



Installing and Administering the Avaya H229 Phone

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Denan Power Cord Statement



Danger:

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The operation of this equipment is subject to the following two conditions:

1. It is possible that this equipment or device may not cause harmful interference, and
2. This equipment or device must accept any interference, including interference that may cause undesired operation.

La operación de este equipo está sujeta a las siguientes dos condiciones:

1. Es posible que este equipo o dispositivo no cause interferencia perjudicial y
2. Este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Power over Ethernet (PoE) Statement

This equipment must be connected to PoE networks without routing to the outside plant.

U.S. Federal Communications Commission (FCC) Statements

Class B Part 15 Statement

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designated to provide reasonable protection against harmful interferences in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interferences to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

EU Countries

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General Safety Warning

- Use only the Avaya approved Limited Power Source power supplies specified for this product.
- Ensure that you:
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Chapter 1: Introduction

Purpose

This document provides procedures for installing, configuring, administering, and troubleshooting the Avaya H229 phone. This document is primarily intended for implementation engineers and administrators.

Change history

This section describes the key changes since the first issue of this document. This section is not included in new documents that have not been updated since the first issue.

Issue	Date	Summary of changes
Issue 1	April 2018	First issue of this document for the initial release.
Issue 2	September 2018	<ul style="list-style-type: none">• Updated Verifying IP address information on page 10.• Added more information about DHCP options in Configuring manual phone provisioning on page 11.• Updated Configuring automatic phone provisioning on page 12.• Added Avaya Aura configuration for failover on page 13.• Updated SIP page on page 18.• Minor rephrasing in Features page on page 29.• Updated Audio page on page 31.• Added Cannot receive incoming calls after failover occurs on page 36.

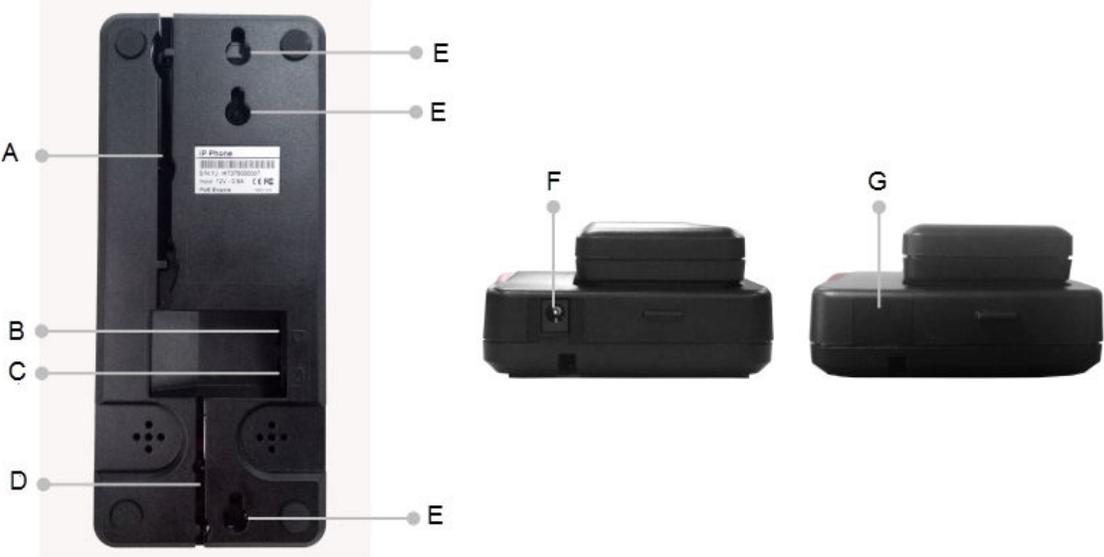
Chapter 2: Overview

The Avaya H229 phone is a SIP-based phone, intended to be used in hotels. The phone supports a variety of telephony operations, including making and answering a call, transferring a call, placing a call on hold, and accessing voice mail messages.

Chapter 3: Initial setup and connectivity

Device connections

The following images show the connectors and ports available on the Avaya H229 phone:



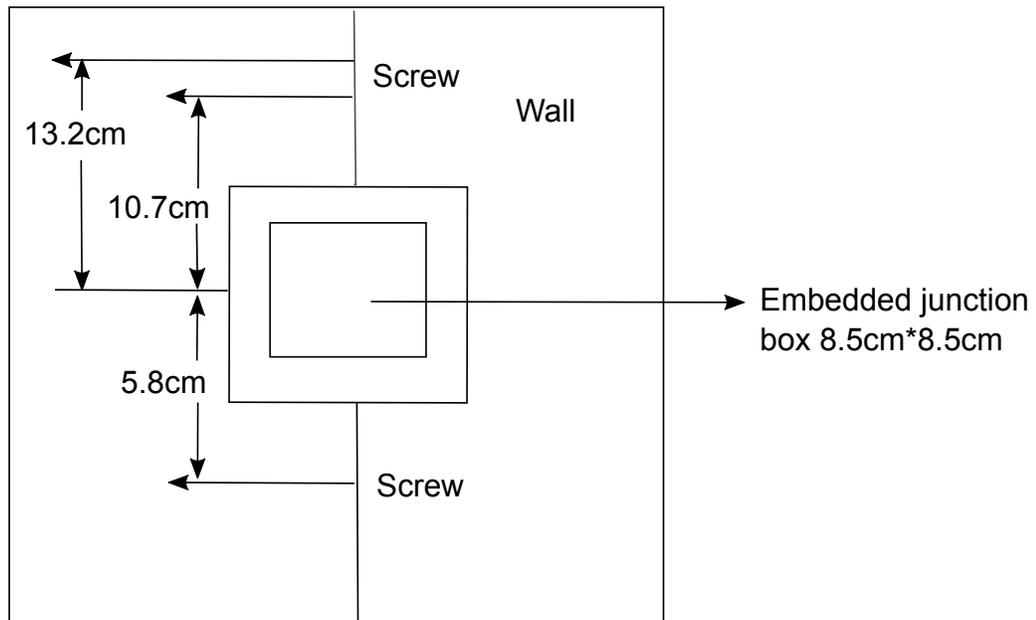
Callout	Description
A	Cable trough.
B	WAN port.
C	Headset port for connecting the headset cord.
D	Handset wire trough.
E	Wall mount holes.
F	Power port. If the power port is not used, put a PVC plate on it to protect it from dirt or debris.
G	PVC plate.

