



Webex Calling Configuration Guide: SIP Enabled IP Intercoms

Document Part #931942A

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# Webex Calling Configuration Guide: SIP Intercoms Document #931942A

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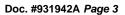
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# **Revision Information**

6/29/2022 - Initial Release

#### WEBEX CALLING CONFIGURATION GUIDE: SIP INTERCOMS





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# 1.0 Supported CyberData Products

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

**Table 1-1:** <u>Supported CyberData Products</u>

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

<u>berData</u>

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### 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.



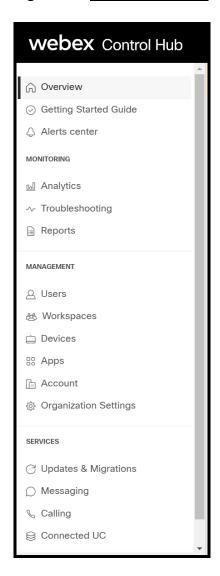
# 3.0 Setting up a Workspace in Webex Calling

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.

<u>Cisco has detailed instructions in the Cisco Webex Help Center in the Add your customer</u> 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





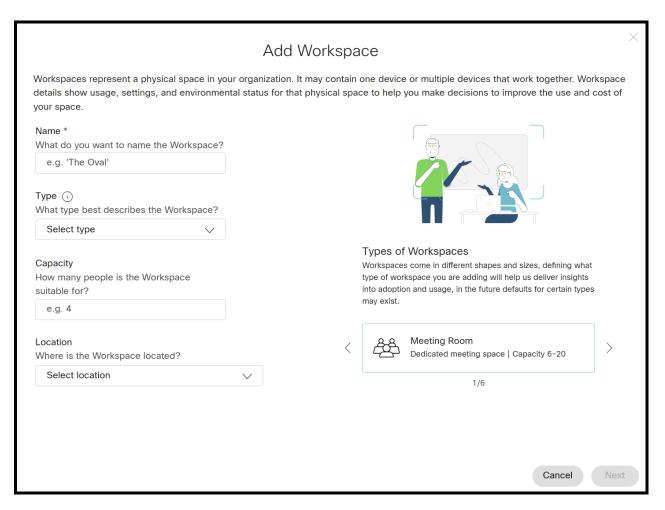
3. From the Workspaces page select the Add Workspace button.

