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CyberData SIP Intercom Integration with Zultys MX –Serial Numbers starting with 2141

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This document covers the integration of CyberData's SIP Intercom with the Zultys MX. This document was written for MX Version 11.0 and the following CyberData Products

- 011214a v3 intercom w/keypad poe V11.3.1
- Serial Numbers starting with 2141

All support and supporting documentation for CyberData should be obtained from CyberData itself. This document assumes the reader is at least a Zultys Certified Systems Expert (ZCSE), and is familiar with creating Users and Devices in general. This document also assumes the reader is familiar with setting up CyberData equipment and/or has access to the Manuals for the CyberData equipment, as several sections are left out of this manual such as setting up the network configuration of the CyberData Equipment and pin outs for relay usage.

For more information on the integration process see integration section.

1 Contents

2	<u>INTEGRATION.....</u>	2
3	<u>CREATING A GENERIC SIP DEVICE ON THE MX FOR NIGHT RING CAPABILITIES</u>	3
3.1	CREATE GENERIC SIP PROFILE	3
3.2	CREATE GENERIC SIP DEVICE	4
3.3	CREATE USER AND ASSIGN USER TO THE DEVICE.....	5
4	<u>CREATING A GENERIC SIP DEVICE ON THE MX FOR INTERCOM CAPABILITIES</u>	5
4.1	CREATE GENERIC SIP PROFILE	5
4.2	CREATE GENERIC SIP DEVICE	6
4.3	CREATE USER AND ASSIGN USER TO THE DEVICE.....	7
5	<u>MX USER CONFIGURATION</u>	8
6	<u>CYBERDATA SIP INTERCOM SETUP.....</u>	8
6.1	CONNECTING TO THE CYBERDATA SIP PAGE SERVER	8
6.2	HOME SCREEN.....	10
6.3	DEVICE CONFIGURATION	11
6.4	BUTTON CONFIGURATION	15
6.5	SIP CONFIGURATION	20
6.6	NIGHTRINGER CONFIGURATION	21
6.7	MULTICAST CONFIGURATION	22
6.8	SENSOR CONFIGURATION	23
6.9	AUDIO FILES	25
7	<u>KNOWN ISSUES.....</u>	26
7.1	AUTO ATTENDANTS.....	26

2 Integration

CyberData SIP Intercom can be integrated with the Zultys MX, as a “Generic SIP Device” to provide an intercom door box service including relay functions for door strikes/locks.

Zultys highly recommends using the speed dial functions of the CyberData SIP Intercom for placing the intercom calls inside the building, vs. allowing the party to dial direct extensions. This could leave an opening for toll fraud, unless proper toll restrictions are implemented.

This document will concentrate on using the speed dial integration method.

3 Creating a Generic SIP Device on the MX for night ring capabilities

If using the night ring capabilities of the SIP Intercom, a generic SIP device and a user is required to be created on the MX. For basic operation a Generic SIP device is created on the MX and assigned to a user. The CyberData equipment will register as this Generic SIP Device, this device is then invited by the MX when the extension is rang triggering the night ring capabilities of the CyberData equipment. If not using the Night Ring capabilities of the CyberData equipment this section can be skipped.

To answer the night ring call, press the “call” button on the device.

3.1 Create Generic SIP Profile

In order to create a Generic SIP Device, it is recommended to create a unique Generic SIP Device Profile to control the codecs, functions and number of lines used by CyberData Equipment, this device profile should be the same profile used with the paging device.

Make sure that the following options are selected.

Sends SIP Register:
Checked.

Supports SIP based configuration: Checked.

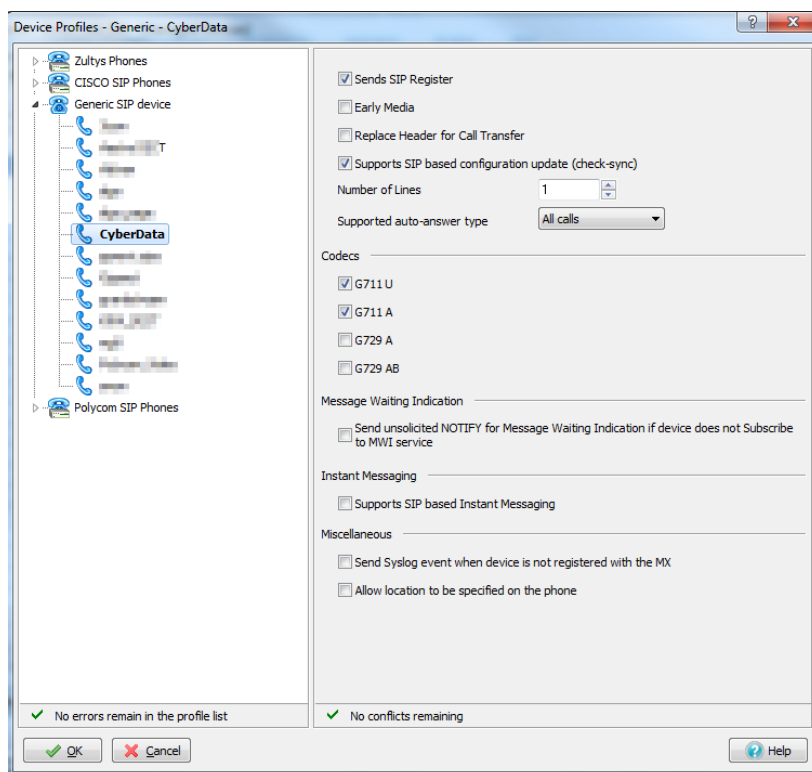
Number of Lines: 1.

Supported auto-answer type: All Calls.

Codecs: G711U and G711A.

Send unsolicited NOTIFY for messages:
Unchecked.

Send Syslog event when device is not registered..: This is an optional selection that is recommended to allow the MX to generate a syslog notification if the device is off line



The remaining options are unchecked.

3.2 Create Generic SIP Device

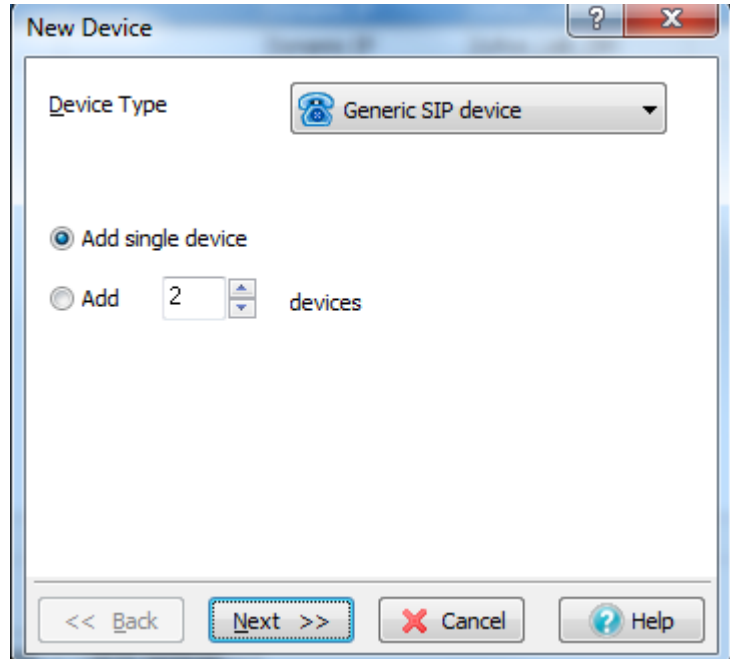
Create a generic SIP device on the MX for the MX to integrate with CyberData Equipment. The CyberData equipment will register with the MX using this Generic SIP Device.

Make sure that the following options are selected.

Device Type: Generic SIP device.

Add Single Device: Selected.

Click *Next* to proceed to the next screen.



The screenshot shows a 'New Device' window with the following configuration:

- Device Type:** A dropdown menu showing 'Generic SIP device' with a telephone icon.
- Add single device:** A radio button that is selected.
- Add:** A radio button that is not selected, followed by a text box containing the number '2' and the word 'devices'.
- Navigation buttons:** '<< Back', 'Next >>' (highlighted with a dashed border), 'Cancel', and 'Help'.

