



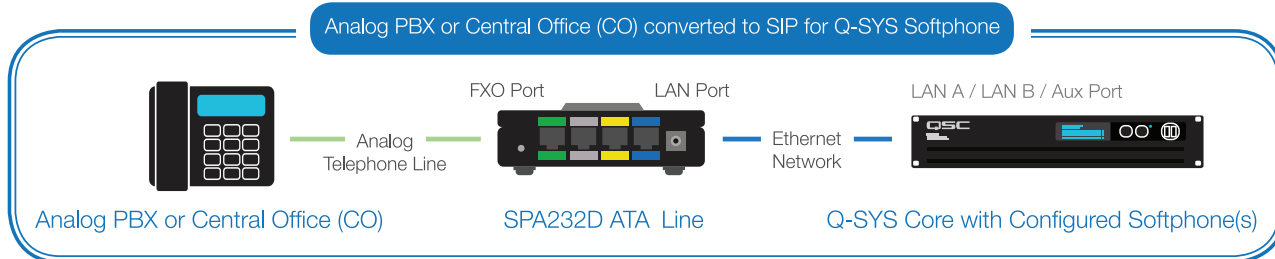
# Analog Telephone Adapter Setup for Q-SYS™ Softphone

## Cisco SPA232D

This document applies to this Cisco device:  
**SPA232D**

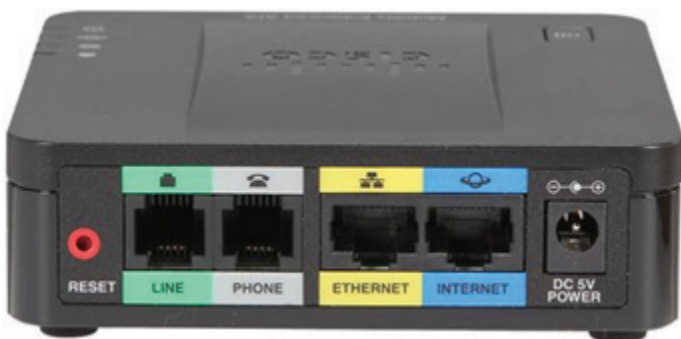
### Introduction

This document covers the use of the SPA232D in the role of analog telephone adapter (ATA) from an analog telephone network to the Q-SYS softphone, shown below:



### Configuration

To configure the SPA232D Analog Telephone Adapter (ATA), you will need an AC mains power outlet and a computer with a wired Ethernet port and up-to-date web browser. You may need Internet access to download a firmware update.



1. Plug the power supply (provided with the ATA) into an AC mains outlet and plug its DC output connector into the DC power jack on the ATA.
2. Connect the POTS line to the green **LINE** port. Using a standard Ethernet cable, connect the computer's network port to the yellow **ETHERNET** port.
3. Set the computer's network interface to obtain an IP address from a DHCP server.

4. If the computer has any other network interface cards (NICs), such as WiFi, additional wired ports, etc., disable them for the time being.
5. The computer should automatically obtain the IP address 192.168.15.100 from the DHCP server in the ATA.
6. Open a web browser and navigate to the IP address **192.168.15.1**. The web interface page of the ATA should appear.

If the browser cannot connect to the web interface, do a factory reset on the ATA. To do so, insert a thin pointed object (e.g., a pin, a straightened paper clip, et al) into the red hole labeled RESET. Press the recessed button inside and hold it until the power LED on the ATA starts flashing (this should take less than 10 seconds). Release the button and allow the ATA to run until the power LED is solid. Then, disconnect power for several seconds and re-connect it. This will reboot the ATA with factory default settings. Once the power LED stays solid, try connecting the browser to 192.168.15.1 again. You might need to refresh the browser several times.

7. Take note of the firmware version displayed on the login page. If it is older than version 1.4.1, locate and download the latest update at <https://software.cisco.com/portal/pub/download/portal/select.html?&mdfid=284517857&softwareid=282463187> so you can apply it later.  
It downloads as a .zip file, so you will have to unzip it to a .bin file.
8. Log in to the web interface. The factory default credentials are admin (user name) and admin (password).
9. If you need to update the firmware, go to **Administration > Firmware Upgrade**. Select the .bin file and follow the instructions on the web interface page. When the update is uploaded and applied, the ATA will restart. Allow it to finish restarting before proceeding.
10. Go to **Administration > Management > User List** and click the pencil icon to the right of the admin account. Change the admin password to something secure other than admin. You may also change the admin user name. Click **Submit**.
11. Go to **Administration > Management > Web Access Management** and select these options:
  - Admin Access: **Enabled**
  - Web Utility Access: **Check both HTTP and HTTPS**
  - Remote Management: **Enabled**
  - Web Utility Access: **HTTP**
  - Remote Upgrade: **Enabled**
  - Allowed Remote IP Address: **Any IP Address**
  - Remote Management Port: **80**

Click **Submit**.

12. Go to **Network Setup > Internet Settings**. Change the **Connection Type** to **Static IP** and set a valid Internet IP address, subnet mask, and default gateway for the network. Click **Submit**.

