

# Dell™ SC4020

## Storage Controller

### Getting Started With Your System



## Notes, Cautions, and Warnings



**NOTE:** A NOTE indicates important information that helps you make better use of your Storage Center.



**CAUTION:** A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.



**WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

## Contacting Dell Technical Support Services

For technical support, go to [support.dell.com/compellent/](https://support.dell.com/compellent/).

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# Installation and Configuration



**WARNING:** Before performing the following procedure, review the safety instructions that came with all Storage Center components.



**WARNING:** Battery pack **MUST** be removed before the controller is removed from the enclosure.



**WARNING:** Installing an incompatible battery on the server board may increase the risk of fire or explosion. Observe the following precautions:

- The battery should only be replaced with a battery that is the same or equivalent as the factory installed battery.
- Do not attempt to open or service the battery. Do not dispose of the battery in a fire or with household waste. Contact the local waste disposal agency for the location of the nearest battery deposit site.



**CAUTION:** Class I laser radiation when open, avoid exposure to the beam.

**DANGER:** Laser radiation, avoid direct exposure to beam.

## Laser Safety statement

The unit is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class I (1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1:2007.

Class I laser products are not considered to be hazardous. The laser system and unit are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance or prescribed service condition.

## Unpacking the System



**NOTE:** Unpacking, installing, and deploying your Storage Center may be done only by a certified service technician.

Before you begin, make sure the site where you intend to set up and use the Storage Center has the following:

- Standard power from an independent source or a rack power distribution unit with a UPS.
- Storage Center with the latest firmware, BIOS, and drivers. Contact your supplier for the correct software versions.

## Installation Overview

The installation process follows the general steps below. For detailed information, refer to vendor documentation supplied with the equipment.



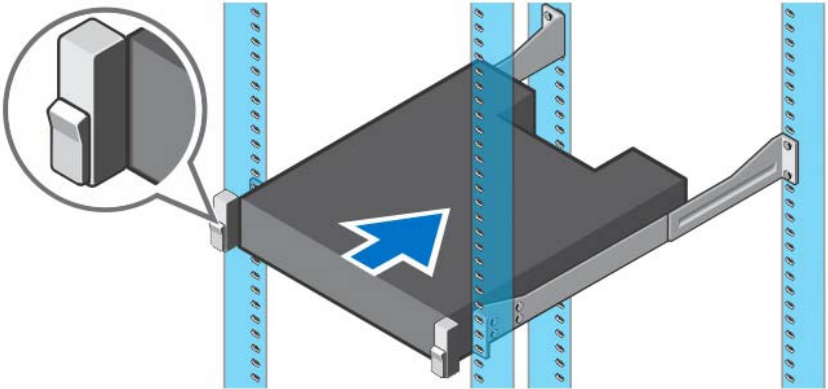
**NOTE:** The system is intended for restricted access location in accordance with the National Electric Code, National Standards Institute (ANSI/National Fire Protection Association (NFPA) 70).



**CAUTION:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T<sub>ma</sub>) specified by the manufacturer. For more information, see "Technical Specifications" on page 7.

- 1 Assemble the rails following the safety instructions and the rack installation instructions provided with your system.
- 2 Install network switches, as applicable.
- 3 Install the SC4020 chassis into the rack.
  - Always load the rack from the bottom up for weight stability.

- You can allow room for expansion if you have fewer than the maximum number of enclosures.



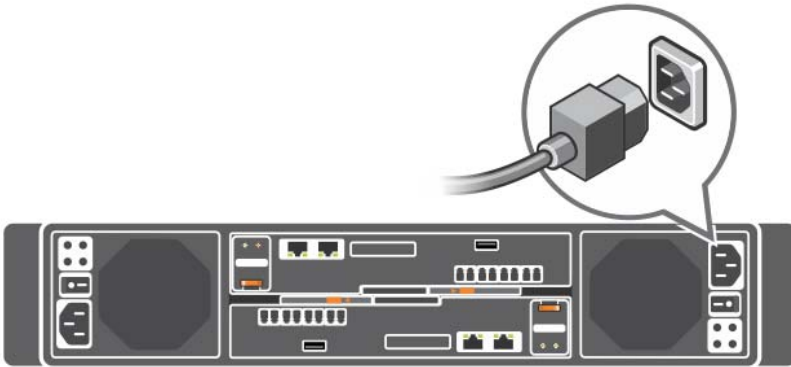
**4** Unwrap and insert each drive into the enclosure one at a time.