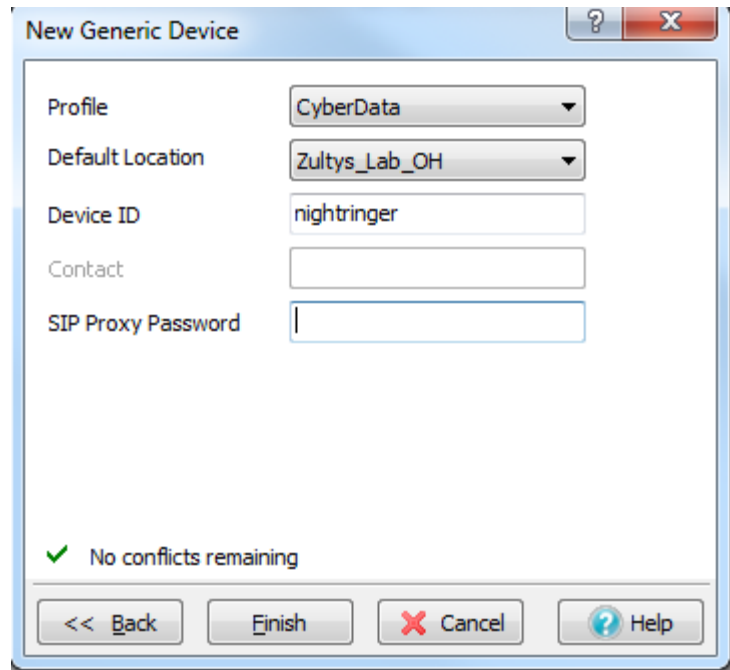
Profile: Select the Generic SIP Device Profile created in section 3.1.

Default Location: Select the proper location from the drop-down.

Device ID: Type the ID to register CyberData Equipment Ringing extension.

Contact: Not used.

SIP Proxy Password: Type the password if required.



3.3 Create User and Assign User to the Device

After creating the device that will interface with CyberData Equipment, create a user and assign the user to this device. This document assumes the reader is a ZCSE trained and a certified technician. Since this process is covered by ZCSE training, it is considered to be outside the scope of this document.

4 Creating a Generic SIP Device on the MX for intercom capabilities

When using the CyberData SIP Intercom for intercom/door box capabilities, Zultys recommends creating a Generic SIP Device and a user for the CyberData equipment. Only a single device and User is required for intercom/door box purposes only, the Night Ringer will require its own user and device. The intercom/door box features of the CyberData Equipment interfaces with the MX system through a preconfigured MX user.

4.1 Create Generic SIP Profile

In order to create a Generic SIP Device, it is recommended to create a unique Generic SIP Device Profile to control the codecs, functions and number of lines used by CyberData Equipment, this device profile should be the same profile used with the night ring device.

Make sure that the following options are selected.

Sends SIP Register:
Checked.

Supports SIP based configuration: Checked.

Number of Lines: 1.

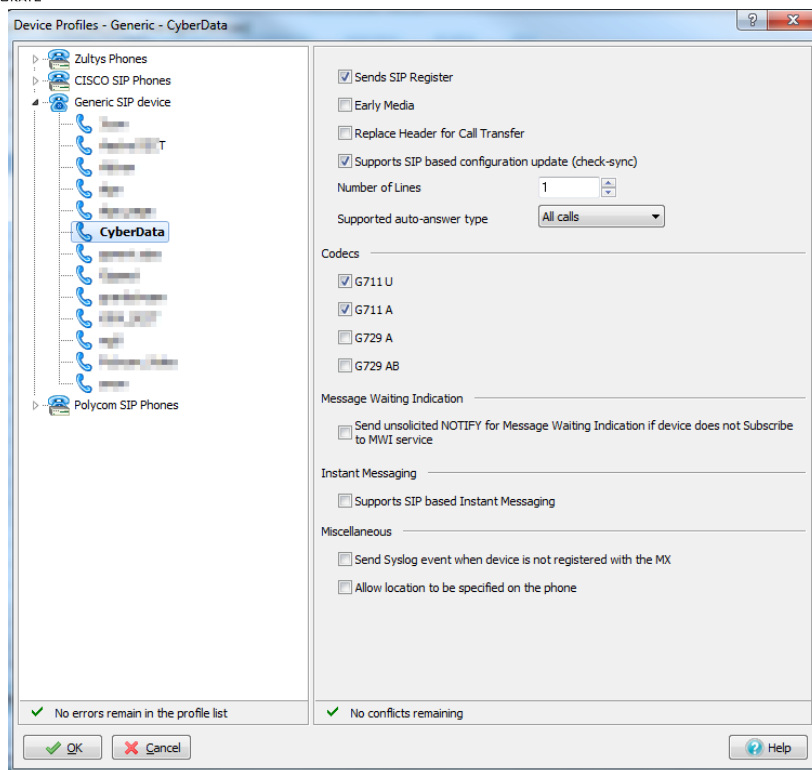
Supported auto-answer type: All Calls.

Codecs: G711U and G711A.

Send unsolicited NOTIFY for messages:
Checked.

Send Syslog event when device is not registered...: This is an optional selection that is recommended to allow the MX to generate a syslog notification if the device is off line

The remaining options are unchecked.



4.2 Create Generic SIP Device

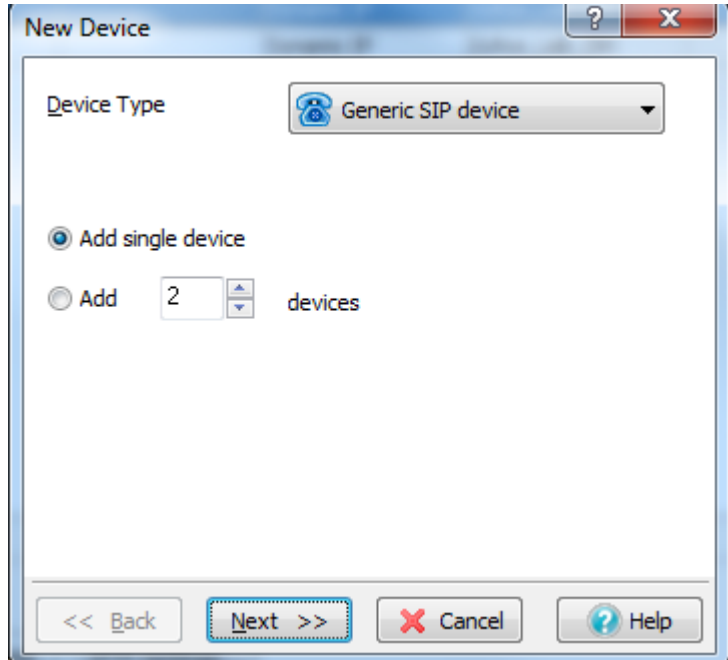
Create a generic SIP device on the MX for the MX to integrate with CyberData Equipment.

Make sure that the following options are selected.

Device Type: Generic SIP device.

Add Single Device: Selected.

Click *Next* to proceed to the next screen.



The 'New Device' dialog box shows the 'Device Type' dropdown set to 'Generic SIP device'. Under the 'Add' section, the 'Add single device' radio button is selected. The 'Add' button is disabled, and the 'devices' count is set to 2. At the bottom, the 'Next >>' button is highlighted with a dashed border, indicating it is the next step.

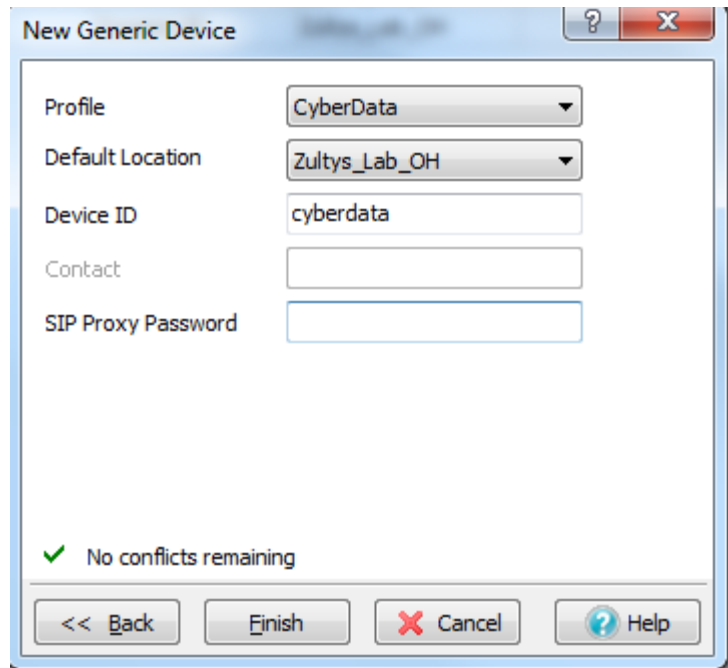
Profile: Select the Generic SIP Device Profile created in section 4.1.

