Cisco TelePresence
Serial GW 3340
Getting started

D14749.02

Contents

General information

About the Cisco TelePresence Serial GW 3340

The Cisco TelePresence Serial GW 3340 (Serial GW 3340) is a high-performance video gateway that provides synchronous serial network connectivity for standards-based IP video infrastructure products as well as IP-based endpoints.
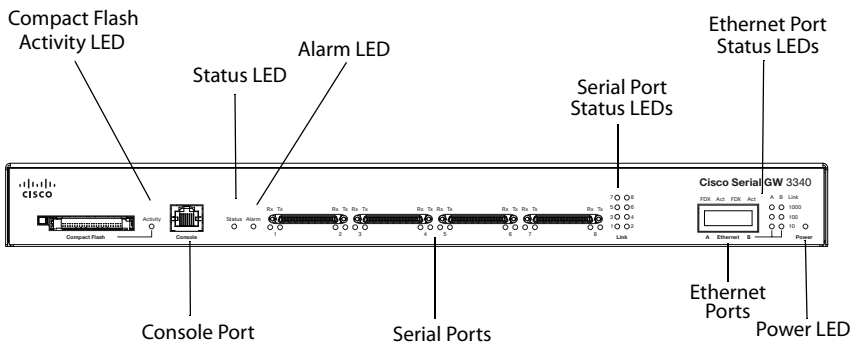
Package contents

The following items are included with the Serial GW 3340. Verify that you have these items before installing the unit:

‣ Cisco TelePresence Serial GW 3340

‣ Console cable (blue)

‣ Power cable

‣ Rack mounting kit

Port and LED location

Figure 1 shows the position of ports and LEDs on the Serial GW 3340.

Figure 1: Serial GW 3340 front panel

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LED behavior

Table 1: Serial GW 3340 LED behavior

LED	Display	Indicates
Compact Flash Activity	Flashing green	One of: ▸ Serial GW 3340 is booting ▸ configuration change has been made ▸ configuration being transferred by FTP ▸ reading/writing to CDRs ▸ audit logs activity
Status	Green	Serial GW 3340 is operating normally
Alarm	Red	Serial GW 3340 is booting or has developed a fault, for example: ▸ temperature is outside normal limits ▸ fan failure ▸ battery failure of the internal clock Refer to the web interface for more information about the problem (go to **Status > Health**)

Serial Port Status, for each Serial port:

Rx	Off	No timing (clock signal) has been received on the port or invalid timing has been received
	On	Valid timing is being received on the port
	Flashing	Port is locked on in both directions and ready for video data transfer
Tx	Off	Port is not transmitting data
	On	Port is transmitting framing data
	Flashing	Port is locked on in both directions and ready for video data transfer
Link	Off	No active call on this port

Table 1: Serial GW 3340 LED behavior (continued)

LED		Display	Indicates
		Flashing	Call setup (handshaking or dialing) in progress
		On	Call setup is complete and a connection established
Ethernet Port Status, for each Ethernet port:			
	FDX	Green	Link has been negotiated as a full-duplex link
	Act	Green	Packets are being transmitted on this port
	Link	Green	Speed of the link from this port (10, 100, or 1000 Mbps)
Power		Blue	Serial GW 3340 is receiving power

Connecting the Serial GW 3340

Before you start

IMPORTANT: Before installing the Serial GW 3340 you must read the safety information at www.cisco.com/go/telepresence/safety.

Cabling and connector information

To reduce the risk of fire, use only 26 AWG or larger telecommunication line cord.

The Serial GW 3340 requires a network adaptor cable (or "Y cable") that provides connectivity to V.35, RS-530 and RS-449 networks with RS-366 dialing. The Y cable has a single 68-pin connector on the gateway side (DTE) and dual TANDBERG DB-26 connectors on the network switch side (DCE). (TANDBERG is now part of Cisco.)

For ordering purposes, the Y cable part name is *Cisco TelePresence Serial GW Y Cable to 2 DB26 connectors* and the part number is CTI-GWS-CAB-2DB26.

The Y cable is transformed into a V.35, RS-530 or RS-449 interface by attaching the appropriate standard TANDBERG cable for the required protocol type. For example, if you attach a V.35-specified cable then that port is now transformed into a standard 34-pin Winchester interface.

