

*Webex Calling Configuration Guide: SIP Enabled  
IP Intercoms*

Document Part #931942B

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**Webex Calling Configuration Guide: SIP Intercoms**  
**Document #931942B**

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## Revision Information

6/29/2022 – Initial Release

1/1/2025 – Updated nomenclature

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## 1.0 Supported CyberData Products

This section describes the products used for interoperability testing with Webex Calling.

**Table 1-1: Supported CyberData Products**

| EQUIPMENT                        | MODEL or PART NUMBER | FIRMWARE VERSION |
|----------------------------------|----------------------|------------------|
| CYBERDATA SIP OUTDOOR INTERCOM   | 011186               | 20.4.1 or later  |
| CYBERDATA SIP INDOOR INTERCOM    | 011211               | 20.4.1 or later  |
| CYBERDATA SIP EMERGENCY INTERCOM | 011209               | 20.4.1 or later  |
| CYBERDATA SIP KEYPAD INTERCOM    | 011214               | 20.4.1 or later  |

## 2.0 Before You Start

### Network Advisories

Webex Calling uses a Fully Qualified Domain Name (FQDN) for the SIP server and Outbound Proxy addresses. The CyberData intercom needs to perform a DNS query to resolve the IP address of Webex's Outbound Proxy FQDN.

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

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

The intercom will need to traverse the public internet in order to operate with Webex Calling in the cloud.

The intercom'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 intercom's product webpage:

SIP Outdoor Intercom:

<https://www.cyberdata.net/collections/sip/products/011186>

SIP Indoor Intercom:

<https://www.cyberdata.net/collections/sip/products/011211>

SIP Emergency Intercom:

<https://www.cyberdata.net/collections/sip/products/011209>

SIP Outdoor Keypad Intercom

<https://www.cyberdata.net/collections/sip/products/011214>

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.

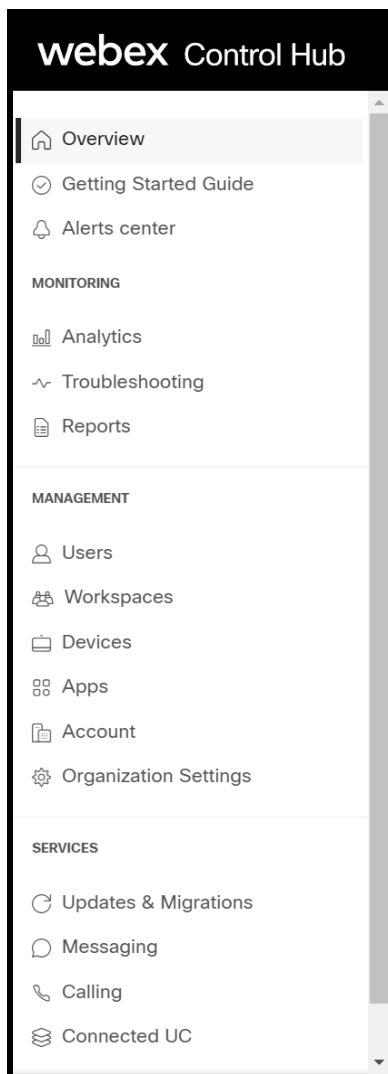
### 3.0 Setting up a Workspace in Webex Calling

This section outlines how to create a Webex Calling user in the Webex Control Hub (CH). This will provide the credentials to then setup the CyberData device.

[Cisco has detailed instructions in the Cisco Webex Help Center in the Add your customer managed device article.](#)

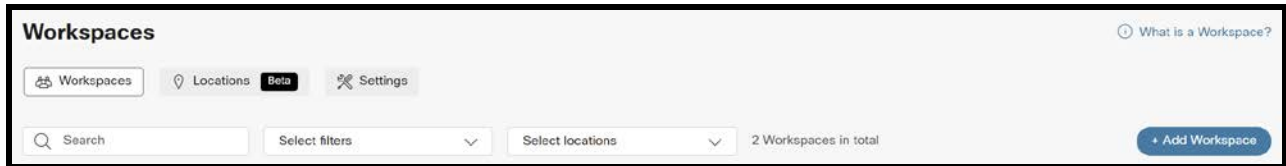
1. Login to [Webex Control Hub as the administrator](#).
2. From the overview page select **Workspaces**.

