



Avaya Solution & Interoperability Test Lab

Application Notes for Algo 8188 SIP Ceiling Speaker with Avaya IP Office - Issue 1.1

Abstract

These Application Notes describe the configuration steps required for Algo 8188 SIP Ceiling Speaker to interoperate with Avaya IP Office. Algo 8188 SIP Ceiling Speaker is a SIP-based device that can register with Avaya IP Office as two separate SIP endpoints, one for loud ringing and one for voice paging.

Readers should pay attention to section 2, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for Algo 8188 SIP Ceiling Speaker to interoperate with Avaya IP Office. Algo 8188 SIP Ceiling Speaker is a SIP-based device that can register with Avaya IP Office as two separate SIP endpoints, one for loud ringing and one for voice paging.

For loud ringing, Algo 8188 SIP Ceiling Speaker can be configured to ring whenever the associated desk phone receives an incoming call. The loud ringing is useful for users that require louder ringing than what is available from the desk phone. The simultaneous ringing at the desk phone and Algo 8188 SIP Ceiling Speaker is accomplished via the Avaya IP Office Mobile Twinning feature.

For voice paging, Algo 8188 SIP Ceiling Speaker can auto-answer an incoming call and allow the caller to broadcast audio over the Algo 8188 SIP Ceiling Speaker.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were manually placed to the loud ringing and voice paging extensions, with call controls such as hold/resume, unattended, attended transfer and conference performed from the caller.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The loud ringing feature testing included registration, internal and external caller, interactions with the voice paging extension, and interactions with desk phone features such as coverage, call forwarding, and do not disturb. The voice paging feature testing included registration, media shuffling, G.722, internal and external caller, interactions with the loud ringing extension, and interactions with caller actions such as drop, hold/reconnect, blind/attended transfer, and blind/attended conference.

The serviceability testing focused on verifying the ability of Algo 8188 SIP Audio Alerter to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to the device.

2.2. Test Results

The objectives outlined in **Section 2.1** were verified. All test cases passed, the following observations were made during the compliance testing:

- The call between Algo 8188 Page and Avaya phones (H.323, SIP, and digital) cannot be transferred in attended mode by Avaya phone to SIP phone. This feature is currently not supported on Algo 8188.

2.3. Support

Technical support on Algo 8188 SIP Ceiling Speaker can be obtained through the following:

- Phone: + 1 604 454 3792
- Web: <http://www.algosolutions.com/support/support.html>
- Email: support@algosolutions.com

3. Reference Configuration

Figure 1 illustrates the test configuration used during the compliance testing between the Avaya IP Office and Algo 8188 SIP Ceiling Speaker. The Algo 8188 communicated with IP Office through Avaya switch with Power over Ethernet (PoE) and registered with Avaya IP Office as two separate SIP endpoints, and the extensions used for the testing: one for Voice Paging and one for Loud Ringer. The PRI T1 trunk was also configured to connect from IP Office to PSTN for test cases off-net via PRI T1 trunk.

