Site Preparation Guide for Sun Storage 6580 and 6780 Arrays

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Contents

Preface

The *Site Preparation Guide for Sun Storage 6580 and 6780 Arrays* describes the requirements for installing the Sun Storage 6580 and 6780 Arrays. Follow the content outlined in this document when planning your installation.

Before You Begin, Read This Book

Before you begin to install the Sun Storage 6580 and 6780 Arrays, you must have read and understand the regulatory and safety requirements described in this book:

- *Sun Storage Regulatory and Safety Compliance Manual*

How This Book Is Organized

Chapter 1 describes the requirements for preparing the customer site for installation.

Chapter 2 describes the physical, environmental, and electrical requirements for the *cabinet* in which the storage arrays are installed.

Chapter 3 describes the physical, environmental, and electrical requirements for the storage arrays.

Chapter 4 provides a site preparation checklist to ensure the customer is ready to receive the equipment and to start the installation.

Appendix A provides worksheets to help gather the information needed to prepare and complete the installation.

Terminology

The following terminology is used throughout this guide and means the same unless otherwise noted:

- Sun Rack II Cabinet, called either a cabinet or a rack
- Common storage modules are also called disk array trays, expansion trays, array trays, or disk trays
- Sun Storage 6580 and 6780 Controller Module is also called a controller tray

Alert Messages and Notes

Note – A note provides additional information that is of special interest or might point out exceptions to rules or procedures.

Caution – A caution informs you of conditions that might result in damage to hardware, corruption of data, corruption of application software, or long-term health problems in people. A caution always precedes the information to which it pertains.

Related Documentation

Application	Title	Part Number
Regulatory and safety information	*Sun Storage Regulatory and Safety Compliance Manual*	820-5506
Late-breaking information	*Release Notes for Sun Storage 6580 and 6780 Arrays*	820-5776
Hardware installation	*Hardware Installation Guide for Sun Storage 6580 and 6780 Arrays*	820-5773
Rack installation	*Sun Rack II User Guide*	820-4759
Software installation instructions	*Sun StorageTek Common Array Manager Software Installation Guide, v6.2.0*	820-5774

Additional Information

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Please include the title and part number of your document with your feedback:

Site Preparation Guide for Sun Storage 6580 and 6780 Arrays, part number: 820-5775-10.

Planning for the Installation

The Sun Storage 6580 and 6780 Arrays are compact, rack-mounted devices that provide high-capacity disk storage for Fibre Channel environments. The storage array system consists of:

- Storage rack (either one or two)
- Controller tray (dual RAID controllers)
- Disk array trays—called expansion trays (from 1 to 16)

This chapter describes the requirements for preparing the customer site for installation of these Storage Arrays, and contains the following sections:

- "Customer Obligations" on page 1
- "Safety Information" on page 2
- "Site Wiring and Power Requirements" on page 4

Customer Obligations

The customer is:

- Obliged to inform Sun Microsystems, Inc. of any and all ordinances and regulations that might affect the installation.

  Document and inform Sun Microsystems, Inc. of any deviations.

- Responsible for meeting all government codes and regulations concerning facilities.

- Responsible for complying with all local, national, and international codes. These subjects include fire and safety, building, and electrical codes.

Safety Information

Before you begin, make sure that you read the safety precautions in the *Sun Storage Regulatory and Safety Compliance Manual.*

Install the Sun Storage 6580 and 6780 Array in accordance with the local safety codes and regulations at the facility site.

The following sections contain additional safety information for the local facility:

■ "Handling Precautions" on page 2

■ "Secure Installation Requirements" on page 3

■ "Placement of a Sun Product" on page 3

Note – Do not make mechanical or electrical modifications to the equipment. Sun Microsystems, Inc. is not responsible for regulatory compliance of a modified Sun product.

Handling Precautions

Caution – A fully populated cabinet can weigh in excess of 737 kg (1625 lb). When moving a cabinet, make that all surfaces the cabinet will move over can withstand this load.

The cabinet is equipped with wheels so you can move it. Use enough personnel when moving the cabinet, especially on sloped loading docks and ramps, to gain access to a raised computer room floor. Move the cabinet slowly and deliberately, and make sure that the floor is free from foreign objects and cables that the cabinet could roll over.

Caution – To avoid injury, wear protective footwear when moving a cabinet.

Secure Installation Requirements

Install the cabinet on a level surface. At each corner, on the base of the cabinet, are adjustable non-skid pads. Extend these pads when the cabinet is installed to prevent the cabinet from rolling. Do not use these pads to level the cabinet.