Any additional cables attached to the Y cable should be at minimum shielded cable with metal-backed connectors in order not to compromise EMC performance.

The Y cable supports two logical interfaces through its dual connectors. It is possible to attach a different protocol type to each connector.

For detailed pin layouts for each cable type, see Pin outs on page 14.

Step one: Connect power

Connect the power connector on the rear of the unit to the power supply using the supplied power cable. There is no On/Off switch.

Step two: Connect to Ethernet Port A

Connect an Ethernet cable from Ethernet Port A to an Ethernet switch (rather than a hub, to minimize interference from other devices on the network). The Ethernet port is a 10/100/1000 Mbps auto-sensing connection.

⚠️ Only connect to Ethernet Port A, as all initial configuration must be done on this port. Do not connect anything to Ethernet Port B.

Step three: Connect the Y cable (network adaptor cable)

1   Slot the 68-pin connector into an available port on the Serial GW 3340.
2   Connect the 26-pin dual connectors to the target network switching equipment. The cabling for the serial data interface and the RS-366 dialing interface is customer-specific and therefore beyond the scope of this guide.

Initial configuration

Step one: Connect to the console port

1   Ensure that power is connected to the Serial GW 3340 and the Status LED is green.

2   Connect the console port of the Serial GW 3340 to the serial port of your PC using the blue RJ45 to DB9 console cable supplied.

3   Use a serial terminal program, such as Secure CRT or HyperTerminal, to connect to the Serial GW 3340. Set your terminal software to the following settings:

   - Baud rate: 38400
   - Data bits: 8
   - Parity: none
   - Stop bits: 1
   - Flow control: none

4   Press Enter and the following command prompt appears on the terminal:
    `S-GW:>`

Step two: Configure Ethernet Port A settings

By default the Ethernet ports on the Serial GW 3340 are set to auto-sensing mode. If the switch ports to which you connect the Serial GW 3340 are not also set to auto-sensing mode, then you must configure the Ethernet ports to use the same speed and duplex mode.

⚠ Only connect to Ethernet Port A, as all initial configuration must be done on this port. Do not connect anything to Ethernet Port B.

⚠ Both ends of the Ethernet connection must be configured in the same way. For example, either configure both ends of the link to be auto-sensing or configure both ends to operate at the same speed and duplex.

⚠ To establish a 1000 Mbps connection, both ends of the link must be configured as auto-sensing.

1   To configure Ethernet Port A, enter the following for auto-sensing mode:
    `ethertype auto`
    or to configure a speed and duplex, use the following command:
    `ethertype <10|100> <half|full>`
2   To display the current configuration and status of the Ethernet ports, enter:
    `status`

For example, to configure a full-duplex 100 Mbps link, enter:

`ethertype 100 full`

⚠ To establish a 1000 Mbps connection, both ends of the link must be
    configured as auto-sensing.

Step three: Assign an IP address to the Serial GW 3340 (optional)

The default setting for the Serial GW 3340 is to use DHCP to obtain an IP address. You can assign a static IP address if you prefer or if no DHCP server is available.

Ignore this step if you want the IP address of the Serial GW 3340 to be assigned by your DHCP server.

▸   To assign a static IP address, use the following command:
    `static <IP address> <netmask> <default gateway address>`
    `<DNS server address>`

⚠ If you do not have a DNS server, use 0.0.0.0 as the DNS server IP
    address.

For example, to assign an address of 192.168.1.2 where the default gateway is at 192.168.1.1, enter:

`static 192.168.1.2 255.255.255.0 192.168.1.1 0.0.0.0`

Step four: Discover the IP address of the Serial GW 3340

1   To display the current status of the IP address, enter: **`status`**
    If DHCP is enabled on your network and you allow the Serial GW 3340 to acquire its address using DHCP, the IP address acquired by Ethernet Port A is shown. If you assign a static IP address, then that address is shown.
2   Make a note of the IP address. You will use this to access the web interface of the Serial GW 3340.

Configuring the Serial GW 3340

Step one: Log in to the Serial GW 3340

All administration of the Serial GW 3340 is performed via the web interface. To log in:

1   Use your browser to navigate to the IP address of the Serial GW 3340 (the previous step describes how to discover the IP address).

