CyberData
The IP Endpoint Company

Configuring CyberData Devices for Intermedia Hosted PBX

This procedure was written by:

INTERMEDIA
The Business Cloud™

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Revision Information

Revision 931097B was released on July 28, 2015, and has the following changes:

- Adds Section 4.0, "Configuring the SIP Paging Adapter"
- Adds Section 7.0, "Configuring the SIP-enabled IP Outdoor Keypad Intercom"
- Adds Section 8.0, "Configuring the Outdoor Intercom to Auto Dial Numbers and Extensions"

Contents

1.0 About Intermedia Bring Your Own Phone (BYOP)

The Intermedia Bring Your Own Phone (BYOP) feature provides the ability to supply your own SIP devices for use with Intermedia's Hosted PBX service. This feature may also be utilized to successfully configure SIP phones, SIP softphones and other SIP devices, such as paging or intercom units, for use with Intermedia Hosted PBX service.

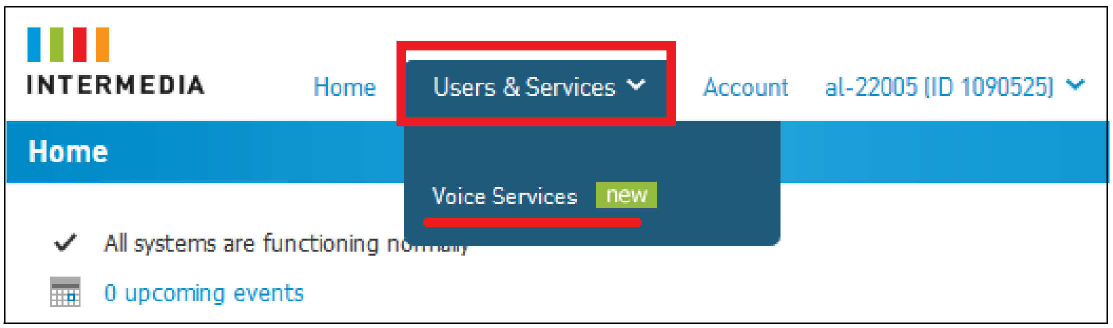
The greatest amount of freedom and access to device configurations are attained with Intermedia's AnyPhone BYOP, which is available to any SIP enabled telecommunications device that is not listed on Intermedia's Approved Phone and Equipment list below:

Cisco SPA112	Polycom IP331	Polycom IP7000
Cisco SPA232D	Polycom IP335	Polycom VVX300
Cisco SPA302D	Polycom IP550	Polycom VVX310
Cisco SPA303	Polycom IP560	Polycom VVX400
Cisco SPA504G	Polycom IP650	Polycom VVX410
Cisco SPA525G2	Polycom IP5000	Polycom VVX500
	Polycom IP6000	Polycom VVX600

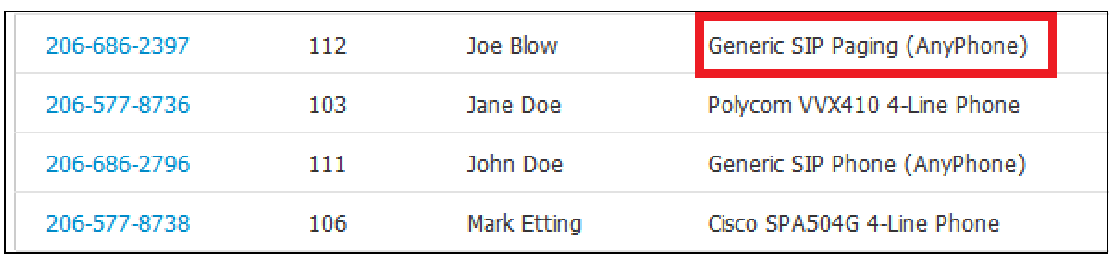
2.0 Obtaining SIP Credentials

Once your account has been created with an AnyPhone BYOP device, or your device has been added to your existing account, you may log into the HostPilot End User Control Panel and retrieve your device's SIP credentials. These credentials are required in order to make your CyberData device register with your Hosted PBX service. To find your credentials:

1. Log into HostPilot at **https://exchange.intermedia.net/aspx/Login.aspx** using the credentials you received via email
2. Under the **Users & Services** section, click on **Voice Services**.

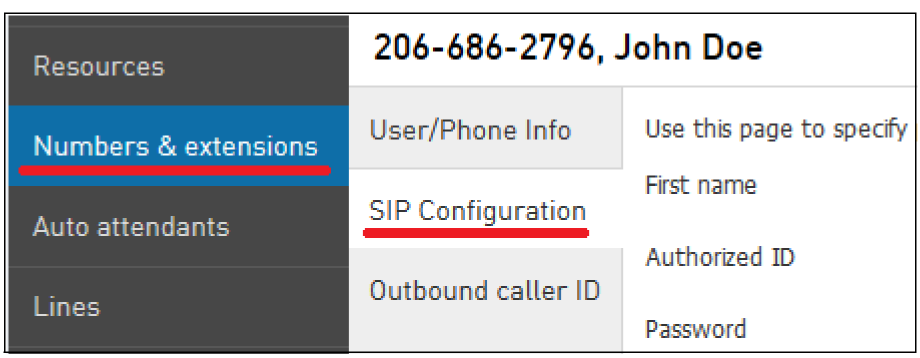


3. Select the **Numbers & Extensions** tab and locate your SIP device by looking for a device type, Extension number or specific DID. A paging device will be provisioned with a device Type of 'Generic SIP Paging (AnyPhone)' making it easier to spot. Once located, click on the phone number for the device.

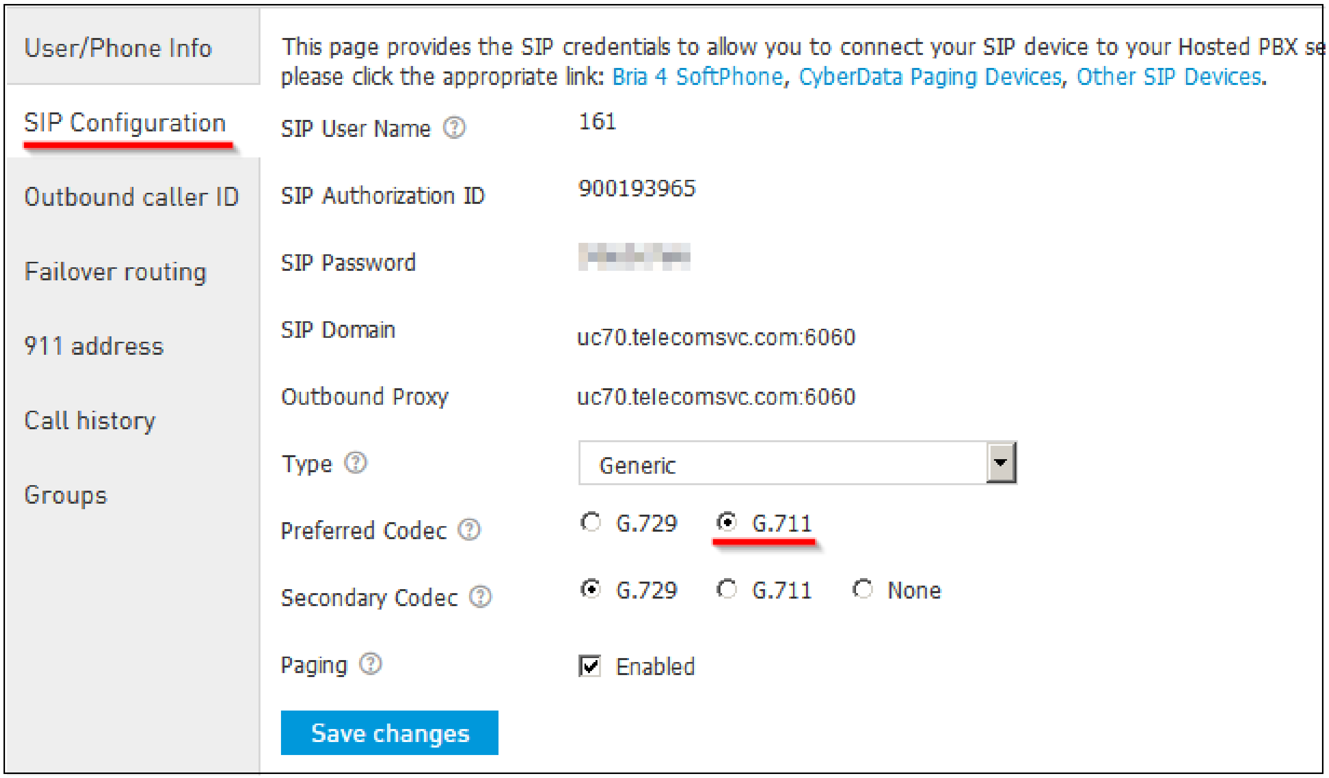


206-686-2397	112	Joe Blow	Generic SIP Paging (AnyPhone)
206-577-8736	103	Jane Doe	Polycom VVX410 4-Line Phone
206-686-2796	111	John Doe	Generic SIP Phone (AnyPhone)
206-577-8738	106	Mark Etting	Cisco SPA504G 4-Line Phone

4. Click on the **SIP Configuration** tab to locate your SIP credentials.



Once you have located your device's credentials, you will need to manually transcribe them into the administrative web interface for your CyberData device.



The CyberData preferred codec is G.711. Intermedia's network supports G.711 uLaw, and our recommendation is to set the **Preferred Codec** on your SIP Configuration tab to G.711 to match the CyberData paging device preference. This setting will help ensure higher quality and more legible pages through your paging devices.

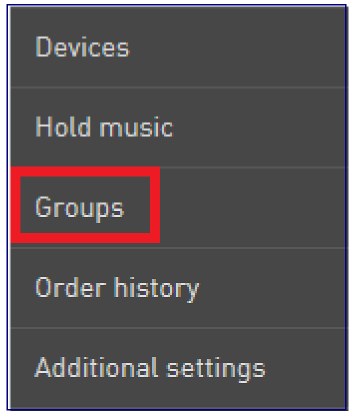
Note After saving a codec change on the SIP Configuration tab, it is very important to power cycle your CyberData device.

