

Leap Telecom Configuration Guide: Speakers

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1.0 Supported CyberData Products

This section describes the products used for interoperability testing with Leap Telecom.

Table 1-1: Supported CyberData Products

EQUIPMENT	MODEL or PART NUMBER	FIRMWARE VERSION
SIP SPEAKER	011394	12.1.1 or greater
SIP TALKBACK SPEAKER	011398	12.1.1 or greater
CYBERDATA VOIP SIP/MULTICAST CEILING MOUNT SPEAKER	011511	20.0.1 or greater
CYBERDATA VOIP SIP/MULTICAST WALL MOUNT SPEAKER	011512	20.0.1 or greater
CYBERDATA SIP OFFICE RINGER	011216	20.4.1 or greater

2.0 Before You Start

Network Advisories

Leap Telecom Calling uses a Fully Qualified Domain Name (FQDN) for the SIP server. The CyberData Speaker needs to perform a DNS query to resolve the IP address of the Leap Telecom SIP Server's FQDN.

In addition, be sure to verify the following ports are available for the speaker to use:

- UDP 5060 (SIP)
- TCP 5060, 5061 (SIP)
- UDP 10500 (RTP)

The speaker will need to traverse the public internet in order to operate with Leap Telecom in the cloud.

The speaker's paging and Nightringer extension uses SIP port 5060 to send and receive SIP messages.

SIP ports 5060 and RTP port 10500 are the default values on all noted firmware levels. Alternatively, SIP ports are configurable on the **SIP** page of the web interface. The RTP port setting on the **SIP** page is used for both extensions.

Product Documentation and Utilities

Before you start, download the Operation and Quick Start guides from the speaker's product webpage:

SIP VoIP SIP/Multicast Ceiling Mount Speaker:

<https://www.cyberdata.net/collections/sip/products/011511>

SIP VoIP SIP/Multicast Wall Mount Speaker:

<https://www.cyberdata.net/collections/sip/products/011512>

SIP Office Ringer:

<https://www.cyberdata.net/collections/sip/products/011216>

The CyberData Discovery Utility can be used to locate CyberData devices on your network. You may download it from the following web address:

<https://www.cyberdata.net/pages/discovery>

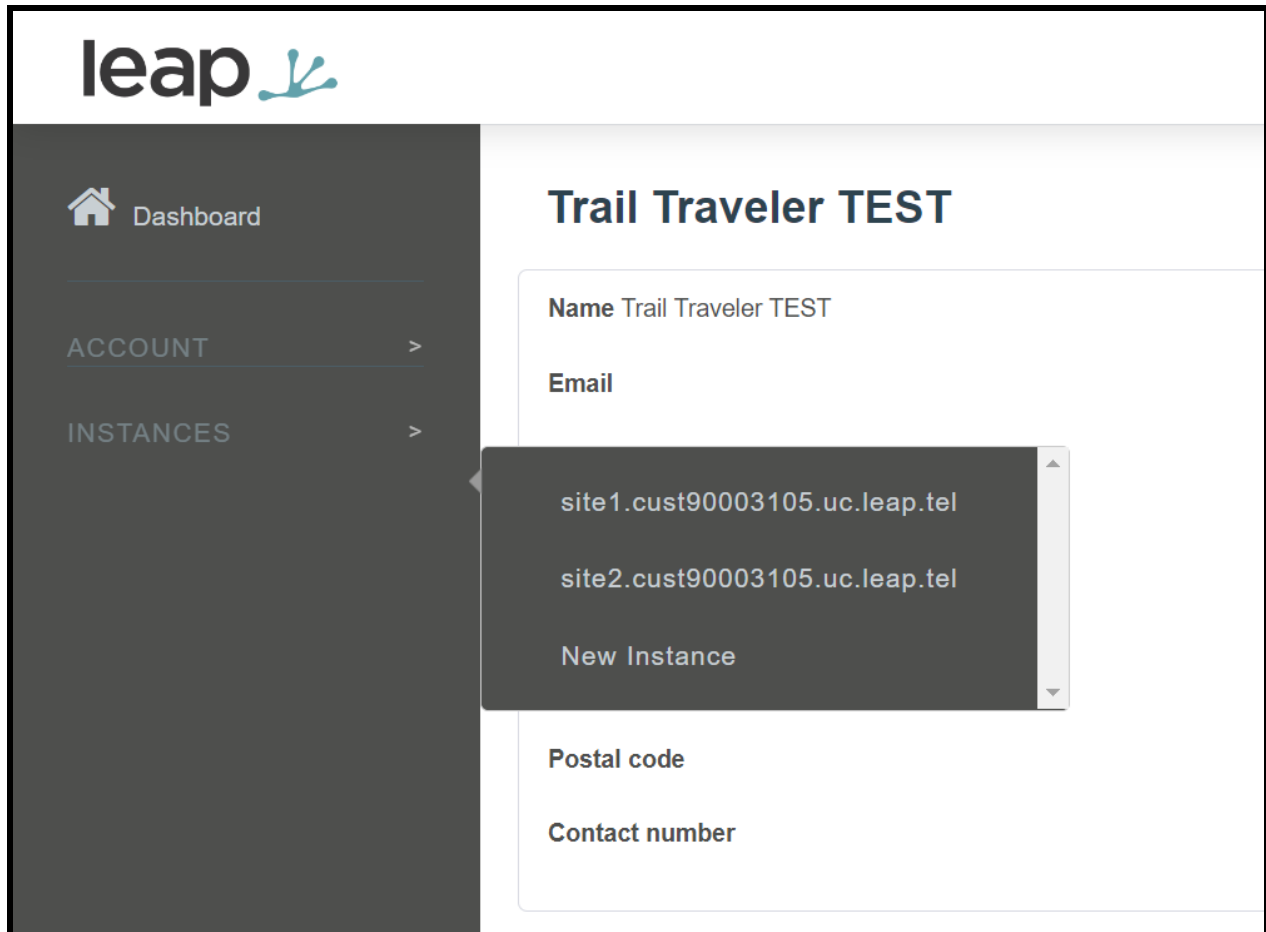
Note: DHCP addressing mode is enabled on default on all noted firmware levels.