**Figure 3-1:** Overview Side Bar



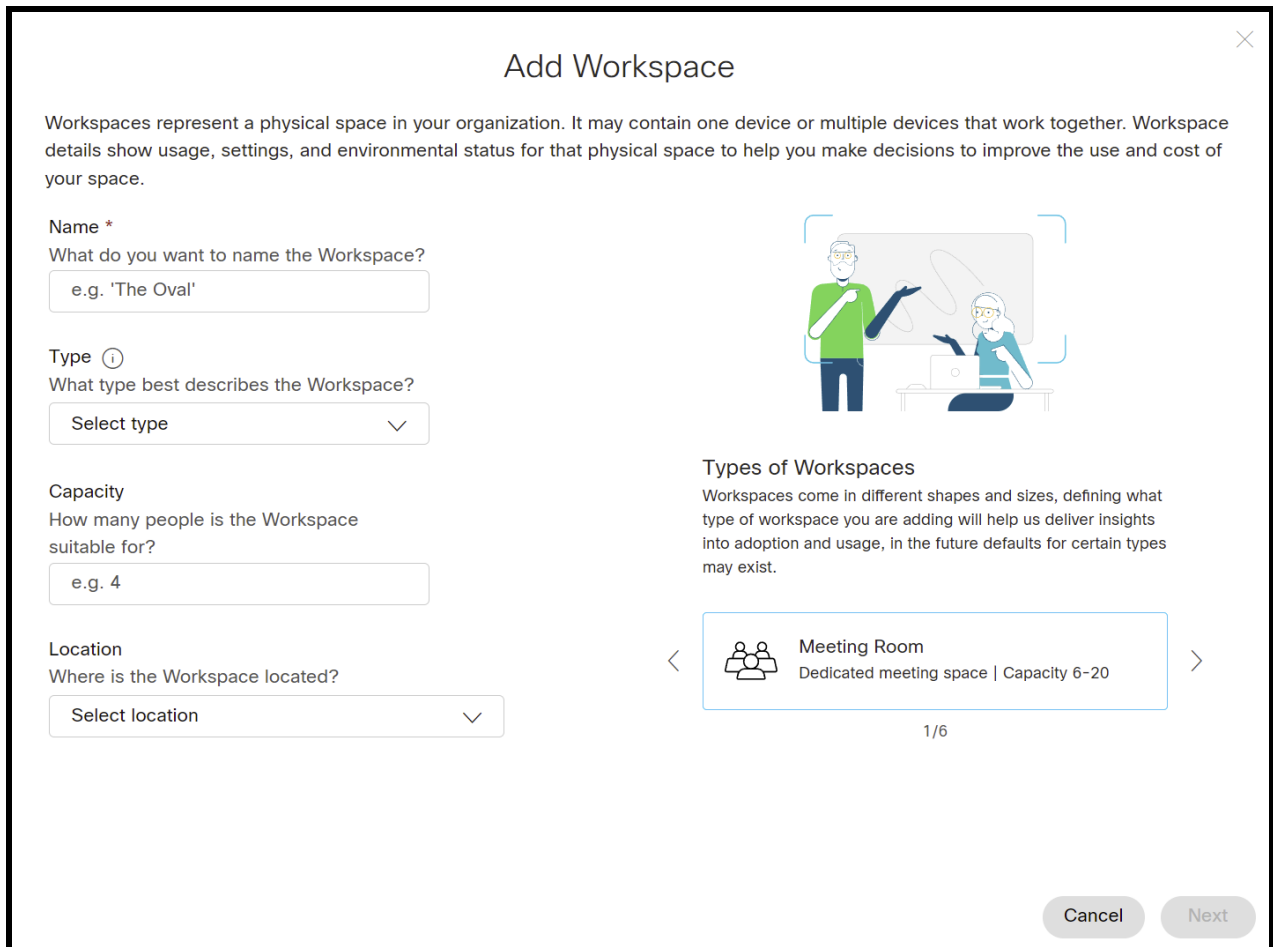
- From the Workspaces page select the **Add Workspace** button.

**Figure 3-2: Workspaces Page**



- On the Add Workspace popup create a Workspace for the intercom.

**Figure 3-3: Create a Workspace**





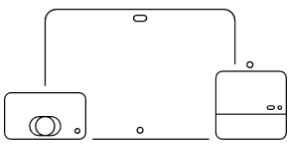
5. After creating the workspace select **Cisco IP Phone**.

**Figure 3-4: Pick a device**

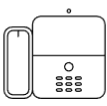
✕

Add Workspace

What kind of device do you want to set up in this workspace?



Cisco Webex Rooms device  
e.g. Cisco Webex Board, Room, and Desk series,  
and Webex Share.



Cisco IP Phone  
e.g. Cisco 8845, 8865, 8800 and Analog Telephone  
Adapter ports

**Select Device**

Customer Managed Device ▾

**Device Vendor**

Cyberdata Customer Managed ▾

**Enter MAC Address**

Enter the MAC address of the IP phone you want to add.