The **Paging Enabled** checkbox controls whether this paging device may be added to a Hosted PBX Paging Group. Hosted PBX has a built-in paging feature which sends pages to devices via direct SIP INVITE messages and utilizes auto-answer paging options. CyberData paging speakers may work in this capacity and if you would like to include them within Hosted PBX Paging Groups, check this option.

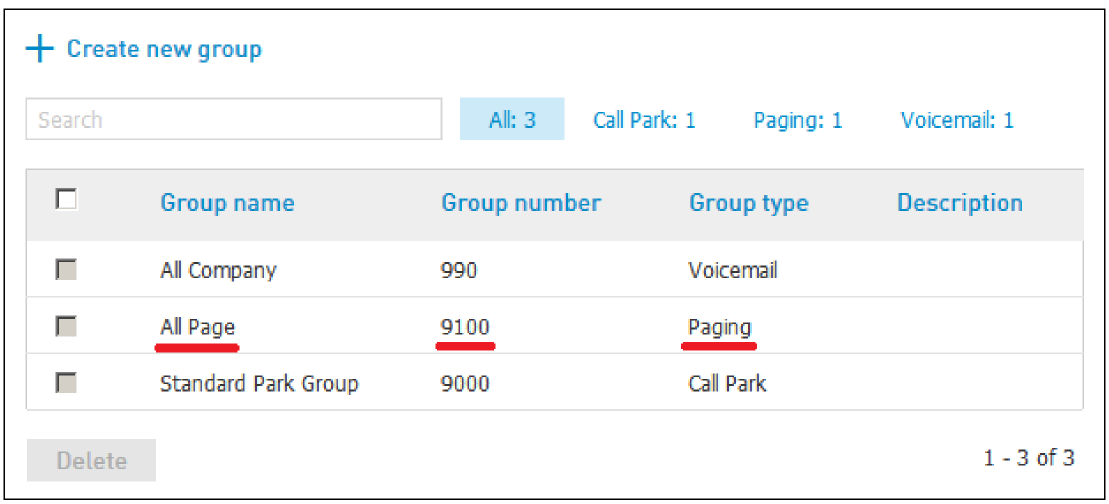
3.0 Creating Hosted PBX Paging Groups

If you wish to add a CyberData paging device into a Hosted PBX paging group, please perform the following within your HostPilot account:

1. Click on the **Groups** section.

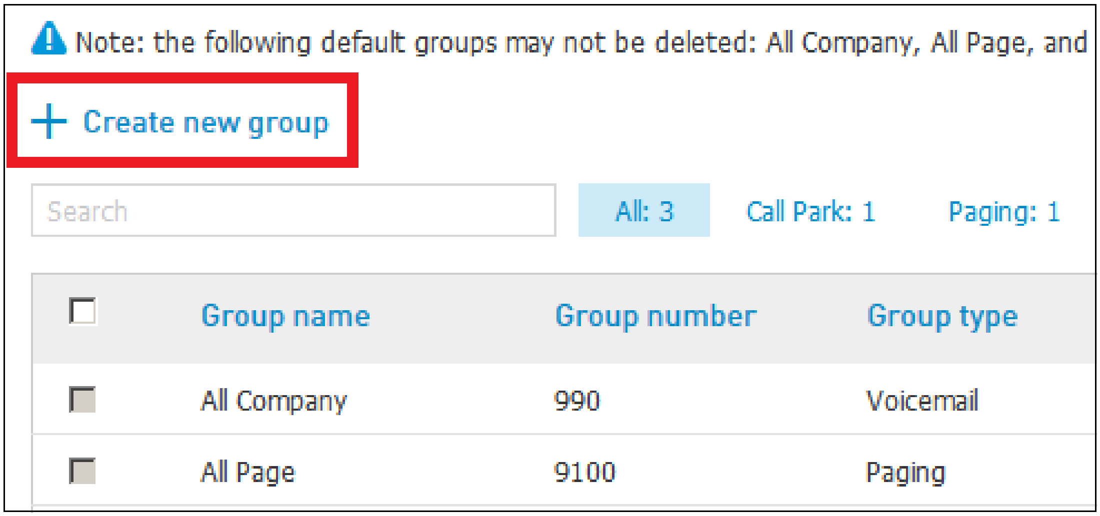


2. The **Groups** section will open and display all current Groups of all types. Your Hosted PBX service automatically comes with one paging group pre-configured, named **All Page**, which includes all of your devices. The group number is **9100**.

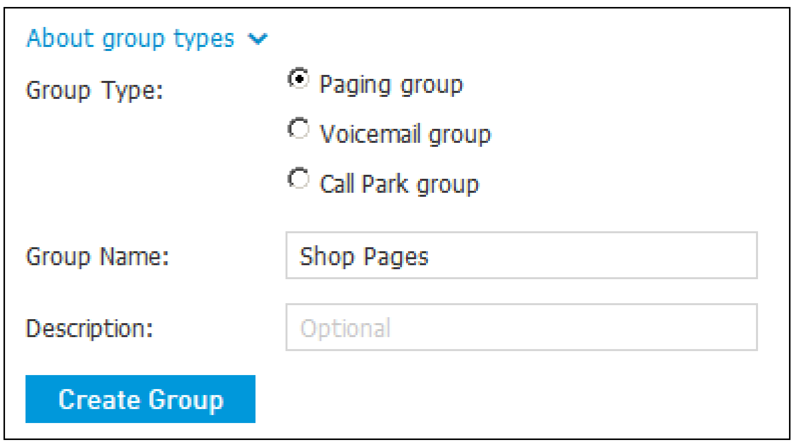


3. Dialing the **All Page** group number of **9100** from any of your phones will send a page to all of your provisioned devices that are currently powered on and registering with your Hosted PBX service.

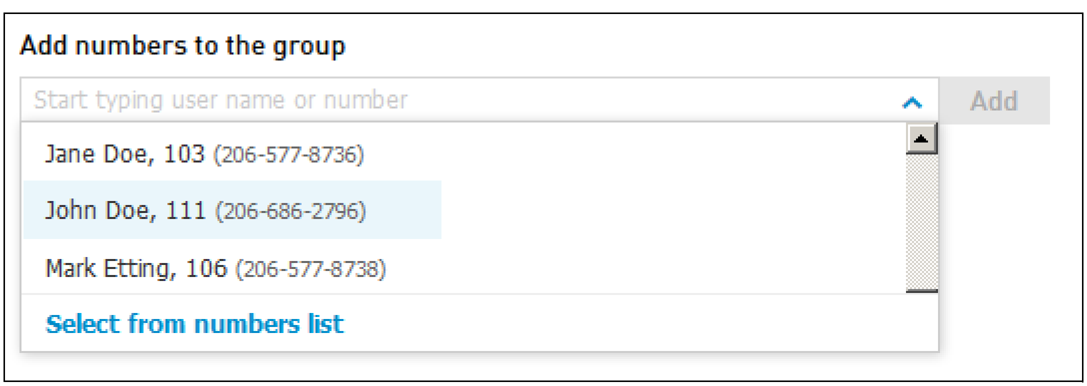
4. Your devices may be included within multiple Hosted PBX paging groups. To create a group, click on the **Create new group** button.



5. The new group dialog will open. Select the **Paging group** radio button, and provide a **Group Name**. When finished, click the **Create Group** button.

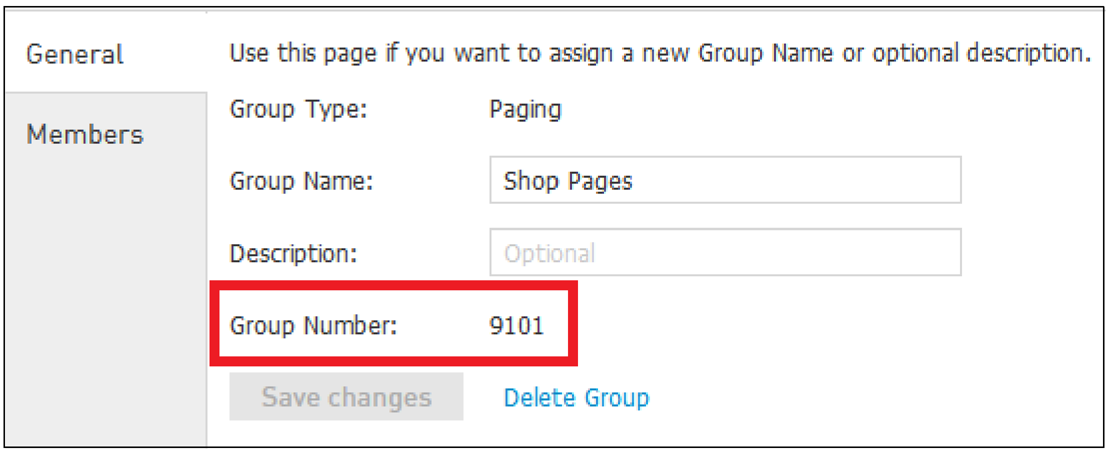


6. Once the paging group has been created, you may now choose which phones and devices you wish to include in the group. Use the drop down menu to choose those devices, and click the **Add** button for each device.



7. Each device automatically saves within the paging group when added. Once finished adding devices to your paging group, the group is ready to use.

8. Take note of your new group's Group Number. This may be found on the group's **General** tab. This Group Number is the 4-digit number you must dial from your phones to send a page to the devices in this page group.