Mounting the phone on the wall

Procedure

1. Screw the embedded junction box onto the wall.

Use the following dimensions when screwing the embedded junction box onto the wall:



2. Connect the cable from the embedded junction box to the phone.
3. Hitch the phone on the screw.

Chapter 4: Phone settings configuration and management

You must configure the phone before it can be used. Mandatory configuration tasks include configuring the IP address, and using the web portal to set up SIP settings.

You can also perform other configuration and management tasks on the web portal. For information about working with the web portal, see [Device management through the web portal](#) on page 14.

IP address configuration

Dynamic Host Configuration Protocol (DHCP) is the default setting in the network. By default, the phone will obtain its IP address from the DHCP server after the line is connected.

Other methods of configuring the IP address are:

- **Static IP configuration:** This option allows users to manually configure parameters, including the IP address, subnet mask, default gateway, and DNS servers. This method can be used in an office environment or by power users.
- **Point-to-Point Protocol over Ethernet (PPPoE):** You can use this option if you connect the device to a broadband modem or router. To establish the PPPoE connection, configure the username and password provided by the service provider

Verifying IP address information

About this task

Use this procedure to verify the IP address settings.

Procedure

1. Pick up the handset.
2. Press and hold # for approximately three seconds to hear information about the IP address.

Manual and automatic phone provisioning

Configuring manual phone provisioning

About this task

Use this procedure to configure manual provisioning. With this process, phones can upgrade their firmware, obtain the configuration file, and register to Avaya Aura® or IP Office.

Procedure

1. Log in to the web portal and navigate to **System > Upgrade**.
2. From the Software upgrade area, click **Select** to browse for the system image file and then click **Upgrade**.
3. Navigate to **System > Auto Provision** and determine whether you want to use DHCP or the static provisioning server to obtain the configuration file.
4. If you are using the DHCP option to obtain the configuration file, do the following:
 - a. Navigate to **DHCP Option**.
 - b. From **Option Value**, select **Option 66**.

You can also select another DHCP option if required. For example, you can select **Option 43** or enter a custom DHCP value. For the custom DHCP option, the supported setting range is 128 to 254.
 - c. Click **Apply** when you are ready to apply your changes.
5. If you are using the static provisioning server to obtain the configuration file, do the following:
 - a. Navigate to **DHCP Option**.
 - b. From **Option Value**, select **Disabled**.
 - c. Navigate to **Static Provisioning Server**.
 - d. In **Server Address**, enter the server IP address.
 - e. In **Configuration File Name**, enter `$mac.cfg` or `<real mac>.cfg`.
 - f. From **Protocol Type**, select the appropriate protocol.
 - g. From **Update Mode**, select **Update After Reboot** or **Update at Time Interval**.

If you select **Update at Time Interval**, you must also specify an update interval period.
 - h. Click **Apply** when you are ready to apply your changes.
6. Navigate to **Line > SIP > Basic Settings** to configure the SIP server settings, which are described in [SIP page](#) on page 18.

7. Navigate to **Line > SIP > Advanced Settings > Transport Protocol** to select the protocol for SIP transmission.

The line can use TCP, UDP, or TLS for SIP transmission.

Configuring automatic phone provisioning

About this task

Use this procedure to configure automatic provisioning. You can use this method to provision firmware for a large number of phones.

Before you begin

Ensure that the DHCP server is set up. Contact your server software vendor to obtain server software installation and configuration instructions.

Procedure

1. On the DHCP server, navigate to the appropriate option; for example, Option 66.
2. Enter the path of the configuration file server.

The following image shows an example for Option 66. The process is almost the same if you are using another DHCP option. For example, with Option 43, navigate to **043 Vendor Specific Info** on the DHCP server and then enter the path of the configuration file server.

Option Name	Vendor	Value	Policy Name
003 Router	Standard	10.16.7.1	None
006 DNS Servers	Standard	10.16.172.177	None
015 DNS Domain Name	Standard	hcm.com	None
066 Boot Server Host Name	Standard	http://10.16.7.212	None
116 116	Standard	httpsrvr=10.128.225.142	None
Unknown	Standard		None
Unknown	Standard		None
145 145	Standard	httpsrvr=lvotot,mcipadd=10.16.26.4	None
Unknown	Standard		None
165 165	Standard	httpsrvr=10.16.7.144	None
169 co le la Tuyen	Standard	httpsrvr=vokhactuyen.hcm.com,...	None
170 Hong	Standard	httpsrvr=vokhactuyen.hcm.com,...	None

3. Put the configuration file on the file server.

The name of the configuration file should use the format `f0H2xxhw1.100.cfg`, where `H2xx` is the phone model.

