



Application Notes for Algo 8128 SIP Strobe Light with Avaya IP Office - Issue 1.1

Abstract

These Application Notes describe the configuration steps required for Algo 8128 SIP LED Strobe to interoperate with Avaya IP Office. The Algo 8128 SIP Strobe Light is a SIP compliant Power over Ethernet high intensity strobe light for alerting and notification of telephone, emergency, safety, and security events.

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 8128 SIP Strobe Light to interoperate with Avaya IP Office. Algo 8128 SIP Strobe Light is a SIP-based device that can register with Avaya IP Office as SIP endpoint.

The 8128 SIP Strobe Light is a SIP compliant Power over Ethernet (PoE) high intensity strobe light for alerting and notification of telephone, emergency, safety, and security events.

2. General Test Approach and Test Results

The feature test cases were performed manually. The focus of this interoperability compliance testing was to verify if Algo 8128 can register as a SIP endpoint on IP Office and to verify proper operation of the Algo 8128 SIP Strobe when integrated with Avaya IP Office.

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

Compliance testing verified that the 8128 was able to interoperate with the telephones residing on IP Office system. The following interoperability areas were covered:

- The 8128 can register to IP Office as a SIP endpoint.
- SIP Ring – The 8128 will flash/alert when the twinning extension is called.
- SIP Monitor – The 8128 can monitor a telephone on IP Office when this telephone is called the 8128 will flash/alert.

The serviceability testing focused on verifying the ability of Algo 8128 SIP Strobe Light 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.

2.3. Support

Technical support on Algo 8128 SIP Strobe Light 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 8128 SIP Strobe Light. The 8128 SIP Strobe Light communicated with IP Office through Avaya switch with Power over Ethernet (PoE) and registered with Avaya IP Office as SIP endpoint. The PRI T1 trunk was also configured to connect from IP Office to PSTN for test cases off-net via PRI T1 trunk.