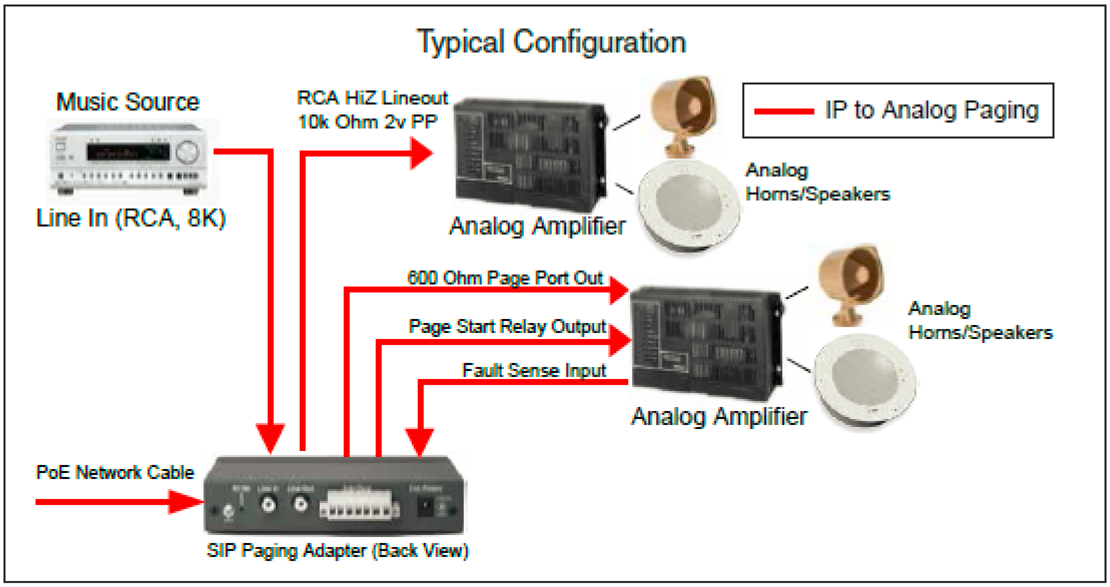


4.0 Configuring the SIP Paging Adapter

4.1 About the SIP Paging Adapter

The CyberData SIP Paging Adapter is a VoIP endpoint that interfaces analog paging systems with SIP and Multicast-based audio sources.

Please note: The SIP Paging Adapter is a Power over Ethernet (PoE) device and requires a PoE router or switch within your local network. If you do not have nor do not wish to obtain a PoE network device, you must purchase a PoE Power Injector along with your SIP Paging Adapter to provide it with electricity.

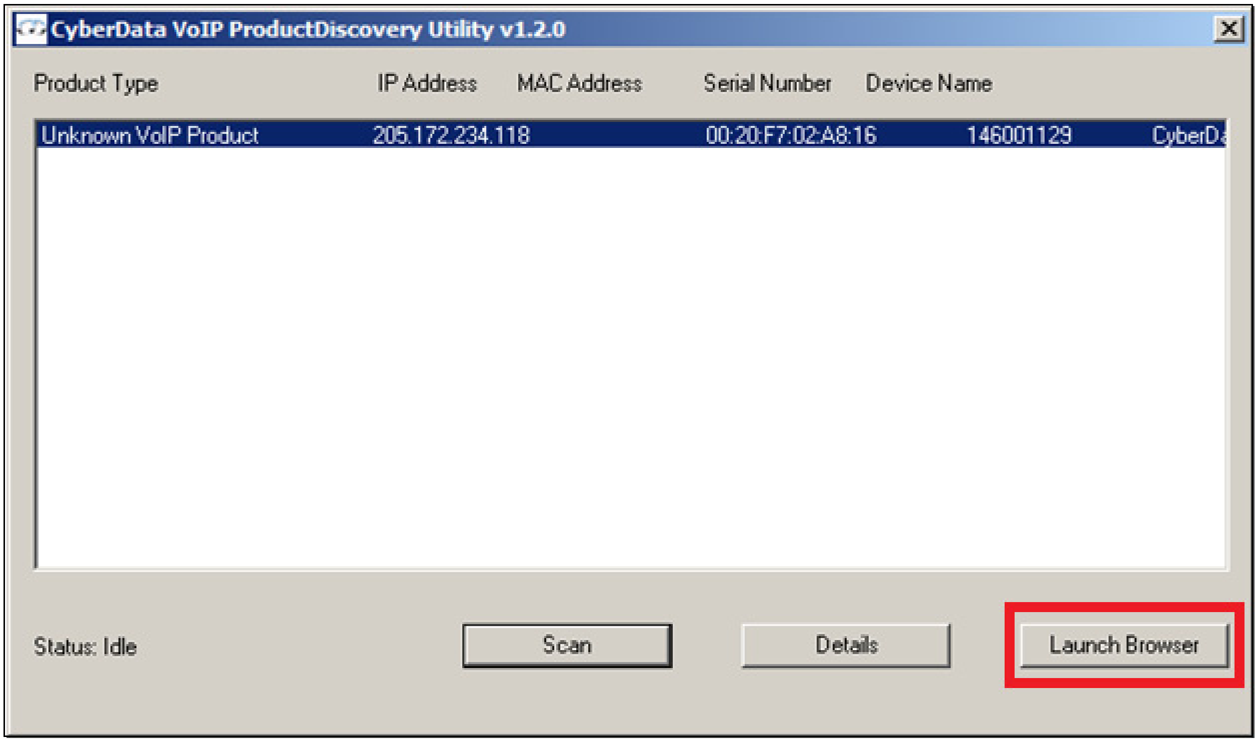


4.2 Accessing the SIP Paging Adapter

To begin setting up your SIP Paging Adapter, please ensure you have:

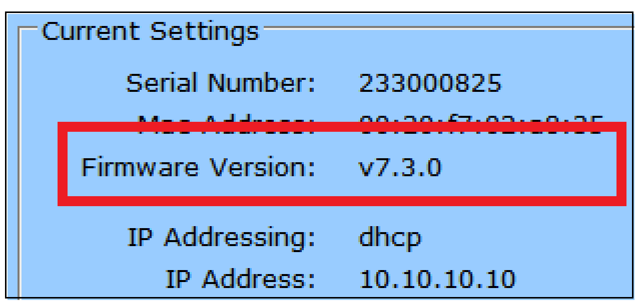
- Connected the Paging Adapter to a PoE port on your network
- Provided power to the device, via PoE or a PoE Power Injector from CyberData
- Provided an IP address to the Paging Adapter via DHCP

Once your Paging Adapter has an IP address, you may use CyberData's VoIP Discovery Utility which can be downloaded from CyberData's website. Run the utility and Scan for your Paging Adapter. Once located, highlight the device and click the Launch Browser button to log into the web user interface. Please refer to your CyberData documentation for the default login and password.



4.3 Verify Firmware Version

Before proceeding, it is recommended to verify your device is utilizing the latest firmware version. The firmware version may be read on the Home page of the user interface.



Please check the CyberData website for the latest firmware version. Download and update the firmware via the Update Firmware section in the user interface if necessary.

4.4 Configure the SIP Parameters

Once your firmware version is verified, proceed to the SIP Config section to begin entering your Intermedia Hosted PBX SIP credentials. Please utilize this reference table below to assist with terminology differences.

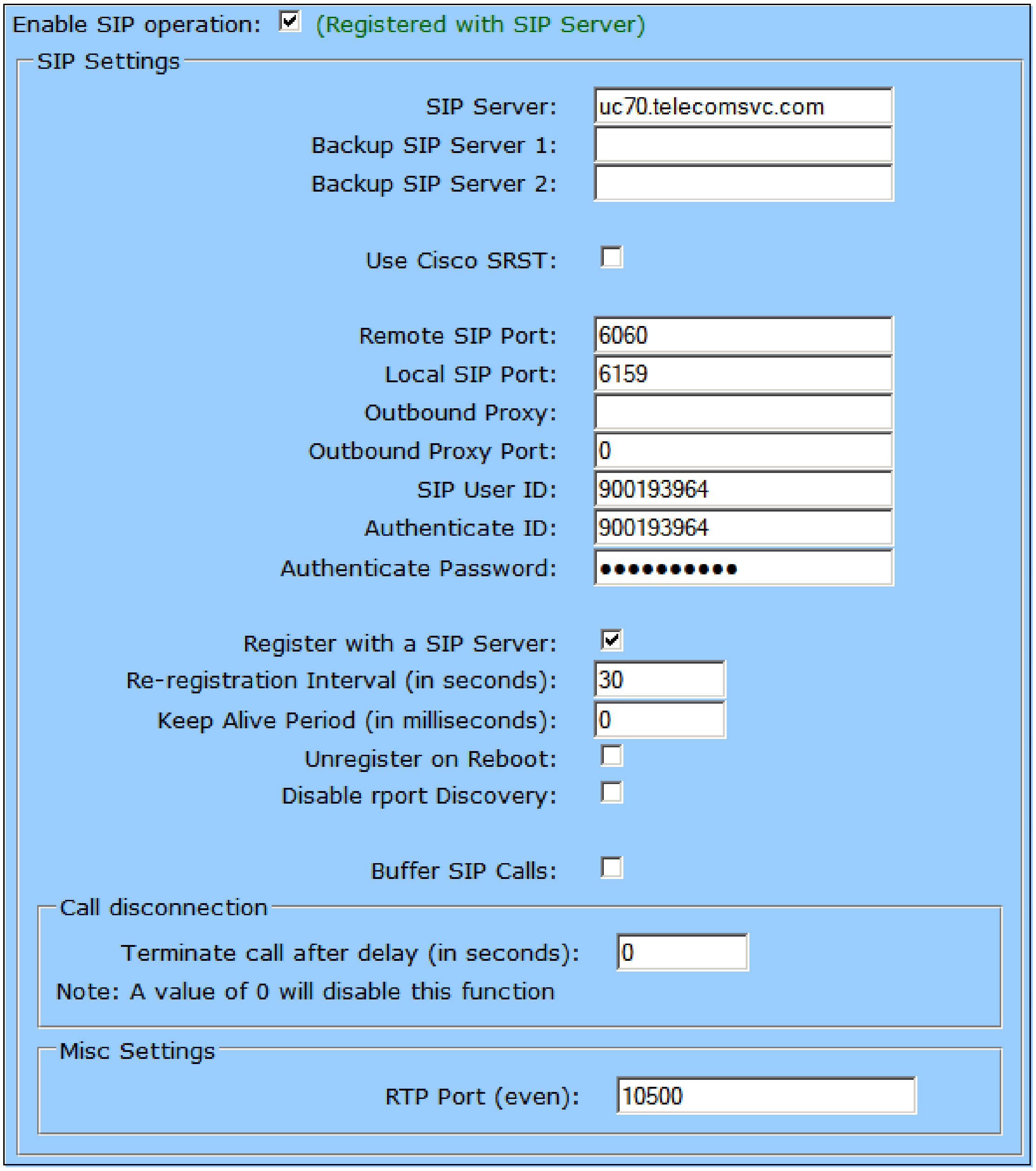
Intermedia Credential Name	CyberData Credential Name
SIP Authorization ID	SIP User ID
SIP Authorization ID	Authenticate ID
SIP Password	Authenticate Password
SIP Domain	SIP Server

In addition to the SIP credentials provided by Intermedia, we recommend the following additional settings.