3.0 Setting up a Device in the Leap Tel System

This section outlines how to create a device in the Leap Tel system.

1. Login to the Leap system
2. Mouse over instances and select the site/instance where the device will be used.

Figure 3-1: Instance Selection



- From the site page select **Devices**, then press the + button to create a new device.

Figure 3-2: Workspaces Page

Devices 8 -

Search:

Name	Login	SIP Caller ID name	SIP Caller ID number	Edit	Delete	Origins	Registration Status	Routing
Ted Home Phone	tedxxx	Traveler Traveler						
Home Speaker	cyb3r	Traveler Traveler						
Test device	fubar	Traveler Traveler						
Cyber Intercom	Intercom	Traveler Traveler						
CyberNight	CyberNight	Traveler Traveler						
CallButton	CallButton	Traveler Traveler						
PaulSoftphone	PaulSoftphone	Traveler Traveler						
KERRY'S DESK PHONE	kgarrison123	Traveler Traveler						

Show 1 - 8 of 8 < < > >

- Set the **Name** of the device, being descriptive can help for device management in the future.
- Set the **Login** field as desired, CyberData recommends not using spaces, hyphens, or underscores.
- Press **Save** at the bottom of the page.

Figure 3-3: Add a Device

New device

Name ⓘ

Login ⓘ

Password ⓘ REGENERATE PASSWORD

7. After pressing save the page will refresh, click on **Extensions**.
8. In the **Extensions** section press the + to create a new extension.

Figure 3-4: Pick a device

Extensions 9 -

Search:

Name	Number	Edit	Delete	Origins	Routing
CyberData Ring Group	3004				
Kerry Home Speaker	4001				
Cyber Intercom	3006				
CyberNight	3008				
CallButton	3010				
PaulSoftphone	3011				
Sales Conference Room Ext	4002				
Kerry	1002				
Ted	2005				

Show 1 - 9 of 9 < < > >

+

9. In the New extension window set a **Name** for the extension. CyberData recommends having the name correlate to the device that will use the extension.
10. Set the **Number** as desired.
11. Set the **Destination** to the **Name** of the device set in step 4.
12. Press **Save**.

Figure 3-5: New Extension Creation

The screenshot shows a web-based configuration window titled "New extension". It contains three input fields, each with a help icon (i):

- Name:** A text input field containing "CyberData Speaker".
- Number:** A text input field containing "3011".
- Destination:** A dropdown menu with "CyberData Speaker (device:3444)" selected.

At the bottom of the window, there are two buttons: "CANCEL" and "SAVE".

Configuration on the Leap Tel side is now complete and the CyberData device is ready to be configured. Values set on the Device tab are required for registration, CyberData recommends opening up the Device created in steps 3 - 6 for ease of copy and pasting.