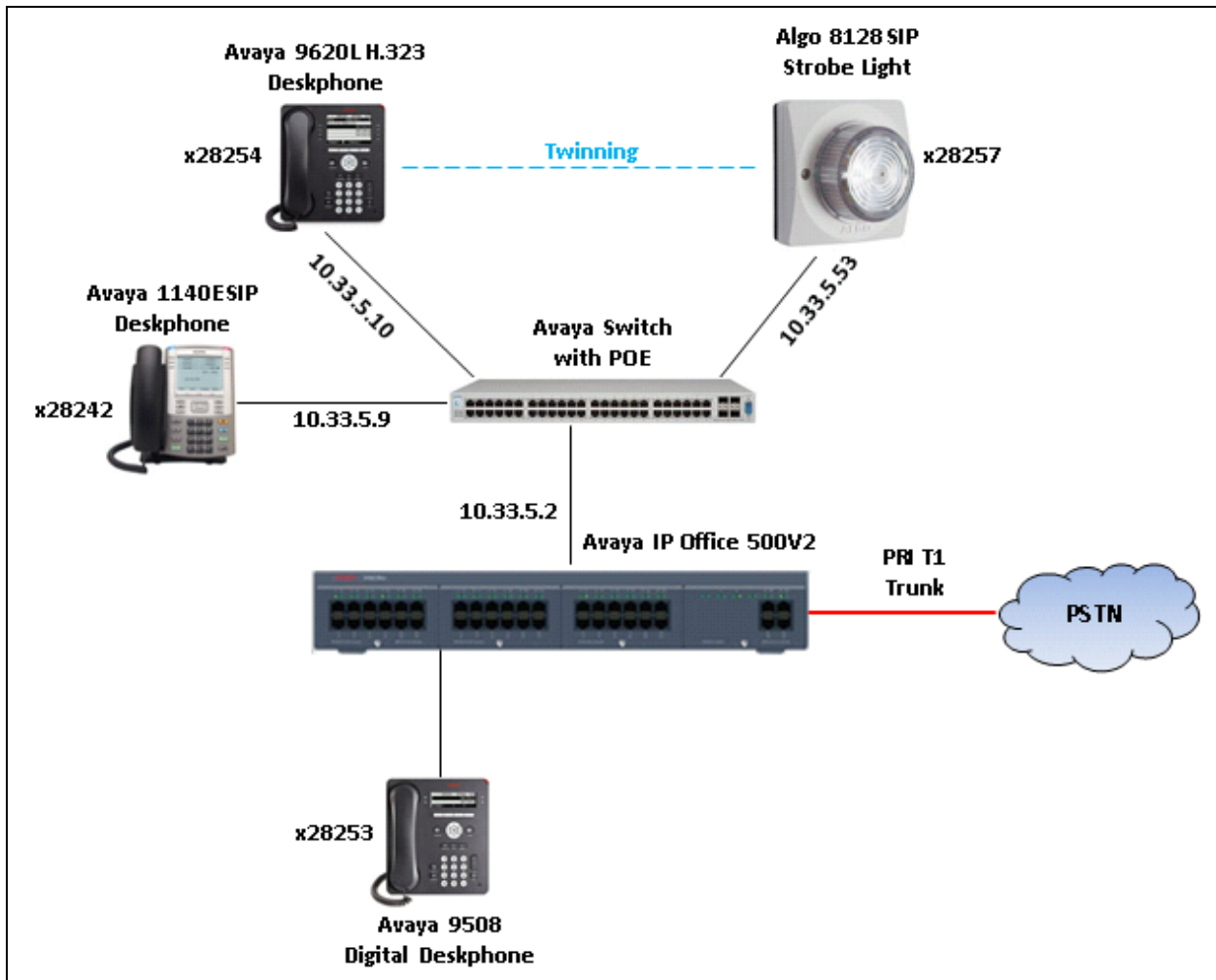


Figure 1: Test Configuration Diagram

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 8128 SIP Strobe Light	2.3

5. Configure Avaya IP Office

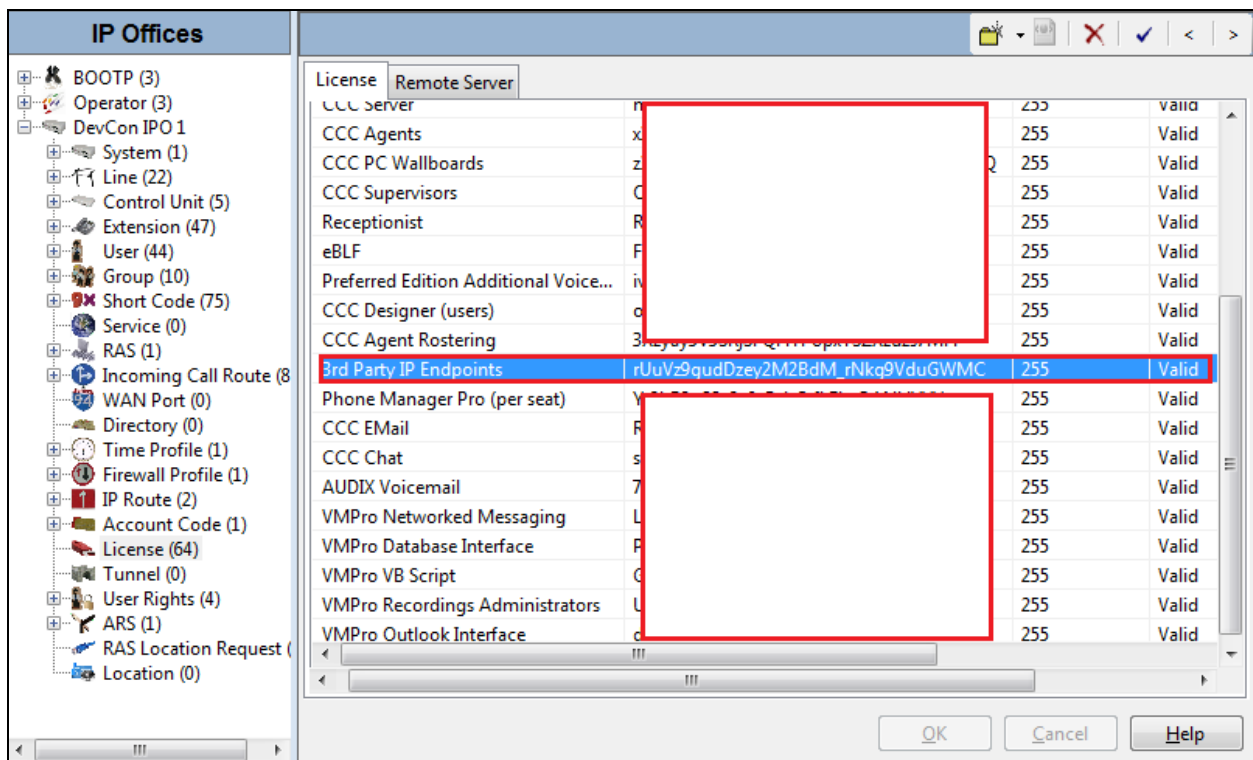
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- 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