Default Location: Select the proper location from the drop-down.

Device ID: Type the ID to register CyberData intercom extension.

Contact: Not used.

SIP Proxy Password: Type the password if required.



The 'New Generic Device' dialog box shows the following fields: 'Profile' (CyberData), 'Default Location' (Zultys_Lab_OH), 'Device ID' (cyberdata), 'Contact' (empty), and 'SIP Proxy Password' (empty). A green checkmark and the text 'No conflicts remaining' are displayed at the bottom. The 'Finish' button is enabled and highlighted with a dashed border, indicating it is the next step.

4.3 Create User and Assign User to the Device

After creating the device that will interface with CyberData Equipment, create a user and assign the user to this device. This document assumes the reader is a ZCSE trained and a certified technician. Since this process is covered by ZCSE training, it is

considered to be outside the scope of this document. Note that you need to create and assign a paging profile to the user if they will be using SIP paging.

5 MX User Configuration

This section covers the basics of the creation of a MX User account to be used for the door box integration. A user is required in most cases, especially if you plan on being able to call the device, or if you implement any toll restriction at all in the MX.

Zultys recommends creating a new user profile that has most if not all features and functions disabled, most importantly Voce Mail, can return calls from voicemail, and register unmanaged accounts. MXIE should also be disabled. These recommendations are made to protect against toll fraud from this account.

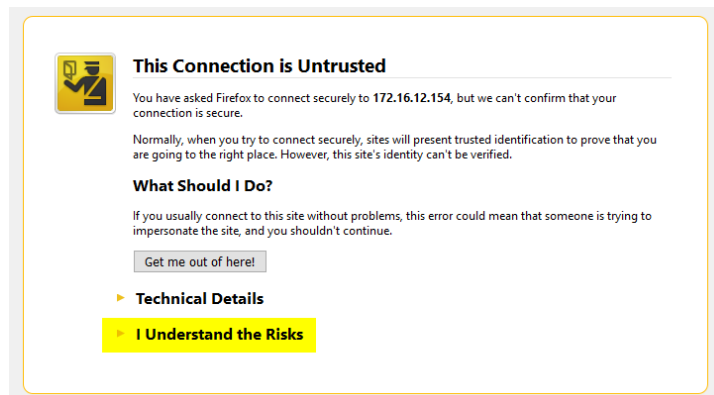
This document assumes the reader is a Zultys Certified Systems Expert (ZCSE), and is familiar with creating Users and user profiles in general, so the details are not included in this document for creating users and user profiles.

6 CyberData SIP Intercom Setup

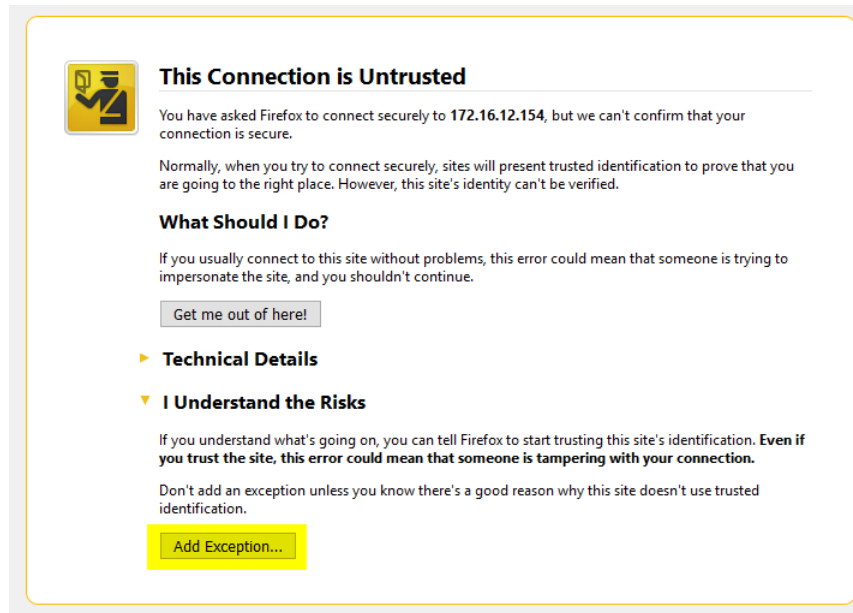
When deploying the CyberData SIP Intercom it is recommended to use DHCP. CyberData provides a “Discovery Utility” that can be downloaded from their website (http://www.cyberdata.net/support/voip/discovery_utility.html) to initially discover the IP address of the SIP Intercom, once configured to register with the Zultys MX, the IP address can be found using the MX’s device status screen in the MXAdministrator UI. Using the CyberData Discovery Utility to obtain the current IP address of the CyberData equipment login using a web browser using the default username of “**admin**” and the default of “**admin**”. For more information on using the discovery utility and basic setup of the CyberData equipment, please refer to the operating manuals from CyberData.

6.1 Connecting to the CyberData SIP Page Server

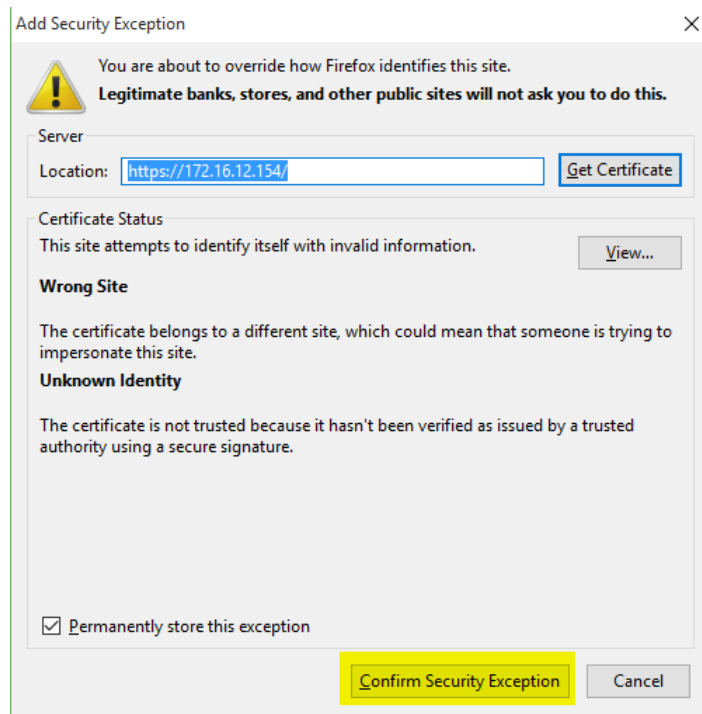
The CyberData SIP Intercom now uses HTTPS to provision the device. When connecting to the CyberData SIP Intercom you will be required to accept the Self Signed certificate by clicking on “I understand the risks” link



Then click “Add Exception”



And then click Confirm Security Exception



6.2 Home Screen

After logging into the CyberData SIP Intercom using your favorite browser you are immediately taken to the Home Screen which will display the following information

On the top you will find your navigation options,

Change Username: Type in this field to change the username (25 character limit).

- Default: **admin**

Change Password: Type in this field to change the password (19 character limit).

- Default: **admin**

Re-enter Password: Type the password again in this field to confirm the new password (19 character limit).

Current Settings:

Provides you with the current IP addressing of the device, Mac address and serial number.

The home screen will also show the current registration status, and features enabled on the CyberData SIP Intercom.