4.0 Setting up the CyberData Speaker

This section outlines the required sections for the CyberData device and how the credentials supplied from Leap correlate to the CyberData settings. For the purposes of the document the Speaker is used to illustrate how to setup the device. There is no difference in configuration for the SIP Speaker, SIP Talkback Speaker, or the VoIP SIP/Multicast Speaker.

Table 4-1: SIP Credential Explanation

Leap Credential	CyberData Setting
Instance	Primary SIP Server
Device Login	Primary SIP User ID
Device Login	Primary SIP Auth ID
Device Password	Primary SIP Auth Password

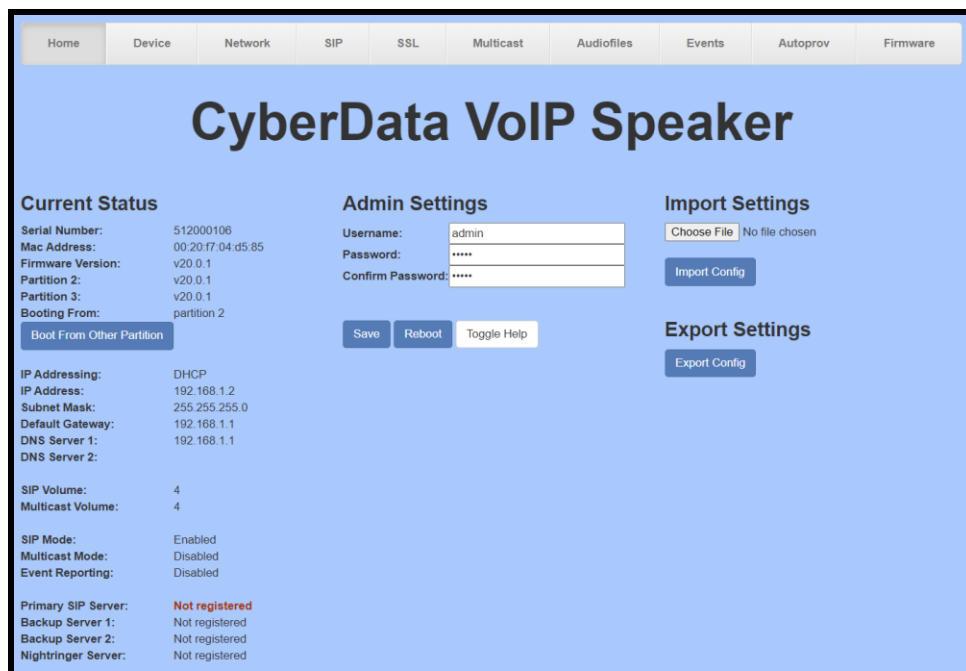
CyberData's default login credentials are:

Username: admin

Password: admin

1. Log into the web interface of the CyberData device.

Figure 4-1: Home Tab



2. Navigate to the SIP tab.
3. Set the **Primary SIP Server** field to the FQDN of the Instance.
4. Set the **Primary SIP User ID** to the Device Login set in step 3-5.
5. Set the **Primary SIP Auth ID** to the Device Login set in step 3-5.
6. Set the **Primary SIP Auth Password** to the Device Password.

Note: Leap Tel supports both UDP and TCP for SIP Transport. Please use either of the transport protocols, during testing CyberData found that TCP preforms best.

7. Save and Reboot.

Figure 4-2: SIP Tab

The screenshot shows the 'SIP Settings' configuration page. It is organized into several sections:

- SIP Settings:** Includes checkboxes for 'Enable SIP operation' and 'Register with a SIP Server' (both checked), a 'Buffer SIP Calls' checkbox (unchecked), and input fields for 'Primary SIP Server' (site1.cust90003105.uc.leap.tel), 'Primary SIP User ID' (Cyber_Speaker), 'Primary SIP Auth ID' (Cyber_Speaker), 'Primary SIP Auth Password' (masked), and 'Re-registration Interval (in seconds)' (360). It also has sections for 'Backup SIP Server 1' and 'Backup SIP Server 2', each with fields for Host or IP address, User ID, Auth ID, Password, and Re-registration Interval (360).
- Remote SIP Port:** 5060
- Local SIP Port:** 5060
- SIP Transport Protocol:** TCP (dropdown)
- TLS Version:** 1.2 only (recommended) (dropdown)
- Verify Server Certificate:** (checkbox, unchecked)
- Outbound Proxy:** Host or IP address (input)
- Outbound Proxy Port:** 0 (input)
- Use Cisco SRST:** (checkbox, unchecked)
- Disable rport Discovery:** (checkbox, unchecked)
- Keep Alive Period:** 10000 (input)

Nightringer Settings: Includes input fields for 'SIP Server' (Host or IP address), 'SIP User ID' (User ID), 'SIP Auth ID' (Auth ID), 'SIP Auth Password' (Password), and 'Re-registration Interval (in seconds)' (360).