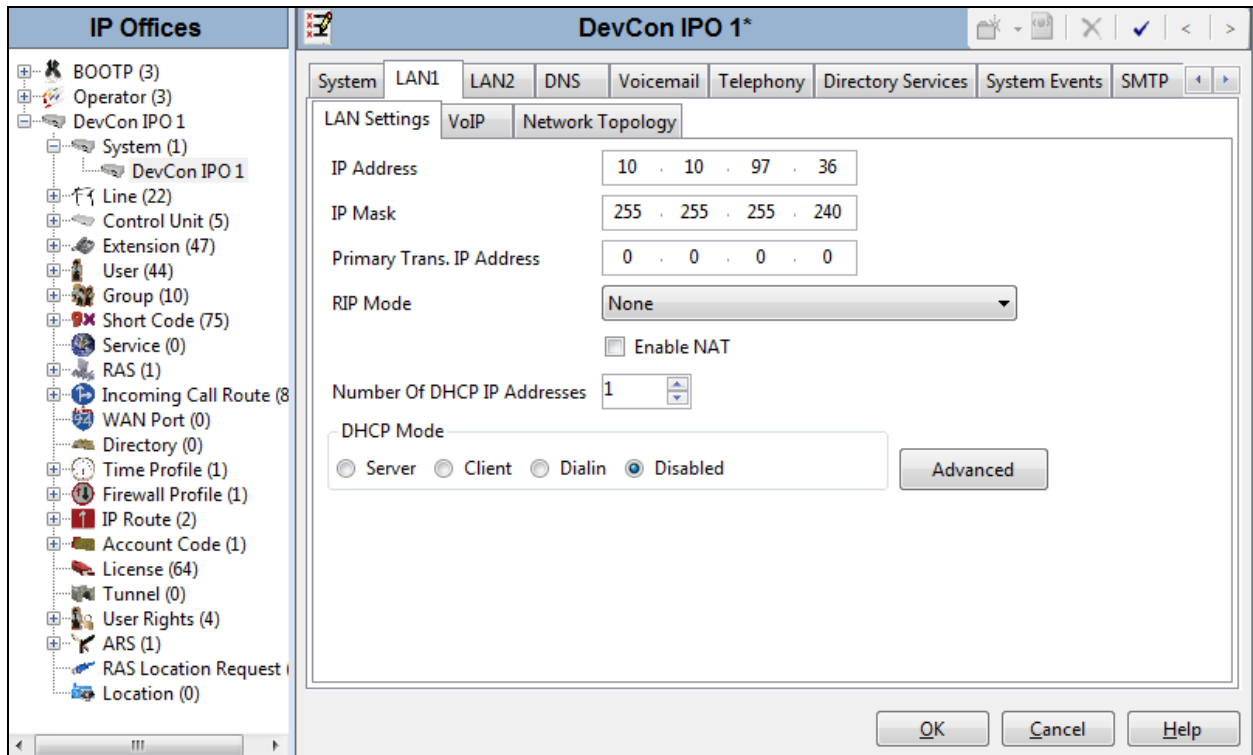
From a PC running the Avaya IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system, and log in using the appropriate credentials.

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**”.