Seismic Installations

To minimize personnel injury in the event of a seismic occurrence, you must securely fasten the cabinet to a rigid structure extending from the floor to the ceiling, or from the walls, of the room in which the cabinet is located.

The requirements for seismic compatibility vary dramatically throughout the world. As such, Sun does not offer a standard "seismic" feature for the 6580 and 6780 Storage Arrays. It is recommended that any customer who has seismic concerns work with local experts who are familiar with the local code and requirements.

Sun Professional Services can also be engaged to help coordinate this activity.

Caution – A licensed seismic engineer must be consulted to verify seismic zone exposures and adequate site preparation.

Placement of a Sun Product

Allow enough room surrounding the cabinet for access to the cabinet and arrays for maintenance.

Caution – Do not block or cover the openings of your Sun product. Never place a Sun product near a radiator or heat register. Failure to follow these guidelines can cause overheating and affect the reliability of your Sun product.

Air cools the system cabinets from front to back. Air enters at the front, circulates, and is expelled at the back of the cabinet. The front and back door clearances provide sufficient space for cooling.

See Chapter 2 for specific clearance specifications.

Site Wiring and Power Requirements

The AC power distribution units (PDUs) in the cabinet use common industrial wiring. Consider the following when preparing the cabinet installation site:

- **AC power source** – The AC power source must provide the correct voltage, current, and frequency specified on the module model and serial number label.

- **Earth ground** – Site wiring must include an earth ground connection to the AC power source.

- **Circuit overloading** – Power circuits and associated circuit breakers must provide sufficient power and overload protection. To prevent possible damage to the AC power distribution boxes and other components in the cabinet, use an external, independent power source that is isolated from large switching loads (such as air conditioning motors, elevator motors, and factory loads).

- **Module power distribution** – All units attached to the four power strips inside that cabinet must be auto-ranging between 180 and 264 VAC, 47-63 Hz.

- **Power interruptions** – The cabinet and modules will withstand the following applied voltage interruptions (with or without an integrated uninterruptible power supply [UPS]):

  - **Input transient** – 0V for 1 cycle with no interruption

  - **Duration** – 70 percent of nominal for 0.5 seconds and 0V for 5 seconds, recoverable with user intervention

- **Power failures** – If a total power failure occurs, when power is restored the modules within the cabinet automatically perform a power-up recovery.

Cabinet Specifications

As stated in Chapter 1, the Sun Storage 6580 and 6780 Arrays are **rack-mounted** devices for disk storage. Depending on the selected configuration, a cabinet holds one controller module tray and up to 12 drive or array trays.

This chapter describes the physical, environmental, and electrical requirements for the Sun Rack II Cabinet and contains the following sections:

FIGURE 2-1   Sun Rack II Cabinet
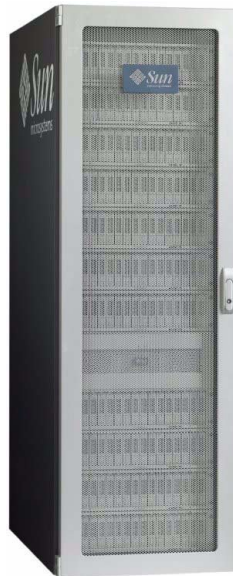
Customer's Floor

The floor at the installation site must provide:

- Proper stability to support the weight of the cabinet and installed trays
- Sufficient space for installation and servicing of the cabinet and components
- Adequate ventilation to provide a free flow of air to the cabinet and components

To ensure safe and proper operation of the storage arrays and ease of maintenance, make sure that all of these requirements are met before using the cabinet.

Sun Rack II Cabinet Overview

The Sun Rack II Cabinet is 120 cm (47 in.) deep, 60 cm (23.6 in.) wide, and provides 42U[1] (186.7 cm—73.5 in.) of equipment space. It has a weight of 190 kg (420 lb) with a capacity for holding up to 907 kg (2000 lb) of equipment.

Note – Both the Sun 6580/6780 controller module and the disk array trays conform to the 48.3-cm (19-in.) rack standard. For more information see the Sun Rack II User's Guide.

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1. U = Rack Units. A rack unit or U (less commonly, RU) is a unit of measure used to describe the height of equipment intended for mounting in a 19-inch rack. One rack unit, as defined by EIA 310-D is 4.45cm(1.75 in) high.

Cabinet Dimensions and Weight

TABLE 2-1 through TABLE 2-4 provides the physical dimensions and weights of the Sun Rack II cabinet.