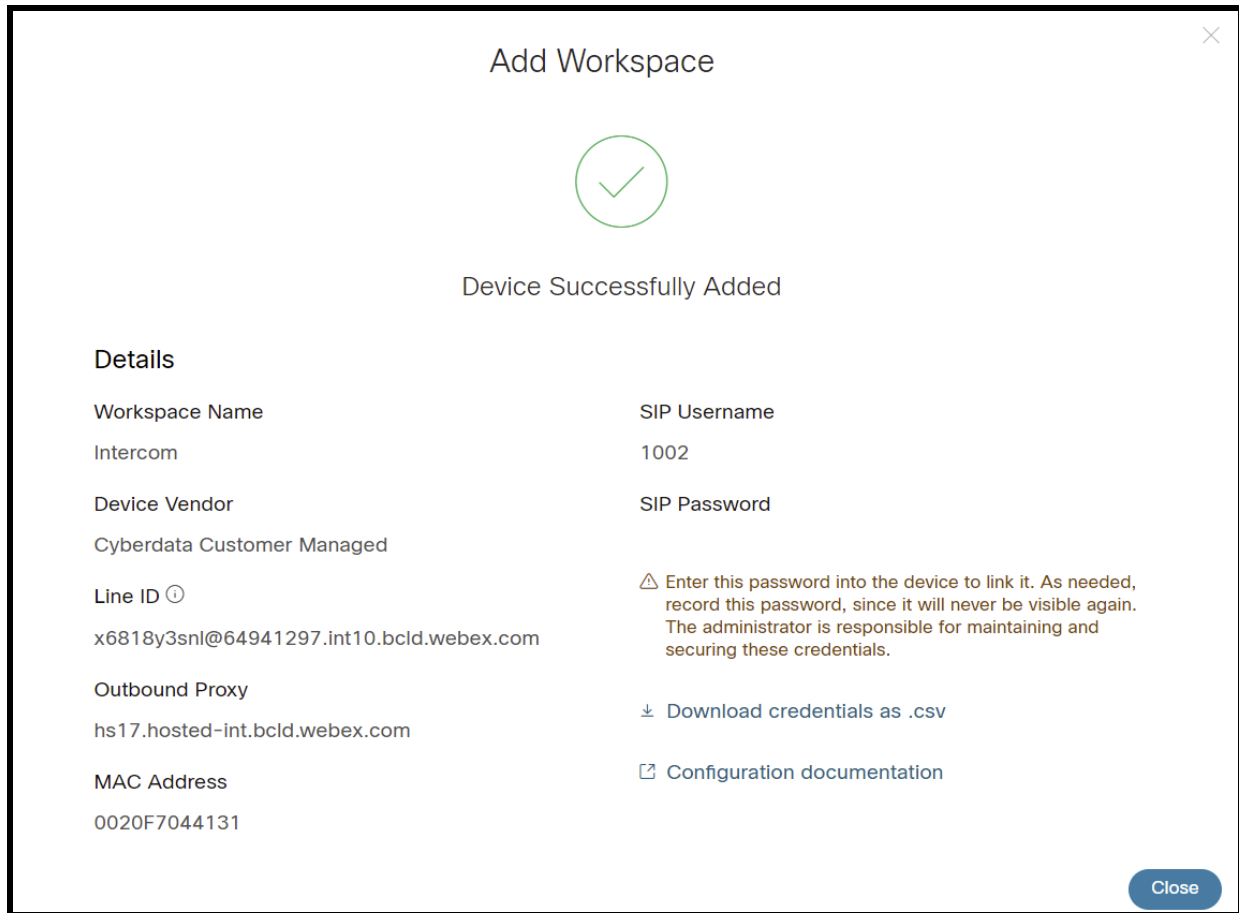
0020f7044131

\*I confirm that creating this device profile will expose sensit with unauthorized access. You are responsible for securing responsible for any fraudulent charges or phone calls that i limited support for third-party devices connected via this ir devices that are actively registered to the Webex Calling pl be directed to the third-party device vendor, including issu connectivity.

Back Next

6. Set the device to **Customer Managed Device**.
7. Select **CyberData Customer Managed** as the Device Vender.
8. Enter the MAC address of the CyberData device.
9. Press **Next** to continue.

**Figure 3-5: Device Successfully Added**



*Note: The password has been obscured.*

**10.** Make sure to press **Download credentials as .csv** because this page is only shown once.

## 4.0 Setting up the CyberData Intercom

This section outlines the required sections for the CyberData device and how the credentials supplied from Webex correlate to the CyberData settings.

**Table 4-1: SIP Credential Explanation**

| Webex Calling Credential        | CyberData Setting         |
|---------------------------------|---------------------------|
| 2 <sup>nd</sup> Half of Line ID | Primary SIP Server        |
| 1 <sup>st</sup> Half of Line ID | Primary SIP User ID       |
| SIP Username                    | Primary SIP Auth ID       |
| SIP Password                    | Primary SIP Auth Password |
| Outbound Proxy                  | Outbound Proxy            |

**Note:** CyberData devices do not support ‘Line IDs’ and the ID provided by Webex must be broken up to be used by the CyberData device. Webex provides the line ID in the following format: “UserID@SIP\_Server\_Address”. Everything before the @ symbol is used as CyberData’s Primary SIP User ID and everything after the @ symbol is used as the Primary SIP Server.