- Protect the drive from static discharge.
- Handle drives by the edges of the frame.



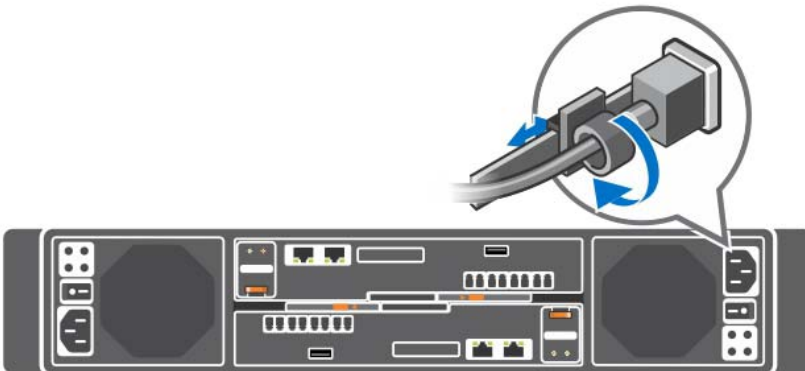
**CAUTION:** If the enclosure system operates for more than a few minutes with missing drives, the enclosure can overheat, causing power failure and data loss. Such use may invalidate the warranty.

## Connecting the Power Cables



- 1 Ensure that the power switch is in the OFF position before connecting the power cables.
- 2 Connect the enclosure power cables to the rack power.

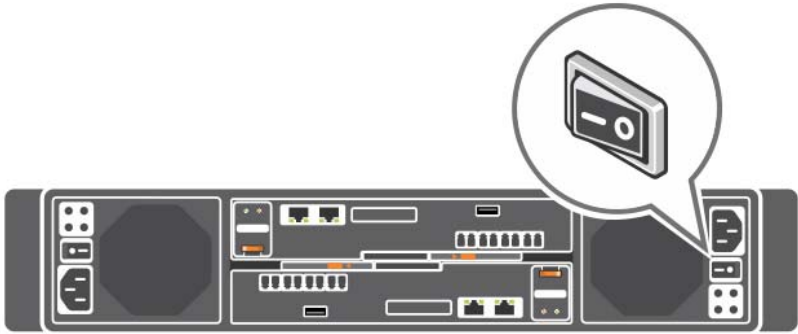
## Securing the Power Cables




- 1 Secure the cables firmly to the bracket using the strap provided.
- 2 Plug the other end of the power cables into a grounded electrical outlet or a separate power source such as an uninterruptible power supply (UPS) or a power distribution unit (PDU).

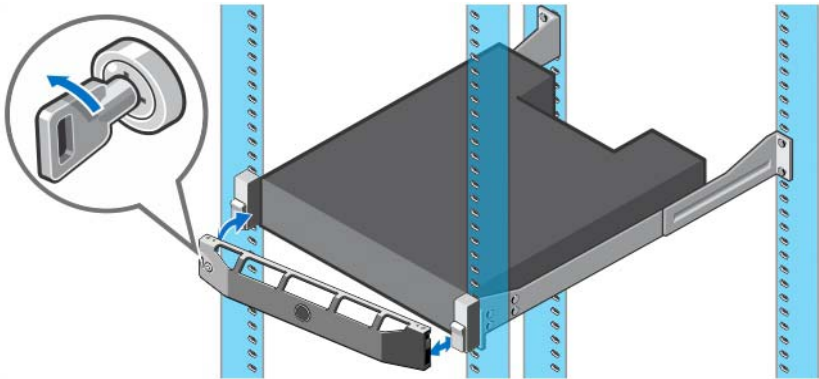


## Location of Power Button



 **NOTE:** Do not power up the enclosure until all Storage Center components are racked and cabled.

## Installing the Bezel



- Install the bezel.

## Other Information You May Need



**WARNING:** See the safety and regulatory information that shipped with your Storage Center components. Warranty information may be included within this document or as a separate document.

- The rack documentation included with your rack solution describes how to install your system into a rack.
- The *Storage Center Deployment Guide* provides information about cabling all Storage Center hardware components and configuring a new Storage Center using the System Manager Setup Wizard.
- The *Storage Center System Manager Administrator's Guide* describes how to manage a Storage Center.