Some HTTP, HTTPS, and FTP file servers require authentication with a user name and password. In this case, you can include the user name and password in the URL. For example: `http://<username>.<password>@<IP_address>`.

4. In the AUTOUPDATE CONFIG MODULE section of the configuration file, add `Auto Image Url` with the path of the firmware file.

For example: Auto Image Url: `http://172.16.6.39/hotelh2s2.4.0.5379T20180209153130.z`

```
<SIP Hotspot MODULE>
Enable Hotspot      :0
Mode                :1
Listen Type         :0
Listen IP           :224.0.2.0
Listen Port         :16360
Remote Port         :16360
Own Name            :SIP Hotspot
--Line Conf List-- :
HS1 Enable          :1

<AUTOUPDATE CONFIG MODULE>
Auto Image Url      : http://172.16.6.39/hotelh2s2.4.0.5379T20180209153130.z
Download Username   :
Download Password   :
FDPS Enable         :0
Config File Name    :
Config File Key     :
```

After the phone obtains the `.cfg` configuration file, it reads the Auto Image Url parameter and then obtains firmware from the specific location.

5. Include other SIP server configuration information, such as Avaya Aura® and IP Office configuration, in the configuration file.

Result

Your phone will be automatically configured after you plug it in.

Avaya Aura® configuration for failover

About this task

Failover occurs when the primary server goes down and the phone registers to the secondary Session Manager. If you end an active call after failover occurs, the line on Communication Manager might remain busy. If this occurs, you will not be able to receive incoming calls. Use this procedure to modify the configuration on Avaya Aura® to prevent this issue from happening.

Procedure

Do one of the following:

- Increase the number of lines in the profile configuration on System Manager.

By default, the profile has three lines configured for the extension. Increase it to five lines or more.

+ Tip:

Increase the number by two lines at a time. For example, if you have three lines, you can increase to five, and if you have five lines, you can increase to seven.

For more information about endpoint configuration on System Manager, see *Administering Avaya Aura® System Manager*.

- Modify the Communication Manager configuration to allow the phone to receive a call on the last available line if the first two are busy.

For more information, see *Administering Avaya Aura® Communication Manager*.

Device management through the web portal

You can use the web portal to manage the Avaya H229 phone settings. Before using the phone, you must configure SIP settings.

Accessing the web portal

About this task

Use this procedure to log in to the web portal to manage phone settings.

Before you begin

- The phone and the computer you are using to access the web portal must be connected to the same LAN.
- Obtain the IP address for the phone.

Procedure

1. In your browser, enter the IP address of the phone and press **Enter**.
2. On the Login page, do the following:
 - In the **User** field, type `admin`.
 - In the **Password** field, type `admin`.
 - In the **Language** field, select the appropriate language.
3. Click **Logon**.

! Important:

Change the password after logging in for the first time.

Guidelines for changing passwords

For security reasons, Avaya recommends that you update your password from time to time. You should also change your password after logging in to the web portal for the first time.

You can use the Account page on the System tab to modify the password. The following are guidelines for creating passwords:

- The minimum password length is 8 characters by default.
- You can use the following character types:
 - Lowercase letters.
 - Capital letters.
 - Numeric characters.
 - Non-alphanumeric special characters, such as !, @, #, \$, %, ^, &, *, (,), -, +.
- Avoid creating a password that is the same as previous passwords. By default, the number of previous passwords that must not match is set to 1, but this value can be modified. You can set it between 0 to 12.
- Do not use repeated or sequential characters. You can enable or disable this setting. Examples of repeated or sequential characters are 12345678, abcdefgh, or bbbbbbbb.

Web portal navigation

System tab

The following sections describe the options that you can access from the System tab.

Information page

To access this page, click the **System** tab and then click **Information**.

From this page, you can access the following system and network information about the device:

- Device model.
- Hardware version.
- Software version.
- Uptime.
- Last uptime.
- Memory information.
- Network mode.
- MAC address.

- IP address.
- Subnet mask.
- Default gateway.
- SIP account including SIP account status.

Account page

To access this page, click the **System** tab and then click **Account**.

From this page, you can manage user accounts, assign privileges, and change the web portal password.

The user account is used to access the web portal.

There are two types of user privileges: Administrators and Users. The Users privilege provides limited access and does not enable you to modify all settings. Administrators have full access to the web portal and they can also manage user accounts.

Configurations page

To access this page, click the **System** tab and then click **Configurations**.

From this page, administrators can import or export the device configuration file and reset the device to its factory default settings.

Restoring factory default settings

About this task

Use this procedure to restore the device to its original factory settings. When you perform this procedure, all user settings and data will be removed and cannot be recovered.

Procedure

1. Log in to the web portal and navigate to **System > Configurations > Reset to factory defaults**.
2. Click **Reset** and then click **OK** to confirm.

Upgrade page

To access this page, click the **System** tab and then click **Upgrade**.

From this page, you can configure settings for upgrades. You can also manually upgrade firmware by navigating to the latest firmware file and then click **Upgrade**.

You should upgrade software for the Avaya H229 phone to keep the devices up-to-date, to gain access to new features, and to enhance stability and security.

You can configure manual or automatic provisioning for the phones. For more information, see [Configuring manual phone provisioning](#) on page 11 and [Configuring manual phone provisioning](#) on page 12.

Auto provision page

To access this page, click the **System** tab and then click **Auto Provision**.

From this page, you can deploy and manage the devices in bulk. You can also use this page to define the method to use for obtaining the configuration file, as described in [Configuring manual phone provisioning](#) on page 11.

Tools page

To access this page, click the **System** tab and then click **Tools**. From this page, you can set up settings to identify issues at troubleshooting, and reboot the phone.