TABLE 2-1 Sun Rack Physical Dimensions
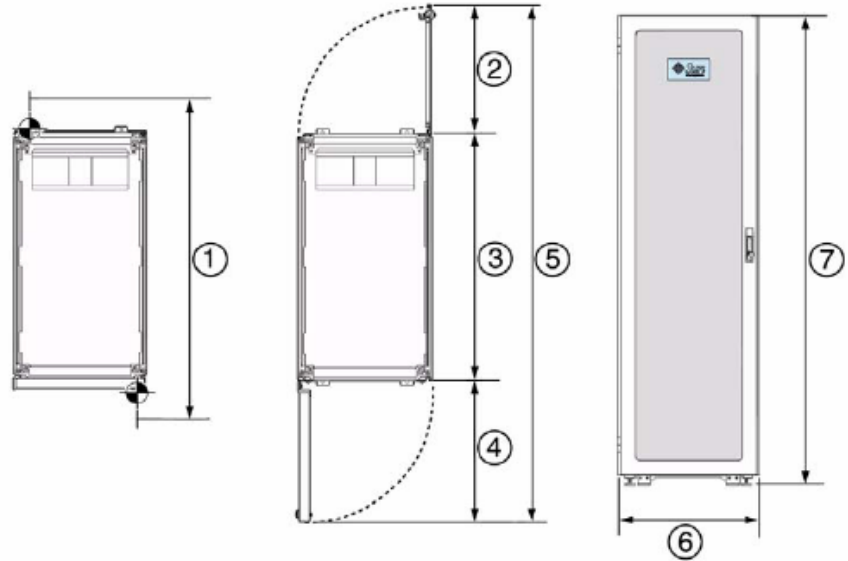
1. Depth	120 cm (47.24 in.)
2. Rear door	91.4 cm (36 in.)
3. Depth with doors removed	111.2 cm (43.78 in.)
4. Front door	91.4 cm (36 in.)
5. Depth with doors opened	294 cm (115.8 in.)
6. Width	60 cm (23.6 in.)
7. Height (total) Height for equipment	199.8 cm (78.66 in.) 186.7 cm (73.5 in.)
Weight (empty) Weight (fully loaded)	190 kg (420 lb) 907 kg (2000 lb)
Rack units (RU)	42U or 186.7 cm (73.5 in.)
Depth between front and rear RETMA rails	68.5 cm (27 in.) Adjustable from: 61.5 to 82.5 cm (24.2 to 32.5 in.)

Note - Adjusting the RETMA rails can make the rack less stable.

TABLE 2-2   Sun Rack Nominal Weight and Space Requirements

Dimension	Measurement
Maximum allowable weight of installed rack equipment	907 kg (2000 lb) Average of 21.7 kg (48 lb) per rack unit
Maximum allowable weight of installed power distribution units	14.5 kg (32 lb)
Maintenance access requirement for rear	91.4 cm (36 in.)
Maintenance access requirement from top	91.4 cm (36 in.)
Air flow requirement for left and right sides	None (front-to-back cooling)

Access Route Guidelines

Moving the rack to the installation site:

- If the existing loading dock meets height and ramp requirements for a standard freight carrier truck, you can use a pallet jack to unload the rack.

- If not, you must provide a standard forklift or other means to unload the rack, or request the rack be shipped in a truck with a lift gate.

Note: Leave the rack in its shipping packaging until it reaches its final destination. The entire access route to the installation site should be free of obstructions and raised patterns that can cause vibration.

TABLE 2-3   Sun Rack Cabinet Shipping Dimensions

Package Dimension	Sun Rack II 1242 Standard Packaging	Sun Rack II 1242E Enterprise Packaging
Shipping height	214.5 cm (84.5 in.)	215.9 cm (85.0 in.)
Shipping width	77.0 cm (30.31 in.)	121.9 cm (48.0 in.)
Shipping depth	112.5 cm (44.13 in.)	157.5 cm (62.0 in.)
Shipping weight	Varies by configuration	Varies by configuration
Shipping weight (Packaging)	31 kg (68.34 lb)	120.2 kg (265 lb)
Minimum door height	218.4 cm (86 in.)	200 cm (78.7 in.)
Minimum door width	122 cm (48 in.)	60 cm (23.6 in.)
Minimum elevator depth	157.5 cm (62 in.)	120 cm (47.3 in.)
Maximum incline	6˚	6˚

Expansion Rack

Depending on the configuration, an additional rack can be placed next to the master rack to obtain a fully configured system. This configuration would consist of one rack with the controller tray and 12 drive trays, then 4 additional drive trays in the second or expansion rack.

