



# CHAPTER 1

## Overview of the Cisco VG350 Voice Gateway

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This chapter provides a brief description of the Cisco VG350 Voice Gateway (VG) and contains the following sections:

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- [VG350 Voice Gateway Chassis, page 1-2](#)
- [Interfaces and Service Capabilities, page 1-3](#)
- [Physical Description and LEDs, page 1-4](#)
- [Software Elements, page 1-9](#)

### Overview

The Cisco VG350 service module is a high-density analog voice gateway. It is an intermediate path that enables TDM to IP transition.

The Cisco VG350 Voice Gateway supports the following interfaces:

- Gigabit Ethernet (GE)
- USB
- High-Speed WAN Interface Card (HWIC) and Voice/WAN Interface Card (VWIC)
- Double-Wide Service Module (DWSM) interface



**Warning**

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**This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means by security.**

Statement 1017

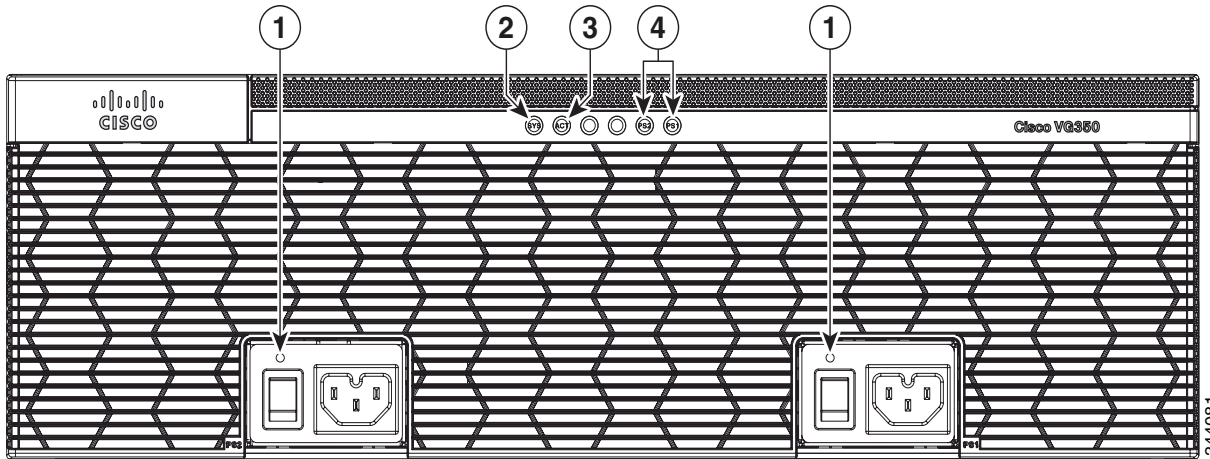
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# VG350 Voice Gateway Chassis

The following figures show the front and back panels of the VG350 Voice Gateway Chassis:

- [Figure 1-1](#) shows the Front Panel.
- [Figure 1-2](#) shows the Back Panel.