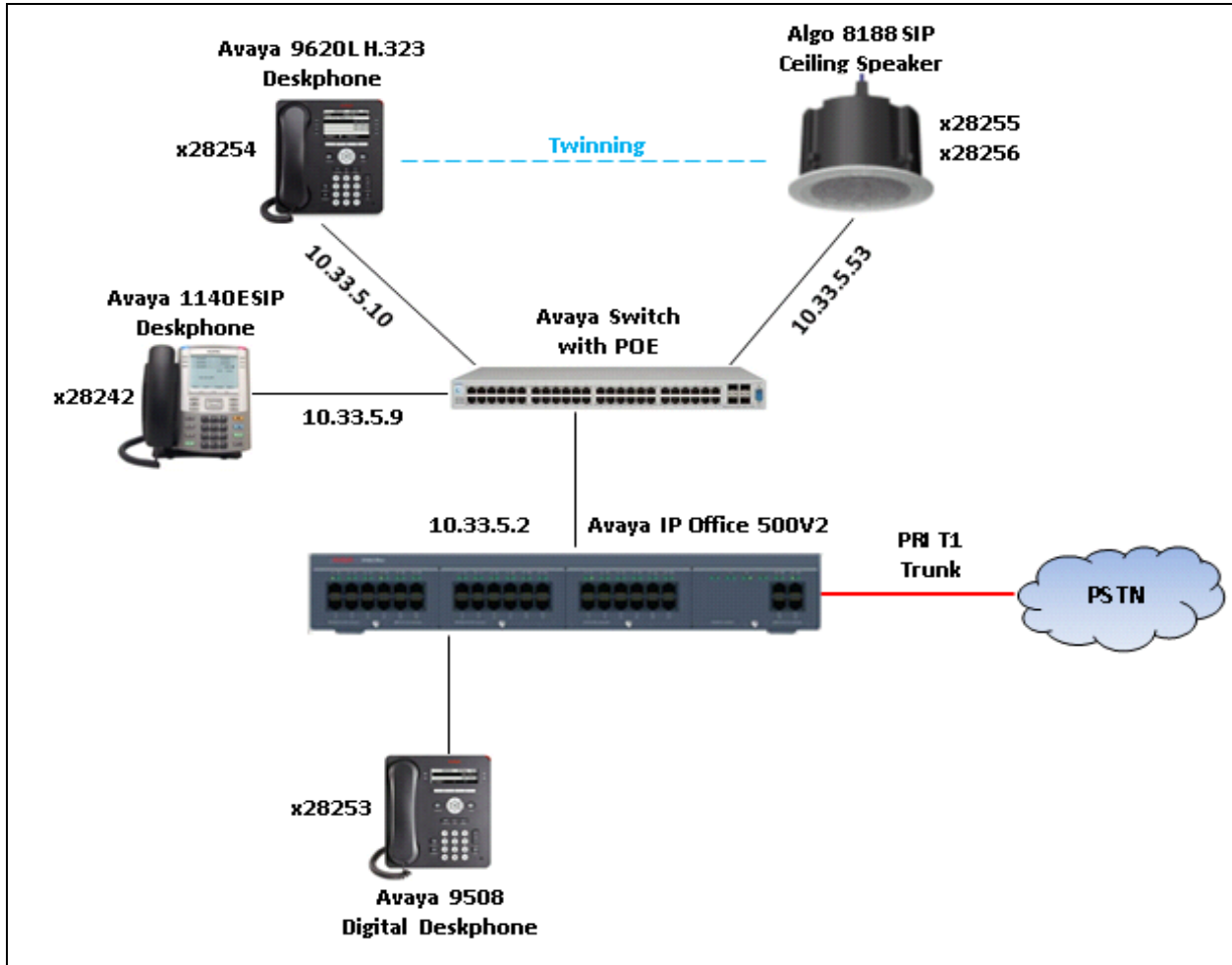


Figure 1: Test Configuration Diagram

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment	Software
Avaya IP Office 500V2	9.0.3.941
Avaya H.323 9620L IP Deskphone	3.220A
Avaya H.323 9650C IP Deskphone	3.220A
Avaya 1140E SIP Phone	4.3
Avaya 9508 Digital Phone	0.55
Algo 8188 SIP Ceiling Speaker	1.0

5. Configure Avaya IP Office

This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license.
- Obtain LAN IP address.
- Administer SIP registrar.
- Administer SIP extensions.
- Administer SIP users.
- Administer Internal Twinning.

5.1. Verify IP Office License

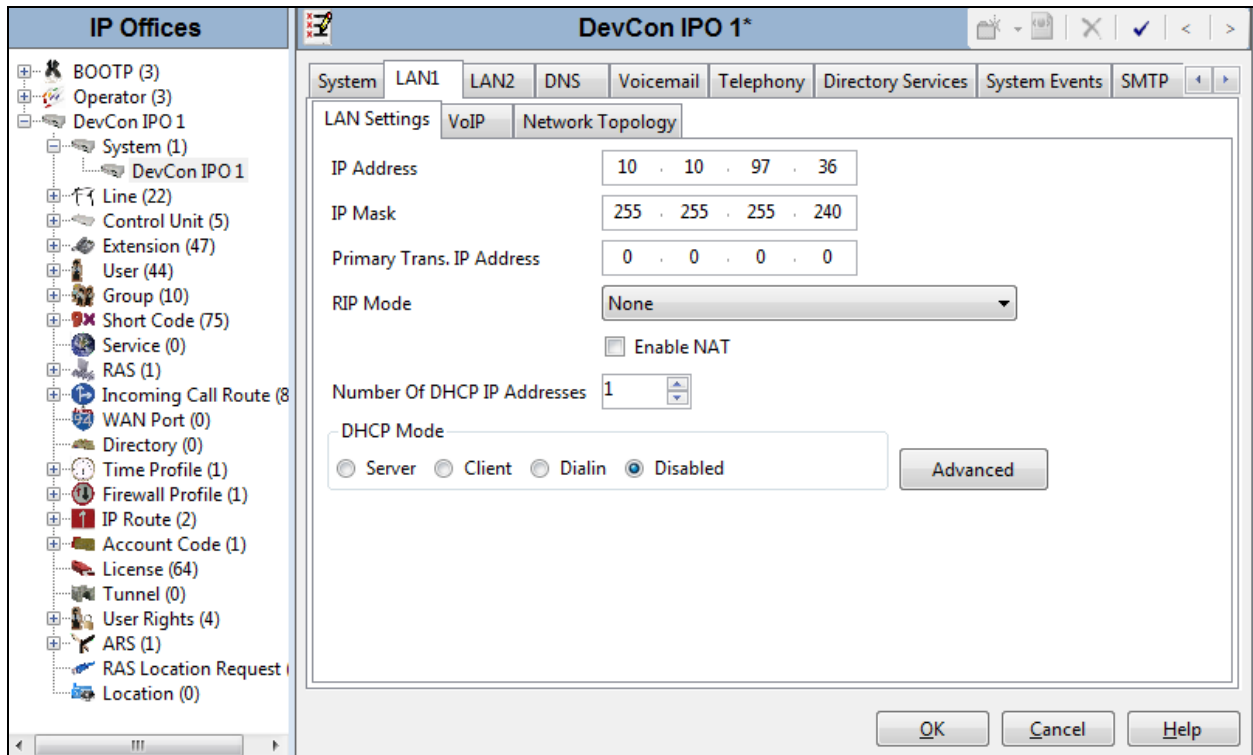
From a PC running the Avaya IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system, and log in using the appropriate credentials.