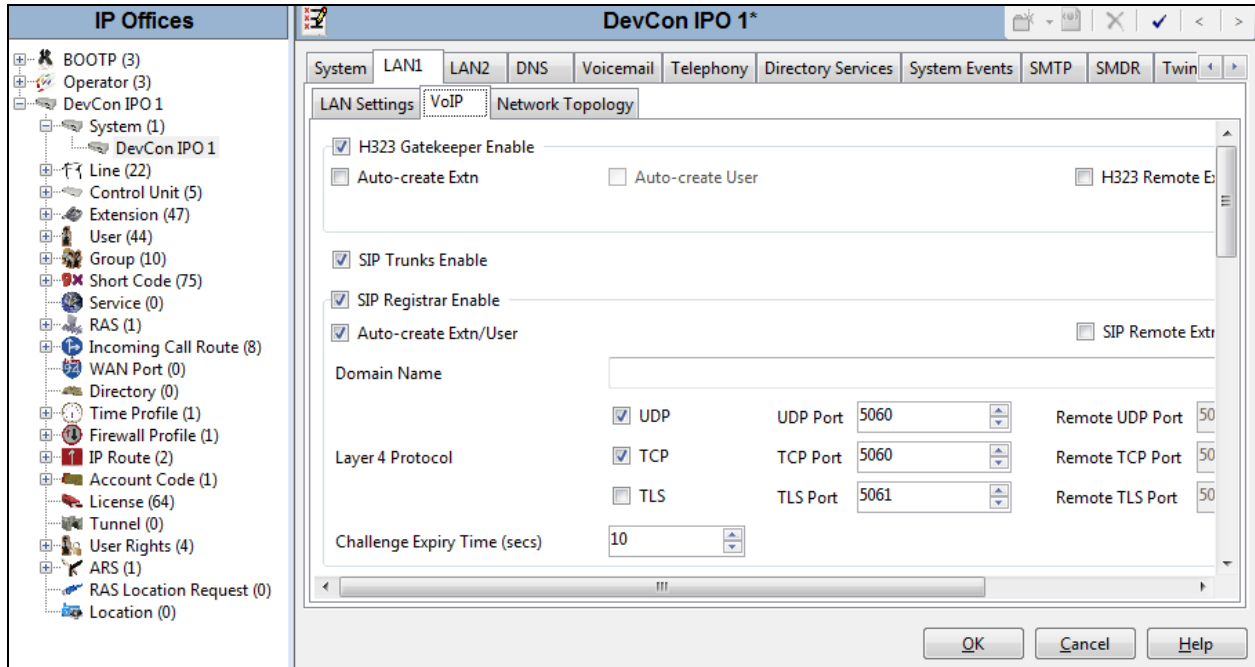
5.2. Obtain LAN IP Address

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 8128. Note that IP Office can support SIP extensions on the **LAN1** and/or **LAN2** interfaces, and the compliance testing used the **LAN1** interface.



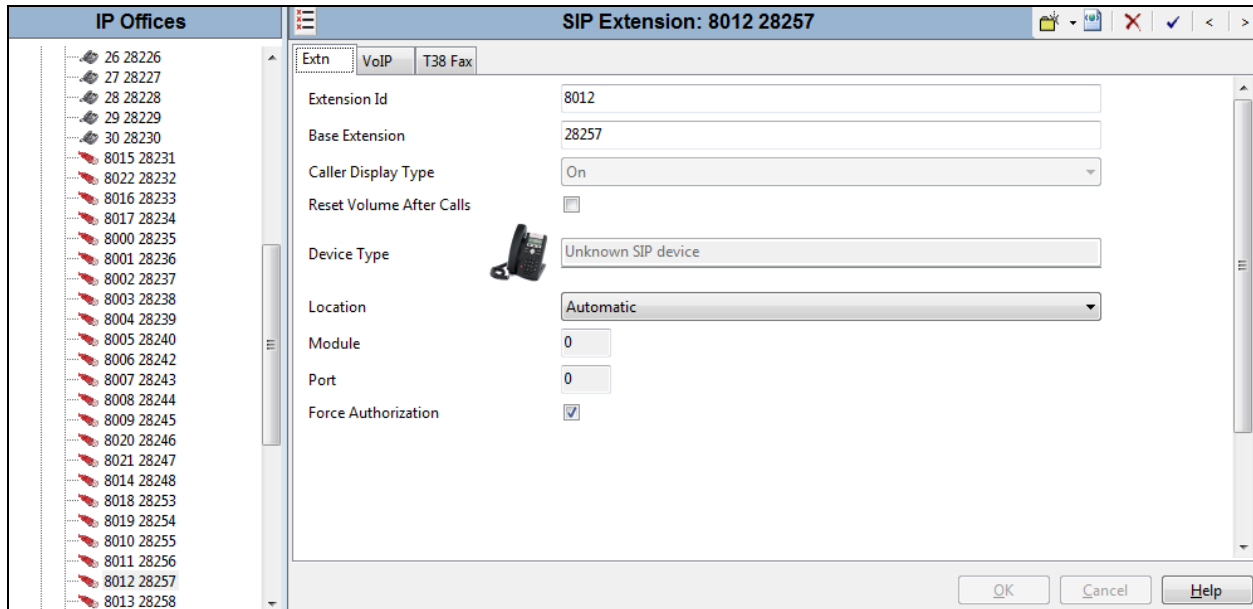
5.3. Administer SIP Registrar

Continuing from Section 5.2, 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.