# NOM Information (Mexico Only)

The following information is provided on the device described in this document in compliance with the requirements of the official Mexican standards (NOM):

Importer:	Dell Inc. de México, S.A. de C.V Paseo de la Reforma 2620-11 ° Piso Col. Lomas Atlas 11950 México, D.F.
Model number:	E10J
Supply voltage:	100–240 V CA
Frequency:	50/60 Hz
Current consumption:	7.6–3.0 A

## Technical Specifications

Drives	
SAS hard drives	Up to 24 2.5-inch SAS hot-swappable hard drives (6.0 Gbps)
Storage Controller Modules	
Storage Controller Modules	Two hot-swappable modules with processors and four Fibre Channel 8 Gbps ports
Connectivity	
Configurations	SC4020 supports up to 120 drives in one redundant-path enclosure chain
Redundant Array of Independent Disks (RAID)	
Controller	Two hot-swappable Storage Controller Modules
Management	RAID management using Storage Center System Manager version 6.5.1 or later

Back-Panel Connectors (per Storage Controller Module)	
Fibre Channel connectors	Connection to the Fiber Channel Network
iSCSI connectors	Connection to iSCSI devices <b>NOTE:</b> Used for replication to another Storage Center only
SAS connectors	6 Gbps SAS A and B connectors for expansion to additional enclosures <b>NOTE:</b> SAS connectors are SFF-8086/SFF-8088 compliant
USB Connector	One USB 3.0 connector <b>NOTE:</b> For engineering use only
LED Indicators	
Front panel	<ul style="list-style-type: none"> <li>• One two color LED indicator for system status</li> <li>• One single color LED indicator for power status</li> <li>• Two digit, seven-segment display indicating enclosure ID number</li> <li>• ID button with a single color LED indicating startup and pressed states</li> </ul>
Hard-drive carrier	<ul style="list-style-type: none"> <li>• One single-color activity LED</li> <li>• One single-color LED status indicator per drive</li> </ul>
Storage Controller Module	<ul style="list-style-type: none"> <li>• Two single-color LEDs per Ethernet Port indicating activity and link speed</li> <li>• Four dual-color LEDs per SAS Connector indicating port activity and status</li> <li>• One single-color LED indicating status</li> <li>• One single-color LED indicating fault</li> <li>• One single-color LED for identification</li> <li>• Eight single-color LED for diagnostics</li> </ul>

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#### LED Indicators *(continued)*

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Power supply/cooling fan	Four LED status indicators for Power Supply Status, AC Fail status, DC Fail status, and Fan Fail status
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#### Power Supplies

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##### AC power supply (per power supply)

Wattage	580 W (maximum wattage: 584 W)
Voltage	100–240 VAC (7.6 A–3.0 A)
Heat dissipation	65 W at 230 V AC and 99 W at 115 V AC
Maximum inrush current	Under typical line conditions and over the entire system ambient operating range, the inrush current may reach 45 A per power supply for 40 ms or less

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#### Physical

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Height	8.79 cm (3.46 inches)
Width	48.2 cm (18.98 inches)
Depth	54.68 cm (21.53 inches)
Weight (maximum configuration)	24 kg (53 lb)
Weight (empty)	7 kg (15.4 lb)

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#### Environmental

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**NOTE:** For additional information about environmental measurements for specific system configurations, see [dell.com/environmental\\_datasheets](https://www.dell.com/environmental_datasheets).

##### Temperature

Operating	10° to 35°C (50° to 95°F) with no direct sunlight on the equipment  Maximum temperature gradation of 20°C per hour
Storage	–40 to 65°C (–40 to 149°F) at a maximum altitude of 12,000 m (39,370 ft)

##### Relative humidity

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**Environmental** *(continued)*

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Operating	10% to 80% (noncondensing) with 29°C (84.2°F) maximum dew point
Storage	5% to 95% (noncondensing) with 33°C (91°F) maximum dew point
Maximum vibration	
Operating	0.21 G at 5–500 Hz for 15 min
Storage	1.04 G at 2–200 Hz for 15 min
Maximum shock	
Operating	Half-sine shock 5 G +/- 5% with a pulse duration of 10 ms +/- 10% in operational orientations only
Storage	Half-sine shock 30 G +/- 5% with a pulse duration of 10 ms +/- 10% (all sides)
Altitude	
Operating	0 to 3,048 m (0 to 10,000 ft) <b>NOTE:</b> For altitudes above 915 m (3,000 ft), the maximum operating temperature is derated 1°C per 300m (1°F per 547 ft)
Storage	–300 to 12,192 m (–1000 to 40,000 ft)
Airborne Contaminant Level	
Class	G1 or lower as defined by ISA-S71.04-1985



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