Import/Export Settings

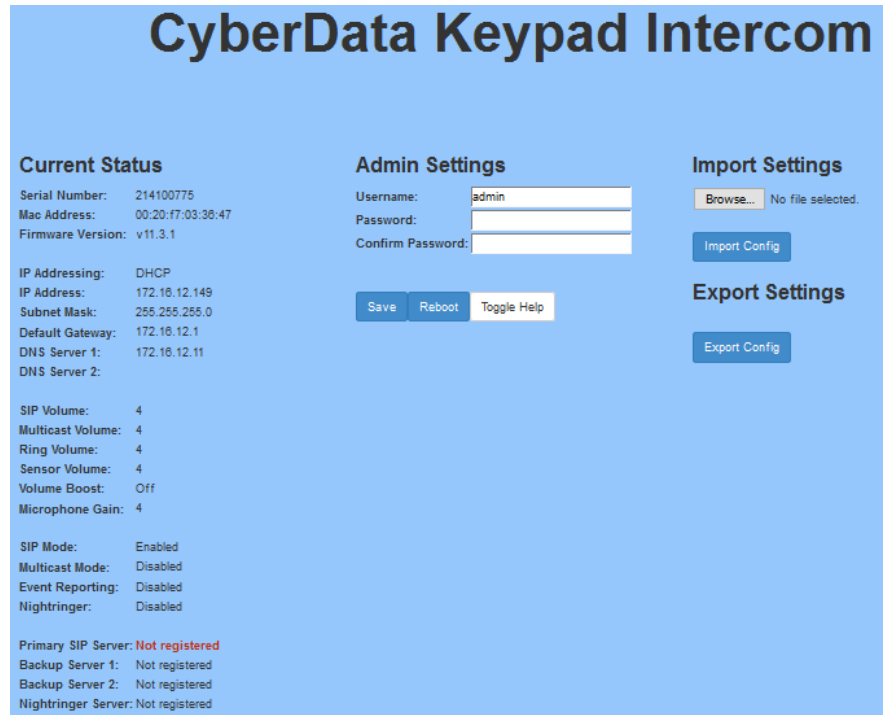
Allows for Importing and Exporting settings of the CyberData Intercom



Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.



CyberData Keypad Intercom

Current Status	Admin Settings	Import Settings	Export Settings
Serial Number: 214100775 Mac Address: 00:20:17:03:38:47 Firmware Version: v11.3.1 IP Addressing: DHCP IP Address: 172.16.12.149 Subnet Mask: 255.255.255.0 Default Gateway: 172.16.12.1 DNS Server 1: 172.16.12.11 DNS Server 2: SIP Volume: 4 Multicast Volume: 4 Ring Volume: 4 Sensor Volume: 4 Volume Boost: Off Microphone Gain: 4 SIP Mode: Enabled Multicast Mode: Disabled Event Reporting: Disabled Nightringer: Disabled Primary SIP Server: Not registered Backup Server 1: Not registered Backup Server 2: Not registered Nightringer Server: Not registered	Username: admin Password: Confirm Password: Save Reboot Toggle Help	Browse... No file selected. Import Config	Export Config

Reboot

Click on the Reboot button to reboot the system.

6.3 Device Configuration

On the device configuration screen, you can configure several default options for the CyberData Intercom, and perform basic operation tests.

SIP Volume Set the speaker volume for a SIP call. A value of 0 will mute the speaker during SIP calls.

Multicast Volume Set the speaker volume for multicast audio streams. A value of 0 will mute the speaker during multicasts.

Ring Volume Set the ring volume for incoming calls. A value of 0 will mute the speaker instead of playing the ring tone when Auto-Answer Incoming Calls is disabled.

Sensor Volume Set the speaker volume for playing sensor activated audio. A value of 0 will mute the speaker during sensor activated audio.

Volume Settings (0-9)	Relay Settings
SIP Volume: <input type="text" value="4"/>	Activate Relay with DTMF code: <input checked="" type="checkbox"/>
Multicast Volume: <input type="text" value="4"/>	DTMF Activation Code: <input type="text" value="321"/>
Ring Volume: <input type="text" value="4"/>	DTMF Activation Duration (in seconds): <input type="text" value="2"/>
Sensor Volume: <input type="text" value="4"/>	Play tone during DTMF Activation: <input type="checkbox"/>
Microphone Gain: <input type="text" value="4"/>	Activate Relay During Ring: <input type="checkbox"/>
No Volume Boost <input type="button" value="v"/> <small>Boost operation recommended with volumes set to level 9</small>	Activate Relay During Night Ring: <input type="checkbox"/>
	Activate Relay While Call Active: <input type="checkbox"/>
	Activate Relay On Button Press: <input type="checkbox"/>
	Relay On Button Press Duration: <input type="text" value="3"/>
Clock Settings	Misc Settings
Set Time with NTP server on boot: <input type="checkbox"/>	Device Name: <input type="text" value="Keypad Intercom"/>
NTP Server: <input type="text" value="north-america.pool.ntp.org"/>	Auto-Answer Incoming Calls: <input checked="" type="checkbox"/>
Posix Timezone String (see manual): <input type="text" value="PST8PDT,M3.2.0/2:00:00,M11"/>	Button Lit when Idle: <input checked="" type="checkbox"/>
Periodically sync time with server: <input type="checkbox"/>	Button Brightness (0-255): <input type="text" value="255"/>
Time update period (in hours): <input type="text" value="24"/>	Play Ringback Tone: <input type="checkbox"/>
Current Time: <input type="text" value="Not set"/>	Disable HTTPS (NOT recommended): <input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Reboot"/>	
<input type="button" value="Test Audio"/> <input type="button" value="Test Microphone"/> <input type="button" value="Test Relay"/> <input type="button" value="Toggle Help"/>	

Microphone Gain

Set the microphone gain level.

Volume Boost:

No Volume Boost

Volume Boost 1

Volume Boost 2

Volume Boost 3

Set the Boost level to increase the volume output of the speaker.

Using Volume Boost may introduce audio clips or cause the device to drop from full duplex to half duplex operation. Normal operation of the product can be met with volume levels 0 through 9. 0 being mute and 9 being the loudest volume that in a normal arm's length and average background noise, will enable full duplex operation and give the best quality of sound output.

The volume boost options increase the output of the speaker by:

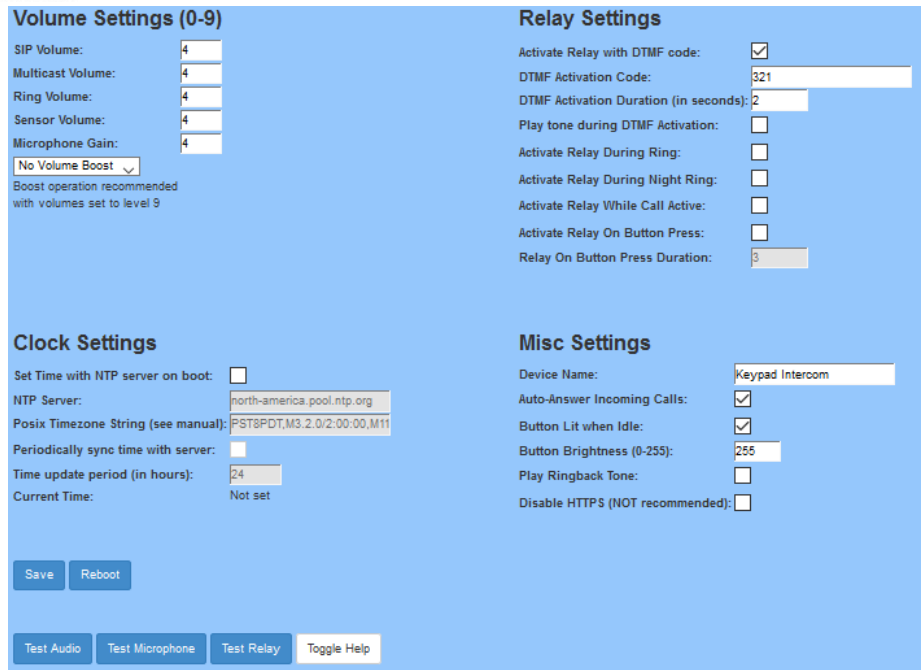
3db for Boost level 1

6db for Boost level 2

9db for Boost level 3

If the user would like a higher output from the speaker, the Boost settings are available. However, operation in Boost Mode may overdrive or clip the audio if, for example, the phone that is connected has a high microphone gain or if the person has a loud voice talking too close to the microphone.

The acoustic echo canceller also has a harder time maintaining full duplex operation when in the Boost Mode. The product may drop from full duplex operation into half/duplex mode while in Boost Mode.



Volume Settings (0-9)

SIP Volume: 4

Multicast Volume: 4

Ring Volume: 4

Sensor Volume: 4

Microphone Gain: 4

No Volume Boost

Boost operation recommended with volumes set to level 9

Relay Settings

Activate Relay with DTMF code: ☒

DTMF Activation Code: 321

DTMF Activation Duration (in seconds): 2

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

Clock Settings

Set Time with NTP server on boot: ☐

NTP Server: north-america.pool.ntp.org

Posix Timezone String (see manual): PST8PDT,M3.2.0/2:00:00,M11

Periodically sync time with server: ☐

Time update period (in hours): 24

Current Time: Not set

Misc Settings

Device Name: Keypad Intercom

Auto-Answer Incoming Calls: ☒

Button Lit when Idle: ☒

Button Brightness (0-255): 255

Play Ringback Tone: ☐

Disable HTTPS (NOT recommended): ☐

Activate Relay with DTMF code:

Relay can be activated via DTMF Code when checked

DTMF Activation Code: Code used to activate relay

DTMF Activation Duration (in seconds): Duration the relay is activated after the proper code is entered. 0-99 seconds. If 0 is entered the relay is indefinitely activated until the DTMF code is entered a second time.