Note – Longer customer supplied Fibre Channel cables are needed with this configuration for connecting the expansion trays to the controller in the master rack.

Configuration Weight

TABLE 2-4 lists the weight of an empty cabinet and the maximum weight of each component.

Use these weights to estimate the total configuration weight of your system based on the number of modules installed. Record the total weight in the table and use it as a reference when checking floor loading or elevator weight restrictions.

TABLE 2-4   Sun Rack Cabinet and Component Weights

Component	Qty		Weight (each)			Total Weight	
			kg	lb		kg	lb
Cabinet (empty)	1	x	150.5 kg	(332 lb)	=	150.5	332
Half Height PDUs	4	x	3.6 kg	(8 lb)	=	14.4	32
Controller tray	1	x	36.8 kg	(81.1 lb)	=	36.8	81.1
Expansion tray (fully populated) (from 1 to 12 trays)		x	38 kg	(85 lb)	=		
				Total Weight	=		

Power Requirements

The AC power sources must provide the correct voltage, current, frequency, and connectors specified on the module type and serial number label.

The following guidelines are a best practice when determining power requirements:

- Use dedicated AC breaker panels for all power circuits that supply power to the PDU.
- Electrical work and installations must comply with applicable local, state, or national electrical codes.
- Contact your facilities manager or a qualified electrician to determine what type of power is supplied to your building.

Power Distribution

The design of this rack includes four Sun Storage, half-height, 5 kVA[2] power distribution units (PDUs) that creates a dual grid power system. This power system consists of four power strips, using separate 30 Amp circuits. Each with 12 outlets, protected by two circuit breakers for a total of 48 outlets, or 24 outlets per grid.

Each circuit requires:

TABLE 2-5   Power Requirements

Requirement	Value
Input Power	180 to 264 VAC
Frequency	47 to 63 Hz
Power connectors	NEMA L6-3 30R domestic or EIC 309 32A for International

2. Kilo volt-ampere. To convert kVA to kW (use the equation kVA = kW/PF) where PF = power factor. For example, if the power factor is 0.6, the equation would be 120 kVA·0.6 = 72 Kilowatts

Circuit Breaker Capacity and Characteristics

Each Sun Rack II requires its own customer-supplied circuit breaker and AC receptacle for each power input cord. Provide a stable power source, such as an uninterruptible power system (UPS), to reduce the possibility of component failures.

If the computer equipment is subjected to repeated power interruptions and fluctuations, it is susceptible to a higher component failure rate than it would be with a stable power source.

Grounding Requirements

Always connect the PDU input power cords into grounded power outlets. Refer to the *Sun Rack II User's Guide* for information about installing an earth grounding cable to the rack.

Caution – To reduce the risk of electric shock or damage to installed equipment, never remove or disable the grounding plug on any power cord or receptacle.

Environmental Requirements

This section describes the environmental conditions for the Sun Rack cabinet and the Sun Storage 6580/6780 Array.

Note – *Typical Sun equipment environmental requirements that mount in a Sun Rack II.* Although most computer equipment is designed to operate in environmental conditions of 20% to 80% humidity, industry best practices recommends computer rooms maintain a relative humidity of 40% to 50% for best performance.

Sun Rack II Cabinet

TABLE 2-6 lists operating and non-operating temperature, relative humidity, and altitude ranges for the Sun Rack II cabinet.

TABLE 2-6   Cabinet Temperature, Humidity, and Altitude

Specification	Operating	Non-operating
Temperature	10°C to 40°C (32°F to 104°F)	–40°C to 65°C (–40°F to 149°F)
Relative humidity (RH)	20% to 80% non-condensing	5% to 95% non-condensing
Altitude	0 to 3 km (0 to 10,000 ft)	0 to 12 km (0 to 40,000 ft)

Note:
If you plan to operate a system at an altitude between 1000 m to 3048 m (3280 ft to 10,000 ft) above sea level, lower the environmental temperature by 1.7°C for (3.3°F) every 1000 m (3,280 ft) above sea level.

Airflow and Heat Dissipation

Cabinet airflow is from the front to the back.

Allow at least 76 cm (30 in.) in front of the cabinet, and at least 61 cm (24 in.) behind the cabinet, for service clearance, proper ventilation, and heat dissipation.

