



CHAPTER 2

Preparing to Install the VSPA and the SSC-600

This chapter describes the safety, general equipment, and site preparation requirements for installing the VSPA and the SSC-600. This chapter contains the following sections:

- [Safety Guidelines, page 2-1](#)
- [Required Tools and Equipment, page 2-2](#)
- [Preventing Electrostatic Discharge Damage, page 2-2](#)

Safety Guidelines

This section provides safety guidelines that you should follow when working with any equipment that connects to electrical power or telephone wiring.

Safety Overview

Safety warnings appear in the Preface and throughout these procedures indicating tasks that may harm you if performed incorrectly. A warning symbol precedes each warning statement.


Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030


Warning

During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself. Statement 94.


Warning

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place. Statement 1029

Electrical Equipment Guidelines

Follow these basic guidelines when working with any electrical equipment:

- Before beginning any procedures requiring access to the chassis interior, locate the emergency power-off switch for the room in which you are working.
- Disconnect all power and external cables before moving a chassis.
- Do not work alone when potentially hazardous conditions exist.
- Never assume that power has been disconnected from a circuit; always check.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe; carefully examine your work area for possible hazards such as moist floors, ungrounded power extension cables, and missing safety grounds.

Required Tools and Equipment

You need the following tools and parts to install the VSPA and the SSC-600. If you need additional equipment, contact a service representative for ordering information.

- Number 1 Phillips screwdriver
- Number 2 Phillips screwdriver
- 3/16-inch flat-blade screwdriver
- Torque screwdriver with range from 6 to 12 inch-pounds (65 to 135 Newton-centimeters)
- Your own electrostatic discharge (ESD)-prevention equipment or the disposable grounding wrist strap supplied with the VSPA or the SSC-600
- Antistatic mat
- Antistatic container

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) damage, which can occur when electronic cards or components are improperly handled, results in complete or intermittent failures. Service modules comprise printed circuit boards that are fixed in metal carriers. Electromagnetic interference (EMI) shielding and connectors are integral components of the carrier. Although the metal carrier helps to protect the board from ESD, use a preventive antistatic strap during handling.

Following are guidelines for preventing ESD damage:

- Always use an ESD wrist or ankle strap and ensure that it makes good skin contact.
- Connect the equipment end of the strap to an unfinished chassis surface.
- When installing a component, use any available ejector levers or captive installation screws to properly seat the bus connectors in the backplane or midplane. These devices prevent accidental removal, provide proper grounding for the system, and help to ensure that bus connectors are properly seated.
- When removing a component, use any available ejector levers or captive installation screws to release the bus connectors from the backplane or midplane.

- Handle carriers by available handles or edges only; avoid touching the printed circuit boards or connectors.
- Place a removed board component-side-up on an antistatic surface or in a static shielding container. If you plan to return the component to the factory, immediately place it in a static shielding container.
- Avoid contact between the printed circuit boards and clothing. The wrist strap only protects components from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Never attempt to remove the printed circuit board from the metal carrier.

**Caution**

For safety, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megohms (Mohms).
