Preparing for Hardware Installation

This section explains how to prepare the for an installation of VX products.

- Safety Requirements
- Space Requirements
- Tool Requirements
- Equipment Requirements
    - Optional Equipment

Safety Requirements

Observe the following requirements to ensure your safety and to protect the VX system and components. This list is not inclusive of all potentially hazardous situations.

- Only qualified service personnel should install, replace, or service the VX system.
- Install the system in an area with restricted access such as a dedicated equipment room, electrical closet, or similar, in accordance with local electrical codes.
- Remove all jewelry, including rings, watches, and necklaces, before working on the equipment.
- Each line feed to the chassis requires dedicated primary branch circuit protection. Usually, a dedicated power distribution module is located on top of each equipment rack.
- Circuit breakers
    - Use on/off circuit breakers for all individual line feeds, in conformance with local electrical code
    - Verify that all circuit breaker(s) are in the OFF position before connecting power to the chassis.
- Chassis must be properly grounded prior to powering on the unit.
- At least two people are required to lift or move a VX chassis.

> ⚠ **Use Electrostatic Discharge (ESD) Precautions**
> When installing and removing plug-in modules, wear an ESD ground strap, connected to a proper earth ground, to prevent electrostatic discharge (ESD) damage to the VX unit.

Space Requirements

To ensure proper chassis cooling, allow a minimum of 3 inches (7.5 cm) horizontal (side-to-side) clearance between the VX chassis and any adjacent equipment. Allow a minimum clearance of 32 inches (81 cm) front and back for proper insertion and extraction of modules. There are no clearance requirements above or below the chassis. More than one VX chassis can be mounted in a standard seven (7) foot rack. These space requirements must be met to comply with Telcordia and ETSI standards.

> ⓘ To ensure proper cooling, the heat and exhaust generated by adjacent equipment must be considered when installing the VX chassis.

> ⚠ When installing the VX chassis, allow space around the chassis for proper air flow through the unit. Avoid blocking the air flow through the vents.

Tool Requirements

The installation guidelines in this manual use the following tools, which you should provide at your installation site.

- Box cutter or diagonal pliers for uncrating and unpacking the VX system.
- 3/8 inch box wrench, socket wrench, or nut driver to attach cables to the VX interfaces.
- 5/16 inch screwdriver and suitable screws for chassis rack-mount.

Equipment Requirements

The installation guidelines in this manual require the following equipment:

- An equipment rack: EIA (19") or ETSI (23").
- Dedicated primary branch circuit protection for each line feed supplied to the chassis. It is recommended to use circuit breakers that conform to local electrical codes.
- Cable ties and cable clamps to secure power cords and signal cables.
- An anti-static pad or treatment if installing on vinyl composite tile, linoleum, or carpet.
- An ESD protection strap for installing or removing plug-in modules.
- A VT100 terminal or a PC capable of running VT-100 terminal emulation software, such as Microsoft HyperTerminal or PuTTY, to communicate with the CPU.
- A 9-pin D-sub serial cable to connect the VX system to the terminal or terminal emulator.
- A two-hole copper lug cable, Panduit LCD8-10A or equivalent, for system-rack grounding.

Optional Equipment

Use of optional customer-supplied equipment depends on the configuration and installation. If applicable, be sure to have the following equipment on hand at the installation site.

- Ethernet crossover cable(s)
- If no external IP connection to the VX system is available, a modem rated at 9600 bps or greater may be connected to the unit via 9-pin D-sub serial cable, for remote Sonus TAC support and incoming PPP connections. For other remote access methods, contact Sonus TAC.