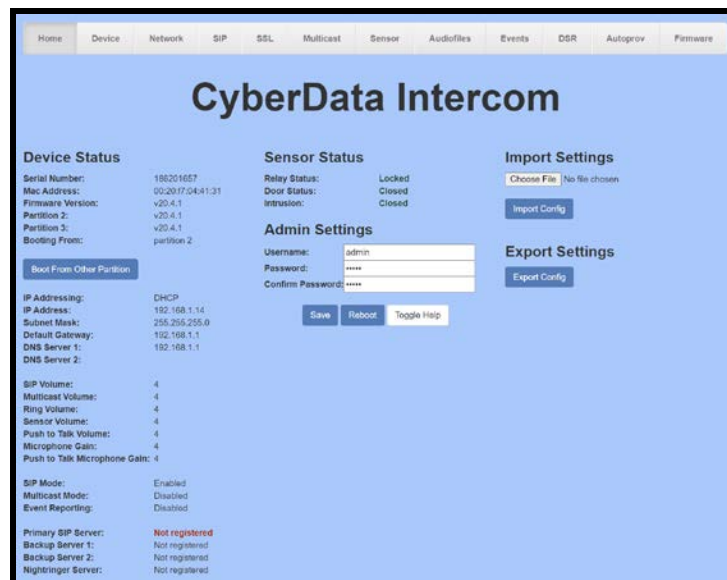
CyberData’s default login credentials are:

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 2<sup>nd</sup> half of the Line ID.
4. Set the **Primary SIP User ID** to the 1<sup>st</sup> half of the Line ID.

**Note:** Do not add an @ to SIP Server or User ID.

5. Set the **Primary SIP Auth ID** to the SIP Username.
6. Set the **Primary SIP Auth Password** to the SIP Password.
7. Set the **Outbound Proxy** to the Outbound Proxy.
8. Leave the **Outbound Proxy port** set to 0.
9. Set the **SIP Transport** to TLS.
10. Ensure **TLS Version** is set to **1.2 Only (Recommended)**.
11. Set RTP Encryption to **Mandatory**.
12. Save and Reboot.

**Figure 4-2: SIP Tab**

**CyberData Intercom**

**SIP Settings**

Enable SIP operation:

Register with a SIP Server:

Primary SIP Server: 64941297.int10.bclid.webex.com

Primary SIP User ID: x6818y3snl

Primary SIP Auth ID: 1002

Primary SIP Auth Password: .....

Re-registration Interval (in seconds): 360

Backup SIP Server 1: Host or IP address

Backup SIP User ID: User ID

Backup SIP Auth ID: Auth ID

Backup SIP Auth Password: Password

Re-registration Interval (in seconds): 360

Backup SIP Server 2: Host or IP address

Backup SIP User ID: User ID

Backup SIP Auth ID: Auth ID

Backup SIP Auth Password: Password

Re-registration Interval (in seconds): 360

Remote SIP Port: 5060

Local SIP Port: 5060

SIP Transport Protocol: TLS  NTP enabled

TLS Version: 1.2 only (recommended)

Verify Server Certificate:

Outbound Proxy: hs17.hosted-int.bclid.webex.com

Outbound Proxy Port: 0

Use Cisco SRST:

Disable rport Discovery:

Unregister on Boot:

Keep Alive Period: 10000

**Nightringer Settings**

SIP Server: Host or IP address

SIP User ID: User ID

SIP Auth ID: Auth ID

SIP Auth Password: Password

Re-registration Interval (in seconds): 360

**Dial Out Settings**

Dial out Extension: 204

Extension ID: id204

Send Multicast Audio:

Multicast Address: 224.5.5.5

Multicast Port: 5050

Repeat Message: 1

**Call Disconnection**

Terminate Call after delay: 0

**Audio Codec Selection**

Codec: Auto Select

**RTP Settings**

RTP Port (even): 10500

Asymmetric RTP:

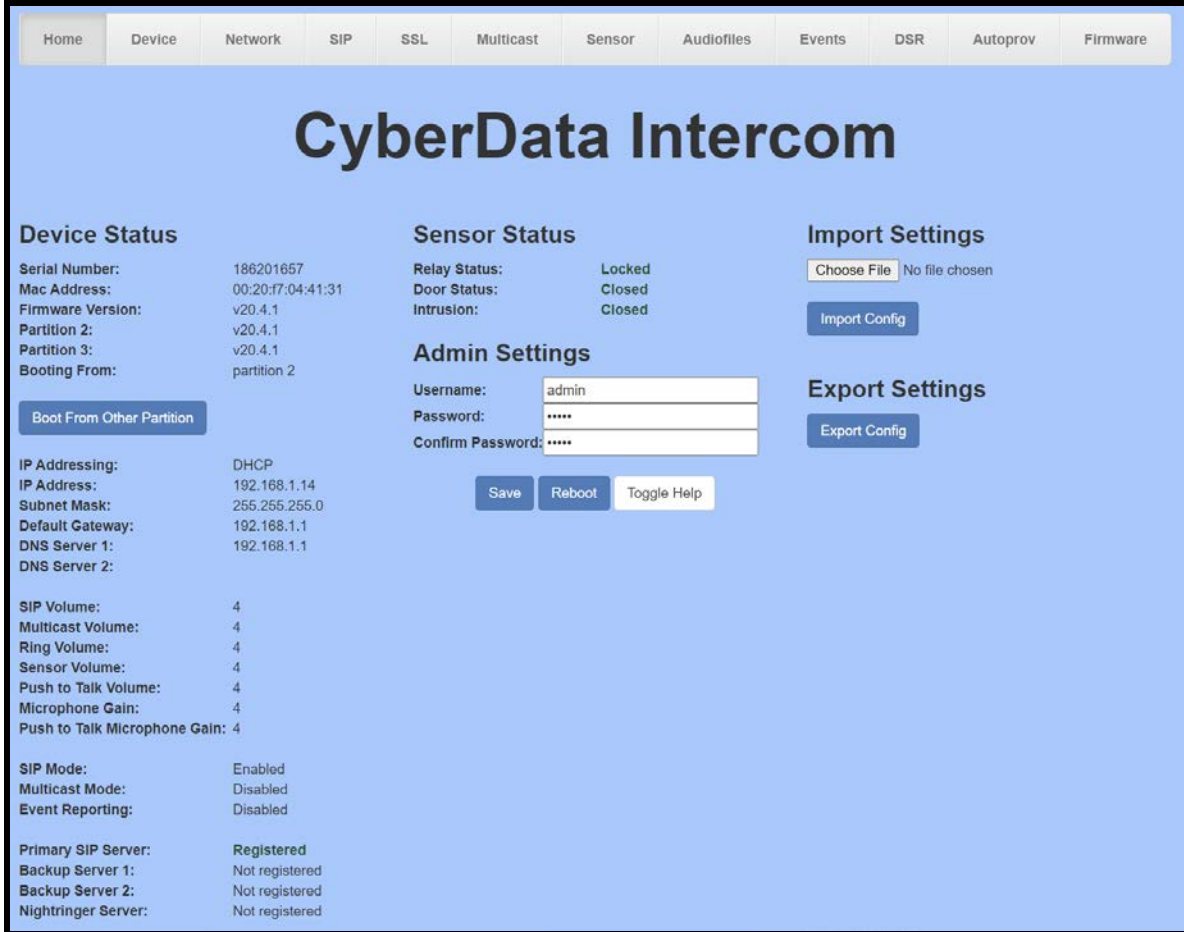
Jitter Buffer: 50

RTP Encryption (SRTP): Mandatory

Save Reboot Toggle Help

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

Figure 4-3: Home Tab – Registered



## 5.0 Using the CyberData Intercom in a Webex Calling system.

CyberData Intercoms are used for access control. Depending on the number of keys the intercom has there are different ways to use the intercom. A single button intercom can be configured to call a number when the call button is pressed. The Keypad variants can take advantage of the keypad and dial numbers to make a call. There are several different modes that can be used on Keypad intercoms.

### 5.1 Setting the Dialout Extension – Single button intercom

Once the intercom is registered with Webex Calling, the “Dial out Extension” will need to be set for the intercom to call a number when the front call button has been pressed. This number can be either a direct extension, hunt group, call queue, or a direct phone number.

1. After Logging into the intercom go to the **SIP** Tab.
2. On the SIP Tab set the Dial out Extension to the address you want the intercom to call.
3. The Extension ID of the intercom is what should appear on the caller ID of the intercom.

**Figure 5-1: Set the Dial out Extension**

The screenshot shows the 'SIP' configuration page for a CyberData Intercom. The 'Dial Out Settings' section is highlighted with a yellow box. The 'Dial out Extension' field is set to '123' and the 'Extension ID' field is set to 'Front Entrance Intercom'. Other settings include 'Send Multicast Audio' (checked), 'Multicast Address' (224.5.5.5), 'Multicast Port' (5050), and 'Repeat Message' (1). The 'SIP Settings' section on the left includes fields for 'Primary SIP Server', 'Primary SIP User ID', 'Primary SIP Auth ID', and 'Primary SIP Auth Password'. The 'Nightringer Settings' section includes fields for 'SIP Server', 'SIP User ID', 'SIP Auth ID', and 'SIP Auth Password'. The 'Call Disconnection' section includes a 'Terminate Call after delay' field set to 0. The 'Audio Codec Selection' section includes a 'Codec' dropdown set to 'Auto Select'. The 'RTP Settings' section includes fields for 'RTP Port (even)', 'Asymmetric RTP', 'Jitter Buffer', and 'RTP Encryption (SRTP)'. At the bottom, there are 'Save', 'Reboot', and 'Toggle Help' buttons.