The **Avaya IP Office Manager** screen is displayed. From the configuration tree in the left pane, select **License**, the list of license displayed in the right panel. Verify that the **3rd Party IP Endpoints** status is “Valid”.

License	Remote Server	Quantity	Status
CCC Server		255	valid
CCC Agents		255	Valid
CCC PC Wallboards		255	Valid
CCC Supervisors		255	Valid
Receptionist		255	Valid
eBLF		255	Valid
Preferred Edition Additional Voice...		255	Valid
CCC Designer (users)		255	Valid
CCC Agent Rostering		255	Valid
3rd Party IP Endpoints	rUuVz9qudDzey2M2BdM_rNkg9VduGWMC	255	Valid
Phone Manager Pro (per seat)		255	Valid
CCC EMail		255	Valid
CCC Chat		255	Valid
AUDIX Voicemail		255	Valid
VMPPro Networked Messaging		255	Valid
VMPPro Database Interface		255	Valid
VMPPro VB Script		255	Valid
VMPPro Recordings Administrators		255	Valid
VMPPro Outlook Interface		255	Valid

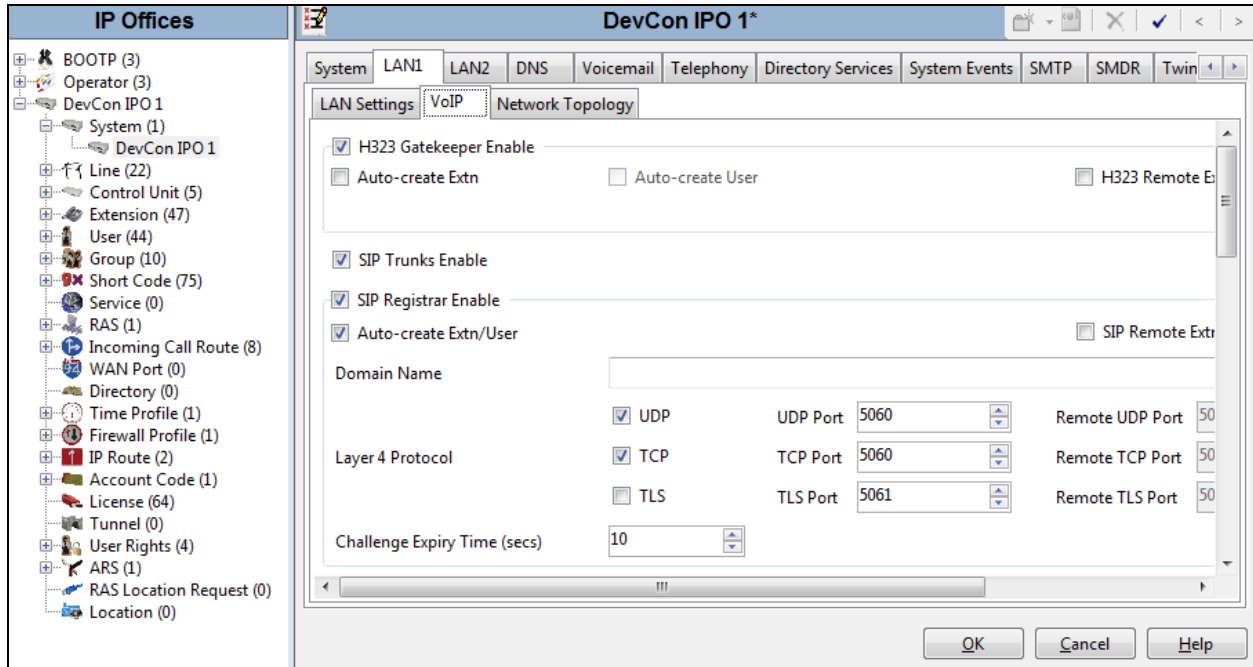
5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select System to display the DevCon IPO 1 screen in the right pane. Select the LAN1 tab, followed by the LAN Settings sub-tab in the right pane. Make a note of the IP Address, which will be used later to configure Algo. Note that IP Office can support SIP extensions on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.



