Overview

The Cisco VG248 Analog Phone Gateway (VG248) enables you to connect analog telephones, modems, and fax machines to the Cisco CallManager IP telephony system.

These sections provide an overview of the VG248:

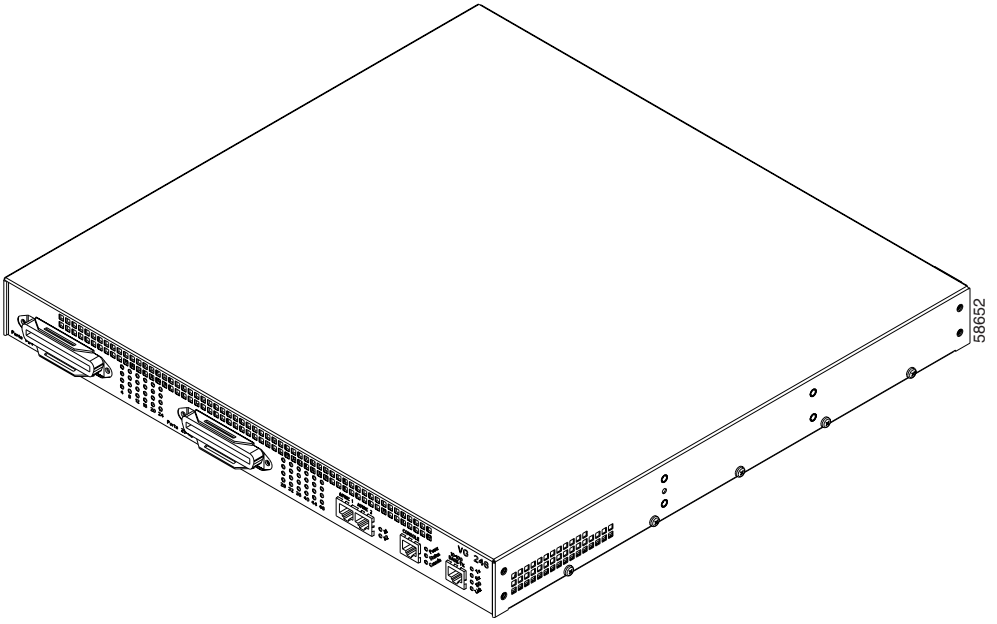
Introduction

The VG248 is a 19-inch rack-mountable hardware device. It includes 48 FXS port interfaces to connect directly to standard analog telephones, modems, or fax machines. The analog devices connected through the FXS port behave as if they are connected to a normal central office (CO) or PBX line, supporting features such as call waiting, caller ID, call transfer, and call transfer.

The VG248 also includes a 10/100 Mbps Ethernet port interface to connect to the Ethernet network for connectivity to Cisco CallManager and the IP telephony network.

Figure 1-1 provides an overview of the entire device.

Figure 1-1 VG248 Overview



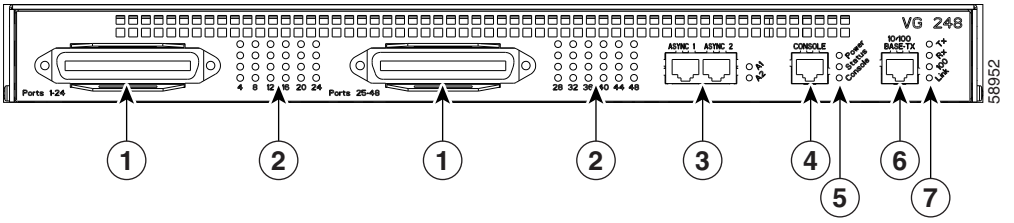
These sections provide additional detail about the VG248 and its interfaces:

- Front Panel, page 1-3
- Rear Panel, page 1-8

Front Panel

Figure 1-2 provides an overview of the interfaces and LED displays on the front panel of the VG248.

Figure 1-2 VG248 Front Panel



1	FXS telco connectors, ports 1-24 and 25-48	**5**	System status indicators
2	Port status indicators, ports 1-24 and 25-48	**6**	Ethernet port
3	Async 1 and 2 ports, unused	**7**	Ethernet status indicators
4	Console port		

FXS Telco Connectors

The FXS interface consists of two telco (RJ-21) connectors featuring these characteristics:

- On-premise connections only—analog phones must be physically located in the same building as the VG248.
- Maximum supported line length—5000 feet or 415 Ohms.
- Loop start support
- Support for disconnect supervision
- DTMF dialing
- Maximum ringer equivalency number (REN) load—3 per line, and only two phones per line can be off-hook at any one time

- Voice activity detection
- Supported codecs—G.711 and G.729a codecs; the same codec must be used for both directions.

Table 1-1 describes the FXS connector pinouts for ports 1-24.