## 5.2 Calling with a Keypad Intercom

The Outdoor Keypad Intercom (011214) has multiple different ‘Dial Modes’ that can be used which will make the intercom operate in a slightly different manner. There are four different dial modes that can be used. Telephone Operation, Cell Phone Operation, Speed Dial Operation, and Security Operation. These different modes are selected on the Buttons page.

**Figure 5-2: Dial Modes**

The screenshot shows the 'Buttons' configuration page for a CyberData Keypad Intercom. The page is titled 'CyberData Keypad Intercom' and has a navigation menu at the top with 'Buttons' highlighted. The main content area is divided into several sections:

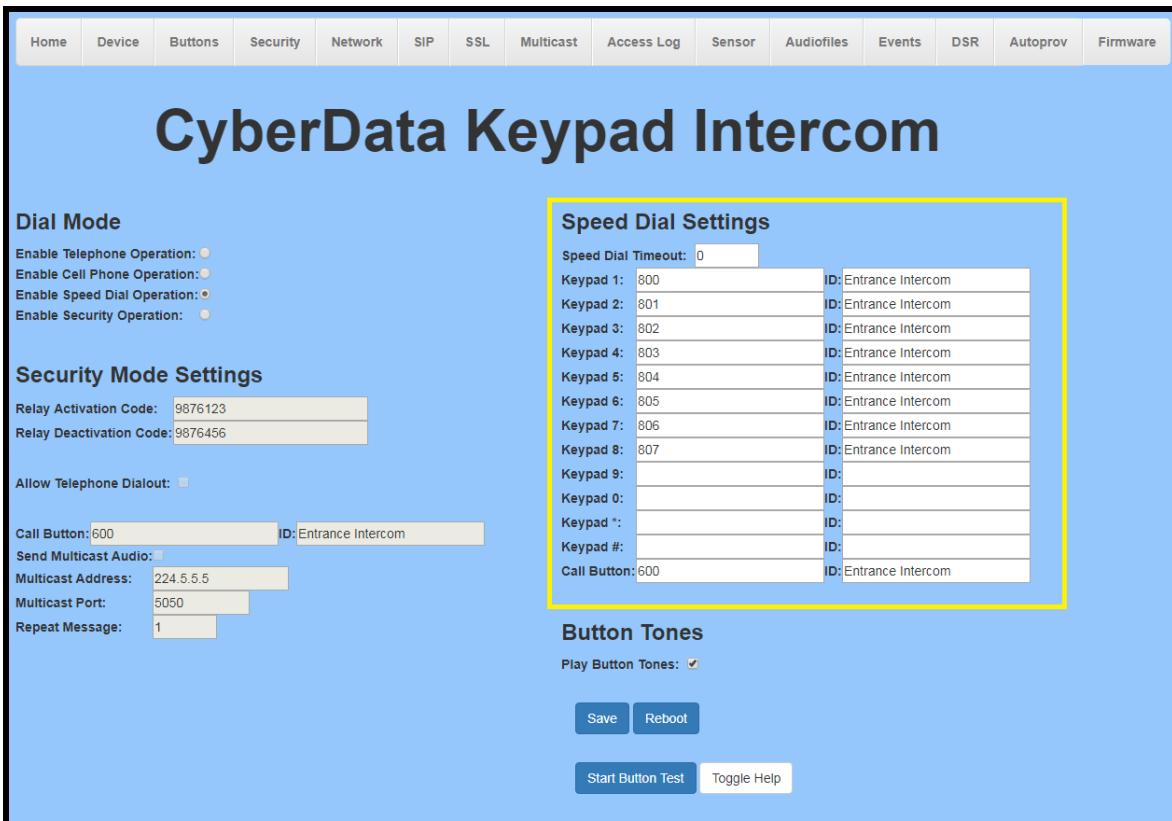
- Dial Mode:** Contains four radio buttons: 'Enable Telephone Operation', 'Enable Cell Phone Operation', 'Enable Speed Dial Operation', and 'Enable Security Operation'. All are currently unselected.
- Security Mode Settings:** Includes fields for 'Relay Activation Code' (9876123) and 'Relay Deactivation Code' (9876456). There is also a checkbox for 'Allow Telephone Dialout' which is unchecked.
- Speed Dial Settings:** Features a 'Speed Dial Timeout' field set to 0. Below it is a table with 10 rows for 'Keypad 1' through 'Keypad 10'. Each row has a 'Keypad #' field and an 'ID' field. Keypads 1-8 are set to 'Entrance Intercom'. Keypads 9 and 10 are empty. There is also a 'Call Button #' field set to 600 with an 'ID' field set to 'Entrance Intercom'.
- Button Tones:** Includes a checkbox for 'Play Button Tones' which is checked. Below this are 'Save' and 'Reboot' buttons, and a 'Start Button Test' button with a 'Toggle Help' link.