Sun Storage 6580 and 6780 Array Specifications

As stated in Chapter 1, the Sun Storage 6580 and 6780 Arrays are a rack-mounted system that consists of the controller module and disk array trays—also called expansion trays—that actually store the data.

FIGURE 3-1   System Components Example

Drive Tray

Controller Module
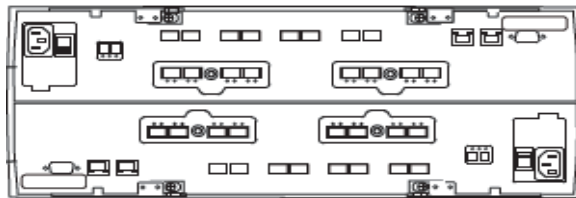
This chapter describes the physical, environmental, and electrical requirements for the Sun Storage 6580 and 6780 Array and contains the following sections:

Controller Overview

The controller tray contains two RAID controllers, which operate independently and provide failover capability. The controller tray is a 4U module that measures 17.8 cm (7 in.) high, 44.5 cm (17.5 in.) wide, and 61 cm (24 in.) deep.

FIGURE 3-2   Controller Module
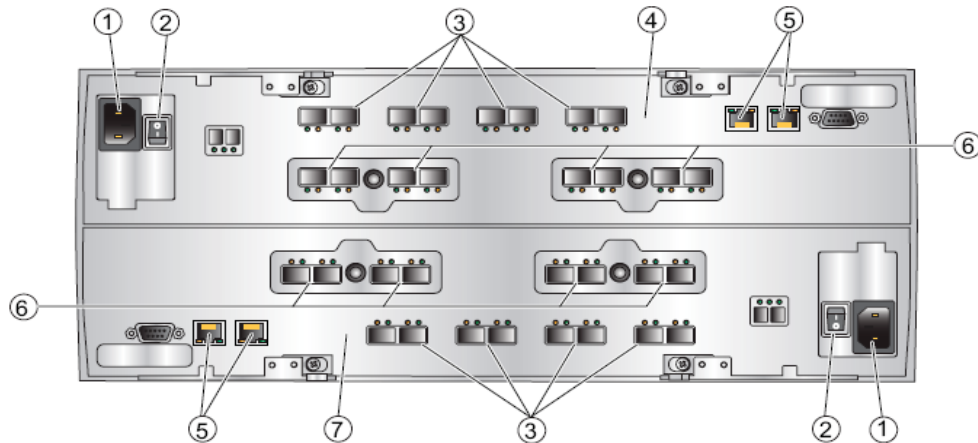
1. AC input
2. AC power switch
3. Dual-ported drive channels (8 each)
4. Controller A (Inverted)
5. Ethernet ports (2 each)
6. Host channels (4 each)
7. Controller B

The controller provides both disk caching and RAID functionality along with other data services. Each controller includes:

- One set of four 4 Gb Fibre Channel ports for host connectivity.
- Another set of eight Fibre Channel ports for drive array connectivity.
- Two Ethernet ports that connects to the customer's management network.

Disk Array Overview

The disk arrays—also called common storage modules—are 3U rack-mountable trays that measure 12.95 cm (5.1 in.) high, 44.7 cm (17.6 in.) wide, and 57.2 cm (22.5 in.) deep. Each tray is capable of holding up to 16 disk drive units.

FIGURE 3-3   Disk Array Trays
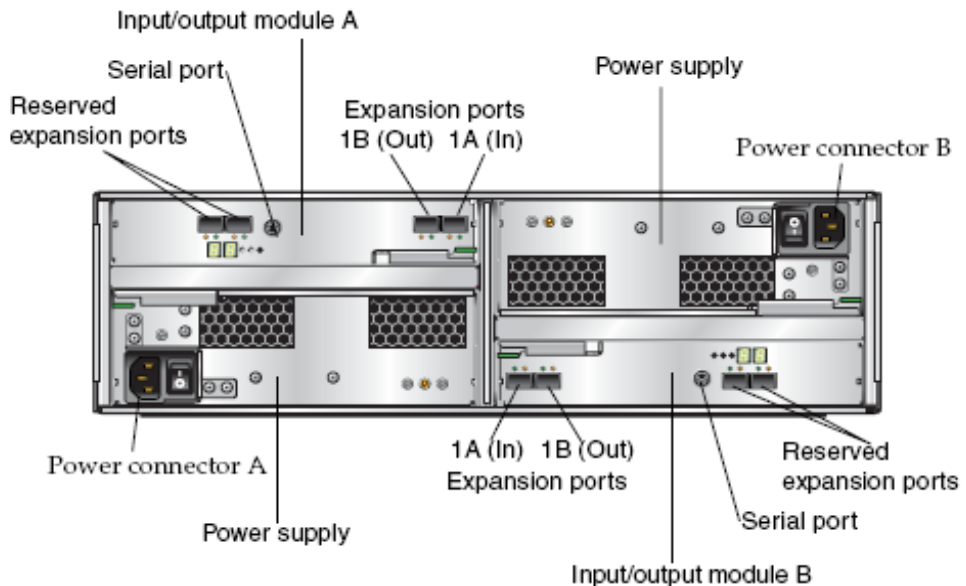
When fully populated, these drive trays weigh 85 pounds each.