Network tab

The following sections describe the options that you can access from the Network tab.

Basic page

To access this page, click the **Network** tab and then click **Basic**.

This page displays network status information, including the IP address, subnet mask, default gateway, and MAC address.

From this page, you can configure network settings. For information about configuring the IP address, see [IP address configuration](#) on page 10.

Advanced page

To access this page, click the **Network** tab and then click **Advanced**.

From this page, you can configure the following advanced settings:

- Link Layer Discovery Protocol (LLDP) settings.
- WAN VLAN settings.
- LAN port VLAN settings.
- Quality of Service (QoS) settings.
- 802.1X settings.

Using DHCP when VLAN is enabled

About this task

To get DHCP, after enabling VLAN, the switch port that uses VLAN must be in trunk mode.

Procedure

1. Use the switch port IP address to access the VLAN interface.

- From the VLAN tab, set **Tagging** to **tagAll(trunk)**.



VPN page

To access this page, click the **Network** tab and then click **VPN**. From this page, you can configure a Virtual Private Network (VPN) connection and view information about the VPN status.

Line tab

The following sections describe the options that you can access from the Line tab.

SIP page

To access this page, click the **Line** tab and then click **SIP**.

The following table describes SIP parameters to be configured for the Avaya H229 phone:

Option	Description	Option	Description
Basic settings			
Line Status	Current line status at page loading. You must refresh the page manually to get the up to date line status.	SIP Proxy Server Address	IP address or FQDN of the SIP proxy server.
Username	User name of the service account.	SIP Proxy Server Port	SIP proxy server port. The default is 5060.
Display Name	Display name to be sent in a call request.	Outbound Proxy Address	IP or FQDN address of outbound proxy server provided by the service provider.
Authentication Name	Authentication name of the service account.	Outbound Proxy Port	Outbound proxy port.
Authentication Password	Authentication password of the service account.	Realm	SIP domain if requested by the service provider.

Table continues...

Option	Description	Option	Description
			<p> Note:</p> <p>To register to SIP though FQDN when the SIP proxy server address is the same as the FQDN address, enter the full domain in this field. For example: hcm.com</p>
Activate		Select this check box to activate service for the line.	
Codecs Settings		Use this section to move codecs from Disabled Codecs list to the Enabled Codecs list.	
Advanced Settings			
Call Forward Unconditional	Use this check box to enable unconditional call forward: all incoming calls will be forwarded to the number specified in the next field.	Enable Auto Answering	Use this check box to enable auto-answering: incoming calls will be answered automatically after the delay time.
Call Forward Number for Unconditional	Number of unconditional call forward	Auto Answering Delay	Use this option to set the delay for incoming calls before the system automatically answers it.
Call Forward on Busy	<p>Use this check box to enable call forwarding when the line is busy. When the line is busy, any incoming call is forwarded to the number specified in the next field.</p> <p> Note:</p> <p>To enable Call Forward on Busy, you need to disable Call Waiting on the Features page. The call waiting feature is not supported on the Avaya H229 phone, but it is still visible in the web</p>	Subscribe For Voice Message	Use this check box to enable subscribing a voice message waiting notification. If enabled, the device receives notification from the server if there is voice message waiting on the server.

Table continues...

Option	Description	Option	Description
	interface on the Features page.		
Call Forward Number for Busy	Number for forwarding calls when the line is busy.	Voice Message Number	The number for retrieving voice messages.
Call Forward on No Answer	Use this check box to forward calls when there is no answer. When an incoming call is not answered within the configured delay time, the call is forwarded to the number specified in the next field.	Voice Message Subscribe Period	The interval for voice message notification subscriptions. You can enter a value between 60 and 65535 seconds.
Call Forward Number for No Answer		Number for call forwarding when there is no answer.	
Call Forward Delay for No Answer	Delay time for unanswered calls. After this time elapses, the call is forwarded.	Enable Hotline	Use this check box to enable hotline configuration. The device will call the hotline number when the handset is off-hook. You can also enable speaker phone or use a headset.
Hotline Delay	Use this option to set the delay in seconds for the hotline feature. If you set this value to 0, the call to the hotline number is made immediately.	Hotline Number	The hotline number to be dialed.
Enable DND	Use this option to enable the Do Not Disturb status. When DND is enabled, any incoming calls to this line will be rejected automatically.	Ring Type	Select the ring tone type for the line.
Blocking Anonymous Call	Use this option to block incoming calls that do not have a caller ID.	Conference Type	Select the type of call conference: <ul style="list-style-type: none"> • Local: set up call conference by the device itself, maximum supports two remote parties. • Server: set up call conference by dialing

Table continues...

