



Preparing to Install the Gateway

This chapter describes important information to consider before you begin to install the Cisco Voice Gateway 200 (VG200), and includes the following sections:

- Safety Recommendations, page 1
- General Site Requirements, page 5
- Preparing to Connect to a Network, page 7

After you have completed this chapter, proceed to Chapter 3, “Installing the Gateway,” for installation instructions.

Safety Recommendations






Follow these guidelines to ensure general safety:

- Keep the chassis area clear and dust-free during and after installation.
- Put the removed chassis cover in a safe place.
- Keep tools away from walk areas where you and others could fall over them.
- Do not wear loose clothing that could get caught in the chassis. Fasten your tie or scarf and roll up your sleeves.
- Remove jewelry (including rings, finger jewelry, necklaces, and watches).
- Wear safety glasses if you are working under any conditions that might be hazardous to your eyes.

- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.

Safety Warnings

Safety warnings appear throughout this publication in procedures that, if performed incorrectly, may harm you. A warning symbol precedes each warning statement.

-  Warning **Read the installation instructions before you connect the system to its power source.**
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-  Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**
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-  Warning **Before working on a chassis or working near power supplies, unplug the power cord on AC units; disconnect the power at the circuit breaker on DC units.**
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-  Warning **Ultimate disposal of this product should be handled according to all applicable national laws and regulations.**
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-  Warning ***Preparation and Safety Guide.* This guide contains important safety information you should know before working with the system.**
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Maintaining Safety with Electricity

Follow these guidelines when working on equipment powered by electricity.

**Warning**

Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground the operator; this can cause serious burns or can weld the metal object to the terminals.

**Warning**

Before working on a chassis or working near power supplies, unplug the power cord on AC units; disconnect the power at the circuit breaker on DC units.

**Warning**

Do not touch the power supply when the power cord is connected. For systems with a power switch, line voltages are present within the power supply even when the power switch is OFF and the power cord is connected. For systems without a power switch, line voltages are present within the power supply when the power cord is connected.

**Warning**

Incorrect connection of this or connected equipment to a general-purpose outlet could result in a hazardous situation.

**Warning**

This equipment is to be installed and maintained by service personnel only as defined by AS/NZS 3260 Clause 1.2.14.3 Service Personnel.

**Warning**

Read the installation instructions before you connect the system to its power source.

- Look carefully for possible hazards in your work area, such as moist floors, ungrounded power extension cables, frayed power cords, and missing safety grounds.

- Locate the emergency power off switch for the room in which you are working. Then, if an electrical accident occurs, you can act quickly to turn off the power.
- Power off the gateway and unplug the power cord before doing the following:
 - Installing or removing a chassis
 - Working near power supplies
- Do not work alone if potentially hazardous conditions exist.
- Never assume that power is disconnected from a circuit. Always check.

If an electrical accident occurs, proceed as follows:

- Use caution; do not become a victim yourself.
- Turn off power to the system.
- If possible, send another person to get medical aid. Otherwise, assess the condition of the victim and then call for help.
- Determine if the victim needs rescue breathing or external cardiac compressions; then take appropriate action.

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. It occurs when electronic components are improperly handled and can result in complete or intermittent failures.

Always follow ESD-prevention procedures when removing and replacing components. Ensure that the chassis is electrically connected to earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the clip to an unpainted surface of the chassis frame to safely channel unwanted ESD voltages to ground. To properly guard against ESD damage and shocks, the wrist strap and cord must be used effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.



Caution

For safety, periodically check the resistance value of the antistatic strap, which should be between 1 to 10 megohms (Mohm).

General Site Requirements

This section describes the requirements your site must meet for safe installation and operation of your system. Ensure that your site is properly prepared before beginning installation.

Site Environment

The gateway can be placed on a desktop or mounted in a rack or on a wall. The location of the chassis and the layout of your equipment rack or wiring room are extremely important for proper system operation. Placing equipment too close together, inadequate ventilation, and inaccessible panels can make system maintenance difficult or cause system malfunctions and shutdowns.

When planning your site layout and equipment locations, remember the precautions described in the next section, “Preventive Site Configuration.” If you are experiencing shutdowns or unusually high errors with your existing equipment, these precautions might help you isolate the cause of failures and prevent future problems.