Each drive tray can have up to 16 Fibre Channel or Serial Advanced Technology Attachment (ATA)—or SATA—8.9 cm (3.5 in.) hard disk drives.

A maximum 6580/6780 configuration can scale to up to 256 hard disk drives per controller pair.

Weight and Dimensions

TABLE 3-1 lists the weight and dimensions of the controller and expansion trays.

Note – The Sun 6580/6780 controller module conforms to the 48.3-cm (19-in.) rack standard.

TABLE 3-1   Dimensions and Weight

Tray-type	Height	Width	Depth	Weight (Fully Populated)
Controller	17.8 cm	44.5 cm	61 cm	36.8 kg
	(7 in.)	(17.5 in.)	(24 in.)	(81.1 lb)
Drive Tray	12.95 cm	44.4 cm	57.2 cm	38 kg*
	(5.1 in.)	(17.6 in.)	(22.5 in.)	(85 lb)*

Note: *The weight of an expansion tray depends on the number and type of drives installed.

TABLE 3-2 lists the various controller module weights.

TABLE 3-2   Weights of the Sun 6580/6780 Controller Module

Unit	Weight		
	Maximum[1]	Empty[2]	Shipping[3]
Controller module	36.8 kg (81.1 lb)	13.15 kg (29.0 lb)	49.44 kg (109.0 lb)

Notes:

1. Maximum weight indicates a controller module with *all* of its components installed.
2. Empty weight indicates a controller module with all of its components removed.
3. Shipping weight indicates the maximum weight of a controller and all shipping material.

Power Requirements

This section provides information regarding site power and wiring, module AC power requirements, plus power cords and receptacles.

Site Wiring and Power

The tray uses wide-ranging redundant power supplies that automatically accommodate voltages to the AC power source. The power supplies operate within the range of 90 VAC to 264 VAC, at a minimum frequency of 50 Hz and a maximum frequency of 60 Hz. The power supplies meet standard voltage requirements for both domestic (inside USA) and international (outside USA) operation. They use standard industrial wiring with line-to-neutral or line-to-line power connections.

Power Input

The AC power sources must provide the correct voltage, current, and frequency specified on the tray model and serial number label. The tray can run without interruption within the limits shown in TABLE 3-3.

TABLE 3-3 Tray AC Power Requirements

Condition	Specification
AC power (Controller tray)	2.65A maximum operating @ 240 VAC (180 to 264 VAC, 50/60Hz)
	5.53A maximum operating @ 115VAC (90 to 136 VAC 50/60HZ)
AC power (Expansion tray)	1.97A maximum operating @ 240VAC (180 to 264 VAC, 50/60Hz)
	4.11A maximum operating @ 115VAC (90 to 136 VAC 50/60HZ)

The Sun Rack cabinet power distribution system only works at 180 to 264VAC. Internal components will never be operated below 180V (200V nominal) when in this cabinet.

Power Cords and Receptacles

The power cords connect the power supplies in a tray to an independent external power source, such as those provided in the supported Sun cabinet, wall receptacle, or uninterruptible power supply (UPS).

Power cords must be ordered separately to obtain the appropriate cable for use in the destination country.

Environmental Requirements

Although the 6580/6780 controller tray will function over a full list of environmental ranges as specified below, optimal reliability is achieved if the environment is maintained between the recommended ranges.

TABLE 3-4 through TABLE 3-6 lists the acceptable environmental conditions in which the 6580/6780 controller module is designed to operate.