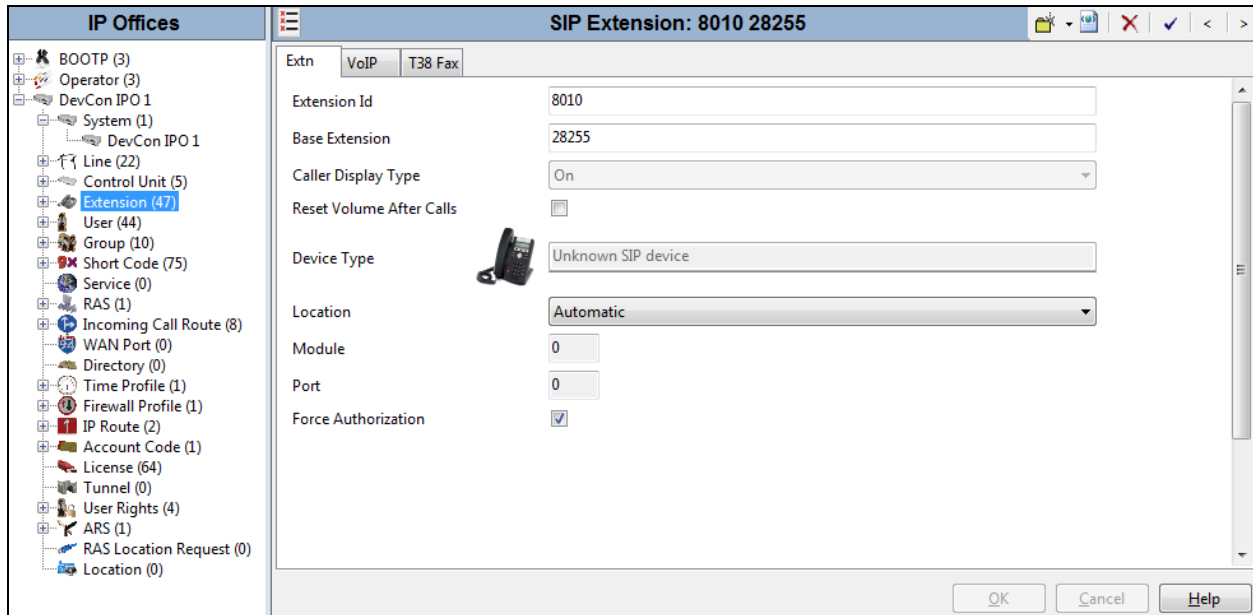
5.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below. Enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the SIP endpoints used the LAN IP address for registration.

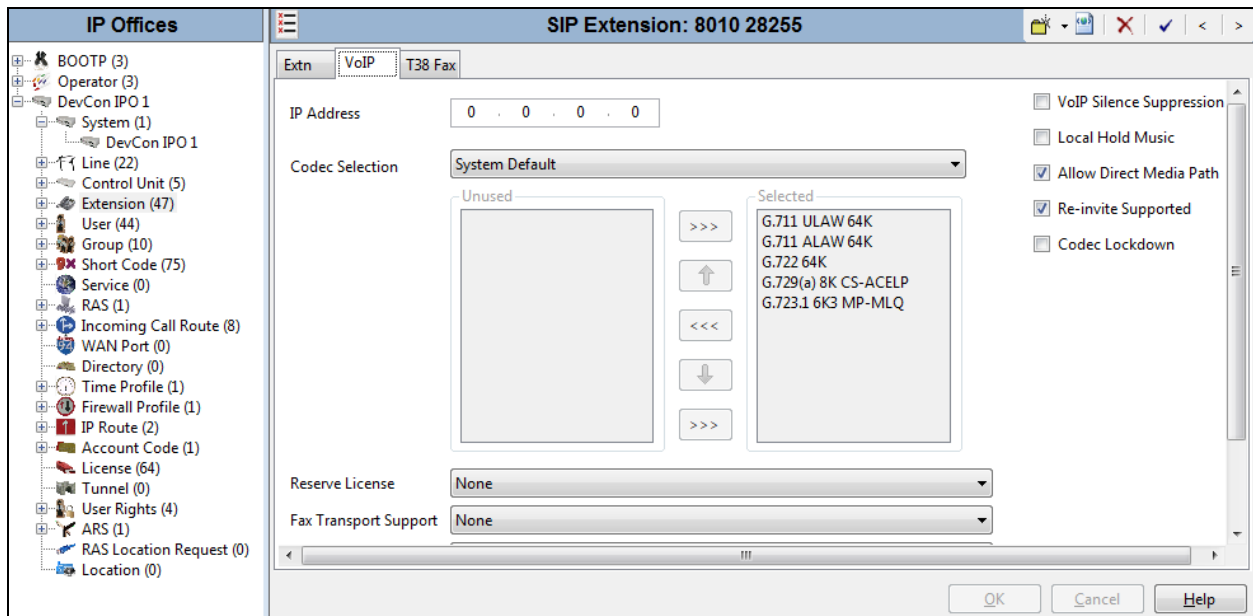


5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension**, and select **New** → **SIP Extension** from the pop-up list to add a new SIP extension. For **Base Extension**, enter the voice paging extension “**28255**”. Retain the default values in the remaining fields.



Select the **VoIP** tab, and retain the default values in all fields. Repeat this section to add additional SIP extensions as desired. In the compliance testing, one SIP extension “**28255**” was created for voice paging, and one SIP extension “**28256**” was created for loud ringing.



5.5. Administer SIP User

From the configuration tree in the left pane, right-click on **User**, and select **New** (not shown) from the pop-up list. Enter desired values for **Name** and **Full Name**. For Extension, enter the first SIP base extension from **Section 5.4**.