Option	Description	Option	Description
			to a conference room on the server.
Server Conference Number		Conference room number when conference type is set to Server.	
Anonymous Call Standard	Use this option to set the standard to be used for anonymous calls.	Transfer Timeout	Timeout of call transfer process.
Dial Without Registered	Use this check box to set call out by a proxy without registration.	Enable Long Contact	Use this check box to allow more parameters in contact field per RFC 3840.
Click To Talk	Use this check box to enable making a call via a link.	Enable Use Inactive Hold	Use this check box to enable using inactive hold for transfers.
User Agent	Use this option to set the user agent. The default is Model with Software Version.	Enable Missed Call Log	Use this check box to enable saving missed calls into the call history record.
Use Quote in Display Name	Use this check box to add quote in display name.	Response Single Codec	Use this check box to enable using a single codec in response to an incoming call request.
Use feature code		When this setting is enabled, the features described below will not be handled by the device but by the server. To control enabling of the features, the device sends feature code to the server by dialing the number specified in each feature code field.	
Enable DND	Set the feature code to dial to the server.	DND disabled	Set the feature code to dial to the server.
Enable Call Forward Unconditional	Set the feature code to dial to the server.	Disable Call Forward Unconditional	Set the feature code to dial to the server.
Enable Call Forward on Busy	Set the feature code to dial to the server.	Disable Call Forward on Busy	Set the feature code to dial to the server.
Enable Call Forward on No Answer	Set the feature code to dial to the server.	Disable Call Forward on No Answer	Set the feature code to dial to the server.
Enable Blocking Anonymous Call	Set the feature code to dial to the server.	Disable Blocking Anonymous Call	Set the feature code to dial to the server.
Enable Send Anonymous	Set the feature code to dial to the server.	Disable Send Anonymous	Set the feature code to dial to the server.
Specific Server Type	Use this option to set the line to collaborate with a specific server type.	Enable DNS SRV	Use this check box to enable using DNS SRV, which resolves the

Table continues...

Option	Description	Option	Description
			FQDN in the proxy server to a service list.
Registration Expiration	Use this option to set the SIP expiration interval	Keep Alive Type	Use this option to set the line to use dummy UDP or SIP OPTION packets to keep the NAT pinhole opened.
Use VPN	Use this check box to enable using VPN restrict routing.	Keep Alive Interval	Use this option to set the keep alive packet transmission interval.
Use STUN	Use this check box to enable using STUN for NAT traversal.	Sync Clock Time	Use this check box to enable time synchronization with the server.
Convert URI	Use this check box to enable converting non-digit and alphabet characters to %hh hex code.	Enable Session Timer	Use this check box to enable call ending by session timer refreshment. The call session is ended if there is no new session timer event update received after the timeout period.
DTMF Type	Use this option to set the DTMF type to be used for the line.	Session Timeout	Use this option to set the session timer timeout period.
DTMF SIP INFO Mode	Use this option to set the SIP INFO mode to send '*' and '#' or '10' and '11'.	Enable Rport	Use this check box to enable adding Rport in SIP headers.
Transportation Protocol	Use this option to set the line to use TCP or UDP for SIP transmission.	Enable PRACK	Use this check box to enable supporting PRACK SIP messages.
SIP Version	Use this option to set the SIP version.	Keep Authentication	Use this check box to enable keeping the authentication parameters from before.
Caller ID Header	Use this option to set the caller ID header.	Auto TCP	Use this check box to enable using the TCP protocol to guarantee usability of transport for SIP messages above 1,500 bytes.
Enable Strict Proxy	Use this check box to enable using strict routing. When the phone	Enable Feature Sync	Use this check box to enable feature

Table continues...

Option	Description	Option	Description
	receives packets from the server, it uses the source IP address, not the via address.		synchronization with the server.
Enable user=phone	Use this check box to enable user=phone in SIP messages.	Enable GRUU	Use this check box to enable the Globally Routable User-Agent URI (GRUU).
Enable SCA	Use this check box to enable Shared Call Appearance (SCA).	BLF Server	Use this option to set the BLF server. The registered server will receive the subscription package from the ordinary application of the BLF phone. If the sever does not support the subscription package, the registered server and subscription server will be separated.
Enable BLF List	Use this check box to enable BLF lists.	BLF List Number	Use this option to set the BLF list number. It allows one BLF key to monitor the status of a group. Multiple BLF lists are supported.
SIP Encryption	Use this check box to enable SIP encryption. The SIP transmission will be encrypted.	RTP Encryption	Use this check box to enable RTP encryption. The RTP transmission will be encrypted.
SIP Encryption Key	Use this option to set the pass phrase for SIP encryption.	RTP Encryption Key	Use this option to set the pass phrase for RTP encryption.
TLS Version	Use this option to select the appropriate TLS version. Supported versions are TLS 1.0, 1.1, and 1.2.		

Dial peer page

To access this page, click the **Line** tab and then click **Dial Peer**.

From this page, you can create rules to make dialing easier. The following table describes the fields you can configure to create dialing rules. All of these fields, except **Phone Number** and **Call Mode**, are optional.

Field	Description
Phone Number	<p>There are two types of matching: Full matching and prefix matching. With full matching, the entire phone number is entered and then mapped according to the dial peer rules. With prefix matching, only part of the number is entered followed by <code>T</code>. The mapping will then take place whenever these digits are dialed. The prefix mode supports a maximum of 30 digits.</p> <p>* Note:</p> <p>Two different special characters are used:</p> <ul style="list-style-type: none"> • <code>x</code> -- Matches any single digit that is dialed. • <code>[]</code> -- Specifies a range of numbers to be matched. It may be a range, a list of ranges separated by commas or a list of digits.
Destination	Destination IP address.
Port	Signal port. The default is 5060 for SIP.
Alias	<p>The text to be added, replaced, or deleted.</p> <p>There are four types of aliases:</p> <ul style="list-style-type: none"> • <code>all: xxx – xxx</code> will replace the phone number. • <code>add: xxx – xxx</code> will be dialed before any phone number. • <code>del</code> –The characters will be deleted from the phone number. • <code>rep: xxx – xxx</code> will be substituted for the specified characters.
Call Mode	Signal protocol.
Suffix	Characters to be added at the end of the phone number.
Deleted Length	The number of characters to be deleted. For example, if this is set to 3, the phone will delete the first 3 digits of the phone number.

The following examples show how to use different aliases.