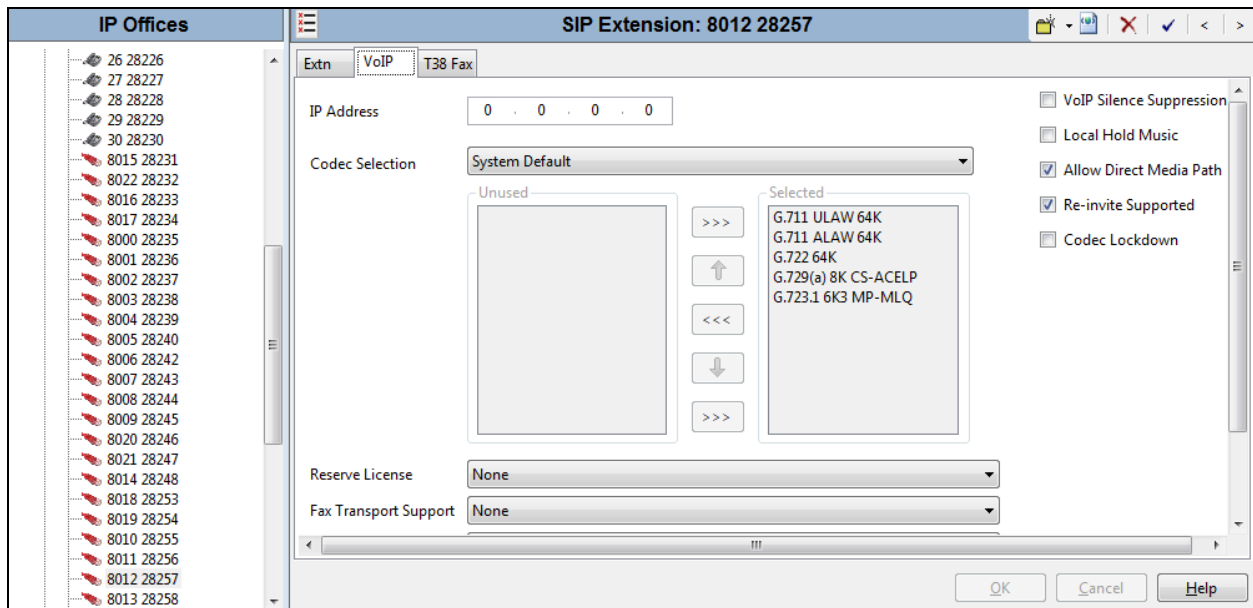


5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension**, and select **New** → **SIP Extension** (not shown) from the pop-up list to add a new SIP extension. For **Base Extension**, enter the SIP strobe light extension “**28257**”. 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.



5.5. Administer SIP User

From the configuration tree in the left pane; right-click on **User** tab and select **New** (not shown) from the pop-up list. Enter desired values for **Name**. For **Extension**, enter the Algo extension from **Section 5.4**. Remember these values as they will be needed to register Algo to IP Office. Enter desired values for **Password**, this password is used when user want to login IP Office Softphone.

The screenshot shows the 'User' configuration window for user 28257: 28257. The left pane shows the configuration tree with 'User (44)' selected. The main pane shows the following fields:

Field	Value
Name	28257
Password	•••••
Confirm Password	•••••
Account Status	Enabled
Full Name	Algo 8128 Strobe
Extension	28257
Email Address	
Locale	
Priority	5
System Phone Rights	None
ACCS Agent Type	None
Profile	Basic User
Receptionist	<input checked="" type="checkbox"/>

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab, and enter a desired **Login Code**. This **Login Code** is needed to register Algo 8128 to IP Office.

The screenshot shows the 'Supervisor Settings' sub-tab under the 'Telephony' tab. The fields and checkboxes are as follows:

Field	Value
Login Code	••••
Login Idle Period (secs)	
Monitor Group	<None>
Coverage Group	<None>
Status on No-Answer	Logged On (No change)
Reset Longest Idle Time	All Calls
After Call Work Time (secs)	System Default (10)

Checkboxes:

- Force Login
- Force Account Code
- Incoming Call Bar
- Outgoing Call Bar
- Inhibit Off-Switch Forward/Transfer
- Can Intrude
- Cannot be Intruded
- Can Trace Calls
- CCR Agent
- Automatic After Call Work
- Deny Auto Intercom Calls

5.6. Administer Internal Twinning

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

IP Offices	
28209	Extn28209
28210	Extn28210
28211	Extn28211
28212	Extn28212
28213	Extn28213
28215	Extn28215
28216	Extn28216
28225	Extn28225
28226	Extn28226
28227	Extn28227
28229	Extn28229
28230	Extn28230
28231	Extn28231
28232	Extn28232
28233	Extn28233
28234	Extn28234
28240	Extn28240
28242	Extn28242
28243	Extn28243
28244	Extn28244
28245	Extn28245
28246	Extn28246
28247	Extn28247
28248	Extn28248
28253	Extn28253
28254	Extn28254
28235	IVR 28235
28226	IVR 28226

Extn28232: 28232	
User	Voicemail DND Short Codes Source Numbers Telephony Forwarding Dial In Voice Recording
Name	Extn28232
Password	
Confirm Password	
Account Status	Enabled
Full Name	
Extension	28232
Email Address	
Locale	
Priority	5
System Phone Rights	None
ACCS Agent Type	None
Profile	Basic User
	<input type="checkbox"/> Receptionist
	<input type="checkbox"/> Enable Softphone

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.