Activate Relay During Ring:

When enabled the relay is activated while the device is ringing. If Auto answer is enabled, this feature is disabled.

Activate Relay During Night

Ring: When selected, the relay will be activated as long as the Night ringer extension is ringing

Activate Relay While Call Active:

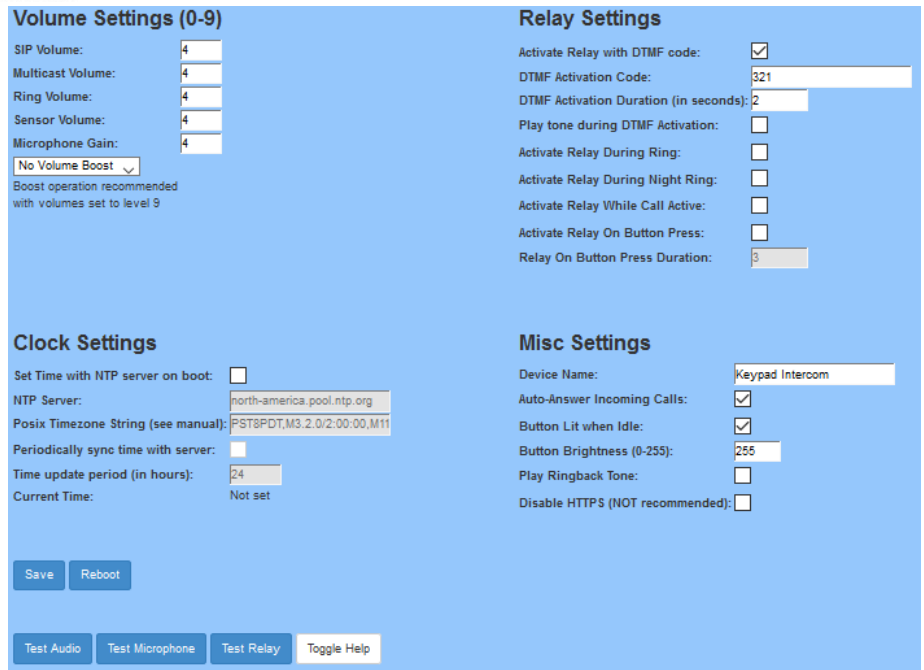
When enabled the relay is activated for the duration of the call automatically.

Activate Relay on Button Press:

When enabled, the relay is activated for the duration specified in "Relay on Button Press Timeout" when the call button is pressed.

Relay on Button Press Duration (in seconds): Duration the relay is activated after the call button is pressed 1-9 seconds

Device Name: Type the device name. Enter up to 25 characters



The screenshot displays the Zultys configuration web interface. It features four main settings panels on a light blue background:

- Volume Settings (0-9):** Includes sliders for SIP Volume, Multicast Volume, Ring Volume, Sensor Volume, and Microphone Gain, all set to 4. A 'No Volume Boost' dropdown is also present.
- Relay Settings:** Contains checkboxes for 'Activate Relay with DTMF code' (checked), 'Play tone during DTMF Activation', 'Activate Relay During Ring', 'Activate Relay During Night Ring', 'Activate Relay While Call Active', and 'Activate Relay On Button Press'. It also includes text input fields for 'DTMF Activation Code' (321), 'DTMF Activation Duration (in seconds)' (2), and 'Relay On Button Press Duration' (3).
- Clock Settings:** Includes checkboxes for 'Set Time with NTP server on boot' and 'Periodically sync time with server'. It also has text input fields for 'NTP Server' (north-america.pool.ntp.org), 'Posix Timezone String' (PST8PDT,M3.2.0/2:00:00,M11), and 'Time update period (in hours)' (24).
- Misc Settings:** Includes a 'Device Name' field (Keypad Intercom), checkboxes for 'Auto-Answer Incoming Calls' (checked), 'Button Lit when Idle' (checked), and 'Disable HTTPS (NOT recommended)' (unchecked). It also has a 'Button Brightness (0-255)' field (255) and a 'Play Ringback Tone' checkbox.

At the bottom, there are 'Save' and 'Reboot' buttons, and a row of utility buttons: 'Test Audio', 'Test Microphone', 'Test Relay', and 'Toggle Help'.

Auto-Answer Incoming Calls:

When enabled, the intercom will auto answer all incoming calls

Button Lit when Idle: When enabled, the call button is lit when there is no active call.

Button Brightness (0-255): The desired Call button LED brightness level. Acceptable values are 0-255, where 0 is the dimmest and 255 is the brightest. Enter up to three digits

Turn on Keypad backlight: When enabled, the keypad is backlit.

Play Ringback Tone: When enabled ringback tone is heard when making a call.

Enable Push to Talk: When enabled this will cause the device to be muted normally, and only transmit audio from the microphone while the call button is pressed. You will not be able to terminate the call from the intercom unit.

Enable DTMF Push to Talk: When enabled pressing the * (star) key will disable the speaker and set the microphone gain level to the max, pressing the # (pound/hash) key the mic will be muted and the speaker will be set to its loudest level.

Prevent Call Termination: When enabled the call button cannot be used to terminate the call.

Disable HTTPS (NOT recommended): Disables the encrypted connection to the webpage. We do not

recommend disabling HTTP for security reasons



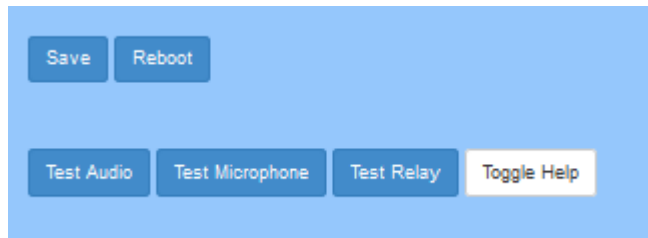
Click on the Save button to save your configuration settings.



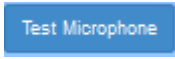
Note: You need to reboot for changes to take effect.



Click on the Reboot button to reboot the system.



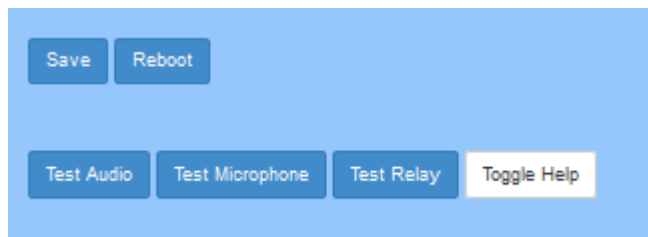
When the Test Audio button is pressed, you will hear a voice message for testing the device audio quality and volume.



When the Test microphone button is pressed, the Intercom will record 3 seconds of audio, then beep to indicate the end of recording, and play back the recording.



Click on the Test Relay button to do a relay test.



6.4 Button Configuration

Button configuration screen is used to configure what happens when the buttons (the Call Button or keys on the key pad) are pressed.