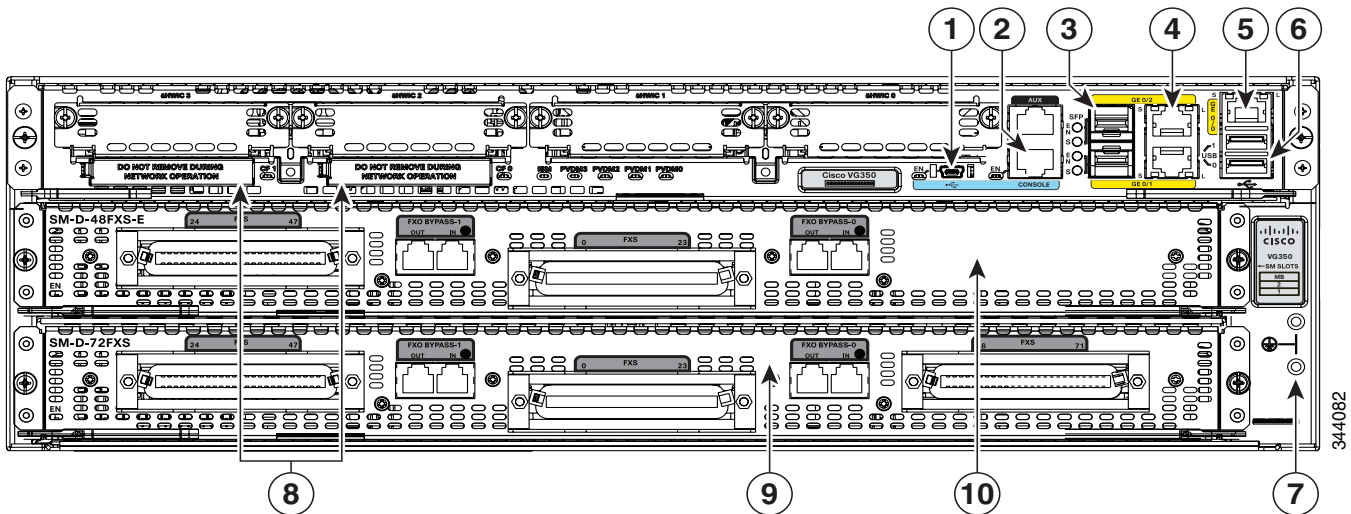
**Figure 1-1 Front Panel of the VG350 Voice Gateway**



1	AC OK <sup>1</sup>	3	ACT status LED
2	SYS status LED	4	PS1 (Right), PS2 (Left)

1. LED goes off if the AC power fails or is disconnected. It does not go on and off with the power switch.

**Figure 1-2 Back Panel of the VG350 Voice Gateway**



<b>1</b>	USB serial console port	<b>6</b>	USB0 and USB1 (1, Top)
<b>2</b>	RJ-45 serial console port	<b>7</b>	Ground
<b>3</b>	SFP1 and SFP2 (2, Top)	<b>8</b>	CompactFlash 0 and 1 (0, Far right)
<b>4</b>	10/100/1000 Ethernet ports GE 0/1 and GE 0/2 (GE 0/2,Top)	<b>9</b>	SM-D-72FXS Service Module
<b>5</b>	10/100/1000 Ethernet port GE 0/0	<b>10</b>	SM-D-48FXS-E Service Module

## Configuration Options

The following configuration options are available for Cisco VG350 Voice Gateway:

**Table 1-1** Configuration Options Possible with Cisco VG350 Voice Gateway with the Double-Wide High Density Analog Service Module (DWSM)

Configuration	VG350		
	SM 1	SM 2	Total number of ports
1	SM-D-72FXS	SM-D-72FXS	144
2	SM-D-72FXS	SM-D-48FXS-E	120
4	SM-D-48FXS-E	SM-D-48FXS-E	96

## Interfaces and Service Capabilities

Table 1-2 lists the built-in interface ports for the Cisco VG350.

**Table 1-2** Built-in Interfaces for the Cisco VG350

	Data Ports			Management Ports		
	10/100/1000 GE RJ-45	10/100/1000 SFP	USB Type A	Console Serial, RJ-45	Console Serial, Mini-USB (Type B)	Auxiliary, RJ-45
Cisco VG350 Voice Gateway	3 <sup>1</sup>	2	2	1	1	1

1. One RJ-45 with two GE SFPs or three RJ-45 GEs.

# Physical Description and LEDs

## LED Indicators

Table 1-3 describes the LED indicators for the Cisco VG350.