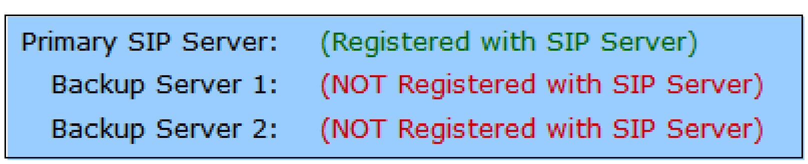
SIP Configuration Tab	Setting
Remote SIP Port	6060
Local SIP Port	6000 + SIP User Name **
Re-registration Interval	30

** Some routers may have difficulty handling requests that return to the same IP address and Port for multiple SIP devices. We recommend setting each SIP device with a unique Local SIP Port, and our preferred method is to match the value of your SIP User Name supplied by Intermedia's Hosted PBX. I.E. your SIP User Name is 112, your Local SIP Port becomes 6000 + 112 = 6112.

When complete, click the Save button. Your SIP Config should be similar to the following:



Once verified, click the Reboot button. Your SIP Paging Adapter should reach out to Intermedia's network and achieve successful registration when it powers up. Registration status may be confirmed on either the Home or SIP Config tabs of the user interface.



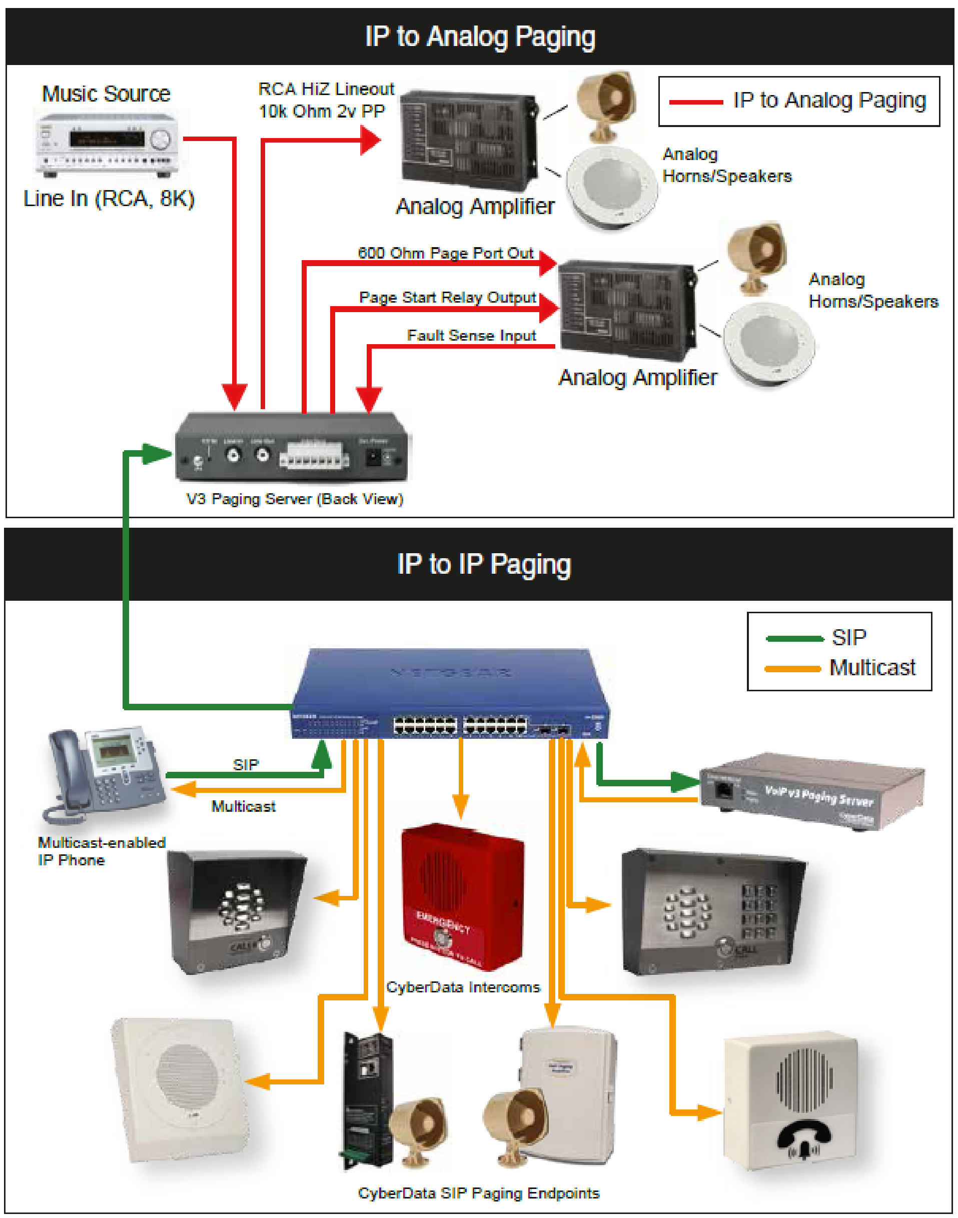
Once registered, your SIP Paging Adapter will receive inbound calls placed to the 10-digit number, or 3-digit extension assigned by your Hosted PBX service.

5.0 Configuring the V3 Paging Server

5.1 About the V3 Paging Server

The CyberData V3 VoIP Paging Server enables users through a single SIP phone extension, to access multiple zones for paging in a VoIP network and to connect to legacy analog overhead paging systems. Configuration is achieved via an intuitive web-based graphical user interface. The V3 Paging Server may be connected via analog or IP, per the diagram below.

Note The V3 Paging Server is a Power over Ethernet (PoE) device and requires a PoE router or switch within your local network. If you do not have or do not wish to obtain a PoE network device, you must purchase a PoE Power Injector along with your V3 Paging Server to provide it with electricity.

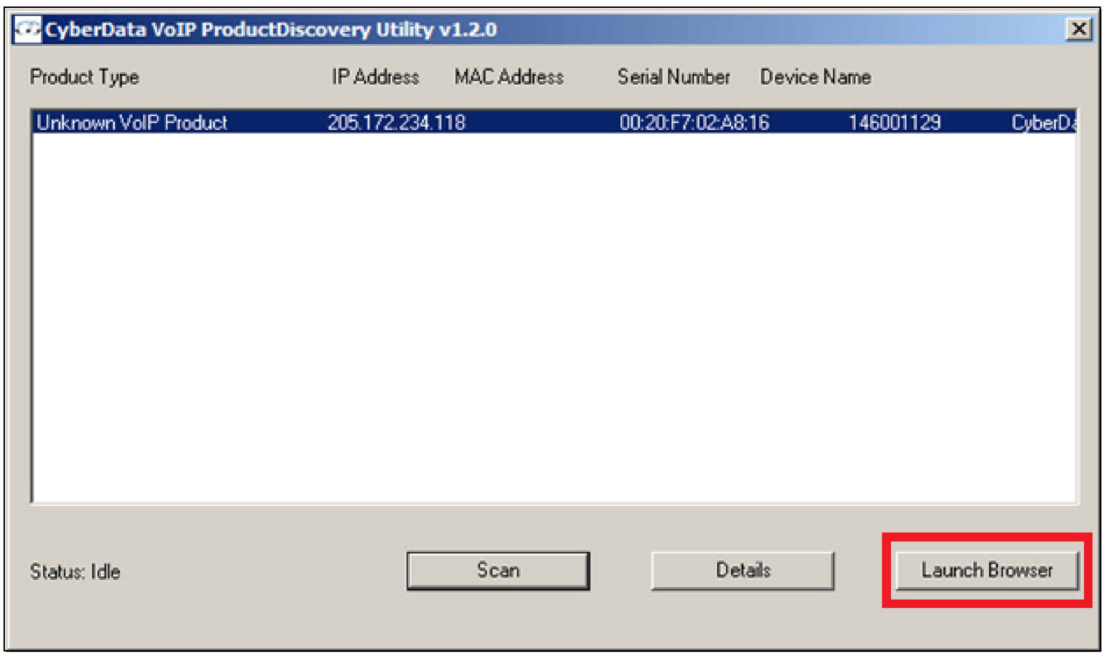


5.2 Accessing the V3 Paging Server

To begin setting up your V3 Paging Server, please ensure you have:

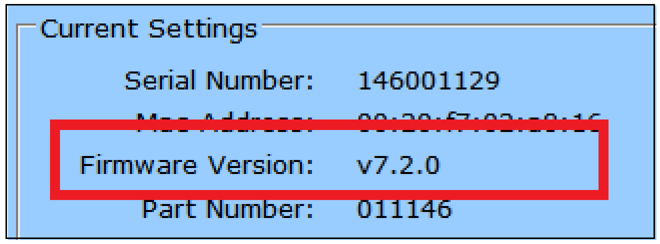
- Connected the paging server to a PoE port on your network
- Provided power to the device, via PoE or a PoE Power Injector from CyberData
- Provided an IP address to the Paging Server via DHCP

Once your Paging Server has an IP address, you may use CyberData's VoIP Discovery Utility which can be downloaded from CyberData's website. Run the utility and Scan for your Paging Server. Once located, highlight the device and click the Launch Browser button to log into the web user interface. Please refer to your CyberData documentation for the default login and password.



5.3 Verify Firmware Version

Before proceeding, it is recommended to verify your device is utilizing the latest firmware version. The firmware version may be read on the Home page of the user interface.



Please check the CyberData website for the latest firmware version. Download and update the firmware via the **Update Firmware** section in the user interface if necessary.

5.4 Configure the SIP Parameters

Once your firmware version is verified, proceed to the **SIP Config** section to begin entering your Intermedia Hosted PBX SIP credentials. Please utilize this reference table below to assist with terminology differences.