IP Offices | **Extn28232: 28232***

28203 Extn28203
 28204 Extn28204
 28205 Extn28205
 28206 Extn28206
 28207 Extn28207
 28208 Extn28208
 28209 Extn28209
 28210 Extn28210
 28211 Extn28211
 28212 Extn28212
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 28234 Extn28234
 28240 Extn28240
 28242 Extn28242

Forwarding | **Dial In** | **Voice Recording** | **Button Programming** | **Menu Programming** | **Mobility** | **Group Membership** | **Ar**

Internal Twinning

Twinned Handset: 28257 Algo 8128 Strob

Maximum Number of Calls: 1

Twin Bridge Appearances
 Twin Coverage Appearances
 Twin Line Appearances

Mobility Features

Mobile Twinning

Twinned Mobile Number (including dial access code): 28257

Twinning Time Profile: <None>

Mobile Dial Delay (secs): 0

Mobile Answer Guard (secs): 0

Hunt group calls eligible for mobile twinning

6. Configure Algo 8128 SIP Strobe Light

This section provides the procedures for configuring Algo 8128 SIP Strobe Light. The procedures include the following areas:

- Launch web interface
- Administer configuration

6.1. Launch Web Interface

Access the 8128 SIP Strobe Light web-based interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Algo 8128 SIP Strobe Light. This IP address can obtain from the Algo locator tool. The **Welcome to the Algo 8128 SIP LED Strobe Control Panel** screen is displayed, as shown below. Log in using the appropriate credentials.

ALGO 8128 SIP LED Strobe Control Panel Firmware: 2.3

Welcome to the Algo 8128 SIP LED Strobe Control Panel

Setting up your SIP LED Strobe:

Step 1: Configure your SIP LED Strobe

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 LED Strobe (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 LED Strobe (Optional)

Please register your product using the link below:
<http://www.algosolutions.com/8128reg>

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

Login

Password (default: **algo**)

6.2. Administer Algo 8128

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**.
- **Extension:** The SIP base extension from **Section 5.4**.
- **Authentication ID:** The SIP user name from **Section 5.5**.
- **Authentication password:** The SIP user login code from **Section 5.5**.
- **Monitor Mode:** There are three options for this field and during the certificate test the **Monitor** and Use “**Subscribe/Notify**” modes were verified.
 - Select **Monitor “Ring” event of the SIP registered extension** option. When this mode is used the 8128 will flash when called directly, or if the 8128 is twinned with another extension, it will also flash when the twinned extension is called.

The screenshot shows the web interface for the ALGO 8128 SIP LED Strobe Control Panel. The top navigation bar includes 'Status', 'Basic Settings', 'Advanced Settings', 'System', and 'Logout'. The 'SIP' sub-menu is active, showing 'Features' and 'Multicast' options. A green checkmark indicates that settings have been saved. The 'SIP Settings' section contains the following fields:

SIP	
SIP Domain (Proxy Server)	10.10.97.36 <small>Default port is 5060. To specify a different port, enter PROXY:PORT, e.g. my_proxy.com:5070, or 192.168.1.10:5080.</small>
SIP Extension	28257
Authentication ID	28257
Authentication Password	••••
Monitoring Mode	<input checked="" type="radio"/> Monitor "Ring" event on registered SIP extension <input type="radio"/> Use "Subscribe/Notify" dialog event (RFC 4235) to monitor event on different extension (if supported by your SIP server) <input type="radio"/> Monitor "Message Waiting" event (RFC 3842) on registered SIP extension

- Select **Use “Subscriber/Notify” dialog event** option this will extend two sub fields below. This mode on the 8128 was used to monitor an extension on IPO.
 - **Monitor Extension:** Enter an extension on IPO that the 8128 will monitor.
 - **Monitor Call Events:** Select an event that triggers the monitor from the 8128.

ALGO
8128 SIP LED Strobe Control Panel
Firmware: 2.3

Status
Basic Settings
Advanced Settings
System
Logout

SIP
Features
Multicast

✔

Saved

Setting changes have been saved and will be applied on the next call.

SIP Settings

Here you can configure the basic SIP settings.

SIP

SIP Domain (Proxy Server)

ⓘ Default port is 5060. To specify a different port, enter PROXY:PORT, e.g. my_proxy.com:5070, or 192.168.1.10:5080.

SIP Extension

Authentication ID

Authentication Password ⓘ

Monitoring Mode

Monitor "Ring" event on registered SIP extension
 Use "Subscribe/Notify" dialog event (RFC 4235) to monitor event on different extension (if supported by your SIP server)
 Monitor "Message Waiting" event (RFC 3842) on registered SIP extension