2   Click **Log in** and enter the user name `admin` with no password.
The **Login information page** is displayed.

> We recommend that you change the admin account to use a password as soon as possible. To do that, click **Change password** on the **Login information** area of the **Home** page or go to **Users**, click the **admin** link, and provide the required user information.

Step two: Allocate port licenses

If your Serial GW 3340 does not already have the appropriate port licenses pre-activated, you need to enable the licenses manually. To do that, make sure you have the appropriate activation code and then go to the **Settings** > **Upgrade** page of the web interface (see the online help for more details).

Step three: Configure the serial ports

1   In the web interface, go to **Settings > Serial ports**.

2   For **Port type,** select the appropriate serial network protocol.

3   For **Cable length**, there is no need to change this setting if you are using standard cables. If you are using non-standard cables then select the appropriate measurement.

4   We recommend that you leave the remaining settings to their default values.

5   Click **Apply changes** to save the configuration changes.

6   Restart the Serial GW 3340.

Step four: Configure an H.323 gatekeeper

If you have H.323 endpoints, using an H.323 gatekeeper can make it easier for callers to make their call. You can configure the Serial GW 3340 to use an external gatekeeper or its own built-in gatekeeper.

To configure an H.323 gatekeeper, go to the **Settings > H.323** page of the web interface (see the online help for more details).

Step five: Configure the dial plan

The default behavior of the Serial GW 3340 is to reject all calls. You must configure a dial plan to allow permitted calls to be placed.

Below are some simple configurations for dial plan rules. See the online help for more information about dial plan rule syntax.

IP to serial dial plan setup

This example allows IP endpoints to dial (via a gatekeeper) a destination number over the serial network. It assumes that the Serial GW 3340 is registered to the gatekeeper with dial plan prefix 888.

1   In the web interface, go to **Dial plan > IP to Serial** and click **Add rule**.
2   For **Condition**, select **Called number matches** and enter the appropriate match for incoming calls to serial endpoints. For example, 888(D*).
3   For **Action**, select **Call this number** and enter $1.
4   Leave the other values unchanged.
    Click **Add rule** to add the rule to the dial plan.

Serial to IP dial plan setup

Option 1. This example assumes that the Serial GW 3340 is configured with at least one serial port and that you require access to a single, defined endpoint on the IP side.

1   Go to **Dial plan > Serial to IP**, and click **Add rule**.
2   For **Condition match calls incoming on port**, select **Any**.
3   For **Action**, select **Call this number** and enter the destination IP endpoint address in any valid format (IP address, hostname, H.323 alias, E.164 number, or H.323 URI).
4   Leave the other values unchanged.
    Click **Add rule** to add the rule to the dial plan.

Option 2. This example assumes that the Serial GW 3340 is configured with at least one serial port and that you require access to multiple endpoints on the IP side. When you initiate a call from the serial endpoint you will be greeted by the Serial GW 3340 auto attendant.

1   Go to **Dial plan > Serial to IP**, and click **Add rule**.

2   For **Condition match calls incoming on port**, select **Any**.

3   For **Action**, select **Enter the auto attendant**.

4   Leave the other values unchanged.
     Click **Add rule** to add the rule to the dial plan.

There are a number of ways in which you can use the dial plan. For example, you can use it to enable the Serial GW 3340 to join incoming calls to the correct conference on a Cisco TelePresence MCU. Dial plan configurations and rule syntax are explained in greater detail in the online help.

Troubleshooting and technical support information

Refer to this section if you are experiencing difficulties with the Serial GW 3340.

Calls fail to complete

If outgoing calls fail to complete, check that you have configured the Serial GW 3340 and all other equipment correctly, paying particular attention to the number you are trying to call. Remember that endpoints may be busy when you call them.

Using the event log to help solve a problem

You can use the event log to produce debugging information to assist technical support in solving any problems. Event logging capture filter topics are set by default to **Errors, warnings and information**. Do not change the capture filter topic level without the guidance of technical support.

Getting more help

If you experience any problems when configuring or using the Serial GW 3340, consult the online help available from the user interface.