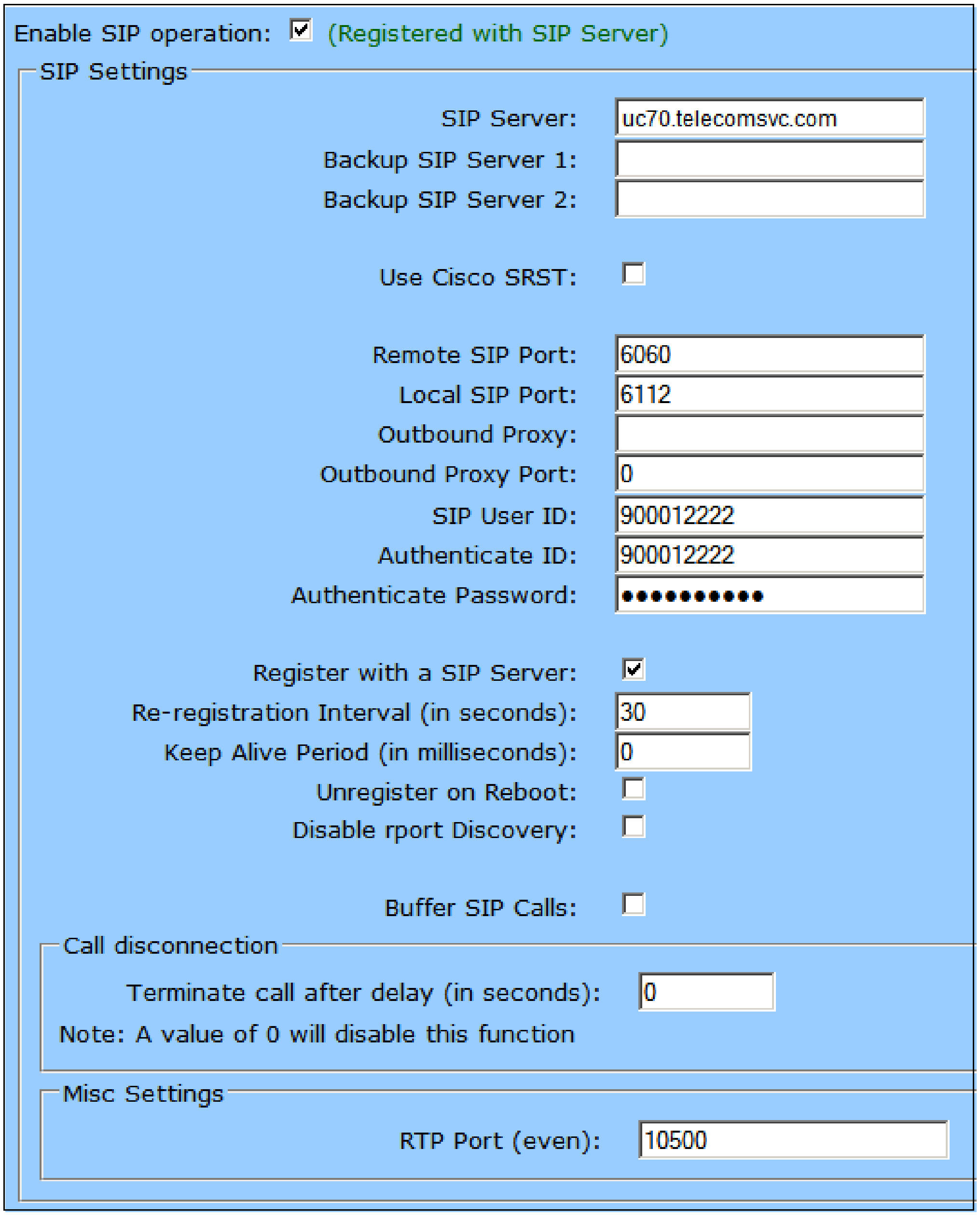
Intermedia Credential Name	CyberData Credential Name
SIP Authorization ID	SIP User ID
SIP Authorization ID	Authenticate ID
SIP Password	Authenticate Password
SIP Domain	SIP Server

In addition to the SIP credentials provided by Intermedia, we recommend the following additional settings.

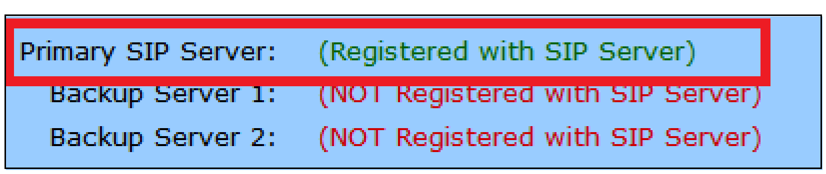
SIP Configuration Tab	Setting
Remote SIP Port	6060
Local SIP Port	6000 + SIP User Name[a]
Re-registration Interval	30

a. Some routers may have difficulty handling requests that return to the same IP address and Port for multiple SIP devices. We recommend setting each SIP device with a unique Local SIP Port, and our preferred method is to match the value of your SIP User Name supplied by Intermedia's Hosted PBX. I.E. your SIP User Name is 112, your Local SIP Port becomes 6000 + 112 = 6112.

When complete, click the **Save** button. Your SIP configuration should be similar to the following:



Once verified, click the **Reboot** button. Your Paging Server should reach out to Intermedia's network and achieve successful registration when it powers up. Registration status may be confirmed on either the **Home** or **SIP Config** tabs of the user interface.



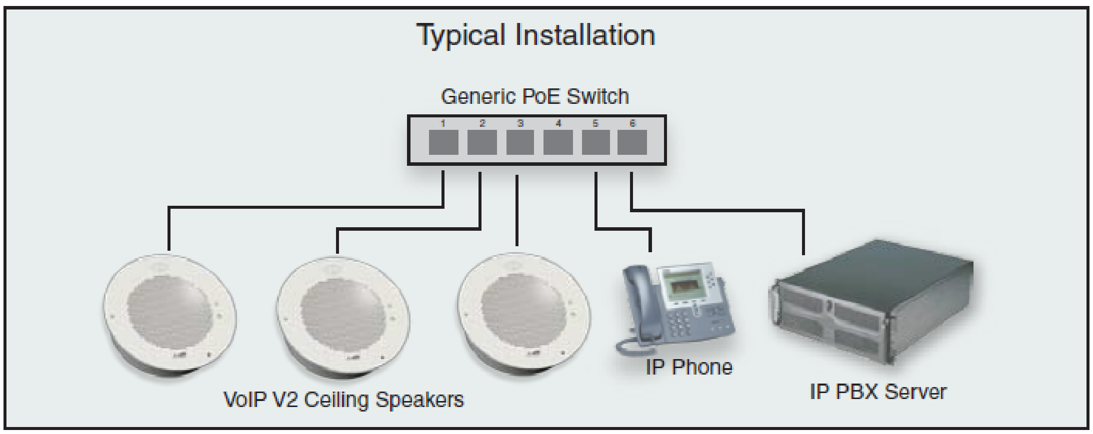
Once registered, your Paging Server will receive inbound calls placed to the 10-digit number, or 3-digit extension assigned by your Hosted PBX service.

6.0 Configuring the V2 Ceiling Speaker

6.1 About the V2 Ceiling Speaker

The CyberData SIP-enabled IP Version 2 IP Speaker is a Power over Ethernet (PoE 802.3af) VoIP mass notification device with network-controlled speaker volume, simultaneous SIP and priority-based multicast streaming, and integrates with both the CyberData Wall Mount and the CyberData Wall Mount Clock Kit. In a non-SIP environment, the speaker is capable of broadcasting audio through multicast and can work in conjunction with the CyberData Paging Server.

Note The v2 Overhead Speaker is a Power over Ethernet (PoE) device and requires a PoE router or switch within your local network. If you do not have or do not wish to obtain a PoE network device, you must purchase a PoE Power Injector along with your V2 Overhead Speaker to provide it with electricity.

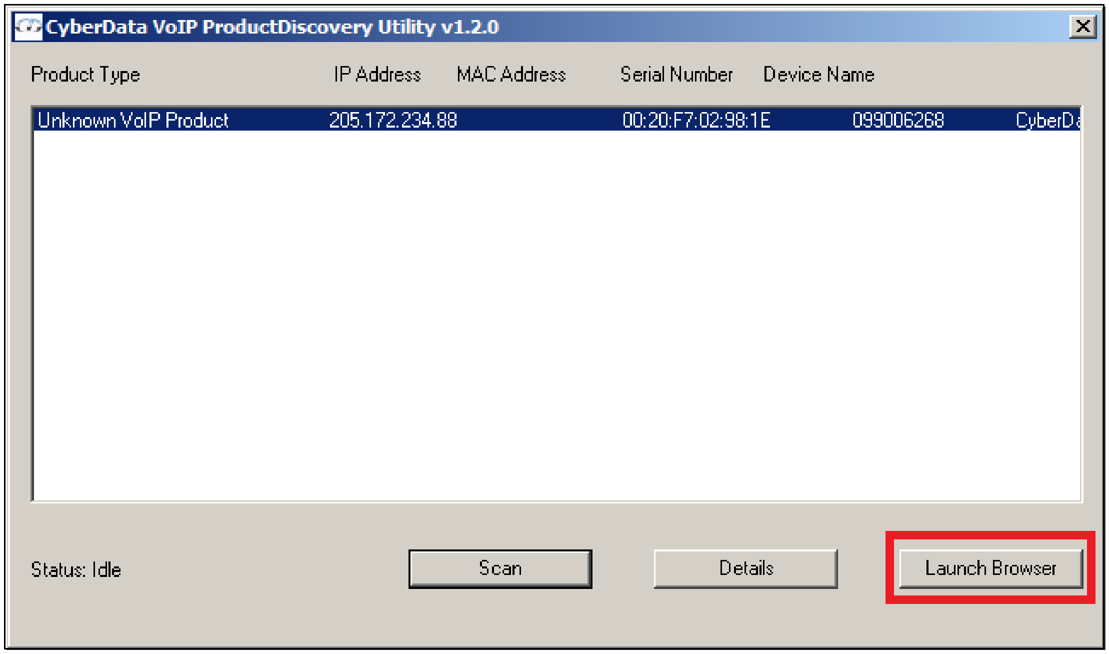


6.2 Accessing the V2 Ceiling Speaker

To begin setting up your Ceiling Speaker, please ensure you have:

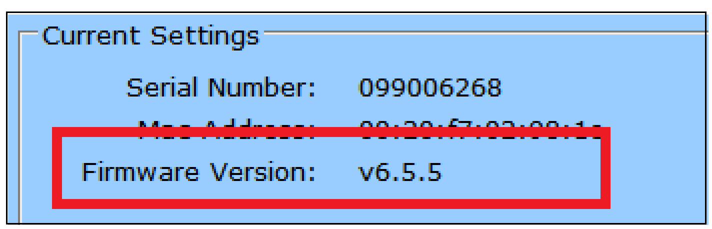
- Connected the speaker to a PoE port on your network
- Provided power to the speaker via PoE or an optional PoE Power Injector available from your CyberData supplier
- Provided an IP address to the speaker via DHCP

Once your speaker has an IP address, you may use CyberData's VoIP Discovery Utility which can be downloaded from CyberData's website. Run the utility and Scan for your speaker. Once located, highlight the device and click the **Launch Browser** button to log into the web user interface. Please refer to your CyberData documentation for the default login and password.