Preventive Site Configuration

The following precautions will help you plan an acceptable operating environment for your gateway and help you avoid environmentally caused equipment failures:

- Ensure that the room in which you operate your system has adequate air circulation. Electrical equipment generates heat. Ambient air temperature might not be able to cool equipment to acceptable operating temperatures without adequate circulation.
- Always follow the ESD-prevention procedures described in the “Preventing Electrostatic Discharge Damage” section on page 2-4” to avoid damage to equipment. Damage from static discharge can cause immediate or intermittent equipment failure.

- Ensure that the chassis cover is secure. The chassis is designed to allow cooling air to flow effectively inside it. An open chassis allows air leaks, which might interrupt and redirect the flow of cooling air from internal components.

Configuring Equipment Racks

The following information will help you plan an acceptable equipment rack configuration:

- Enclosed racks must have adequate ventilation. Ensure that the rack is not overly congested because each unit generates heat. An enclosed rack should have louvered sides and one or more fans to provide cooling air.
- When mounting a chassis in an open rack, ensure that the rack frame does not block the intake or the exhaust ports. If the chassis is installed on slides, check the position of the chassis when it is seated all the way into the rack.
- In an enclosed rack with a ventilation fan in the top, excessive heat generated by equipment near the bottom of the rack can be drawn upward and into the intake ports of the equipment above it in the rack. Ensure that you provide adequate ventilation for equipment at the bottom of the rack.
- Baffles can help to isolate exhaust air from intake air, which also helps to draw cooling air through the chassis. The best placement of the baffles depends on the airflow patterns in the rack, which can be found by experimenting with different arrangements.

Power Supply Considerations

Check the power at your site to ensure that you are receiving “clean” power (free of spikes and noise). Install a power conditioner if necessary.



Warning

The device is designed to work with telephone-network voltage (TN) power systems.



Warning

The telecommunications lines must be disconnected
1) before unplugging the main power connector and /or
2) while the housing is open.

The gateway power supply includes the following features:

- Autoselects either 110V or 220V operation.
- All units include a 6-foot (1.8-meter) electrical power cord. (A label near the power cord indicates the correct voltage, frequency, current draw, and power dissipation for the unit.)



Warning

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10A international) is used on the phase conductors (all current-carrying conductors).

Preparing to Connect to a Network

When setting up your gateway, consider distance limitations and potential electromagnetic interference (EMI) as defined by the applicable local and international regulations.

Network connection considerations for 10BaseT and 100BaseT are discussed in the next section, "Ethernet Connections."



Warning

The Ethernet 10BaseT, console, and auxiliary ports contain safety extra-low voltage (SELV) circuits. Avoid connecting SELV circuits to telephone-network voltage (TNV) circuits.

Ethernet Connections

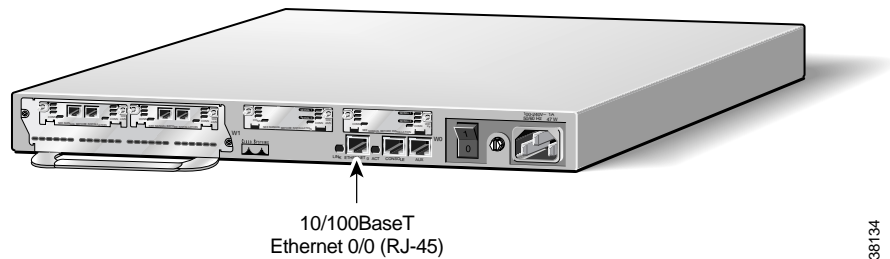
The IEEE has established Ethernet as standard IEEE 802.3. The most common Ethernet implementations are as follows:

- 100BaseT—2-pair Category 5 or unshielded twisted-pair (UTP) straight-through RJ-45 cable.

- 10BaseT—Ethernet on UTP cable. The maximum segment distance is 328 feet (100 meters). UTP cables look like the wiring used for ordinary telephones; however, UTP cables meet certain electrical standards that telephone cables do not meet.

The Ethernet interface for the Cisco VG200 operates at speeds up to 100 Mbps.

Figure 2-1 Cisco VG200 Fast Ethernet Connection



Use the cable provided to connect the Cisco VG200 to a switch.