Example 1: Global substitution

This configuration is used for speed dialing. Configure the dial peer settings as follows:

Field	Value
Phone Number	32
Destination	255.255.255.255
Port	
Alias	<code>all:833333</code>

Table continues...

Field	Value
Call Mode	SIP
Suffix	
Deleted Length	

With this configuration, when you dial 32, the dialed number will be replaced by 833333. However, if you dial 322, the device sends 322 rather than 833332. The replacement rules should be matched globally.

Example 2: Local substitution

To dial a long distance call to Beijing requires dialing area code 010 before the local phone number. Using this feature, 1 can be substituted for 010. Configure the dial peer settings as follows:

Field	Value
Phone Number	1T
Destination	
Port	
Alias	rep:010
Call Mode	SIP
Suffix	
Deleted Length	1

With this configuration, you can dial 162213123 instead of 01062213123.

Example 3: Adding prefixes

If the dialed number starts with the fixed prefix number, the phone sends out your dialed phone number adding prefix number automatically. Configure the dial peer settings as follows:

Field	Value
Phone Number	9T
Destination	
Port	
Alias	add:007
Call Mode	SIP
Suffix	
Deleted Length	

With this configuration, when you dial 9312, the device sends 0079312.

Example 4: Adding suffixes

If the dialed number ends with the fixed suffix number, the phone sends out your dialed phone number adding suffix number automatically. Configure the dial peer settings as follows:

Field	Value
Phone Number	138T
Destination	
Port	
Alias	
Call Mode	SIP
Suffix	0088
Deleted Length	

With this configuration, when you dial 1383322, the device sends 13833220088.

Example 5: Deleting prefix numbers

If the dialed number ends with the fixed prefix number, the phone sends out your dialed phone number deleting the prefix number automatically. Configure the dial peer settings as follows:

Field	Value
Phone Number	9T
Destination	255.255.255.255
Port	
Alias	del
Call Mode	SIP
Suffix	
Deleted Length	1

With this configuration, when you dial 98322, the device sends 8322.

Dial plan page

To access this page, click the **Line** tab and then click **Dial Plan**.

The Avaya H229 phone supports the following dialing modes:

Option	Description
Press # to Send	Use this check box to enable dialing the desired number ending with # .
Dial Fixed Length	Use this option to configure the fixed length to dial out.
Send after	Use this option to specify the time after which the number is sent to the server.
Press # to Do Blind Transfer	Use this check box to enable the blind transfer onhook option: Press # after entering the target number for the transfer. The phone transfers the call to the remote party.

Table continues...

Option	Description
Blind Transfer on Onhook	Use this check box to enable the blind transfer onhook option: Hang up after entering the target number for the transfer. The phone transfers the call to the remote party.
Attended Transfer on Onhook	Use this check box to enable the attended transfer onhook option: Hang up after the remote party answers. The phone transfers the call to the remote party.
Attended Transfer on Conference Onhook	Use this check box to enable the attended transfer onhook option for conferences: Hang up during a three-way conference call. The other phone transfers the call to the remote party.
Press DSS Key to Do Blind Transfer	Use this check box to enable blind transfer using the DSS key. After talking, press the DSS key to perform the blind transfer.

Global settings page

To access this page, click the **Line** tab and then click **Global Settings**. From this page, you can configure global settings for lines and upload the TLS certification file.

The following table describes SIP and STUN settings to be configured for the Avaya H229 phone:

Option	Description
SIP Settings	
Local SIP Port	Use this option to set the local Sip port used to send and receive SIP messages.
Registration Failure Retry Interval	Retry interval of SIP registration when registration fails.
SIP Invite Restrict	Use this option to restrict SIP invites.
uaCSTA Enable	Use this option to enable uaCSTA.
STUN Settings	
STUN NAT Traversal	The STUN NAT Traversal estimation. If TRUE, STUN can penetrate NAT. If FALSE, STUN cannot penetrate NAT.
Server Address	STUN server address.
Server Port	STUN server port. The default is 3478.
Binding Period	STUN binding period, which can be used to keep the NAT pinhole opened.
SIP Waiting Time	Timeout of STUN binding before sending SIP messages.

SIP Hotspot page

To access this page, click the **Line** tab and then click **SIP Hotspot**. From this page, you can configure settings for the SIP hotspot function.

Configuring the SIP hotspot server and phone client

About this task

Use this procedure to configure the SIP hotspot server or client. The hotspot server must be configured before you configure the client.

Before you begin

Ensure that the SIP account is registered. For information about the SIP parameters to be configured, see [SIP page](#) on page 18. The SIP account for the SIP hotspot client is automatically obtained from the SIP hotspot server.

Procedure

1. Log in to the web portal and navigate to **Line > SIP Hotspot**.
2. In **Enable Hotspot**, select **Enable**.
3. In **Mode**, select one of the following:
 - To configure the server, select **Hotspot**.
 - To configure the client, select **Client**.
4. In **Monitor Type**, select one of the following:
 - **Multicast**: To limit the broadcast packets.
 - **Broadcast**: To send packets to all clients.
5. In **Monitor Address**, enter the broadcast address.

The monitor address should be the same for the hotspot server and the hotspot client.
6. In **Remote Port**, enter the remote port number.
7. In **Local Port**, enter the local port number.
8. In **Name**, enter the SIP hotspot name.
9. In **Line Settings**, select **Enable** and click **Apply**.

When configuring the SIP hotspot server, in the device table, you can view hotspot client information, such as the client IP address, MAC address, and the hotspot extension number.

When configuring the SIP hotspot client, in the device table, you can view hotspot server information.