6.3 Verify Firmware Version

Before proceeding, it is recommended to verify your device is utilizing the latest firmware version. The firmware version may be read on the Home page of the user interface.



Please check the CyberData website for the latest firmware version. Download and update the firmware via the **Update Firmware** section in the user interface if necessary.

6.4 Configure the SIP Parameters

Once your firmware version is verified, proceed to the **SIP Config** section to begin entering your Intermedia Hosted PBX SIP credentials. Please utilize this reference table below to assist with terminology differences.

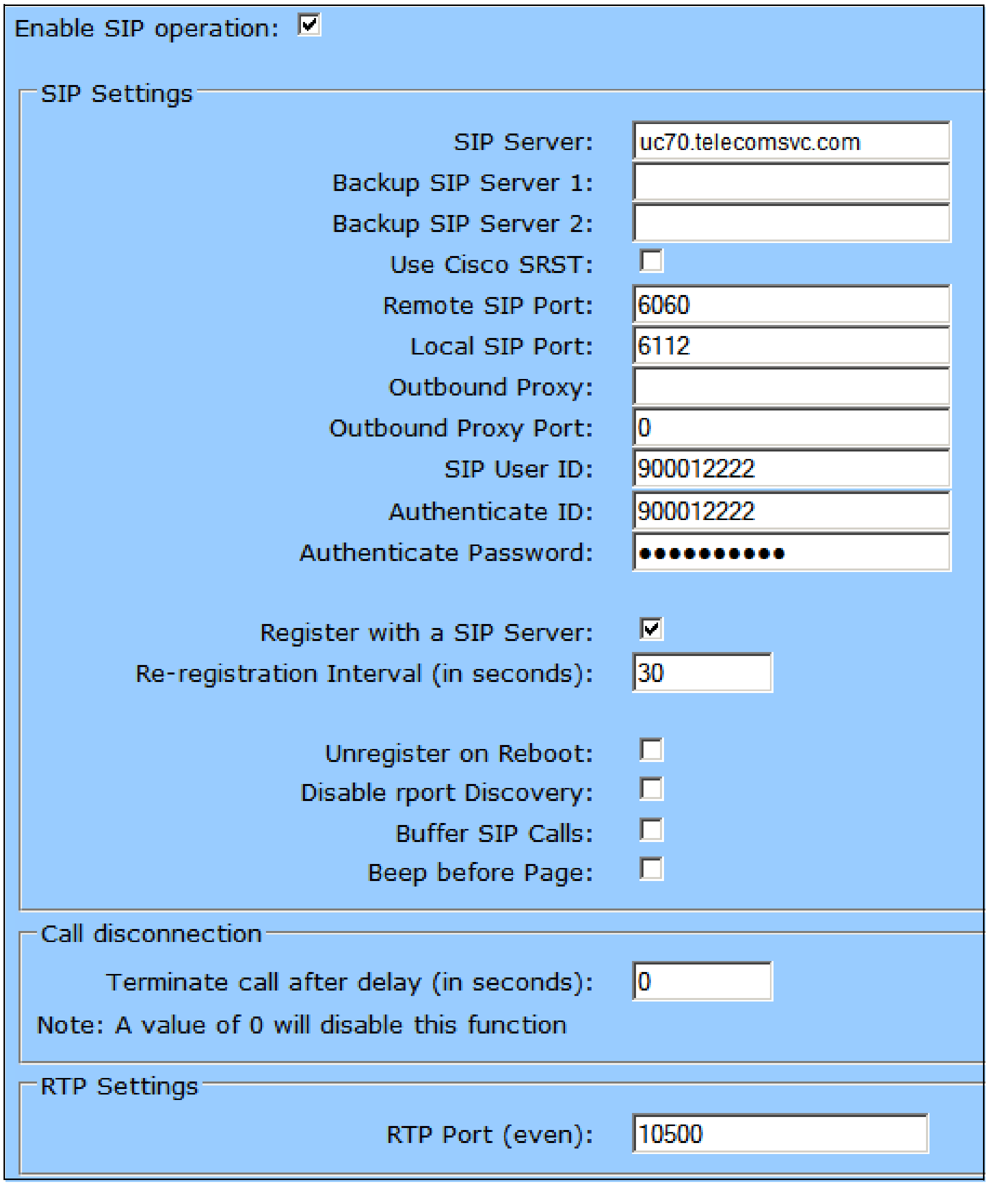
Intermedia Credential Name	CyberData Credential Name
SIP Authorization ID	SIP User ID
SIP Authorization ID	Authenticate ID
SIP Password	Authenticate Password
SIP Domain	SIP Server

In addition to the SIP credentials provided by Intermedia, we recommend the following additional settings.

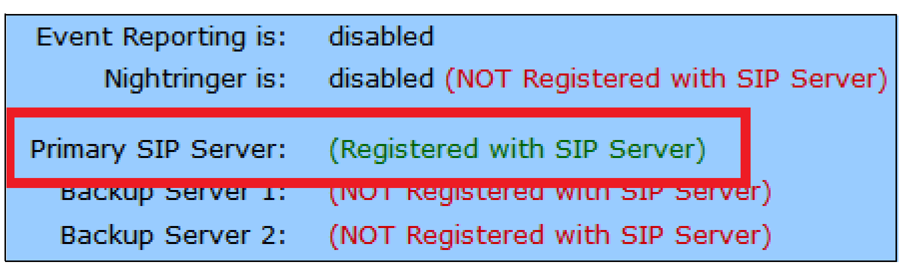
SIP Configuration Tab	Setting
Remote SIP Port	6060
Local SIP Port	6000 + SIP User Name [a]
Re-registration Interval	30

a. Some routers may have difficulty handling requests that return to the same IP address and Port for multiple SIP devices. We recommend setting each SIP device with a unique Local SIP Port, and our preferred method is to match the value of your SIP User Name supplied by Intermedia's Hosted PBX. I.E. your SIP User Name is 112, your Local SIP Port becomes 6000 + 112 = 6112.

When complete, click the **Save** button. Your SIP configuration should be similar to the following:



Once verified, click the **Reboot** button. Your Ceiling Speaker should reach out to Intermedia's network and achieve successful registration when it powers up. Registration status may be confirmed on the **Home** tab of the user interface.



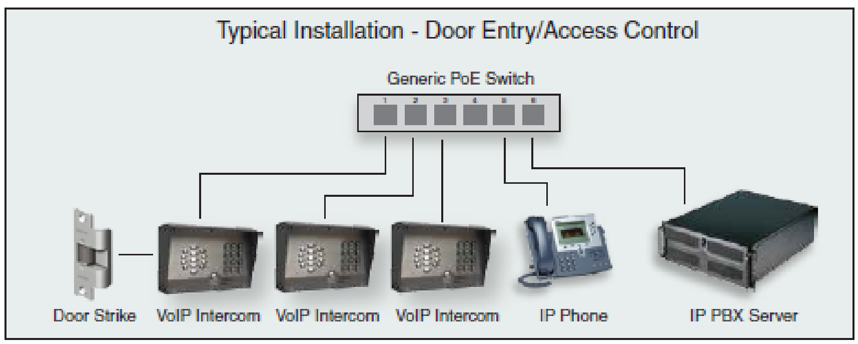
Once registered, your Ceiling Speaker will receive inbound calls placed to the 10-digit number, or 3-digit extension assigned by your Hosted PBX service.

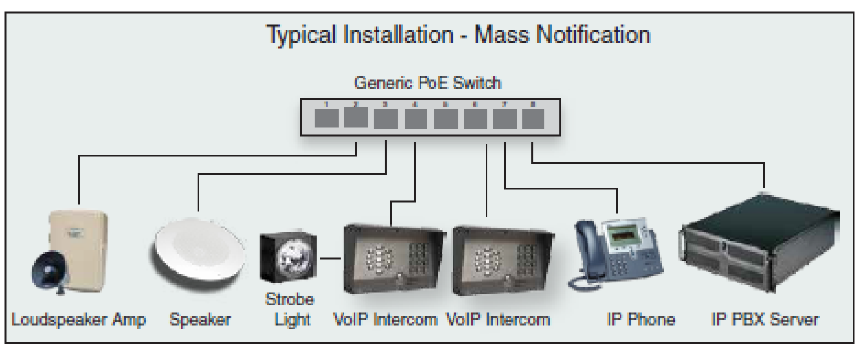
7.0 Configuring the SIP-enabled IP Outdoor Keypad Intercom

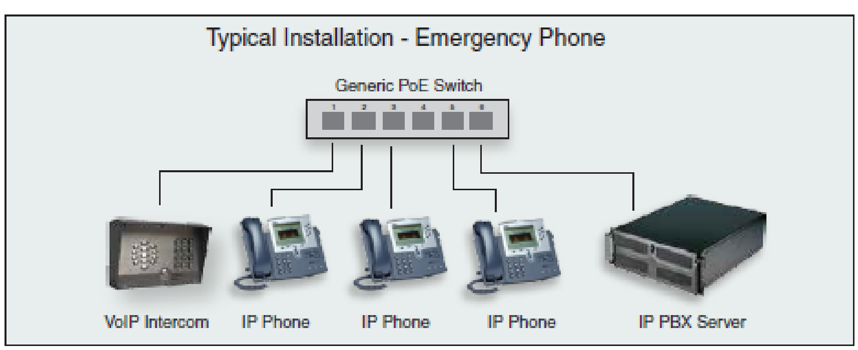
7.1 About the SIP-enabled IP Outdoor Keypad Intercom

The SIP-enabled IP Outdoor Intercom with Keypad is a two-way communication and secure access device. Combining the versatility of a SIP based keypad intercom with the increased weather protection rating of IP 65, this device is perfect for settings such as commercial/ residential facilities, schools and universities, retail establishments, warehouse and manufacturing plants, parking garages and shipyards, and so much more.