TABLE 3-4   Controller Tray Temperature

Temperature	Optimum	Recommended Range	Full Operating Range	Maximum Rate of Change per Hour
Operating	22°C (72°F)	20° – 25°C (68° – 77°F)	10°C to 40°C (32°F to 104°F)	10°C (18°F)
Storage	—	—	–10°C to 65°C (14°F to 149°F)	15°C (27°F)
Transit	—	—	–40°C to 65°C (–40°F to 149°F)	20°C (36°F)

Humidity: Although this equipment is designed to operate in environmental conditions of 20% to 80% humidity, industry best practices recommends computer rooms maintain a relative humidity of 40% to 50% for best performance.

TABLE 3-5   Controller Tray Relative Humidity

Relative Humidity (non-condensing)	Optimum	Recommended Range	Full Operating Range
Operating	45%	40% – 50%	20% to 80%
Storage	—	—	10% to 93%
Transit	—	—	5% to 95%
Maximum dew point	26°C (79°F)		
Maximum gradient	10% per hour		
Wet bulb (operating)	25.6°C (78°F) maximum, non-condensing		

Altitude: If you plan to operate a system at an altitude between 1000 m to 3048 m (3280 ft to 10,000 ft) above sea level, lower the environmental temperature by 1.7°C for (3.3°F) every 1000 m (3280 ft) above sea level.

TABLE 3-6   Controller Tray Altitude

Description	
Operating	30.5 m (100 ft) below sea level to 3048 m (10,000 ft) above sea level
Storage	30.5 m (100 ft) below sea level to 3048 m (10,000 ft) above sea level
Transit	30.5 m (100 ft) below sea level to 12,000 m (40,000 ft) above sea level

Airflow and Heat Dissipation

Cabinet airflow is from the front to the back.

Allow at least 76 cm (30 in.) in front of the cabinet, and at least 61 cm (24 in.) behind the cabinet, for service clearance, proper ventilation, and heat dissipation.

CHAPTER **4**

Site Preparation

Use the following checklist to ensure that the customer is ready to receive the equipment and to ensure that you are ready to start the installation.

See Chapter 2, "Cabinet Specifications" and Chapter 3, "Sun Storage 6580 and 6780 Array Specifications" for supporting information such as measurements, weights, and service clearances.

TABLE 4-1 Site Preparation Checklist

Question	Answer	Comments
Delivery and Handling		
Does the customer have a delivery dock? If not, where will the equipment be delivered?	Yes ❑ No ❑	**Important:** Check the delivery route that the equipment must travel from the loading dock to the installation location.
If a delivery dock is available, what are the hours of operation?	_____	
Are there street or alley limitations that may hinder the delivery? For example: Limited access, one-way traffic, truck size?	Yes ❑ No ❑	Make sure there are no obstructions and that the Sun cabinet will fit through doors, hallways, and into elevators.
Is the dock close to the computer room where the equipment will be installed? If no, how far does the equipment need to be moved?	Yes ❑ No ❑ Distance: _____	
Is an elevator required to move the equipment to the appropriate floor? What type of elevator is being used? Such as: Class A or C, freight, low-rise, passenger, service, hydraulic, pneumatic.	Yes ❑ No ❑ Description:	

TABLE 4-1 Site Preparation Checklist *(Continued)*

Question	Answer	Comments
What is the capacity of the elevator? What are the dimensions of the elevator?		
Are there any ramps or slopes that you need to move equipment over to get to the installation site? What is the angle?	Yes ❏ No ❏ Degrees: _____	
Will there be people available to handle the number of, size of, and weight of the pallets?	Yes ❏ No ❏	
Will there be equipment available to handle the pallets (forklifts or pallet jacks)?	Yes ❏ No ❏	
Is there a *staging area* where the pallets can be placed with access to the installation site?	Yes ❏ No ❏	
Are there doorway or hallway height and width limitations that may prevent moving the equipment on the shipping pallets?	Yes ❏ No ❏	
Will the equipment need to be unpacked before moving it to the installation site?	Yes ❏ No ❏	
Physical Placement		
Does the site have raised flooring? Has the floor been laser-leveled? Does the site have a solid floor? Does the floor have carpeting?	Yes ❏ No ❏ Yes ❏ No ❏ Yes ❏ No ❏ Yes ❏ No ❏	
Will cables be routed from the floor? or from the ceiling?	Floor ❏ Ceiling ❏	
Does the customer have floor tile cut-outs available for AC power, interface cables, and ventilation?	Yes ❏ No ❏	
Does the intended site have enough room to install and service the equipment?	Yes ❏ No ❏	
Can the customer's floor support the weight of the cabinet with controllers and arrays?	Yes ❏ No ❏	
Is the ceiling above the library clear of obstructions such as smoke detectors, sprinklers, and vents.	Yes ❏ No ❏	
Does the equipment need to move over carpet? If so, is there protection from electrostatic discharge (ESD)?	Yes ❏ No ❏ Yes ❏ No ❏	