Figure 3-2: Workspaces Page



**4.** On the Add Workspace popup create a Workspace for the intercom.

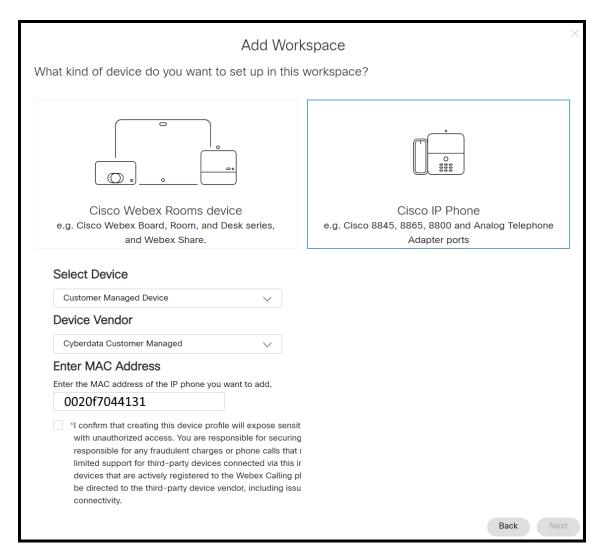
Figure 3-3: Create a Workspace





5. After creating the workspace select Cisco IP Phone.

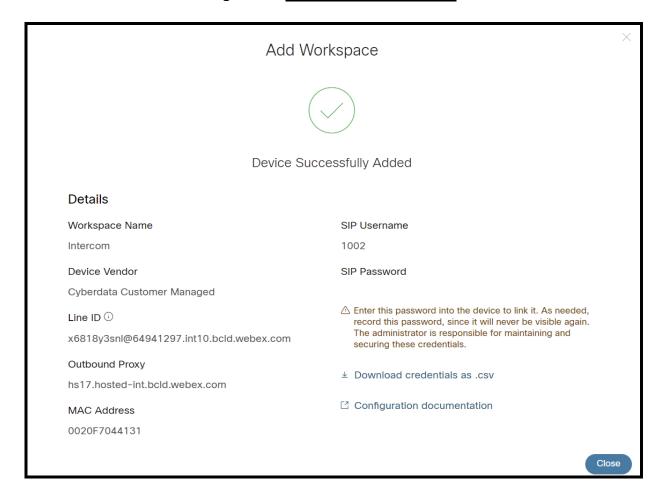
Figure 3-4: Pick a device



- 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	

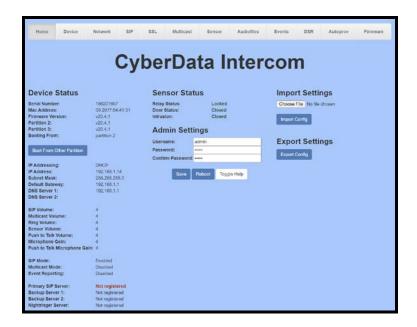
**Note:** CyberData devices do not support 'Line IDs' and the ID provided by Webex must be broken up to be used by the CyberData device. Webex provides the line ID in the following format: "UserID@SIP\_Server\_Address". Everything before the @ symbol is used as CyberData's Primary SIP User ID and everything 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 Extension Number.
- **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		Nightringer S	Nightringer Settings	
Enable SIP operation: Register with a SIP Server: Primary SIP Server: Primary SIP User ID:	64941297 int10 bcld webex.com x6818y3snl	SIP Server: SIP User ID: SIP Auth ID: SIP Auth Password:	Host or IP address User ID Auth ID Password	
Primary SIP Auth ID: Primary SIP Auth Password: Re-registration Interval (in seconds)	1002	Re-registration Intervention		
Backup SIP Server 1: Backup SIP User ID: Backup SIP Auth ID: Backup SIP Auth Password: Re-registration interval (in seconds)	Host or IP address User ID Auth ID Password 360	Dial out Extension: Extension ID: Send Multicast Audio: Multicast Address: Multicast Port:	204 id204	
Backup SIP Server 2: Backup SIP User ID: Backup SIP Auth ID: Backup SIP Auth Password:	Host or IP address User ID Auth ID Password	Repeat Message:  Call Disconn Terminate Call after de		
Re-registration Interval (in seconds)  Remote SIP Port:  Local SIP Port:	5060 5060	Audio Codec		
SIP Transport Protocol: TLS Version: Verify Server Certificate: Outbound Proxy:	TLS V NTP enabled 1.2 only (recommended) hs17 hosted-int bcld webex com	RTP Settings	10500	
Outbound Proxy Port:  Use Cisco SRST: Disable rport Discovery:	0	Asymmetric RTP: Jitter Buffer: RTP Encryption (SRTI		
Unregister on Boot: Keep Alive Period:	10000	Save Reboot	Toggle Help	

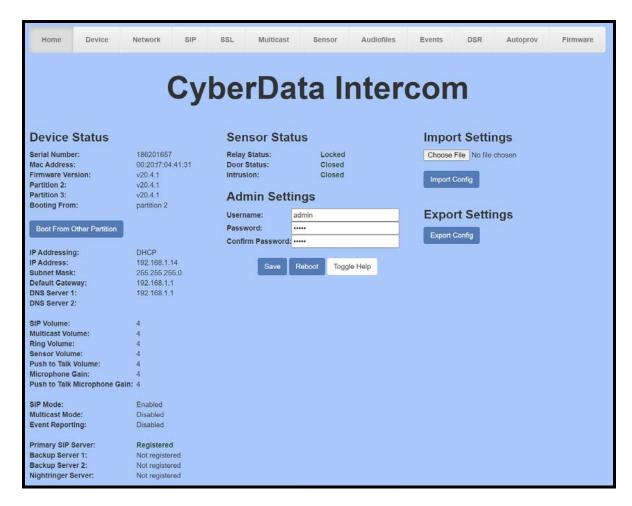
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If the credentials have been entered correctly the device should now be registered with Webex. This can be verified on the home tab of the web interface or on the Webex site.

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.

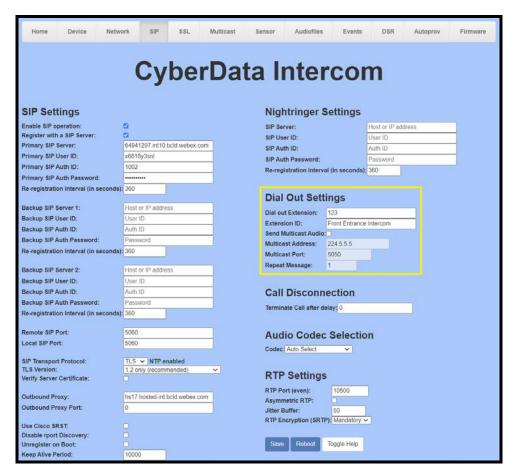


Figure 5-1: Set the Dial out Extension

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### 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.

CyberData Keypad Intercom **Dial Mode Speed Dial Settings** Enable Telephone Operation: Speed Dial Timeout: 0 Enable Cell Phone Operation: Keypad 1: 800 ID: Entrance Intercom Enable Speed Dial Operation: Keypad 2: ID: Entrance Intercom Enable Security Operation: Keypad 3: 802 ID: Entrance Intercom Keypad 4: 803 ID: Entrance Intercom Security Mode Settings Keypad 5: 804 ID: Entrance Intercom Keypad 6: 805 ID: Entrance Intercom Relay Activation Code: 9876123 Keypad 7: 806 ID: Entrance Intercom Relay Deactivation Code: 9876456 Keypad 8: Keypad 9: Allow Telephone Dialout: Keypad 0: Keypad \*: Call Button: 600 ID: Entrance Intercom Kevpad #: Send Multicast Audio Call Button: 600 ID: Entrance Intercom Multicast Address: 224.5.5.5 Multicast Port: 5050 Repeat Message: **Button Tones** Play Button Tones: 🗹 Start Button Test Toggle Help

Figure 5-2: Dial Modes

#### Telephone Operation

This mode operates like a telephone. Press the call button and then dial the number.