Please note: The SIP-enabled IP Outdoor Intercom is a Power over Ethernet (PoE) device and requires a PoE router or switch within your local network. If you do not have or do not wish to obtain a PoE network device, you must purchase a PoE Power Injector along with your SIP-enabled IP Outdoor Intercom to provide it with electricity.





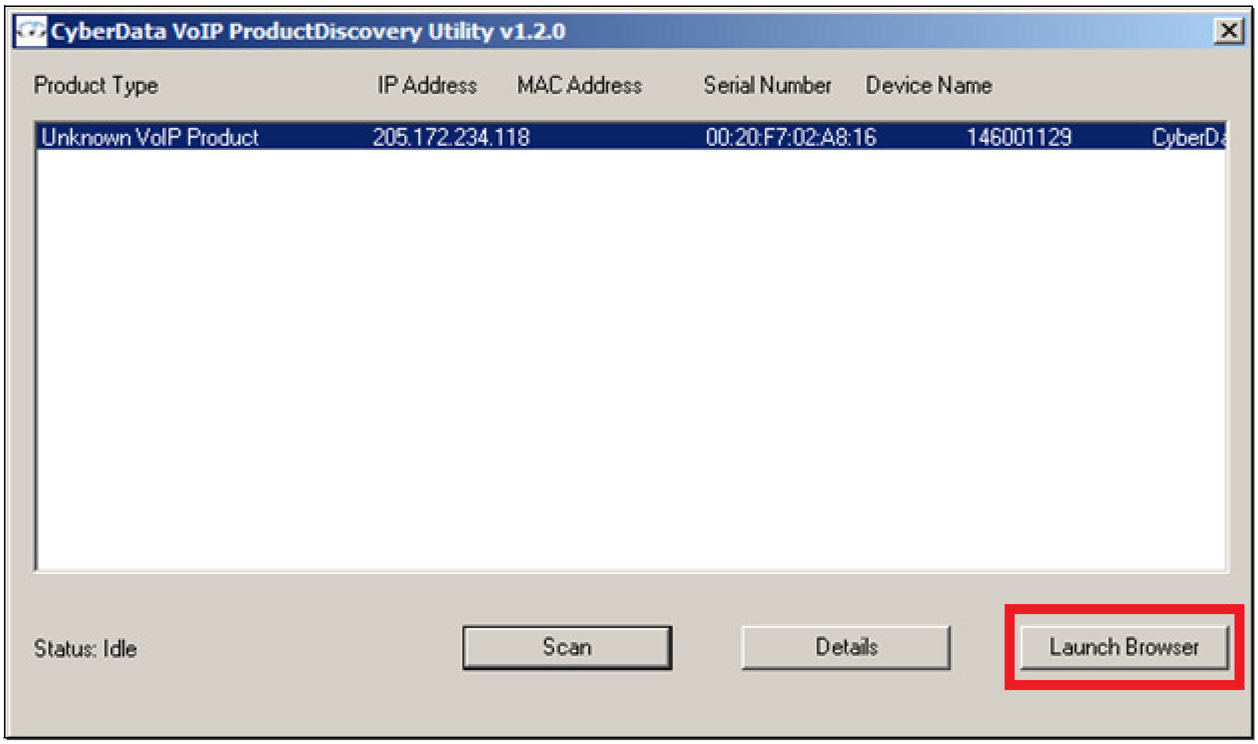


7.2 Accessing the SIP-enabled IP Outdoor Keypad Intercom

To begin setting up your SIP-enabled IP Outdoor Intercom, please ensure you have:

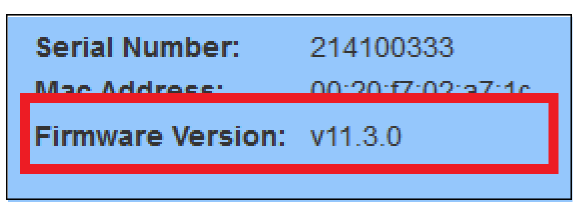
- Connected the Outdoor Intercom to a PoE port on your network
- Provided power to the device, via PoE or a PoE Power Injector from CyberData
- Provided an IP address to the Outdoor Intercom via DHCP

Once your Outdoor Intercom has an IP address, you may use CyberData's VoIP Discovery Utility which can be downloaded from CyberData's website. Run the utility and Scan for your Outdoor Intercom. Once located, highlight the device and click the Launch Browser button to log into the web user interface. Please refer to your CyberData documentation for the default login and password.



7.3 Verify Firmware Version

Before proceeding, it is recommended to verify your device is utilizing the latest firmware version. The firmware version may be read on the Home page of the user interface.



Please check the CyberData website for the latest firmware version. Download and update the firmware via the Update Firmware section in the user interface if necessary.

7.4 Configure the SIP Parameters

Once your firmware version is verified, proceed to the SIP Config section to begin entering your Intermedia Hosted PBX SIP credentials. Please utilize this reference table below to assist with terminology differences.

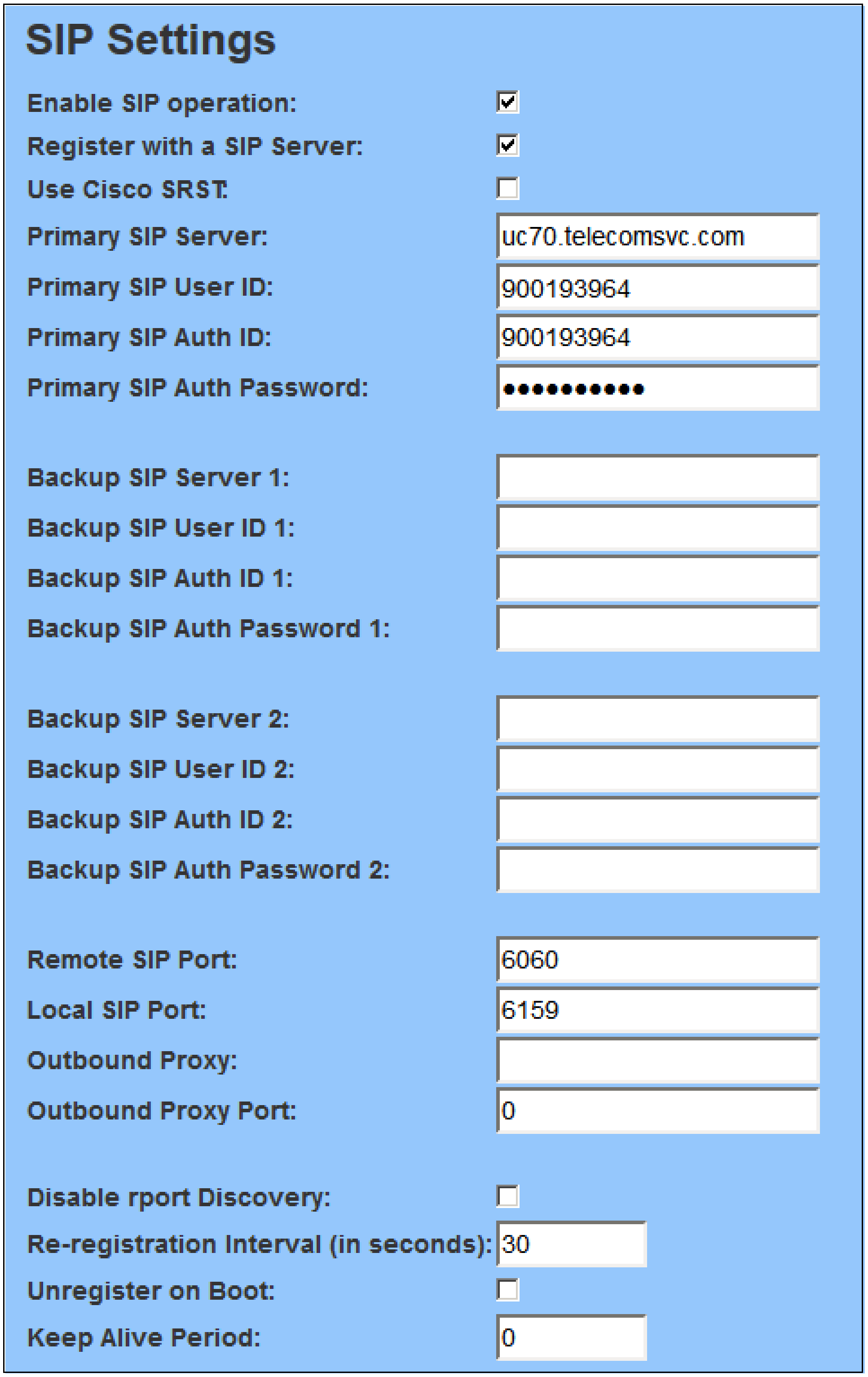
Intermedia Credential Name	CyberData Credential Name
SIP Authorization ID	Primary SIP User ID
SIP Authorization ID	Primary SIP Auth ID
SIP Password	Primary SIP Auth Password
SIP Domain	Primary SIP Server