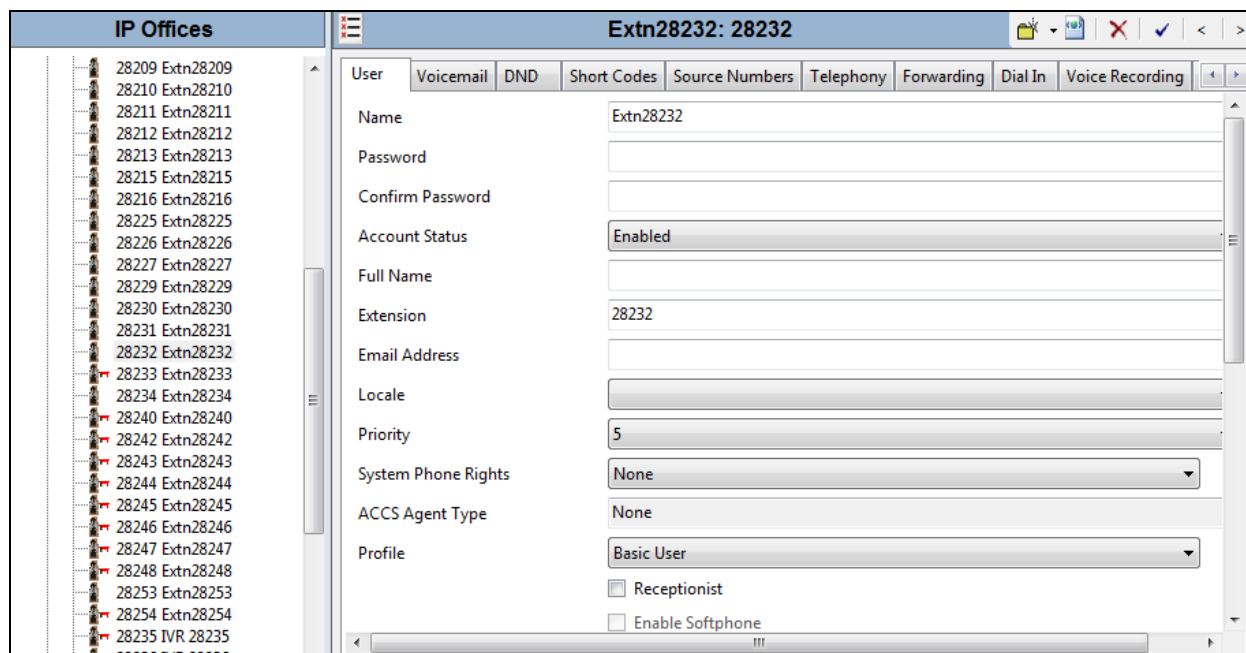
The screenshot shows the 'User' configuration page for extension 28255. The left pane shows the configuration tree with 'User (44)' selected. The main pane has tabs for 'User', 'Voicemail', 'DND', 'Short Codes', 'Source Numbers', 'Telephony', 'Forwarding', 'Dial In', and 'Voice Recording'. The 'User' tab is active, showing fields for Name (28255), Password, Confirm Password, Account Status (Enabled), Full Name (Algo 8180 Page), Extension (28255), Email Address, Locale, Priority (5), System Phone Rights (None), ACCS Agent Type (None), and Profile (Basic User). There are checkboxes for 'Receptionist' and 'Enable Softphone'.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab, and enter a desired **Login Code**. Repeat this section to add a new user for each SIP extension from **Section 5.4**. In the compliance testing, user “28256” was created for loud ringing, and user “28255” was created for voice paging.

The screenshot shows the 'Supervisor Settings' sub-tab under the 'Telephony' tab for extension 28255. The left pane shows the configuration tree with 'User (44)' selected. The main pane has tabs for 'Call Settings', 'Supervisor Settings', 'Multi-line Options', 'Call Log', and 'TUI'. The 'Supervisor Settings' tab is active, showing fields for Login Code (masked with dots), Login Idle Period (secs), Monitor Group (<None>), Coverage Group (<None>), Status on No-Answer (Logged On (No change)), and After Call Work Time (secs) (System Default (10)). There are checkboxes for Force Login, Force Account Code, Incoming Call Bar, Outgoing Call Bar, Inhibit Off-Switch Forward/Tran, Can Intrude, Cannot be Intruded, Can Trace Calls, CCR Agent, Automatic After Call Work, and Deny Auto Intercom Calls. There are radio buttons for 'All Calls' and 'External Incoming'.

5.6. Administer Internal Twinning

From the configuration tree in the left pane, select the desk phone user that will be associated with the loud ringing user. In this case, desk phone user “**Extn28232**”.



Select the **Mobility** tab, and check **Internal Twinning**. For the Twinned Handset, select the strobe extension user from Section 5.5. Retain the default values in the remaining fields. Note that with the Internal Twinning configuration, the Algo extension 28257 will be acting like a secondary extension of the extension 28232 which is configured as primary and a direct call to the secondary will always get busy. This is the design intent of the Internal Twinning feature in IP Office. In order to place a direct call to the Algo strobe light extension, do not configure it twinned with a deskphone.