#### Cell Phone Operation

o 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.

SIP SSL Multicast Access Log Sensor Audiofiles Events DSR CyberData Keypad Intercom **Dial Mode Speed Dial Settings** Enable Telephone Operation: Speed Dial Timeout: 0 Enable Cell Phone Operation: Keypad 1: 800 ID: Entrance Intercom Enable Speed Dial Operation: Keypad 2: 801 ID: Entrance Intercom Enable Security Operation: Keypad 3: 802 ID: Entrance Intercom Keypad 4: 803 ID: Entrance Intercom **Security Mode Settings** Keypad 5: 804 ID: Entrance Intercom Keypad 6: 805 Relay Activation Code: 9876123 ID: Entrance Intercom Keypad 7: Relay Deactivation Code: 9876456 Keypad 8: 807 ID: Entrance Intercom Keypad 9: Allow Telephone Dialout: ID: Keypad 0: Keypad \*: ID: Call Button: 600 ID: Entrance Intercom Keypad #: Send Multicast Audio: ID: Entrance Intercom Call Button: 600 Multicast Address: 224.5.5.5 Repeat Message: 1 **Button Tones** Play Button Tones: 🗹 Start Button Test Toggle Help

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.

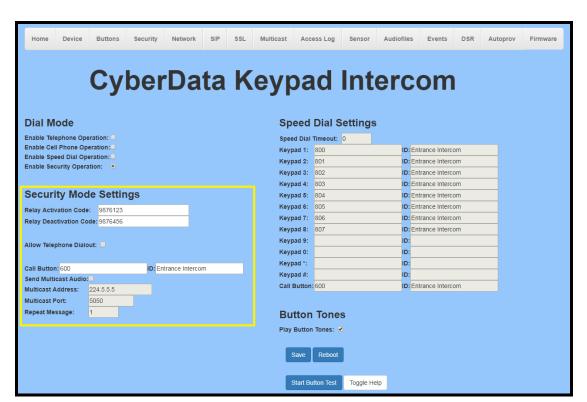


Figure 5-4: Security Mode Operation

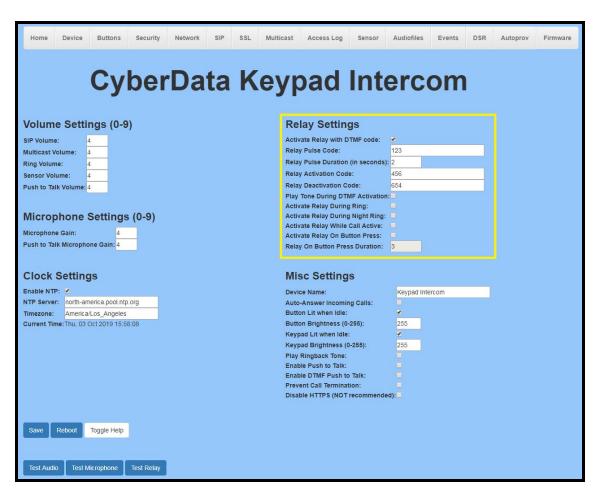


### 5.3 Activating the on-board relay

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
  - o This code activates the relay.
- Relay Deactivation Code
  - This code deactivates the relay.

Figure 5-5: Relay Settings



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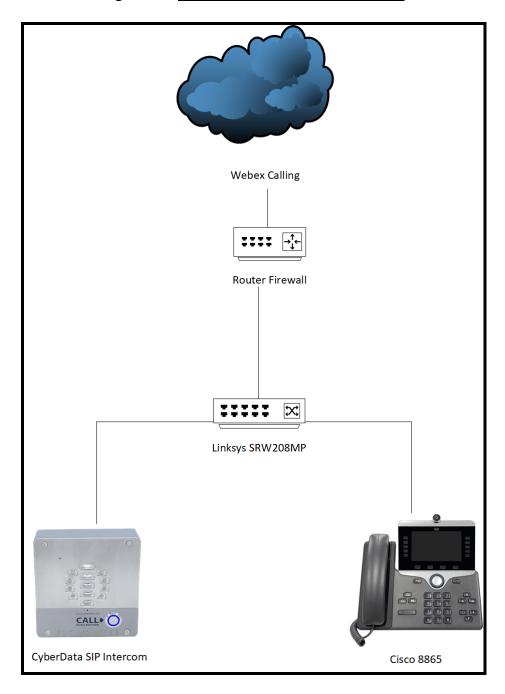


**Note:** Enable "Play Tone During DTMF Activation" if you want a tone to play when the onboard relay is active.



# 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 <u>Contact CyberData Sales</u> web page for more information.

#### **Technical Support**

For CyberData Technical Support, please submit a <u>Contact CyberData VoIP Technical Support</u> 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.

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