If you cannot find the answer you need, check the web site at http://www.cisco.com/cisco/web/support/index.html where you will be able to:

‣ Make sure that you are running the most up-to-date software.

‣ Get help from the Cisco Technical Support team.

Make sure you have the following information ready before raising a case:

‣ Identifying information for your product, such as model number, firmware version, and software version (where applicable).

‣ Your contact email address or telephone number.

‣ A full description of the problem.

Pin outs

⚠️ **No RTS signal support on DCE side**

The DB-26 connectors on the network switch side (DCE) of the Y cable do not support the RTS (request to send) signal. We strongly advise that your DCE equipment is configured to operate without RTS. If this is not possible, contact Cisco customer support for assistance and they will advise you on cable re-pinning options.

On some encryption devices the RTS signal is known as PTRS (plain text ready to send) and may need to be configured as "Forced On".

V.35 pin out

⚡ Cables should be at minimum shielded cable with metal backed connectors in order not to compromise EMC performance.

Table 2: Pin assignments for V.35 interfaces

DTE	⟶	DCE	
Pin	**Direction**	**Signal**	**Description**
1	◄►	FGND	Frame ground/shield
11	⟶	TD-A	Send data
12	⟶	TD-B	Send data
13	◄	RD-A	Receive data
14	◄	RD-B	Receive data
15	◄	RC-A	Receive clock
16	◄	RC-B	Receive clock
17	◄	TC-A	Send clock
18	◄	TC-B	Send clock

Table 2: Pin assignments for V.35 interfaces

DTE		DCE	
Pin	**Direction**	**Signal**	**Description**
19	◄─►	SG	Signal ground
22	◄──	CD	Carrier detect
23	◄──	SG	Signal ground
24	◄──	RI	Ring indicator
25	──►	LOS	Synchronization signal (some encryption devices)
26	──►	DTR	DTE ready

RS-530 pin out

⚠️ Cables should be at minimum shielded cable with metal backed connectors in order not to compromise EMC performance.

Table 3: Pin assignments for RS-530 interfaces

DTE	→	DCE	
Pin	Direction	Signal	Description
1	◄►	FGND	Frame ground/shield
11	→	TD-A	Send data
12	→	TD-B	Send data
13	←	RD-A	Receive data
14	←	RD-B	Receive data
15	←	RC-A	Receive clock
16	←	RC-B	Receive clock
17	←	TC-A	Send clock
18	←	TC-B	Send clock
19	◄►	SG	Signal ground
20	→	DTR-A	DTE ready
21	→	DTR-B	DTE ready
22	←	CD-A	Carrier detect
23	←	CD-B	Carrier detect
25	→	LOS	Synchronization signal (some encryption devices)

RS-449 pin out

⚠ Cables should be at minimum shielded cable with metal backed connectors in order not to compromise EMC performance.

Table 4: Pin assignments for RS-449 interfaces

DTE	➡	DCE	
Pin	**Direction**	**Signal**	**Description**
1	◄►	FGND	Frame ground/shield
11	➡	TD-A	Send data
12	➡	TD-B	Send data
13	◄	RD-A	Receive data
14	◄	RD-B	Receive data
15	◄	RC-A	Receive clock
16	◄	RC-B	Receive clock
17	◄	TC-A	Send clock
18	◄	TC-B	Send clock
19	◄►	SG	Signal ground
20	➡	DTR-A	DTE ready
21	➡	DTR-B	DTE ready
22	◄	CD-A	Carrier detect
23	◄	CD-B	Carrier detect
24	◄	IC	Incoming call
25	➡	LOS	Synchronization signal (some encryption devices)

RS-366 pin out

Cables should be at minimum shielded cable with metal backed connectors in order not to compromise EMC performance.

Table 5: Pin assignments for RS-366 interfaces

DTE	→	DCE	
Pin	**Direction**	**Signal**	**Description**
1	◄►	FGND	Frame ground/shield
2	→	DPR	Digit present
3	←	ACR	Abandon call and retry
4	→	CRQ	Call request
5	←	PND	Present next digit
6	←	DLO	Data line occupied
7	→	NB1	Digit bit 1
8	→	NB2	Digit bit 2
9	→	NB4	Digit bit 4
10	→	NB8	Digit bit 8

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