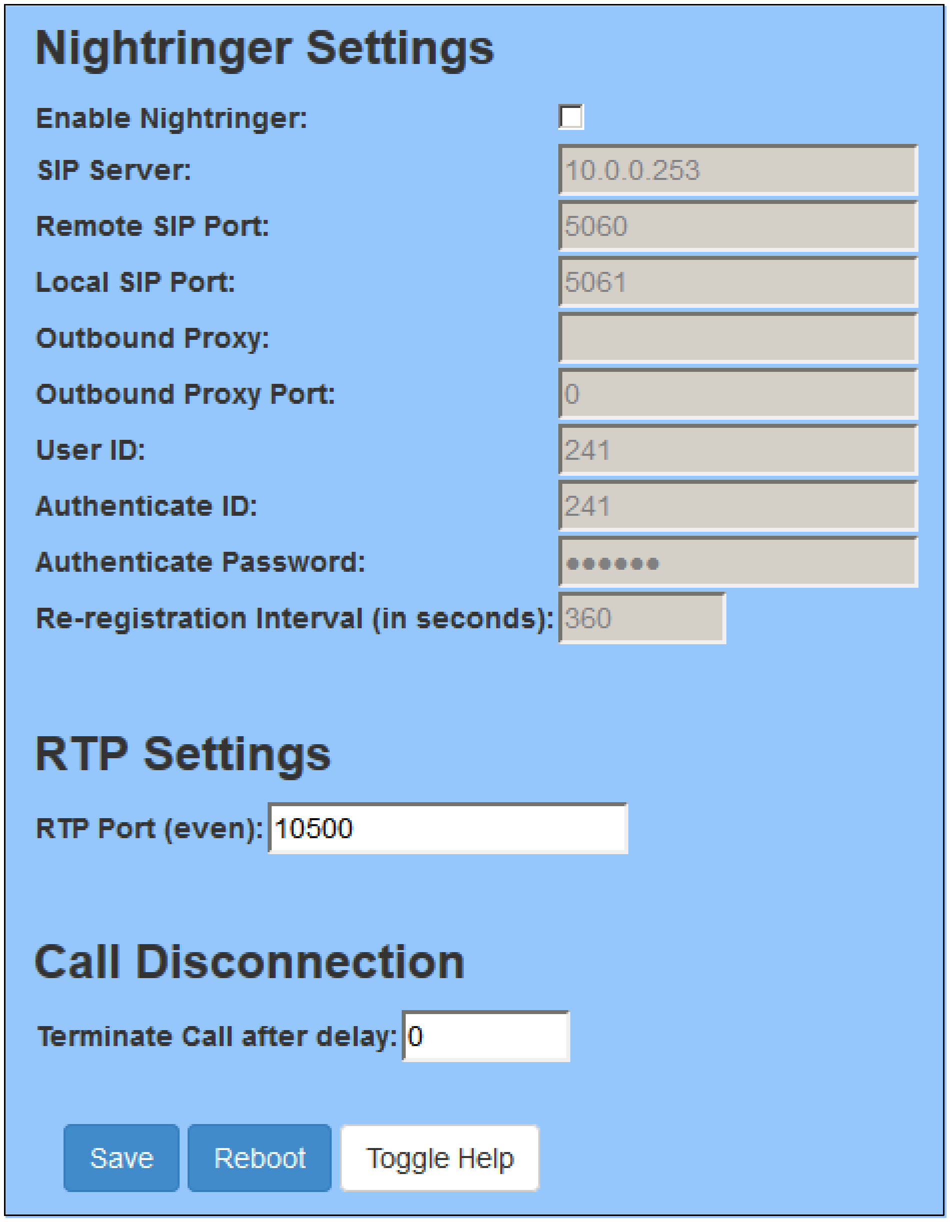
In addition to the SIP credentials provided by Intermedia, we recommend the following additional settings.

SIP Configuration Tab	Setting
Remote SIP Port	6060
Local SIP Port	6000 + SIP User Name[a]
Re-registration Interval	30

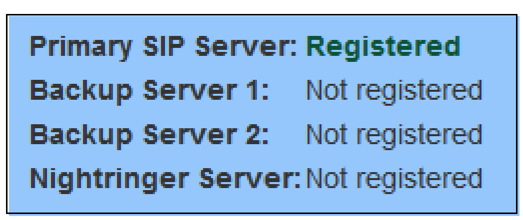
a. Some routers may have difficulty handling requests that return to the same IP address and Port for multiple SIP devices. We recommend setting each SIP device with a unique Local SIP Port, and our preferred method is to match the value of your SIP User Name supplied by Intermedia's Hosted PBX. I.E. your SIP User Name is 112, your Local SIP Port becomes 6000 + 112 = 6112.

When complete, click the Save button. Your SIP Config should be similar to the following:





Once verified, click the Reboot button. Your Outdoor Intercom should reach out to Intermedia's network and achieve successful registration when it powers up. Registration status may be confirmed on the Home tab of the user interface.



Once registered, your Outdoor Intercom will receive inbound calls placed to the 10-digit number, or 3-digit extension assigned by your Hosted PBX service.

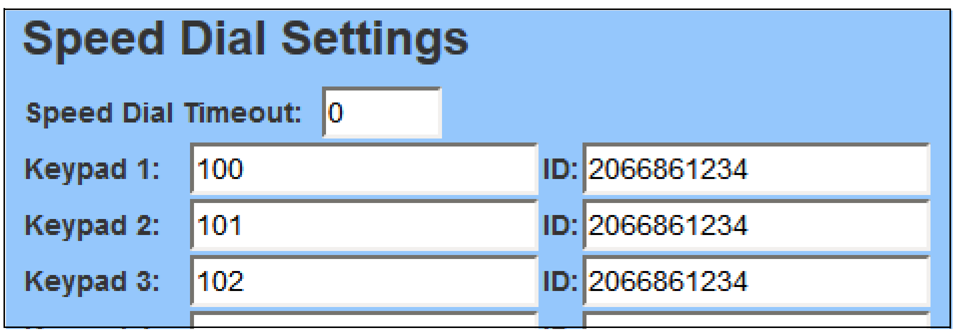
8.0 Configuring the Outdoor Intercom to Auto Dial Numbers and Extensions

By default, the Outdoor Intercom will behave like a typical SIP phone and will emit a dial tone upon pressing the Call Button, allowing for the dialing of Hosted PBX extensions or full 10-digit phone numbers. You may wish to more closely constrain the destinations which are reachable from the Outdoor Intercom to prevent misuse. Some logical dial destinations may include:

- A Hosted PBX extension number
- A Hosted PBX phone number such as a desk phone or cell phone
- An Auto Attendant phone number

The easiest way to accomplish this is to utilize the Outdoor Intercom's Speed Dial feature. To locate this feature, within the Outdoor Intercom's web user interface:

1. Click on the Buttons section at the top.
2. Under Dial Mode, select 'Enable Speed Dial Operation'. The 'Speed Dial Settings' section will now become enabled.



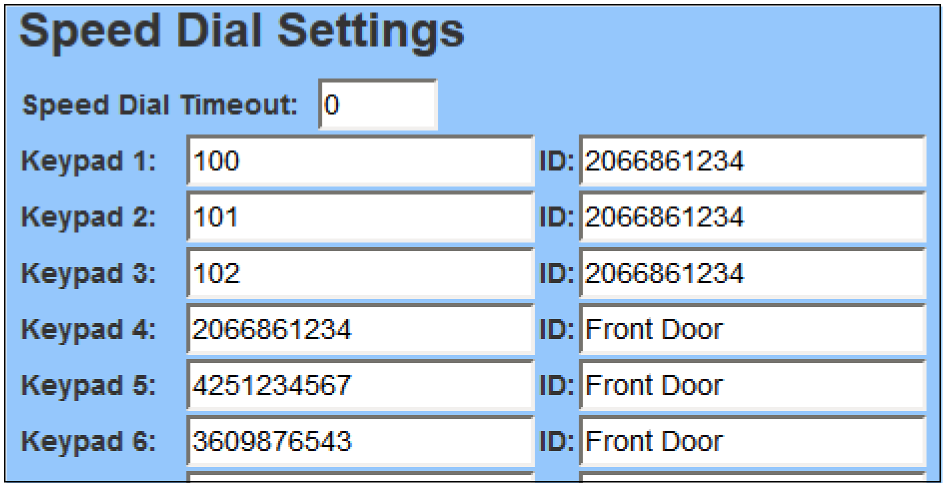
The Speed Dial Settings section allows you to program the actions of a specific button on the Outdoor Intercom's keypad. For instance, you may program the '1' button on the keypad to automatically dial your Hosted PBX extension 100 when pressed. Alternately, you may program a full 10-digit phone number, such as your main Auto Attendant. You may even create complex dial strings, including pauses and menu choices.

8.1 To Program a Phone Number or Extension

1. Set the Speed Dial Timeout value. This value will determine how long, in seconds, a button must be pressed in order to place a call. Use a value of 0 for no delay.
2. Next choose the keypad digit you wish to program. You may also program the Call Button itself to automatically dial a number or extension.
3. Locate the 'Keypad X:' field, where 'X' is the button you wish to program.
4. Enter the full 10-digit phone number or extension number in the first column.
5. Enter the Caller ID you wish to be displayed when someone uses this Speed Dial in the second column named 'ID'. This field will accept numbers and letters.

6. Click the Save button.

7. Click the Reboot button.



The Outdoor Intercom will now place a phone call to the phone numbers or extensions you have programmed when each corresponding button is pressed on the keypad.

8.2 To Program an Auto Attendant Number

More complex speed dials may be attained with the use of an Intermedia Auto Attendant. Auto Attendants allow for the use of calls to pre-programmed hunt groups or ring groups, which are a more efficient way of reaching multiple people within your organization should building access be required. To program the Outdoor Intercom to use an Auto Attendant hunt groups or ring groups:

1. First, create your hunt group or ring group within your Auto Attendant, and link the hunt group or ring group to a menu option within your active menu.

2. Next, decide which keypad option on the Outdoor Intercom will correspond to the action to call this Auto Attendant. You may also program the Call Button itself to automatically dial the Auto Attendant.

3. Locate the ‘Keypad X:’ field, were ‘X’ is the button you wish to program.

4. Enter the full 10-digit phone number of the Auto Attendant in the first column.

5. Next, enter a comma, followed by the Auto Attendant menu option number for your hunt group or ring group. The comma creates a pause of 3 seconds before sending the next digits. E.x. 2066861234,5

Keypad #:		**ID:**	
Call Button:	2066861234,5	**ID:**	Front Door

6. Click the Save button.

7. Click the Reboot button.

Test your setup thoroughly. If necessary, you may need to add additional commas to compensate for post dial delay to create a longer delay or access nested menu choices. Each comma will increase the delay by an additional 3 seconds. For example, the following dial string will produce the following results:

- 2066861234,1,,123
  - Dial 2066861234
  - Pause 3 seconds
  - Dial 1
  - Pause 6 seconds
  - Dial 123

This mechanism can be used to automatically access nested menus, but remember to adjust your programming in the Outdoor Intercom any time menu routing or voiced greetings are updated.