Enable Telephone Operation:

Select Enable Telephone Operation to put the Intercom into Telephone Dial Mode. In Telephone Dial Mode, the Intercom will operate like a telephone:

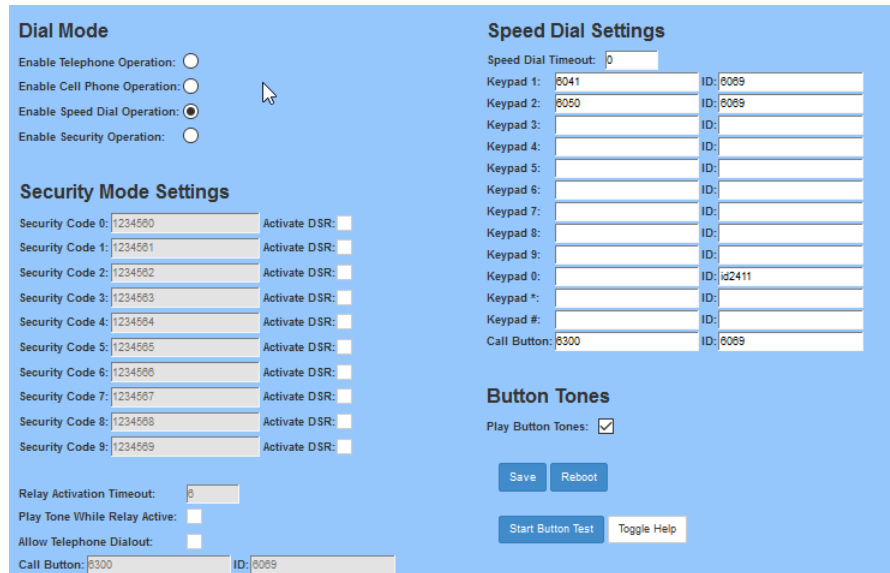
- To make a call in this mode, press the Call Button to go 'off-hook'. The unit will begin playing a dial tone and will wait for keypad input.
- Dial the extension you want to reach and wait.
- Pressing the Call Button at any time in this process will hang up the call (put it back 'on-hook').
- During a call, you can use the keypad to send DTMF tones to the remote extension

Enable Cellphone Operation:

Select Enable Cellphone Operation to put the Intercom into Cellphone Dial Mode. In Cellphone Dial Mode, the Intercom will operate like a cellular phone:

- This mode is similar to the telephone operation but you dial in an extension differently.
- To make a call in this mode, dial the extension and then press the call button to 'send' or initiate the call.
- Pressing the call button at any time in this process will hang up the call (put it back 'on-hook').
- During a call you can use the keypad to send DTMF tones to the remote extension

Enable Speed Dial: Select Enable Speed Dial to put the Intercom into



Dial Mode

Enable Telephone Operation: ☐

Enable Cell Phone Operation: ☐

Enable Speed Dial Operation: ☒

Enable Security Operation: ☐

Security Mode Settings

Security Code 0:	1234560	Activate DSR:	<input type="checkbox"/>
Security Code 1:	1234561	Activate DSR:	<input type="checkbox"/>
Security Code 2:	1234562	Activate DSR:	<input type="checkbox"/>
Security Code 3:	1234563	Activate DSR:	<input type="checkbox"/>
Security Code 4:	1234564	Activate DSR:	<input type="checkbox"/>
Security Code 5:	1234565	Activate DSR:	<input type="checkbox"/>
Security Code 6:	1234566	Activate DSR:	<input type="checkbox"/>
Security Code 7:	1234567	Activate DSR:	<input type="checkbox"/>
Security Code 8:	1234568	Activate DSR:	<input type="checkbox"/>
Security Code 9:	1234569	Activate DSR:	<input type="checkbox"/>

Relay Activation Timeout:

Play Tone While Relay Active: ☐

Allow Telephone Dialout: ☐

Call Button: ID:

Speed Dial Settings

Speed Dial Timeout:

Keypad 1:	6041	ID:	6069
Keypad 2:	6050	ID:	6069
Keypad 3:		ID:	
Keypad 4:		ID:	
Keypad 5:		ID:	
Keypad 6:		ID:	
Keypad 7:		ID:	
Keypad 8:		ID:	
Keypad 9:		ID:	
Keypad 0:		ID:	62411
Keypad *:		ID:	
Keypad #:		ID:	
Call Button:	6300	ID:	6069

Button Tones

Play Button Tones: ☒

Speed Dial Mode. In this mode the user sets up extensions to dial when a button is pressed.

Speed Dial Timeout (in seconds):

The Speed Dial Timeout (in seconds) setting is the number of seconds you need to hold the button before it will place a call. If this value is 0, it will place a call as soon as the button is released.

Keypad (0-9, *, #): Number to be called when this button is pressed (max of 64 characters)

Call Button: Number to be called when this button is pressed (max of 64 characters)

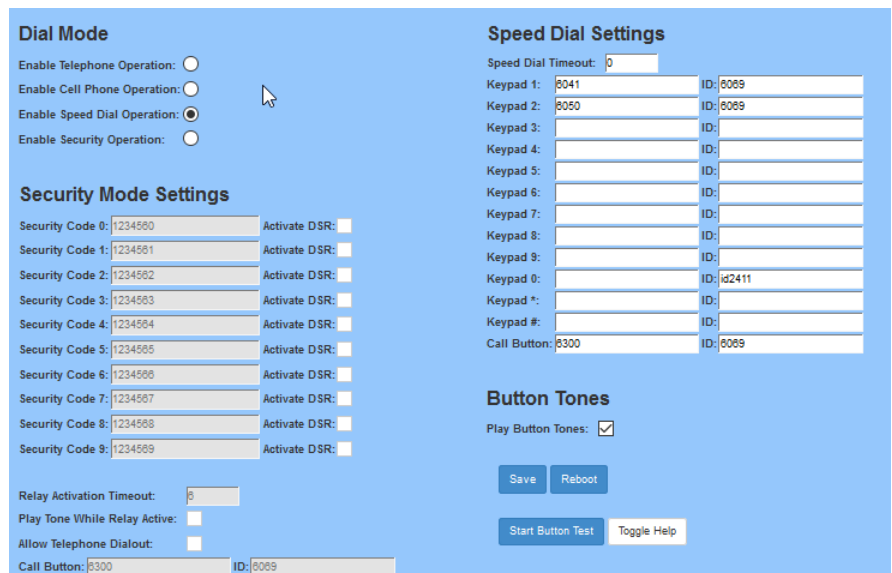
ID: Enter the Extension number associated with the Intercom User (64 character limit)

Enable Security Keypad Operation: Select Enable Security Keypad Operation to put the Intercom into Security Dial Mode. In Security Dial Mode, the Intercom will act like a normal, one-button Intercom by calling the extension specified in the Call Button field.

When a security code is entered on the keypad that matches one of the seven-digit fields specified on the page, the relay will be activated.

- This mode is meant for installation with security doors. In Security Dial Mode, the Intercom will act like a normal, one-button Intercom by calling the extension specified in the Call Button field.

- Up to 10 (7-digit maximum) security codes can be registered with the



The screenshot shows the 'Speed Dial Settings' web interface. It is divided into three main sections: 'Dial Mode', 'Security Mode Settings', and 'Speed Dial Settings'.

Dial Mode: Contains four radio buttons: 'Enable Telephone Operation', 'Enable Cell Phone Operation', 'Enable Speed Dial Operation' (which is selected), and 'Enable Security Operation'.

Security Mode Settings: Contains a table with 10 rows for Security Codes 0 through 9. Each row has a text input for the Security Code and a checkbox for 'Activate DSR'. Below this table are four checkboxes: 'Relay Activation Timeout' (set to 3), 'Play Tone While Relay Active', 'Allow Telephone Dialout', and 'Call Button' (set to 5300) with an 'ID' field (set to 8089).

Speed Dial Settings: Contains a 'Speed Dial Timeout' field (set to 0) and a table for 10 Keypads (1 through 10). Each keypad has a 'Keypad' text input and an 'ID' text input. Below this table is a 'Call Button' field (set to 8300) and an 'ID' field (set to 8089).

Button Tones: Contains a 'Play Button Tones' checkbox (checked) and two buttons: 'Save' and 'Reboot'. At the bottom are 'Start Button Test' and 'Toggle Help' buttons.

device. Enter a security code by pressing the # key before entering the code. When one of these codes is typed on the keypad, it will activate the relay for the Relay Activation Timeout (in seconds) setting.

- It is possible to enter a security code both inside and out of calls.
- In this mode normal relay operation is suspended and the following settings are non-operational:

Relay On Button Press, Relay During Call Active, Relay During Ring, Relay During Night-ring

- In this mode, you can't send dtmf to a remote extension using the keypad. You can however setup delayed dtmf tones in the dial out string.

Relay Activation Timeout (in seconds): Type the desired length of time (in seconds) that you want the relay to remain activated after a security code is entered.

Play Time While Relay is Active:
Check this box to play an audible tone while the relay is activated

Allow Telephone Dialout: When the Allow Telephone Dialout option is enabled, you can use the keypad to place calls to a dialed extension. To call an extension, dial the number and wait. You can still enter security codes with the Allow Telephone Dialout option enabled by pressing the # key before entering the code. With the Allow Telephone Dialout option disabled, all keypad input will be treated as security input. You can

still use the # key but it is not necessary.


Call Button: Enter the desired dial-out extension number (64 character limit). Security codes are limited to seven characters and are activated with the # key


ID: Enter the Extension number associated with the Intercom User (64 character limit)

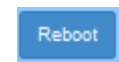
Security Code (0-9): Enter the desired security code number (7 character limit). When a security code is entered on the keypad that matches one of the seven-digit fields specified on the page, the relay will be activated.