6. Configure 8188 SIP Ceiling Speaker

This section provides the procedures for configuring Algo 8188 SIP Ceiling Speaker. The procedures include the following areas:

- Launch web interface.
- Administer configuration.

6.1. Launch Web Interface

Access the 8188 SIP Ceiling Speaker web-based interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the 8188 SIP Ceiling Speaker. The IP address of the 8188 can be spoken by pressing the reset button on the front of

the 8188. The **Welcome to the Algo 8188 SIP Ceiling Speaker Control Panel** screen is displayed, as shown below. Log in using the appropriate credentials.

ALGO 8188 SIP Ceiling Speaker Control Panel Firmware: 1.0

Welcome to the Algo 8188 SIP Ceiling Speaker Control Panel

Setting up your SIP Ceiling Speaker:

Step 1: Configure your SIP Ceiling Speaker

Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)

Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Mask, and Gateway to the device.

Step 3: Secure your SIP Ceiling Speaker (Optional)

Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠️ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your SIP Ceiling Speaker (Optional)

Please register your product using the link below:
<http://www.algosolutions.com/8188reg>

Registration ensures your access to the latest upgrades to this product and important service notices.

Login

Password (default: **algo**)

6.2. Administer Algo 8188

Select **Basic Settings** → **SIP** from the top menu, to display the screen below. Configure the **SIP Settings** section toward the bottom of the screen as desired to match the configuration. Enter the following values for the specified fields, and retain the default values in the remaining fields.

- **Sip Domain (Proxy Server)** : The LAN IP address from **Section 5.2**.
- **Ring/Alert Mode**: Select **Monitor “Ring” event on the registered SIP extension**.
- **Page Function**: Select **Enabled**.
- **Ring Extension**: Enter the loud ringing SIP base extension from **Section 5.4**.
- **Authentication ID**: Enter the loud ringing SIP user name from **Section 5.5**.
- **Ring Password**: Enter the loud ringing SIP user login code from **Section 5.5**.
- **Page Extension**: Enter the voice paging SIP base extension from **Section 5.4**.
- **Page Auth ID**: Enter the voice paging SIP user name from **Section 5.5**.
- **Page Password**: Enter the voice paging SIP user login code from **Section 5.5**.

The screenshot displays the 'SIP Settings' page in the ALGO 8188 SIP Ceiling Speaker Control Panel. The page title is 'SIP Settings' and it includes a sub-header 'Here you can configure the basic SIP settings.' The settings are organized into two main sections: 'SIP' and 'Page Extension'. The 'SIP' section includes fields for 'SIP Domain (Proxy Server)' (10.10.97.36), 'Ring/Alert Mode' (Monitor "Ring" event on registered SIP extension), 'Page Function' (Enabled), 'Ring Extension' (28256), 'Authentication ID' (28256), and 'Authentication Password' (masked). The 'Page Extension' section includes fields for 'Page Extension' (28255), 'Authentication ID' (28255), and 'Authentication Password' (masked). A 'Different Ports for Extensions' option is set to 'Disabled'.

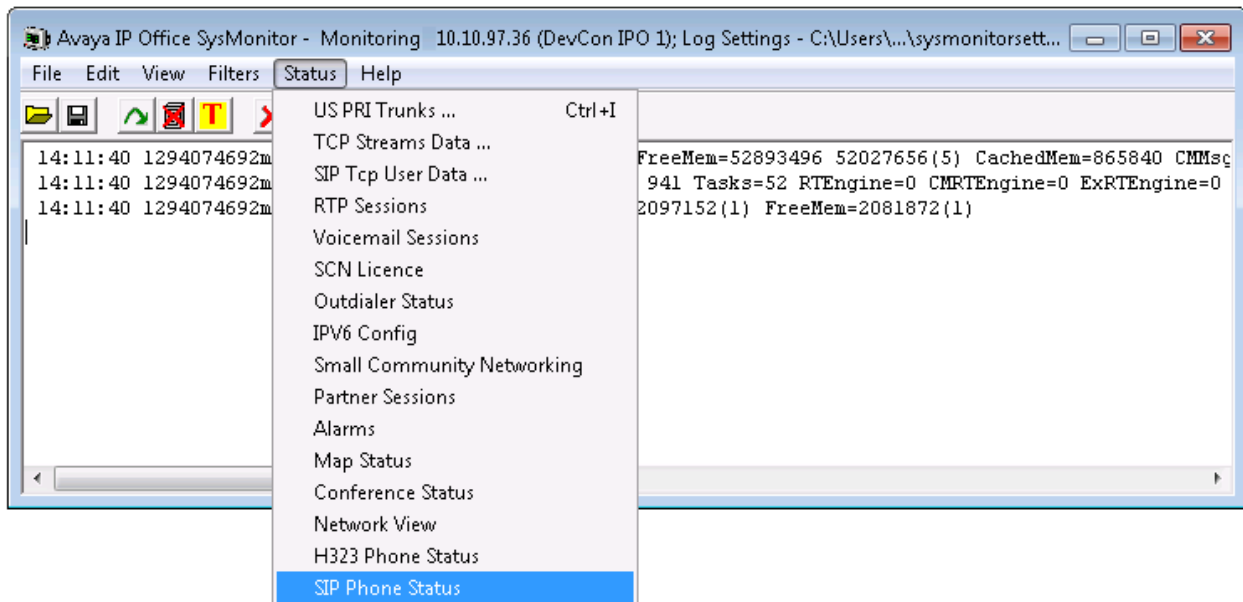
Field	Value
SIP Domain (Proxy Server)	10.10.97.36
Ring/Alert Mode	<input checked="" type="radio"/> Monitor "Ring" event on registered SIP extension
Page Function	<input checked="" type="radio"/> Enabled
Ring Extension	28256
Authentication ID	28256
Authentication Password	•••••
Page Extension	28255
Authentication ID	28255
Authentication Password	•••••
Different Ports for Extensions	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled

7. Verification Steps

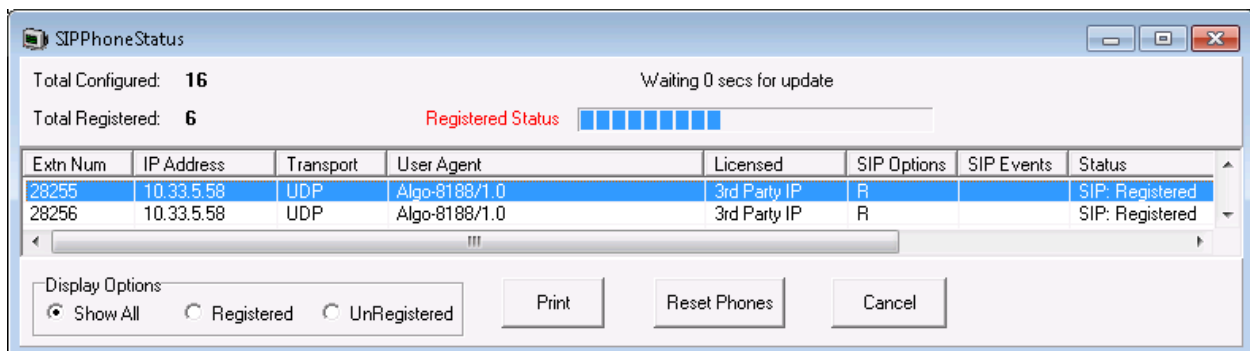
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Algo 8188 SIP Ceiling Speaker.

7.1. Verify Avaya IP Office

From a PC running the Avaya IP Office Monitor application, select **Start → Programs → IP Office → System Monitor** to launch the application. The **Avaya IP Office SysMonitor** screen is displayed, as shown below. Select **Status → SIP Phone Status** from the top menu.