Table 1-1 FXS Ports 1-24 Connector Pinouts

Pin Number	Function
1, 26	Port 1 transmit/receive
2, 27	Port 2 transmit/receive
3, 28	Port 3 transmit/receive
4,29	Port 4 transmit/receive
5, 30	Port 5 transmit/receive
6,31	Port 6 transmit/receive
7, 32	Port 7 transmit/receive
8, 33	Port 8 transmit/receive
9, 34	Port 9 transmit/receive
10, 35	Port 10 transmit/receive
11, 36	Port 11 transmit/receive
12, 37	Port 12 transmit/receive
13, 38	Port 13 transmit/receive
14, 39	Port 14 transmit/receive
15, 40	Port 15 transmit/receive
16, 41	Port 16 transmit/receive
17, 42	Port 17 transmit/receive
18, 43	Port 18 transmit/receive
19, 44	Port 19 transmit/receive
20, 45	Port 20 transmit/receive
21, 46	Port 21 transmit/receive
22, 47	Port 22 transmit/receive
23, 48	Port 23 transmit/receive

Table 1-1 FXS Ports 1-24 Connector Pinouts (continued)

Pin Number	Function
24, 49	Port 24 transmit/receive
25, 50	Unused

Table 1-2 describes the FXS connector pinouts for ports 25-48.

Table 1-2 FXS Ports 25-48 Connector Pinouts

Pin Number	Function
1, 26	Port 25 transmit/receive
2, 27	Port 26 transmit/receive
3, 28	Port 27 transmit/receive
4,29	Port 28 transmit/receive
5, 30	Port 29 transmit/receive
6,31	Port 30 transmit/receive
7, 32	Port 31 transmit/receive
8, 33	Port 32 transmit/receive
9, 34	Port 33 transmit/receive
10, 35	Port 34 transmit/receive
11, 36	Port 35 transmit/receive
12, 37	Port 36 transmit/receive
13, 38	Port 37 transmit/receive
14, 39	Port 38 transmit/receive
15, 40	Port 39 transmit/receive
16, 41	Port 40 transmit/receive
17, 42	Port 41 transmit/receive
18, 43	Port 42 transmit/receive
19, 44	Port 43 transmit/receive
20, 45	Port 44 transmit/receive

Table 1-2 FXS Ports 25-48 Connector Pinouts (continued)

Pin Number	Function
21, 46	Port 45 transmit/receive
22, 47	Port 46 transmit/receive
23, 48	Port 47 transmit/receive
24, 49	Port 48 transmit/receive
25, 50	Unused

Status Indicators

Three sets of status indicator LEDs on the front panel display the VG248 status:

- Port Status Indicators
- System Status Indicators
- Ethernet Status Indicators

Table 1-3 includes descriptions of the LED states of these status indicators.

Table 1-3 LED Status Explanation

LED	On	Flashing	Off
Port Status Indicators			
Ports 1-24	Off hook	Ringing	Not connected or on hook
Ports 25-48	Off hook	Ringing	Not connected or on hook
System Status Indicators			
Power	Power connected and operating normally	N/A	Power not connected
Console	Console link connected	N/A	Console link not connected
Status	Operating normally	Potential hardware error detected. Check the event log for details.	Not operating normally

Table 1-3 LED Status Explanation (continued)

LED	On	Flashing	Off
Ethernet Status Indicators			
TX	N/A	Packet transmitted.	Nothing transmitted
RX	N/A	Packet received.	Nothing received
100	Connected at 100 Mbps	N/A	Connected at 10 Mbps or not connected
Link	Ethernet link connected	N/A	Not connected

Console Port

Use the console port to connect the VG248 to a console terminal for configuration and management tasks. Table 1-4 describes the console port connector pinouts.

Table 1-4 Console Port Connector Pinouts

Pin Number	Function
1, 8	Connected to each other
2	DTR
3	TxD
4,5	Ground
6	RxD
7	DSR

Ethernet Port

Use the Ethernet port to connect the VG 248 to the IP network to access Cisco CallManager. Table 1-5 describes the Ethernet port connector pinouts.

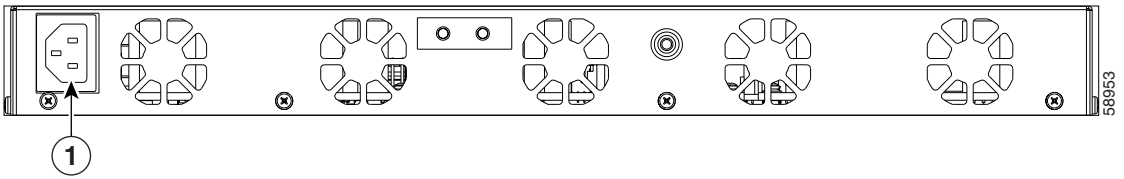
Table 1-5 Ethernet Port Connector Pinouts

Pin Number	Function
1	TD+
2	TD-
3	RD+
4	—
5	—
6	RD-
7	—
8	—

Rear Panel

The rear panel of the VG248 includes the power connector (see Figure 1-3). The VG248 has a single AC inlet requiring 100- 240 VAC, 50-60 Hz. The VG248 draws approximately 176W at 100v in its maximum load condition.

Figure 1-3 VG248 Rear Panel



1	Power connector