**Table 1-3 LED Indicators for Cisco VG350**

LED	Color	Description	Location on the VG350
PS/PS1	Green	System is running.	Front bezel
	Amber	System is not running.	
PS2	Green	System is running.	Front bezel
	Amber	System is not running.	
AC OK	Green	AC power connected.	Front bezel
	Off	No AC power connected	
RPS	Green	System is running on external RPS power supply.	—
SYS	Solid green	Solid green indicates normal operation.	Front bezel
	Blinking green	System is booting or is in ROM monitor mode.	
	Amber	System error.	
	Off	Power is off or system board is faulty.	
ACT	Solid or blinking green	Solid or blinking indicates packet activity between the forwarding and routing engine and any I/O port.	Front bezel
	Off	No packet transfers are occurring.	
RJ-45 CON	Green	Serial console is active.	Back panel
USB CON	Green	USB console is active.	Back panel
GE: Link	Green	Solid green indicates the Ethernet port has a link partner.	Back panel
SFP S	Blinking green	Blinking frequency indicates port speed. See the definition for the S LED.	Back panel
SFP EN	Off	Not present.	Back panel
	Green	Present and enabled.	
	Amber	Present with failure.	

**Table 1-3** LED Indicators for Cisco VG350 (continued)

LED	Color	Description	Location on the VG350
CF0/CF1	Green	Flash memory is being accessed; do not eject the CompactFlash memory card.	Back panel
	Amber	CompactFlash error.	
	Off	Flash memory is not being accessed; okay to eject the CompactFlash memory card.	
	Off	No FE or GE link is established.	
PVDM 0,1,2, and 3	Green	PVDM is initialized.	Back panel
	Amber	PVDM is detected but not initialized.	
	Off	No PVDM installed.	

## Specifications

Table 1-4 details the technical specifications of the Cisco VG350 Voice Gateway.

**Table 1-4 Cisco VG350 Voice Gateway Technical Specifications**

Description	Specification
<b>Physical</b>	
Dimensions (H x W x D)	5.22 x 17.25 x 18.75 in. (88.9 x 438.2 x 476.2 mm), 3 RU height
Weight with AC PS (without modules)	39 lbs (17.69 kg)
Weight with AC PS (without modules)	40 lbs (18.14 kg)
Weight (fully configured)	60 lbs (27.21 kg)
<b>Power</b>	
<b>AC input power</b>	
• Input voltage	100 to 240 VAC, autoranging
• Frequency	47 to 63 Hz
• Input current	0.4 to 3.5 A (configuration dependent)
• Input current with AC	0.4 to 7.0 A (configuration dependent)
• Surge current	30 A maximum at 115 VAC 60 Hz 60 A maximum at 230 VAC 50 Hz
<b>Power consumption</b>	85 to 400 W, 600 to 1370 BTU/hr (configuration dependent)
With AC	85 to 800 W, 600 to 2740 BTU/hr (configuration dependent)
<b>Ports</b>	
Console port	One RJ-45 connector and one mini USB Type B, USB 2.0 compliant
Auxiliary port	RJ-45 connector
USB ports	Two USB Type A, USB 2.0 compliant, 2.5 W (500 mA) maximum <sup>1</sup>
10/100/1000 Gigabit Ethernet	Three RJ-45 connectors (GE 0/0, GE 0/1, GE 0/2) auto-MDIX2
SFP	Two RJ-45 connectors support SFP modules. When an SFP module is installed, the adjacent RJ-45 GE connector is disabled.
<b>Environmental</b>	
Operating humidity	5 to 85%, noncondensing
Operating humidity (short-term per NEBS)	5% to 90%, but not to exceed 0.024 kg water/kg of dry air
Operating temperature up to 5906 ft (1800 m) elevation	32 to 104°F (0 to 40°C)
Operating temperature up to 9843 ft (3000 m) elevation	32 to 104°F (0 to 40°C)
Operating temperature up to 13,123 ft (4000 m) elevation	32 to 86°F (0 to 30°C)

Table 1-4 Cisco VG350 Voice Gateway Technical Specifications (continued)