Monitored Extension

Monitored Call Events

Ring

In-Use

Both Ring & In-Use

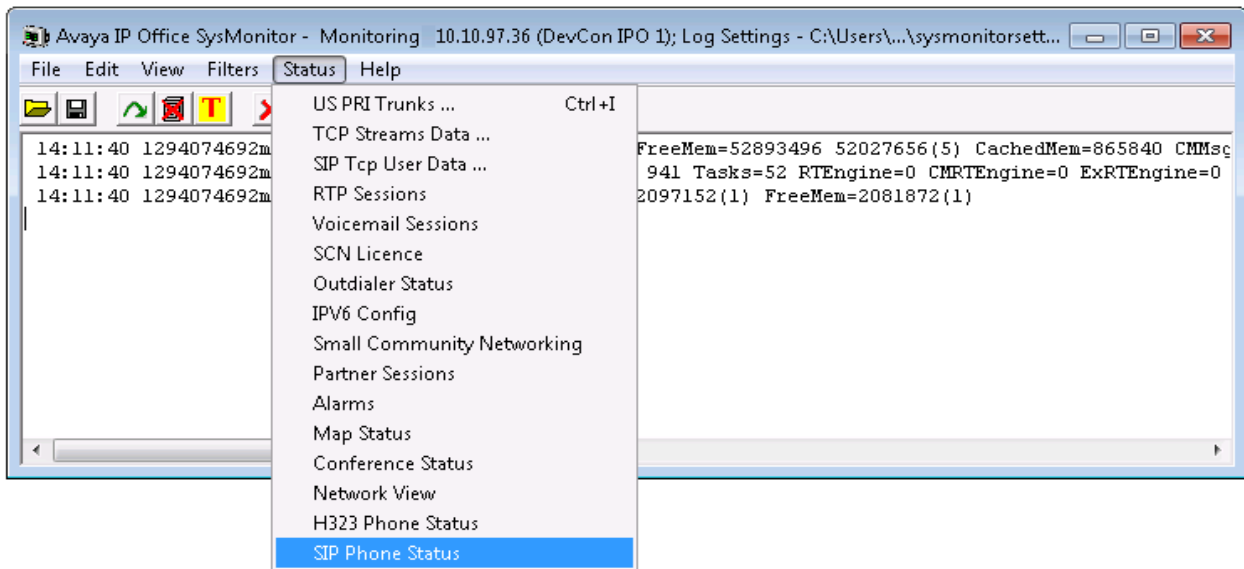
✔ Save

7. Verification Steps

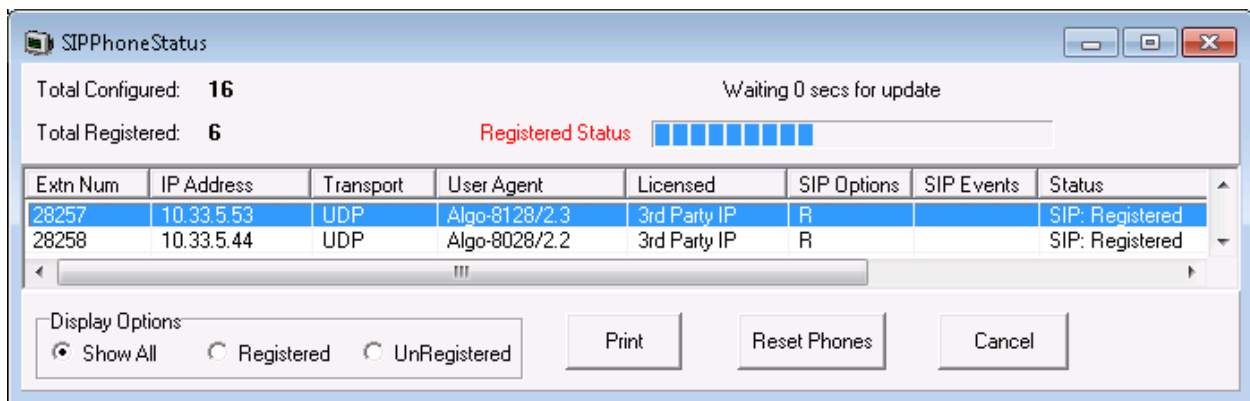
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Algo 8128 SIP Strobe Light.

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.