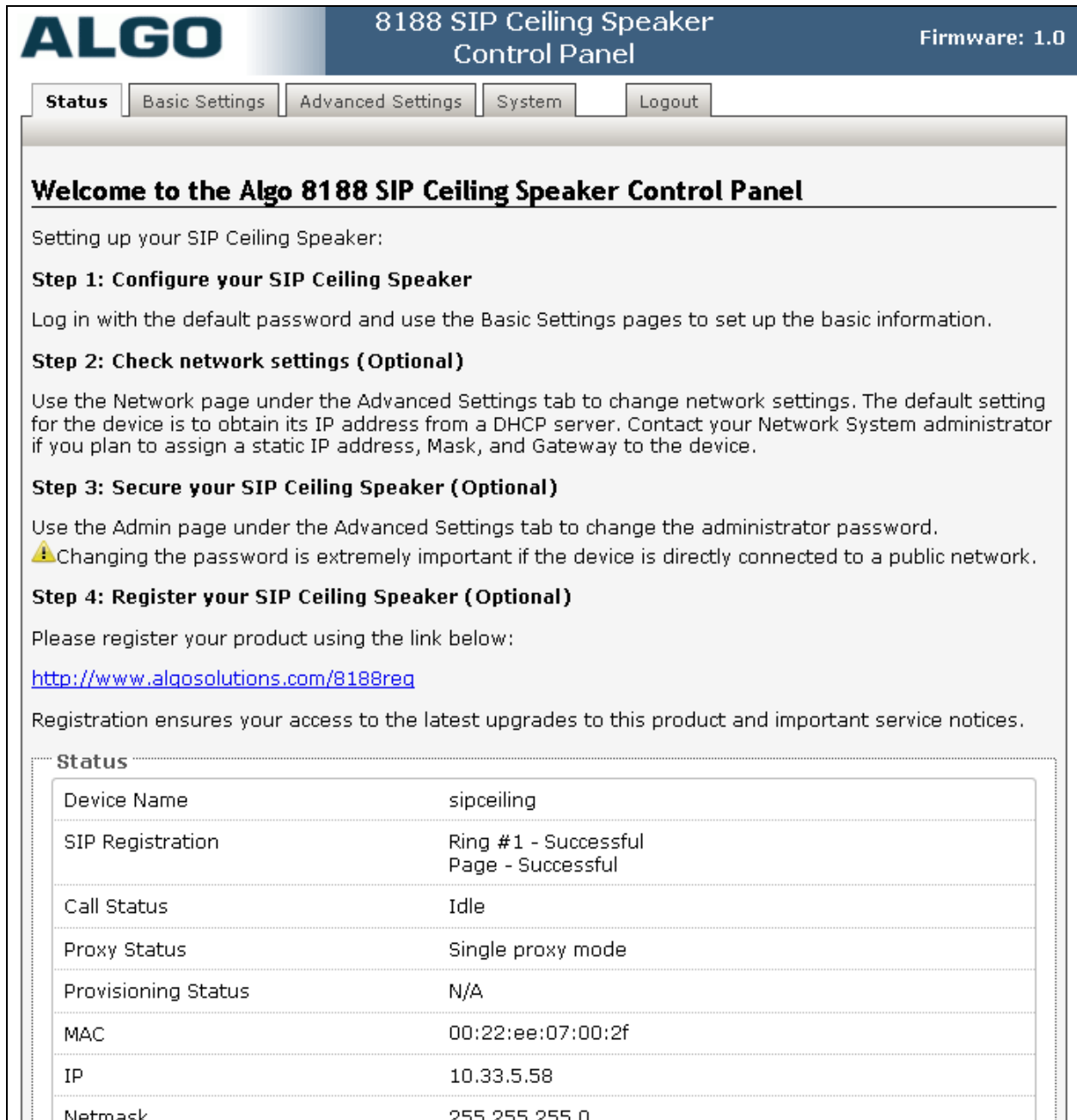


The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each SIP extension from **Section 5.4**, that the **User Agent** is “Algo-8188/1.0”, and that the **Status** is “SIP: Registered”, as shown below.



7.2. Verify Algo 8188

From the Algo 8188 SIP Ceiling Speaker web-based interface, select **Status** from the top menu. Verify that **SIP Registration** displays “Ring – Successful” and “Page – Successful”, as shown below.



The screenshot shows the web-based interface for the Algo 8188 SIP Ceiling Speaker. The top navigation bar includes the ALGO logo, the title "8188 SIP Ceiling Speaker Control Panel", and the firmware version "Firmware: 1.0". Below the navigation bar are tabs for "Status", "Basic Settings", "Advanced Settings", "System", and "Logout". The "Status" tab is selected.

Welcome to the Algo 8188 SIP Ceiling Speaker Control Panel

Setting up your SIP Ceiling Speaker:

Step 1: Configure your SIP Ceiling Speaker
Log in with the default password and use the Basic Settings pages to set up the basic information.

Step 2: Check network settings (Optional)
Use the Network page under the Advanced Settings tab to change network settings. The default setting for the device is to obtain its IP address from a DHCP server. Contact your Network System administrator if you plan to assign a static IP address, Mask, and Gateway to the device.

Step 3: Secure your SIP Ceiling Speaker (Optional)
Use the Admin page under the Advanced Settings tab to change the administrator password.
⚠️ Changing the password is extremely important if the device is directly connected to a public network.

Step 4: Register your SIP Ceiling Speaker (Optional)
Please register your product using the link below:
<http://www.algosolutions.com/8188reg>
Registration ensures your access to the latest upgrades to this product and important service notices.

Status

Device Name	sipceiling
SIP Registration	Ring #1 - Successful Page - Successful
Call Status	Idle
Proxy Status	Single proxy mode
Provisioning Status	N/A
MAC	00:22:ee:07:00:2f
IP	10.33.5.58
Netmask	255.255.255.0

The following tests were conducted to verify the solution between the Algo 8188 and Avaya IPO.

- Verify that the incoming call to the twinning extension on the IPO rings the 8188 and the 8188 stops ringing if the twinning extension answers the call.
- Verify that the incoming call to the 8188 Voice Page is automatically answered with clear audio path.
- Verify that the telephone that places the incoming call to the 8188 Page can do conference, transfer, mute, un-mute and provide busy tone if it is on another call.
- Verify that the solution works with different Avaya clients (e.g. digital, analog, IP etc).
- Verify that 8188 goes into an idle state when the call is completed.
- Verify that the 8188 re-registers without issues if the Ethernet cable is unplugged and plugged back in.

8. Conclusion

All of the executed test cases have passed and met the objectives outlined in **Section 2.1**, with some exceptions outlined in **Section 2.2**. Algo 8188 SIP Ceiling Speaker Version 1.0 is considered to be in compliance with Avaya IP Office System Release 9.0.

9. Additional References

Product documentation for the Avaya IP Office may be found at:

<https://support.avaya.com/css/Products/>

Product documentation for the Algo 8188 SIP Audio Alerter products may be found at:

<http://www.algosolutions.com/find-a-product-by/by-product-name.html>

Avaya IP Office Documents:

[1] IP Office 9.0 Installation, Document number 15-601042 Issue 28, 11 October 2013

[2] IP Office 9.0 Manager 9.0, Document number 15-601011 Issue 9.01, 09 September 2013

IP Office 9.0 Administering Voicemail Pro, Document number 15-601063 Issue 9.0 Release 1.0, September 2013

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