Description	Specification
Temperature (short-term per NEBS/1800m max altitude)	23 to 122°F (−5°C to 50°C)
Operating altitude maximum	13,123 ft (4000 m)
	 <b>Note</b> For China, the unit cannot operate above 2000 m. The internal AC power supplies do not meet the new Chinese Safety requirements for products that operate in the 2001-5000 m range.
<b>Transportation and Storage</b>	
Non-operating temperature	−40 to 158°F (−40 to 70°C)
Non-operating humidity	5 to 95% RH
Non-operating altitude	15,000 ft (4570 m)
<b>Acoustic</b>	
Acoustic: Sound Pressure (Typical/Maximum)	57.6 to 77.6 dBA
Acoustic: Sound Power (Typical/Maximum)	67.8 to 84.7 dBA
<b>Compliance</b>	
Safety compliance	<ul style="list-style-type: none"> <li>• IEC 60950-1, Safety of information technology equipment</li> <li>• EN 60950-1, Safety of information technology equipment</li> <li>• UL 60950-1, Standard for safety for information technology equipment [US]</li> <li>• CAN/CSA C22.2 No. 60950-1, Safety of information technology equipment including electrical business equipment [Canada]</li> <li>• AS/NZS 60950.1 2003</li> <li>• IEC60950, 3rd edition [PRC]</li> <li>• IEC60950, 2nd Edition [Mexico]</li> </ul>

Table 1-4 Cisco VG350 Voice Gateway Technical Specifications (continued)

Description	Specification
Immunity compliance	<ul style="list-style-type: none"> <li>• CISPR24 ITE-Immunity characteristics, Limits and methods of measurement</li> <li>• EN 55024 ITE-Immunity characteristics, Limits and methods of measurement</li> <li>• EN 50082-1 Electromagnetic compatibility - Generic immunity standard - Part 1</li> <li>• EN 300-386 Electromagnetic compatibility for TNESD/EMI</li> <li>• EN 61000-6-1</li> <li>• SD/EMI</li> </ul>
EMC compliance	<ul style="list-style-type: none"> <li>• EN 55022, Class A</li> <li>• CISPR22, Class A</li> <li>• CFR47, Part 15, Subpart B, Class A</li> <li>• EN300386, Class A</li> <li>• AS/NZS CISPR22, Class A</li> <li>• VCCI, Class A</li> <li>• SD/EMI, Class A</li> <li>• Harmonic Current Emission               <ul style="list-style-type: none"> <li>– EN 61000-3-2 for EUT Power requirements &lt;16A</li> <li>– EN 61000-3-12 for EUT Power requirements &gt;16A</li> </ul> </li> <li>• Voltage Fluctuation and Flicker               <ul style="list-style-type: none"> <li>– EN 61000-3-3 for EUT Power requirements &lt;16</li> <li>– EN 61000-3-11 for EUT Power requirements &gt;16A</li> </ul> </li> </ul>

1. 480 Mb/s individually, bandwidth is shared when both are used.

**Warning**

**Ultimate disposal of this product should be handled according to all national laws and regulations.**  
Statement 1040



# Software Elements

The operating system for the Cisco VG350 Voice Gateway is the Cisco IOS software that resides in flash memory.

## Configuration Connections

You can use an ASCII terminal or a PC to configure a Cisco VG350 Voice Gateway. The configuration can be performed in several ways:

- Locally, with a direct connection through the console port
- Remotely, with a connection through the auxiliary port and a modem
- Through Telnet and TFTP

## Configuration Methods

### Automated Configuration

If your Cisco VG350 Voice Gateway was ordered with the Simple Network-Enabled Auto-Provision (SNAP) option, no onsite configuration is required. When the Cisco VG350 Voice Gateway is powered on and connected, the SNAP application downloads the applicable configuration files automatically.

### Manual Configuration

When a Cisco VG350 Voice Gateway is first installed, use the procedure in the [“Power-On Procedure” section on page 5-1](#) for the initial configuration. This sets the basic communication parameters.

After the Cisco VG350 Voice Gateway is operating and able to communicate, use the procedures in [Cisco VG350 Voice Gateway Software Configuration Guide](#) to configure the specific services and functions or to make changes to the existing configuration.

There are multiple methods for configuring a Cisco VG350 Voice Gateway:

- System configuration dialog
- Configuration mode—Cisco IOS software CLI
- setup command facility—Remote configuration through a LAN
- SNMP-based application—CiscoView or HP OpenView
- HTTP-based configuration server—Provides access to the CLI from a web browser