The static IP address ensures that a Q-Sys Smartphone can always reach the ATA. Do not enter a temporary IP address here; use only the ATA's permanent WAN address.

13. Go to **Network Settings > Basic Setup > Network Service** and change **Networking Service** to **Bridge**. Click **Submit**. The ATA will reboot to implement these settings, which may take longer than two minutes. While it reboots, continue with steps 14 and 15.

14. Adjust the computer's IPv4 settings to allow access to the Core and the ATA's WAN IP address, which was set in an earlier step.
15. Disconnect the ATA from the computer's network port. Connect both the ATA and the computer to the same switch and VLAN that the Q-Sys Core is connected to.
16. In the web browser, use the ATA's WAN IP address to access its web interface. The web interface should appear once the unit finishes rebooting. You might need to refresh the browser. When the page appears, log in using the new credentials.
17. Go to the Quick **Setup** page.

Handset - Outgoing DECT Line Selection				
DECT Line	1	2	3	4
Handset 1(0000000000)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handset 2(0000000000)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handset 3(0000000000)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handset 4(0000000000)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handset 5(0000000000)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>All Handsets</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Clear this check box**

- a. Under **Handset—Outgoing DECT Line Selection**, clear the check box to the right of **All Handsets** (see the figure at left). This will clear all the check boxes in the left column, under DECT Line 1.
- b. Under **Handset—Incoming DECT Line Selection**, clear all the check boxes in the **All** row, and clear the check box at the bottom of the **All Handsets** column (see the figure below).

Click **Submit**. Wait for the web interface page to return.

Handset - Incoming DECT Line Selection						
Handset	1 (0000000000)	2 (0000000000)	3 (0000000000)	4 (0000000000)	5 (0000000000)	All Handsets
DECT Line 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DECT Line 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PSTN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>All</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Clear these check boxes**

18. Click the **Voice** tab.

NOTE: To save time, assign all the following settings, then click **Submit** once at the end.

		Parameter	Setting
Line 1		<b>Line</b>	<b>No</b>
PSTN	SIP Settings	<b>SIP Port</b>	<b>5060</b>
	Proxy and Registration	<b>Proxy</b>	Enter the Q-Sys Core's Softphone IP address (this address is assigned in the <b>Core Interface</b> tab of Q-Sys Administrator)
		<b>Register</b>	<b>No</b>
		<b>Make Call Without Reg</b>	<b>Yes</b> (default value)
		<b>Ans Call Without Reg</b>	<b>Yes</b> (default value)
	Audio Configuration	<b>Preferred Codec</b>	<b>G711u</b>
		<b>G729a Enable</b>	<b>No</b>
		<b>DTMF Process INFO</b>	<b>No</b>
		<b>DTMF Tx Method</b>	AVT (this is Cisco's term for out-of-band DTMF RTP events)
	Dial Plans	<b>Dial Plan 8</b>	( <i>S0&lt;: nnnn</i> ) where <i>nnnn</i> is a four- to 10-digit number. You will have to use this same number as the <b>User Name</b> telephone number in Step 22.  You may use the same number as the POTS line, if you wish, but it is not required.
	VoIP-To-PSTN Gateway Setup	<b>DECT Line Caller DP</b>	<b>None</b>
	PSTN-To-VoIP Gateway Setup	<b>PSTN Caller Default DP</b>	<b>8</b>
	PSTN Timer Values (sec)	<b>PSTN Answer Delay</b>	<b>2</b>
	International Settings	<b>FXO Country Setting</b>	Select the appropriate country from the list, if not US

Click **Submit**. The ATA will restart.

19. Because the ATA is operating with networking bridged, you may switch the network connection at this point from the yellow Ethernet port to the blue Internet port. Either port will work for accessing the ATA, but the blue port has a network activity indicator LED, while the yellow one does not.

20. If you wish to save a backup file of this configuration, click on the Administration tab. Go to **Config Management > Backup Configuration**.

Click **Backup** to download the configuration file. NOTE: The SPA232D configuration file is not in editable text form.

21. In Q-Sys Administrator, click the **Softphones** tab. Double-click the **Softphone** instance you wish to assign the ATA to.

# Analog Telephone Adapter Setup for Q-SYS Softphone

## Cisco SPA232D



22. In the Edit Softphone dialog box, assign these settings:

Option	Setting
<b>User Name</b>	Enter the phone number assigned in the <b>Dial Plan 8</b> setting in Step 18.
<b>CID Name</b> (Q-Sys Designer v4.2 and higher only)	Enter the Caller ID name that Q-Sys should report to the gateway.
<b>Proxy</b>	Enter the WAN IP address assigned to the ATA in Step 12.
<b>Register With Proxy</b>	No
<b>Call Start Tone</b>	Choose one:  <b>Yes</b> = When a call connects, a short tone is produced.  <b>No</b> = No tone is produced when a call connection is made.

Click **OK**.

23. If you are using Q-Sys Designer 4.1, select **File > Disconnect** (or press **F7**), and then select **File > Save to Core & Run** (or press **F5**). This will make the Softphone changes in the Q-Sys Core.

NOTE: This step is unnecessary in Q-Sys Designer 4.2 and later.