- **Telephone Operation**
  - This mode operates like a telephone. Press the call button and then dial the number.
- **Cell Phone Operation**
  - This mode operates like a cell phone. Dial the number then press the call button.
- **Speed Dial Operation**
  - This allows each button (0-9 \* # Call Button) to be for a specific speed dial number. The Speed Dial Timeout is how long the button must be pressed before the call will send.
- **Security Operation**
  - This mode restricts the calling options to only the call button. The keypad is then used for “Security Codes” for access control without making a call. Check the operations manual for more details on the Security Codes.

### 5.2.1 Setting up Speed Dial Operation

After setting the dial mode to **Speed Dial Operation**, the **Speed Dial settings** will be configurable. **Speed Dial Timeout** is how long the button will need to be pressed to make a call; if set to 0 the call will send immediately.

Figure 5-3: Speed Dial Settings





## 5.2.2 Setting up Security Mode Operation

**Security Mode Operation** will make the call button function as the main way to make a call. The call button can call a direct extension, ring group/call queue, or a standard phone number. The keypad can then be used for security codes that are configured on the security tab.

Relay Activation and Relay Deactivation are codes that can be entered on the keypad to activate and deactivate the relay. If those fields are left blank, they will be disabled.

**Figure 5-4: Security Mode Operation**

Home Device Buttons Security Network SIP SSL Multicast Access Log Sensor Audiofiles Events DSR Autoprov Firmware

# CyberData Keypad Intercom

**Dial Mode**

- Enable Telephone Operation:
- Enable Cell Phone Operation:
- Enable Speed Dial Operation:
- Enable Security Operation:

**Security Mode Settings**

Relay Activation Code:

Relay Deactivation Code:

Allow Telephone Dialout:

Call Button:  ID: Entrance Intercom

Send Multicast Audio:

Multicast Address:

Multicast Port:

Repeat Message:

**Speed Dial Settings**

Speed Dial Timeout:

|              |                                  |                       |
|--------------|----------------------------------|-----------------------|
| Keypad 1:    | <input type="text" value="800"/> | ID: Entrance Intercom |
| Keypad 2:    | <input type="text" value="801"/> | ID: Entrance Intercom |
| Keypad 3:    | <input type="text" value="802"/> | ID: Entrance Intercom |
| Keypad 4:    | <input type="text" value="803"/> | ID: Entrance Intercom |
| Keypad 5:    | <input type="text" value="804"/> | ID: Entrance Intercom |
| Keypad 6:    | <input type="text" value="805"/> | ID: Entrance Intercom |
| Keypad 7:    | <input type="text" value="806"/> | ID: Entrance Intercom |
| Keypad 8:    | <input type="text" value="807"/> | ID: Entrance Intercom |
| Keypad 9:    | <input type="text"/>             | ID:                   |
| Keypad 0:    | <input type="text"/>             | ID:                   |
| Keypad *:    | <input type="text"/>             | ID:                   |
| Keypad #:    | <input type="text"/>             | ID:                   |
| Call Button: | <input type="text" value="600"/> | ID: Entrance Intercom |

**Button Tones**

Play Button Tones:

Save Reboot

Start Button Test Toggle Help

### 5.3 Activating the on-board relay

While in a call with the intercom, DTMF codes can be entered on the phone to trigger the onboard relay of the intercom. These settings are found on the Device tab of the web interface.

- Relay Pulse code
  - Activates the relay for the configured Relay Pulse Duration.
- Relay Pulse Duration
  - How long the relay will activate when the Pulse code is sent.
- Relay Activation Code
  - This code activates the relay.
- Relay Deactivation Code
  - This code deactivates the relay.

Figure 5-5: Relay Settings

The screenshot displays the 'CyberData Keypad Intercom' configuration page. The 'Relay Settings' section is highlighted with a yellow box. It includes the following fields and options:

- Activate Relay with DTMF code:
- Relay Pulse Code: 123
- Relay Pulse Duration (in seconds): 2
- Relay Activation Code: 456
- Relay Deactivation Code: 654
- Play Tone During DTMF Activation:
- Activate Relay During Ring:
- Activate Relay During Night Ring:
- Activate Relay While Call Active:
- Activate Relay On Button Press:
- Relay On Button Press Duration: 3

Other sections visible include:

