included</b>	Yes (2)	Yes (2)
<b>Maximum Number of Active/Active Controllers</b>	2	—
<b>Battery-Backed Cache per Controller</b>	4GB	—
<b>Dedicated RAID6 Hardware</b>	Yes	—
<b>Two RAID Engines per Controller</b>	Yes	—
<b>6 GB SASx4 (24 GB) Ports for Interchassis Connectivity</b>	4	4
<b>8 GB Fibre Channel Ports per Controller</b>	2	—
<b>10/100 GB Ethernet Management Ports per Controller</b>	1	—
<b>SATA 7200 RPM Drives</b>	Yes	
<b>Maximum LUN Size</b>	72 TB	
<b>LUNs per RAID Disk Set</b>	254	
<b>Volumes and LUNs</b>	254	
<b>RAID Levels</b>	0, 1, 1+0, 4, 5, 6	
<b>Mounting Rails Included</b>	Yes	
<b>All Software Included</b>	Yes	
<b>LUN Security via CHAP</b>	Yes	N/A
<b>Stress Test Individual Drives</b>	Yes	
<b>Stress Test System with Drives Before Shipping</b>	Yes	
<b>Anti-Vibration Design</b>	Yes	
<b>Cool Drive Technology</b>	Yes	
<b>Active Drawer Technology</b>	Yes	
<b>Recommended Rack Depth</b>	1200 mm / 47.24 in.	
<b>Dimensions—Width</b>	16.93 in. / 43.00 cm	
<b>Dimensions—Width (with mounting flanges)</b>	19.00 in. / 48.26 cm	
<b>Dimensions—Height</b>	7 in. / 17.78 cm (4 RU)	
<b>Dimensions—Depth</b>	37.40 in. / 95.00 cm	
<b>Dimensions—Depth (with required front bezels)</b>	40.39 in. / 102.60 cm	
<b>Dimensions—Depth (with required front bezels and rear handles)</b>	42.72 in. / 108.50 cm	
<b>Maximum Installed Weight (with mounting rails, all drives and controllers)</b>	225 lb / 102 kg	212 lb / 96 kg
<b>Standard Dual Power Supplies (redundant, load sharing, hot-pluggable, auto-sensing)</b>	2@1600W, 220 to 240V	
<b>Operating Temperature Range</b>	5°C to 35°C (41°F to 95°F)	

Specification	CPS-SS-4RU	CPS-SS-4RU-EX
Operating Humidity Range	20% to 80% non-condensing	
Operating Altitude	0 to 2133 m (0 to 7000 ft)	

## Ordering Information

Table 4 lists the part numbers for the Cisco Video Surveillance Storage Series Platform and options.

**Table 4.** Ordering Information

Item	Specification
<b>CPS-SS-4RU</b>	CPS-SS: 4-RU 60-Bay Triple Drawer w/1x RAID Controller
<b>CPS-SS-4RU-EX</b>	CPS-SS: 4-RU 60-Bay Triple Drawer Extender
<b>CPS-SS-4RU-SP=</b>	CPS-SS: 4-RU 60-Bay Triple Drawer w/1x RAID Controller Spare
<b>CPS-SS-4RU-EX-SP=</b>	CPS-SS: 4-RU 60-Bay Triple Drawer Extender Spare
<b>CPS-SS-4RU-RC</b>	CPS-SS: Redundant RAID Controller: 4-RU Storage Array
<b>CPS-SS-20TB-BNDL</b>	CPS-SS: 10x 2000 GB Hard-Disk Drive Bundle
<b>CPS-SS-HDD-2000=</b>	CPS-SS: 2000 GB Hard-Disk Drive with Carrier

## Services and Support

Cisco and our certified partners can help you accelerate success and improve the return on your investment in a Cisco Physical Security solution. The Cisco lifecycle approach to services defines the requisite activities at each phase of the solution lifecycle:

- Reduce deployment costs by identifying the features that will best meet your business requirements
- Accelerate migration by assessing the readiness of your network to support the system and by developing a sound design
- Support smooth implementation through effective planning and expert installation, configuration, and integration
- Increase operational efficiency and extend the value of your investment with award-winning technical support

For more information about Cisco services, visit <http://www.cisco.com/go/services>.

## For More Information

For more information about the Cisco Video Surveillance Storage Series, visit <http://www.cisco.com/go/physec> or contact your local account representative.



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