Phone Settings tab

The following sections describe the options that you can access from the Phone Settings tab.

Features page

To access this page, click the **Phone Settings** tab and then click **Features**.

The following table describes the common configuration settings for the Avaya H229 phone. Only supported options are described. Some unsupported features are displayed in the web interface, but they are not described in this table.

Option	Description	Option	Description
Common Settings			
DND Mode	Use this option to set the phone DND. If the Phone DND is enabled, the phone rejects any incoming call, and the caller will automatically prompt hang up.	Ban Outgoing	Use this check box to disable dialing out.
Auto HangUp Delay	Use this option to set an auto hangup delay time.	Enable Call Completion	Use this check box to enable call completion. If the dialed line is busy, the SIP server inspects the dialed line status at intervals. If the dialed line is idle, the server sends a notify message to inform the caller to redial.
Hide DTMF	Use this option to set the hide DTMF mode.	Enable Pre-Dial	Use this check box to enable entering the number without opening audio channel. If disabled, the user enters number with an audio channel opened automatically.
Enable Silent Mode	Use this check box to disable the ring tone for incoming calls.  Note: On the H229 phone, the MWI does not blink when silent mode is enabled.	Disable Mute for Ring	Use this check box to disable the mute mode for ring.
Enable Intercom	Use this check box to enable intercom. The device will accept the	Enable Intercom Mute	Use this check box to enable the mute mode during the intercom call.

Table continues...

Option	Description	Option	Description
	incoming call request with a SIP header of alert-info instruction to automatically answer the call after specific delay time.		
Enable Intercom Tone	Use this check box to enable playing the intercom tone if the incoming call is an intercom call.	Enable Intercom Barge	Use this check box to enable auto-answering an intercom call during a call. If the current call is an intercom call, the phone rejects the second intercom call.
Emergency Call Number	Use this option to set the emergency call number. If the keypad is locked, you can dial the emergency call number.	DND Response Code	Use this option to set the SIP response code on call rejection on DND.
Enable Password Dial	Use this check box to enable password dialing. When the number entered begins with the password prefix, the following N numbers after the password prefix will be hidden as *. N stand for the value which you enter in the Password Length field. For example, if you set the password prefix as 3 and enter 2 in the Password Length , when you enter the number 34567, it will display 3**67 on the screen.	Busy Response Code	Use this option to set the SIP response code on line busy.
Password Dial Prefix	Use this option to set the prefix of the password call number.	Reject Response Code	Use this option to set the SIP response code on call rejection.
Enable Phone DND	Use this check box to enable phone DND.	Encryption Number Length	Use this option to set the encryption number length. The value must be from 0 to 31.
Restrict Active URI Source IP	Use this option to set IP address from which the	Push XML Server	Use this option to set the push XML server. When

Table continues...

Option	Description	Option	Description
	device accepts active URI command.		the phone receives request, it determines whether to display the content sent by the specified server.
Allow IP Call		Use this check box to enable dialing out with IP address.	
Play Dialing DTMF Tone		Use this check box to enable playing DTMF tone when the user presses keys at dialing. The default is enabled.	
Play Talking DTMF Tone		Use this check box to enable playing DTMF tone when the user presses keys during taking. The default is enabled.	
Caller ID Display Priority		Use this option to set caller ID display priority. The default priority is Phonebook > SIP Display Name > SIP URI.	
Hotline Number	Use this option to set the hot line number	Hotline Delay	Use this option to set the hot line delay time.

Audio page

To access this page, click the **Phone settings** tab and then click **Audio**.

The following table describes the audio configuration settings for the Avaya H229 phone. Only supported options are described. Some unsupported features are displayed in the web interface, but they are not described in this table.

Option	Description	Option	Description
First Codec	The first preferential DSP codec.	Second Codec	The second preferential DSP codec.
Third Codec	The third preferential DSP codec.	Fourth Codec	The fourth preferential DSP codec.
Fifth Codec	The fifth preferential DSP codec.	Sixth Codec	The sixth preferential DSP codec.
Onhook Time	The least reflection time for when the handset is down. The default is 200 ms.	Handset Volume	Use this option to set the handset volume. The value must be from 1 to 9.
Tone Standard	Country standard of call progress tones, including dial tone, busy tone, and ring-back tone.	Default Ring Type	If the caller ID of an incoming call is not configured with a specific ring type, the default ring is used.
Speakerphone Volume	Use this option to set the speakerphone volume.	Speakerphone Ring Volume	Use this option to set the ring volume. You can

Table continues...

Option	Description	Option	Description
	You can enter a value between 0 to 9.		enter a value between 0 to 9.  Note: When you receive an incoming call on your H229 phone, the MWI will only blink if this value is set to 8 or 9. If you decrease the ring volume, the MWI LED will not light up. This is because the MWI LED is lit based on the electric current of the ringing speaker. If you decrease the ring volume, the electric current is decreased, and the MWI cannot light up.
Region Select		You can set one of the following options: <ul style="list-style-type: none"> • Global: Provides acoustic tuning for use in all regions. • North America: Provides a tuning that is optimized for hearing aid compatibility. 	
G.729AB Payload Length	Length of the G729 Payload.	G.723.1 Bit Rate	You can select 5.3kb/s or 6.3kb/s.
G.722 Timestamps	You can select 160/20 ms or 320/20 ms.	DTMF Payload Type	Use this option to set the DTMF payload type. The value must be from 96 to 127.
Enable VAD	Use this check box to enable the Voice Activity Detection (VAD). When enabled, the device suppresses the audio transmission with artificial comfort noise signal to save the bandwidth.	Enable MWI Tone	Use this check box to enable playing the MWI tone when a new MWI comes.