Call Disconnection: Includes 'Terminate Call after delay' (0).

Audio Codec Selection: Includes 'Codec' (Auto Select dropdown).

RTP Settings: Includes 'RTP Port (even)' (10500), 'Asymmetric RTP' (checkbox, unchecked), 'Jitter Buffer' (50), and 'RTP Encryption (SRTP)' (Disabled dropdown).

At the bottom right, there are buttons for 'Save', 'Reboot', and 'Toggle Help'.

If the credentials have been entered correctly the device should now be registered with Leap. This can be verified on the home tab of the web interface or on the Leap Device page.

Figure 4-3: Home Tab – Registered

The screenshot displays the 'Home' tab of the CyberData VoIP Speaker web interface. The page features a navigation menu at the top with tabs for Home, Device, Network, SIP, SSL, Multicast, Audiofiles, Events, Autoprov, and Firmware. The main content area is titled 'CyberData VoIP Speaker' and is divided into three columns: Current Status, Admin Settings, and Import Settings. The 'Current Status' column shows device information such as Serial Number (512000106), Mac Address (00:20:f7:04:d5:85), and IP Addressing (DHCP). The 'Admin Settings' column includes fields for Username (admin), Password, and Confirm Password, along with Save, Reboot, and Toggle Help buttons. The 'Import Settings' column has a 'Choose File' button and an 'Import Config' button. Below these are 'Export Settings' with an 'Export Config' button. The 'Current Status' section also includes a 'Boot From Other Partition' button and a list of SIP and Multicast servers, with the Primary SIP Server listed as 'Registered'.

Category	Item	Value
Current Status	Serial Number:	512000106
	Mac Address:	00:20:f7:04:d5:85
	Firmware Version:	v20.0.1
	Partition 2:	v20.0.1
	Partition 3:	v20.0.1
	Booting From:	partition 2
	IP Addressing:	DHCP
	IP Address:	192.168.1.2
	Subnet Mask:	255.255.255.0
	Default Gateway:	192.168.1.1
DNS Server 1:	192.168.1.1	
DNS Server 2:		
SIP Volume:	SIP Volume:	4
	Multicast Volume:	4
SIP Mode:	SIP Mode:	Enabled
	Multicast Mode:	Enabled
	Event Reporting:	Disabled
SIP Servers	Primary SIP Server:	Registered
	Backup Server 1:	Not registered
	Backup Server 2:	Not registered
	Nightringer Server:	Not registered

5.0 Using the CyberData VoIP Speaker in a Leap Telecom system.

CyberData VoIP SIP/Multicast Speakers are designed with IP Paging in mind. Supporting both SIP and Multicast that allows the speakers to work with individual addressability or mass notification scenarios.

5.1 Setting up a Multicast priority

CyberData devices support multicast that works in a priority system, where a higher priority will always supersede a lower priority. For example, a multicast page to priority 4 would play over a background music stream at priority 0. SIP Calls are treated as priority 4.5.

CyberData devices also have an Emergency Multicast Priority, priority 9, which will always play at max volume regardless of setting, by design.

Figure 5-1: Multicast Tab

Home Device Network SIP SSL **Multicast** Audiofiles Events Autopro Firmware

CyberData VoIP Speaker

Multicast Settings

Enable Multicast Operation:

Priority	Address	Port	Name	Buffer	Beep
0	239.168.3.1	2000	Background Music	<input type="checkbox"/>	<input type="checkbox"/>
1	239.168.3.2	3000	MG1	<input type="checkbox"/>	<input type="checkbox"/>
2	239.168.3.3	4000	MG2	<input type="checkbox"/>	<input type="checkbox"/>
3	224.5.5.5	5050	MG3	<input type="checkbox"/>	<input type="checkbox"/>
4	239.168.3.5	6000	General Announcements	<input type="checkbox"/>	<input type="checkbox"/>
5	239.168.3.6	7000	MG5	<input type="checkbox"/>	<input type="checkbox"/>
6	239.168.3.7	8000	MG6	<input type="checkbox"/>	<input type="checkbox"/>
7	239.168.3.8	9000	MG7	<input type="checkbox"/>	<input type="checkbox"/>
8	239.168.3.9	10000	MG8	<input type="checkbox"/>	<input type="checkbox"/>
9	239.168.3.10	11000	Emergency	<input type="checkbox"/>	<input type="checkbox"/>