Play Button Tone: Check this box to hear a tone when a keypad button is pushed. This setting applies to all modes and determines whether the device will play an audible sound out of the speaker when doing any of the following:

- Entering a security code
- Initiating a speed dial
- Pressing the keys in cellphone and telephone modes

 Click on the Save button to save your configuration settings.

 **Note:** You need to reboot for changes to take effect.

 Click on the Reboot button to reboot the system.

Dial Mode

☐ Enable Telephone Operation:
☐ Enable Cell Phone Operation:
☒ Enable Speed Dial Operation:
☐ Enable Security Operation:

Security Mode Settings

Security Code 0:	1234560	Activate DSR:	<input type="checkbox"/>
Security Code 1:	1234561	Activate DSR:	<input type="checkbox"/>
Security Code 2:	1234562	Activate DSR:	<input type="checkbox"/>
Security Code 3:	1234563	Activate DSR:	<input type="checkbox"/>
Security Code 4:	1234564	Activate DSR:	<input type="checkbox"/>
Security Code 5:	1234565	Activate DSR:	<input type="checkbox"/>
Security Code 6:	1234566	Activate DSR:	<input type="checkbox"/>
Security Code 7:	1234567	Activate DSR:	<input type="checkbox"/>
Security Code 8:	1234568	Activate DSR:	<input type="checkbox"/>
Security Code 9:	1234569	Activate DSR:	<input type="checkbox"/>

Relay Activation Timeout:
 Play Tone While Relay Active: ☐
 Allow Telephone Dialout: ☐
 Call Button: ID:

Speed Dial Settings

Speed Dial Timeout:

Keypad 1:	0041	ID:	0009
Keypad 2:	0050	ID:	0009
Keypad 3:		ID:	
Keypad 4:		ID:	
Keypad 5:		ID:	
Keypad 6:		ID:	
Keypad 7:		ID:	
Keypad 8:		ID:	
Keypad 9:		ID:	
Keypad 0:		ID:	02411
Keypad *:		ID:	
Keypad #:		ID:	
Call Button:	0300	ID:	0009

Button Tones

Play Button Tones: ☒

6.5 SIP Configuration

SIP configuration screen is used to configure the SIP registration parameters used by the CyberData SIP Page Server to register with the MX for paging purposes. The SIP User ID and Authentication ID are the same values which is the Device ID created in the MX in section 6 and assigned to the user created in section 6. Authentication Password is only used if a SIP Proxy Password is required by the Generic SIP Device created in the MX.

If using MXNetwork with Redundancy it is suggested to add the redundant node to the backup SIP server of the CyberData Paging Server, this way in a failover situation the paging equipment will continue to function with no intervention.

The IP addresses and Port Numbers used in this document are example IP and port number, you may select the appropriate multicast IP address range and ports for your deployment.

Note: The Multicast Address used on this screen cannot be a multicast address used for your paging groups.

Enable SIP Operation: Checked

SIP Server: IP or FQDN of the MX

Backup SIP Server 1: Only Used if using MXNetwork with failover, then will be the IP address or FQDN of the failover node. Will dual register with the MXNetwork Node

Backup SIP Server 2: Not Used

Use Cisco SRST: Unchecked

Remote SIP Port: 5060

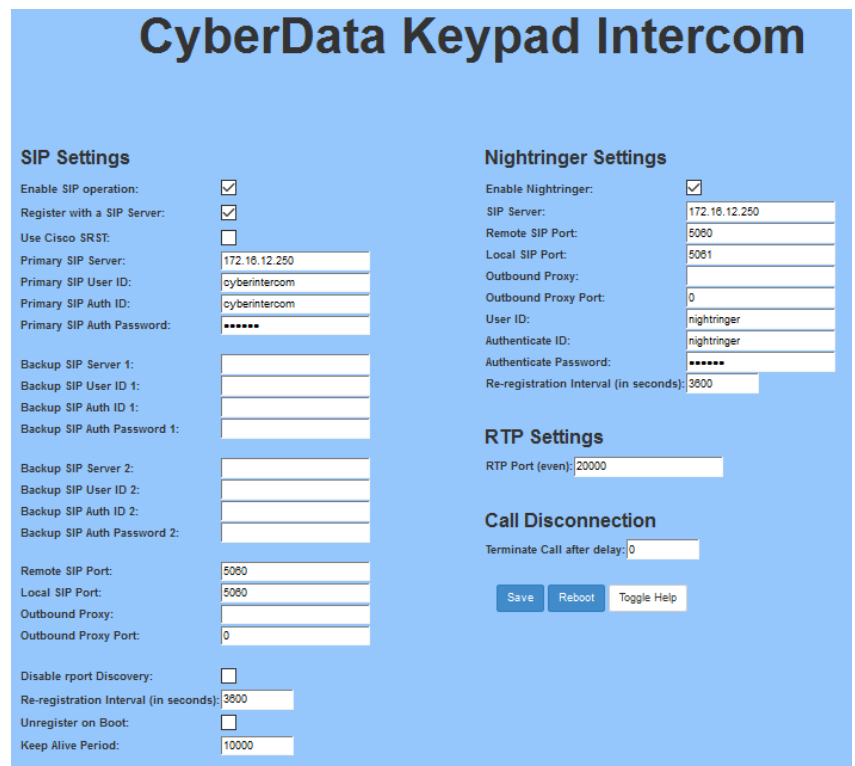
Local SIP Port: 5060

Outbound Proxy: must be left blank

Outbound Proxy Port: 0

SIP User ID: the Device ID created on the MX in Section 4

Authentication ID: Same as User ID



Authentication Password: the SIP Proxy Password for the Device ID created in section 4 (if required)

Register with a SIP Server: Checked


Re-registration Interval: 3600

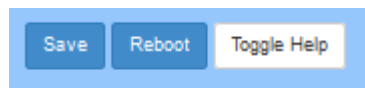
Terminate call after delay (in seconds): Type the desired number of seconds that you want to last before a call is terminated.

Note: A value of 0 will disable this function

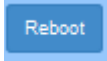
Unregister on reboot: Unchecked

RTP Port: 20000

 Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.

 Click on the Reboot button to reboot the system.

6.6 Nightringer Configuration

Nightringer configuration screen is used to configure the SIP registration parameters used by the CyberData SIP Intercom to register with the MX for Night Bell or Nightringer purposes. The SIP User ID and Authentication ID are the same values which is the Device ID created in the MX in section 3 and assigned to the user created in section 3. Authentication Password is only used if a SIP Proxy Password is required by the Generic SIP Device created in the MX.

The IP addresses and Port Numbers used in this document are example IP and port number, you may select the appropriate multicast IP address range and ports for your deployment.

Note: The Multicast Address used on this screen cannot be a multicast address used for your paging groups.

Enable Nightringer: Checked

SIP Server: IP or FQDN of the MX

Remote SIP Port: 5060

Local SIP Port: 5061, must be Port 5061

User ID: the Device ID created on the MX in Section 3

Authentication ID: Same as User ID

Authentication Password: the SIP Proxy Password for the Device ID created in section 3 (if required)

CyberData Keypad Intercom

SIP Settings		Nightringer Settings	
Enable SIP operation:	<input checked="" type="checkbox"/>	Enable Nightringer:	<input checked="" type="checkbox"/>
Register with a SIP Server:	<input checked="" type="checkbox"/>	SIP Server:	172.16.12.250
Use Cisco SRST:	<input type="checkbox"/>	Remote SIP Port:	5060
Primary SIP Server:	172.16.12.250	Local SIP Port:	5061
Primary SIP User ID:	cyberintercom	Outbound Proxy:	
Primary SIP Auth ID:	cyberintercom	Outbound Proxy Port:	0
Primary SIP Auth Password:	*****	User ID:	nightringer
Backup SIP Server 1:		Authenticate ID:	nightringer
Backup SIP User ID 1:		Authenticate Password:	*****
Backup SIP Auth ID 1:		Re-registration Interval (in seconds):	3600
Backup SIP Auth Password 1:			
Backup SIP Server 2:			
Backup SIP User ID 2:			
Backup SIP Auth ID 2:			
Backup SIP Auth Password 2:			
Remote SIP Port:	5060		
Local SIP Port:	5060		
Outbound Proxy:			
Outbound Proxy Port:	0		
Disable rport Discovery:	<input type="checkbox"/>		
Re-registration Interval (in seconds):	3600		
Unregister on Boot:	<input type="checkbox"/>		
Keep Alive Period:	10000		

RTP Settings	
RTP Port (even):	20000

Call Disconnection	
Terminate Call after delay:	0

Save Reboot Toggle Help

Save

Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.