TABLE 4-1 Site Preparation Checklist *(Continued)*

Question	Answer	Comments
Environmental		

Does the site meet the environmental requirements
Current measurements:
    Temperature: _____
    Relative Humidity: _____
	Yes ❏ No ❏	Temperature: 16°–32°C (60°–90°F)
		Humidity: 20–80%, non-condensing

Does the site contain features and materials that guard against electrostatic discharge?	Yes ❏ No ❏	
Does the customer have a large dumpster and means to dispose of the packing material?	Yes ❏ No ❏	
Are there special requirements to dispose of or recycle the packing material, pallets, and cardboard?	Yes ❏ No ❏	
Does the customer have a place to store the packing material?	Yes ❏ No ❏	
Is there concern about Seismic or Earthquake ratings for the equipment?	Yes ❏ No ❏	
Power		
Does the intended site meet the power requirements for of the equipment?	Yes ❏ No ❏	
Have arrangements been made for a licensed electrician to connect power?	Yes ❏ No ❏	
Does the site have multiple, separate circuits for power redundancy?	Yes ❏ No ❏	
Does the customer plan to use multiple branch circuits for redundancy?	Yes ❏ No ❏	
How many power cables are needed?	2 ❏ 4 ❏	
Building Codes		
Do local, city, state, or federal codes need to be checked and approved for: Wiring configurations? Fire suppression requirements? Clearances? Safety?	Yes ❏ No ❏ Yes ❏ No ❏ Yes ❏ No ❏ Yes ❏ No ❏	
Does the customer require a fire suppression system?	Yes ❏ No ❏	

TABLE 4-1 Site Preparation Checklist *(Continued)*

Question	Answer	Comments
Connectivity		
Is the customer platform using: Open Systems Enterprise platform	Open ❑ Enterprise ❑	
Have you completed a cable plan? Have you completed a configuration drawing?	Yes ❑ No ❑ Yes ❑ No ❑	

Have you determined the type of and number of cables required?
    Ethernet: Host connections
    Fibre Channel: Host connections
	Yes ❑ No ❑
	
	_____	

Is the customer prepared to supply Ethernet cables for the network?	Yes ❑ No ❑	
Can the customer provide the required number of "static" IP addresses?	Yes ❑ No ❑	
Will interface cables be run from outside the computer room?	Yes ❑ No ❑	Cables that run outside a computer room require flammability ratings of CL2/CL2P.
Networking		
Does the customer have an existing storage area network (SAN)?	Yes ❑ No ❑	
Are additional network devices required?	Yes ❑ No ❑	
Does the customer use *zones* in the network?	Yes ❑ No ❑	
Are there frequent reconfigurations of the network?	Yes ❑ No ❑	
Does the network span multiple floors?	Yes ❑ No ❑	
Are there inter-connections of hubs and switches?	Yes ❑ No ❑	
Are there remote connections to hubs and switches?	Yes ❑ No ❑	
Is this a campus network?	Yes ❑ No ❑	
Are trunk cables used?	Yes ❑ No ❑	
Are patch panels used?	Yes ❑ No ❑	
Professional Services, Data Center Services, and Data Migration Services		

Are Professional Services required for:
    Assessments and Migration
    Fire suppression systems
    Network upgrades
    Training
	
	Yes ❑ No ❑
	Yes ❑ No ❑
	Yes ❑ No ❑
	Yes ❑ No ❑	

Configuration Worksheets

Use the worksheets in this appendix to help you collect the information you need to perform the installation.

TABLE A-1 lists the information you need to collect to configure the array.

TABLE A-1 Sun Storage 6580 and 6780 Array Configuration Worksheet

Controller A MAC address:
Controller B MAC address:
Controller A IP address:
Controller B IP address:
Management host IP address:
Network mask:
Name server domain name:
IP address of the domain name server (DNS):
Gateway IP address:
Email notification address:

TABLE A-2 lists the information you need to collect for each data host connected to the Sun Storage 6580 and 6780 Array.

TABLE A-2   Sun Storage 6580 and 6780 Array Data Host Information

Host name:		
Vendor:		
Model:		
Operating system:		
Patch/Service pack:		
Number of HBAs: (List information below)		
HBA World Wide Name (WWN):		
HBA model:		
HBA driver:		