Polycm Default Channel

Polycm Priority Channel

Polycm Emergency Channel

SIP calls are considered priority 4.5

Port range can be from 2000-65535

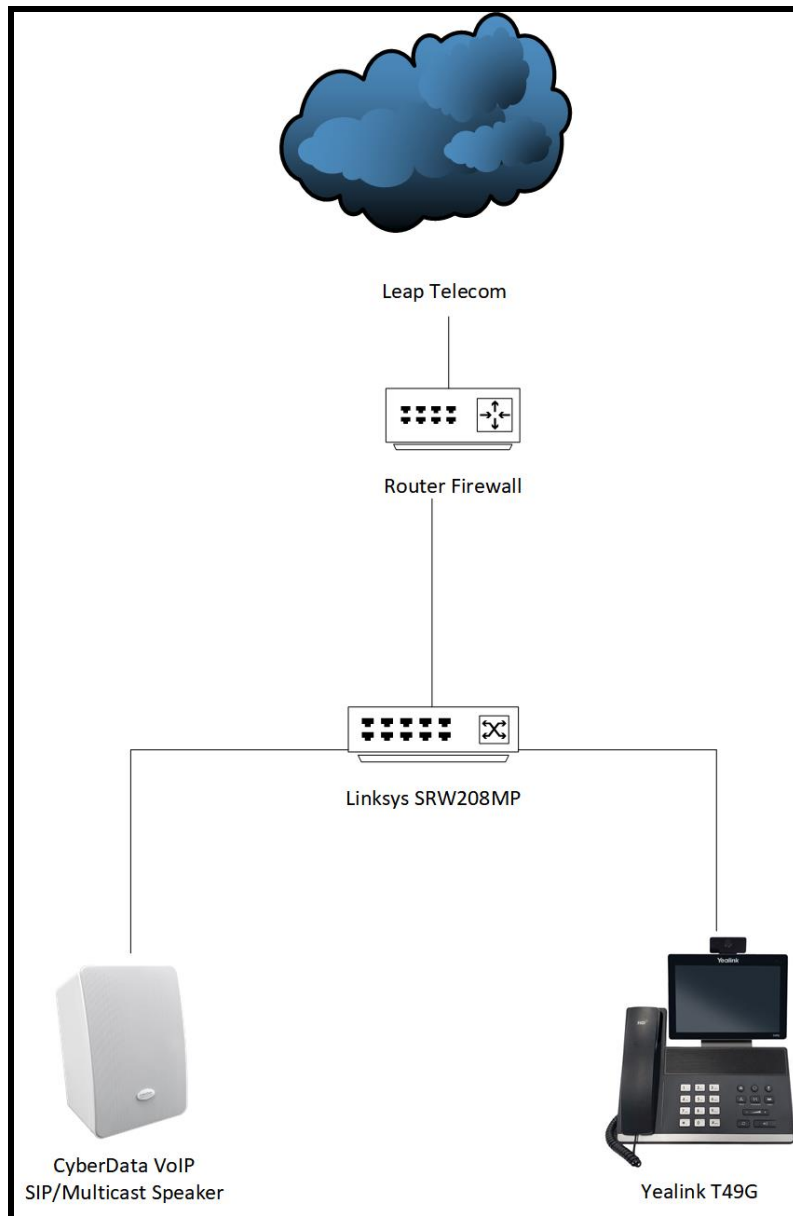
Priority 9 is the highest and 0 is the lowest

A higher priority audio stream will always supersede a lower one

Priority 9 streams will play at maximum volume

6.0 Setup Diagram

Figure 6-1: Interoperability Test Infrastructure



7.0 Contact CyberData Corporation

Sales

For sales-related questions, please visit our [Contact CyberData Sales](#) web page for more information.

Technical Support

For CyberData Technical Support, please submit a [Contact CyberData VoIP Technical Support](#) form on our website.

The CyberData VoIP Technical Support Contact form initiates a troubleshooting ticket which CyberData uses for quality assurance purposes.

Additionally, the Contact VoIP Tech Support form tells us which phone system you are using, the make and model of the network switch, and other essential troubleshooting information we need to efficiently assist with a resolution. Please also include as much detail as possible in the Describe Problem section of the form. Your installation is extremely important to us.

Documentation Feedback

We realize changes to the software or hardware of the Leap Telecom solution may render this document obsolete. We welcome and encourage documentation feedback to ensure continued applicability.