MCAST page

To access this page, click the **Phone Settings** tab and then click **MCAST**.

This feature allows you to make a broadcast call to people who are in a multicast group. You can configure a multicast DSS Key on the phone to send an RTP stream to the pre-configured multicast addresses without involving SIP signaling. You can also configure the phone to receive an RTP stream from pre-configured multicast listening addresses without involving SIP signaling. You can specify up to 10 multicast listening addresses

The following table describes the MCAST settings to be configured for the Avaya H229 phone:

Option	Description
Priority	The priority of the active call: 1 is the highest priority and 10 is the lowest.
Enable Page Priority	The voice call in progress takes precedence over all incoming paging calls.
Name	Multicast server name.
Host:port	Multicast server's multicast IP address and port.

Time/Date page

To access this page, click the **Phone settings** tab and then click **Time/Date**.

The following table describes time settings to be configured for the Avaya H229 phone:

Option	Description
Network Time Server Settings	
Time Synchronized via SNTP	Use this check box to enable time synchronization through the SNTP protocol.
Time Synchronized via DHCP	Use this check box to enable time synchronization through the DHCP protocol.
Primary Time Server	Primary time server address.
Secondary Time Server	Secondary time server address. When the primary server is not reachable, the device connects to the secondary time server to get time synchronization.
Time zone	Time zone for the device.
Resync Period	Time of re-synchronization with the time server.
Time/Date Format	
12-Hour Clock	Use this check box to enable time display in 12-hour mode.
Date Format	Time/date display format.
Daylight Saving Time Settings	
Location	The user's time zone specific area.

Table continues...

Option	Description
DST Set Type	Type of DST setting: <ul style="list-style-type: none"> • Automatic: based on the preset rules of DST. • Manual: manually input rules.
Fixed Type	Use this option to set specific dates for conversion. In the automatic mode, it is displayed as read-only.
Offset	DST offset time.
Month Start/End	DST start/end month.
Week Start/End	DST start/end week.
Weekday Start/End	DST start/end weekday.
Hour Start/End	DST start/end time.

You can also set the date and time manually by choosing the desired date and time in the **Manual Time Settings** section.

Advanced page

To access this page, click the **Phone Settings** tab and then click **Advanced**. From this page, you can set the clear interval after which the redial records are cleaned.

Trusted certificates page

To access this page, click the **Phone Settings** tab and then click **Trusted Certificates**. From this page, you can update and delete trusted certificates files.

Call logs tab

On the Call logs tab, you can access call logs to view detailed information about incoming, outgoing, and missed calls. You can filter call logs based on the call type. Click on the appropriate column headings to sort call log entries by the call time, caller ID, contact name, call duration, or line.

You can also make a web call by clicking on the phone number in a call log.

 **Note:**

The phone can store approximately 629 call logs in total.

Chapter 5: Troubleshooting

This chapter describes known issues and solutions for these issues.

Before using this chapter, verify that all web portal settings are properly configured. You can use the System tab in the web portal to obtain network packet dumps, configure upgrades, and reset the device to its factory settings. For information about the web portal, see [Device management through the web portal](#) on page 14.

No audio during calls

Condition

When making a call, you get no audio or the other party does not hear you.

Solution

The firewall can block the audio stream. Disable this feature.

No access to the web portal

Condition

You cannot access the web portal.

Solution

1. Verify that the phone and the computer you are using to access the web portal are connected to the same LAN.
2. Verify the IP address you entered in your browser.
3. After verifying the connections, if necessary, reset the device to its factory default settings.

IP address issue

Condition

The IP address cannot be obtained.

Solution

Verify your network configuration settings.

Calls cannot be made

Condition

The line indicator flashes and an outgoing call cannot be made.

Solution

Check the SIP registration status, and make sure that the registration information is correct.

Cannot receive incoming calls after failover occurs

Condition

While you are on an active call, the primary Session Manager server goes down and failover occurs. After you end the call, you can no longer receive incoming calls for several hours. You can still make calls.

Cause

The line on Communication Manager remains busy. You cannot receive calls until the line on Communication Manager is automatically released based on the timer expiration.

Solution

To prevent this issue from happening, perform the configuration outlined in [Avaya Aura configuration for failover](#) on page 13.

Chapter 6: Resources

Documentation

See the following related documents at <http://support.avaya.com>

Title	Use this document to:	Audience
Deploying		
<i>Installing and Administering the Avaya H229 Phone</i>	Install, configure, and maintain the Avaya H229 phone.	Implementation personnel and administrators
Using		
<i>Using the Avaya H229 Phone</i>	Set up and use the Avaya H229 phone.	End users

Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Using the Avaya InSite Knowledge Base

The Avaya InSite Knowledge Base is a web-based search engine that provides:

- Up-to-date troubleshooting procedures and technical tips
- Information about service packs
- Access to customer and technical documentation
- Information about training and certification programs
- Links to other pertinent information

If you are an authorized Avaya Partner or a current Avaya customer with a support contract, you can access the Knowledge Base without extra cost. You must have a login account and a valid Sold-To number.

Use the Avaya InSite Knowledge Base for any potential solutions to problems.

1. Go to <http://www.avaya.com/support>.
2. Log on to the Avaya website with a valid Avaya user ID and password.
The system displays the Avaya Support page.
3. Click **Support by Product > Product Specific Support**.
4. In **Enter Product Name**, enter the product, and press `Enter`.
5. Select the product from the list, and select a release.
6. Click the **Technical Solutions** tab to see articles.
7. Select relevant articles.

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