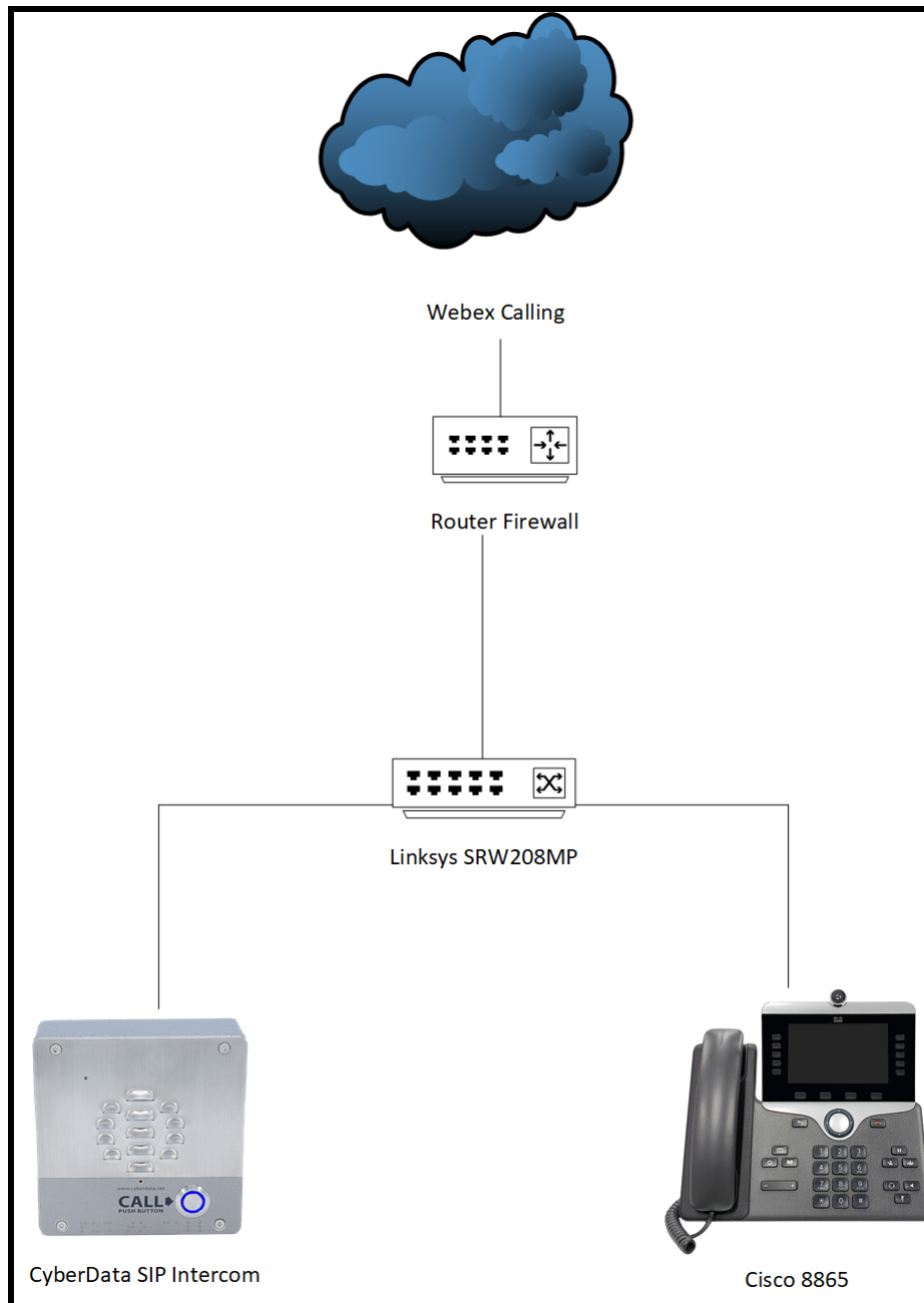
- Volume Settings (0-9):** SIP Volume: 4, Multicast Volume: 4, Ring Volume: 4, Sensor Volume: 4, Push to Talk Volume: 4.
- Microphone Settings (0-9):** Microphone Gain: 4, Push to Talk Microphone Gain: 4.
- Clock Settings:** Enable NTP: , NTP Server: north-america.pool.ntp.org, Timezone: America/Los\_Angeles, Current Time: Thu, 03 Oct 2019 15:58:08.
- Misc Settings:** Device Name: Keypad Intercom, Auto-Answer Incoming Calls: , Button Lit when Idle: , Button Brightness (0-255): 255, Keypad Lit when Idle: , Keypad Brightness (0-255): 255, Play Ringback Tone: , Enable Push to Talk: , Enable DTMF Push to Talk: , Prevent Call Termination: , Disable HTTPS (NOT recommended): .

Buttons at the bottom include: Save, Reboot, Toggle Help, Test Audio, Test Microphone, Test Relay.

**Note:** Enable “Play Tone During DTMF Activation” if you want a tone to play when the onboard relay is active.

## 6.0 Setup Diagram

Figure 6-1: Interoperability Test Infrastructure



## 7.0 FAQ

*Why is the device registering to a backup server and not the primary server listed in the SRV record?*

CyberData devices have a bug where they will not fall back to the primary server listed in the SRV record in the event it switches to a backup server. To resolve this issue simply reboot the device. This will be fixed in a future release.

## 8.0 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 Webex solution may render this document obsolete. We welcome and encourage documentation feedback to ensure continued applicability.