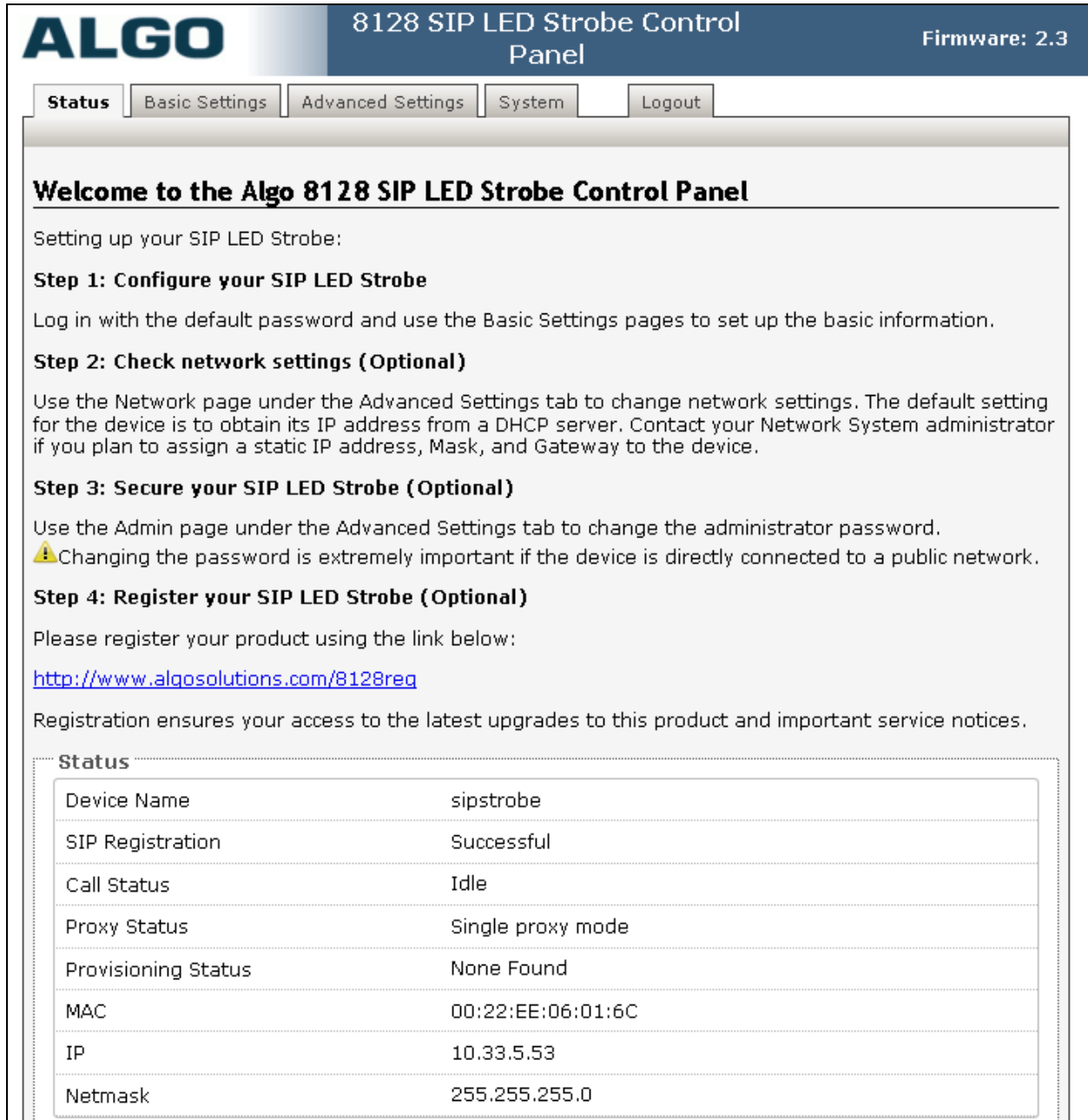


The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each SIP extension from **Section 5.4**, that the **User Agent** is “Algo-8128”, and that the **Status** is “SIP: Registered”, as shown below.



7.2. Verify Algo 8128 SIP Strobe Light

From the Algo 8128 SIP Strobe Light web-based interface, select **Status** from the top menu. Verify that **SIP Registration** displays “Successful” in the **SIP Registration** as shown below.



The screenshot shows the web interface for the Algo 8128 SIP LED Strobe Control Panel. The top navigation bar includes the ALGO logo, the title "8128 SIP LED Strobe Control Panel", and the firmware version "Firmware: 2.3". Below the navigation bar are tabs for "Status", "Basic Settings", "Advanced Settings", "System", and "Logout". The main content area displays a welcome message and four steps for setting up the device. The "Status" section is expanded to show a table of device information.

Status	
Device Name	sipstrobe
SIP Registration	Successful
Call Status	Idle
Proxy Status	Single proxy mode
Provisioning Status	None Found
MAC	00:22:EE:06:01:6C
IP	10.33.5.53
Netmask	255.255.255.0

The following tests were conducted to verify the solution between the Algo 8128 and Avaya IPO.

- Verify that the 8128 flashes when placing a call to the 8128 Strobe and it stops flashing when the caller hangs up the call.
- Verify that the 8128 flashes in the event of Ring or In-Use of monitored extension on IPO and it stop flashing when the event ends.

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 8128 SIP Strobe Light version 2.3 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 8128 SIP Strobe Light products may be found at:

<http://www.algosolutions.com/products/Audible-and-Visual-Alerting/8128-sip-strobe-light.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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