Reboot

Click on the Reboot button to reboot the system.

6.7 Multicast Configuration

Multicast Configuration is used to create multiple zones that the CyberData SIP Intercom will listen to and relay pages that are received, configure each multicast zone to match the multicast Zone. If you are not using Multicast Paging, or do not want to include the Intercom in the paging zone this section can be skipped.

When playing multicast streams, audio on different streams will preempt each other according to their priority in the list. An audio stream with a higher priority will interrupt a stream with a lower priority.

CyberData SIP Intercom Integration with MX (0000000408)

Revision 9 -- November 20, 2015

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Page 22 of 26

If both SIP and Multicast is enabled, SIP audio streams are considered priority 4.5. SIP audio will interrupt multicast streams with priority 0 through 4 and will be interrupted by multicast streams with priority 5 through 9.

During priority 9 multicast streams, the analog volume control is bypassed and the volume level is set to maximum.

Ringtones all play at the same priority level. This means that it is possible to have a nightring tone and a normal ringtone playing at the same time.

Priority 9 will play the announcement at maximum volume.

Enable Multicast operation: Checked

Address: Enter the IP address of the Multicast Group.

- **Note:** To disable a relay on a group, use an IP address of 0.0.0.0.

Port: Enter the port number of the Multicast Group.

- **Note:** The port range can be from 2000 to 65534.

Name: Enter a name for the Multicast Group.

Multicast Settings

Enable Multicast Operation: ☒

Priority	Address	Port	Name	Beep
9	239.168.3.10	11000	Emergency	<input type="checkbox"/>
8	234.2.1.1	10002	Office	<input checked="" type="checkbox"/>
7	239.168.3.8	9000	MG7	<input type="checkbox"/>
6	239.168.3.7	8000	MG6	<input type="checkbox"/>
5	239.168.3.6	7000	MG5	<input type="checkbox"/>
4	239.168.3.5	6000	MG4	<input type="checkbox"/>
3	239.168.3.4	5000	MG3	<input type="checkbox"/>
2	239.168.3.3	4000	MG2	<input type="checkbox"/>
1	239.168.3.2	3000	MG1	<input type="checkbox"/>
0	239.168.3.1	2000	Background Music	<input type="checkbox"/>

SIP calls are considered priority 4.5
Port range can be from 2000-65535
Ports must be even numbers
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
* You need to reboot for changes to take effect

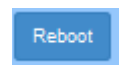
Save Reboot



Click on the Save button to save your configuration settings.



Note: You need to reboot for changes to take effect.



Click on the Reboot button to reboot the system.

6.8 Sensor Configuration

The door sensor (pins 5 and 6) on the header can be used to monitor a door's open or closed state. There is an option on the Sensor Configuration page to trigger on an open

or short condition on these pins. The door sensor alarm will be activated when the Door Open Timeout parameter has been met.

The intrusion sensor is an optical sensor installed on the Intercom board and will be activated when the Intercom is removed from the case. Zultys Highly recommends implementing the Intrusion Sensor Settings.

For each sensor there are five (5) actions the Intercom can take:

- Flash the LED until the sensor is deactivated (roughly 10 times/second)
- Activate the relay until the sensor is deactivated
- Loop an audio file out of the Intercom speaker until the sensor is deactivated
- Call an extension and play a pre-recorded audio file (once)
- Call an extension and establish a 2 way conversation

Door Sensor Normally Closed: Select the inactive state of the door sensors.

Door Open Timeout (in seconds): Select the number of seconds that you want to pass before the door sensor is activated

Flash Button LED: Check this box to flash the LED until the sensor is deactivated (roughly 10 times/second).

Activate Relay: Check this box to activate the relay until the sensor is deactivated.


Play Audio Locally: Check this box to loop an audio file out of the Intercom speaker until the sensor is deactivated.

Make Call to Extension: Check this box to call a preset extension (one time).

Play recorded audio: Check this box to play a pre-recorded audio file (one time).

Dial Out Extension: Enter the desired dial-out extension number

Dial Out ID: Enter in the Extension number associated with the MX Intercom User (64 character limit).



The screenshot displays two side-by-side configuration panels. The left panel, titled 'Door Sensor Settings', includes options for 'Door Sensor Normally Closed' (radio buttons for Yes/No, with 'No' selected), 'Door Open Timeout (in seconds)' (text input '0'), 'Flash Button LED' (checkbox), 'Activate Relay' (checkbox), 'Play Audio Locally' (checkbox), 'Make call to extension' (checkbox), 'Dial Out Extension' (text input '204'), 'Dial Out ID' (text input 'd204'), 'Play recorded audio' (checkbox), and 'Repeat Sensor Message' (text input '0'). The right panel, titled 'Intrusion Sensor Settings', includes 'Flash Button LED' (checkbox checked), 'Activate Relay' (checkbox), 'Play Audio Locally' (checkbox checked), 'Make call to extension' (checkbox checked), 'Dial Out Extension' (text input '0041'), 'Dial Out ID' (text input '0009'), 'Play recorded audio' (checkbox), and 'Repeat Intrusion Message' (text input '0'). Both panels have 'Save', 'Reboot', and 'Toggle Help' buttons at the bottom, and 'Test Door Sensor' and 'Test Intrusion Sensor' buttons at the very bottom.

Test Door Sensor

: Use this button to test the door sensor.

Flash Button LED*: Check this box to flash the LED until the sensor is deactivated (roughly 10 times/second).

Activate Relay: Check this box to activate the relay until the sensor is deactivated.

Play Audio Locally: Check this box to loop an audio file out of the Intercom speaker until the sensor is deactivated.

Make call to extension: Check this box to call a preset extension (once).

Play recorded audio: Check this box to play a pre-recorded audio file (once).

Dial Out Extension: Enter the desired dial-out extension number.

Dial Out ID: Enter in the Extension number associated with the MX Intercom User (64 character limit).

Test Intrusion Sensor

Test Intrusion sensor

Save

Click on the Save button to save your configuration settings.

Save

Reboot

Toggle Help



Note: You need to reboot for changes to take effect.

Reboot

Click on the Reboot button to reboot the system.

6.9 Audio Files

CyberData SIP-enabled Outdoor Keypad Intercom allows you replace all the prompts used by the intercom with your own custom paging prompts. Custom prompts must be saved as

WAVE audio, Microsoft PCM, 16 bit, mono 8000 Hz

CyberData SIP Intercom Integration with MX (0000000408)

Revision 9 -- November 20, 2015

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Page 25 of 26

Zultys Technical Support can provide prompts matching the Zultys voice prompts upon request.

Custom files may be uploaded for all prompts played by the CyberData SIP-enabled Outdoor Keypad Intercom

Save

The Save button will download a new user audio file to the board once you've selected the file by using the Browse button.

Delete

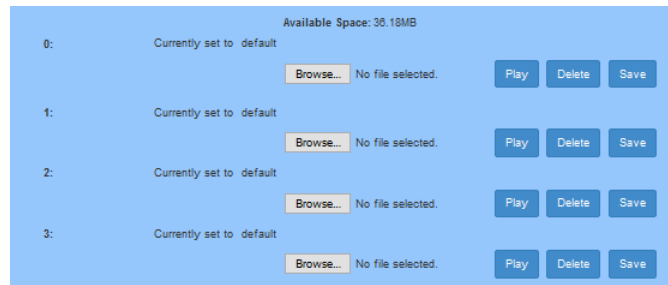
The Delete button will delete any user uploaded audio and restore the stock audio file.

Play

The Play button will play that audio file

Browse...

The Browse button will allow you to navigate to and select an audio file



Index	Status	Action	File Selection	Buttons
0:	Currently set to: default	Browse...	No file selected.	Play Delete Save
1:	Currently set to: default	Browse...	No file selected.	Play Delete Save
2:	Currently set to: default	Browse...	No file selected.	Play Delete Save
3:	Currently set to: default	Browse...	No file selected.	Play Delete Save

7 Known Issues

7.1 Auto Attendants

Due to known issues in the operation /functionality of the echo canceller in the Cyber Data SIP-enabled Outdoor Keypad Intercom when the intercom is programmed to call an MX AutoAttendant/IVR there will be no audio for the first 15-20 seconds. As a workaround disable “*Device Config | Miscellaneous Settings | Play Ringback Tone*” or contact technical support for additional options if you require ringback tone to be played when calling an extension.