CyberData

The IP Endpoint Company

SIP Paging Adapter Operations Guide

SIP Compliant

Part #*011233*

Document Part #*930622L*

for Firmware Version 7.0.1

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Operations Guide 930622L
SIP Compliant 011233

CyberData
The IP Endpoint Company

Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:
http://www.cyberdata.net/support/contactsupportvoip.php

Phone: (831) 373-2601, Ext. 333
Email: support@cyberdata.net
Fax: (831) 373-4193
Company and product information is at **www.cyberdata.net**.

Revision Information

Revision 930622L, which corresponds to firmware version 7.0.1, was released on July 8, 2014, and has the following changes:

- Adds the following Note to Table 2-6, "Device Configuration Parameters".

  “Note: The user must press the # key after entering the zone.”

Browsers Supported

The following browsers have been tested against firmware version 7.0.1:

- Internet Explorer (version: 10)
- Firefox (also called Mozilla Firefox) (version: 23.0.1 and 25.0)
- Chrome (version: 29.0.1547.66 m)
- Safari (version: 5.1.7)

Pictorial Alert Icons

 GENERAL ALERT	**General Alert** This pictorial alert indicates a potentially hazardous situation. This alert will be followed by a hazard level heading and more specific information about the hazard.
	**Ground** This pictorial alert indicates the Earth grounding connection point.

Hazard Levels

Danger: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This is limited to the most extreme situations.

Warning: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also alert users against unsafe practices.

Notice: Indicates a statement of company policy (that is, a safety policy or protection of property).

The safety guidelines for the equipment in this manual do not purport to address all the safety issues of the equipment. It is the responsibility of the user to establish appropriate safety, ergonomic, and health practices and determine the applicability of regulatory limitations prior to use. Potential safety hazards are identified in this manual through the use of words Danger, Warning, and Caution, the specific hazard type, and pictorial alert icons.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
13. Prior to installation, consult local building and electrical code requirements.

Warning

Electrical Hazard: This product should be installed by a licensed electrician according to all local electrical and building codes.

Warning

Electrical Hazard: To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

Warning

The PoE connector is intended for intra-building connections only and does not route to the outside plant.

Abbreviations and Terms

Abbreviation or Term	Definition
A-law	A standard companding algorithm, used in European digital communications systems to optimize, i.e., modify, the dynamic range of an analog signal for digitizing.
AVP	Audio Video Profile
Cat 5	TIA/EIA-568-B Category 5
DHCP	Dynamic Host Configuration Protocol
LAN	Local Area Network
LED	Light Emitting Diode
Mbps	Megabits per second.
NTP	Network Time Protocol
PBX	Private Branch Exchange
PoE	Power over Ethernet (as per IEEE 802.3af standard)
RTFM	Reset Test Function Management
SIP	Session Initiated Protocol
u-law	A companding algorithm, primarily used in the digital telecommunication
UC	Unified Communications
VoIP	Voice over Internet Protocol

Contents

1 Product Overview

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

The SIP Paging Adapter (SPA) can be configured to support two separate SIP extensions. SIP extension one passes audio through to the analog output spoken from the caller's handset.

When called, SIP extension two plays a bell audio that can be used as a night ringer when configured in a night ring group.

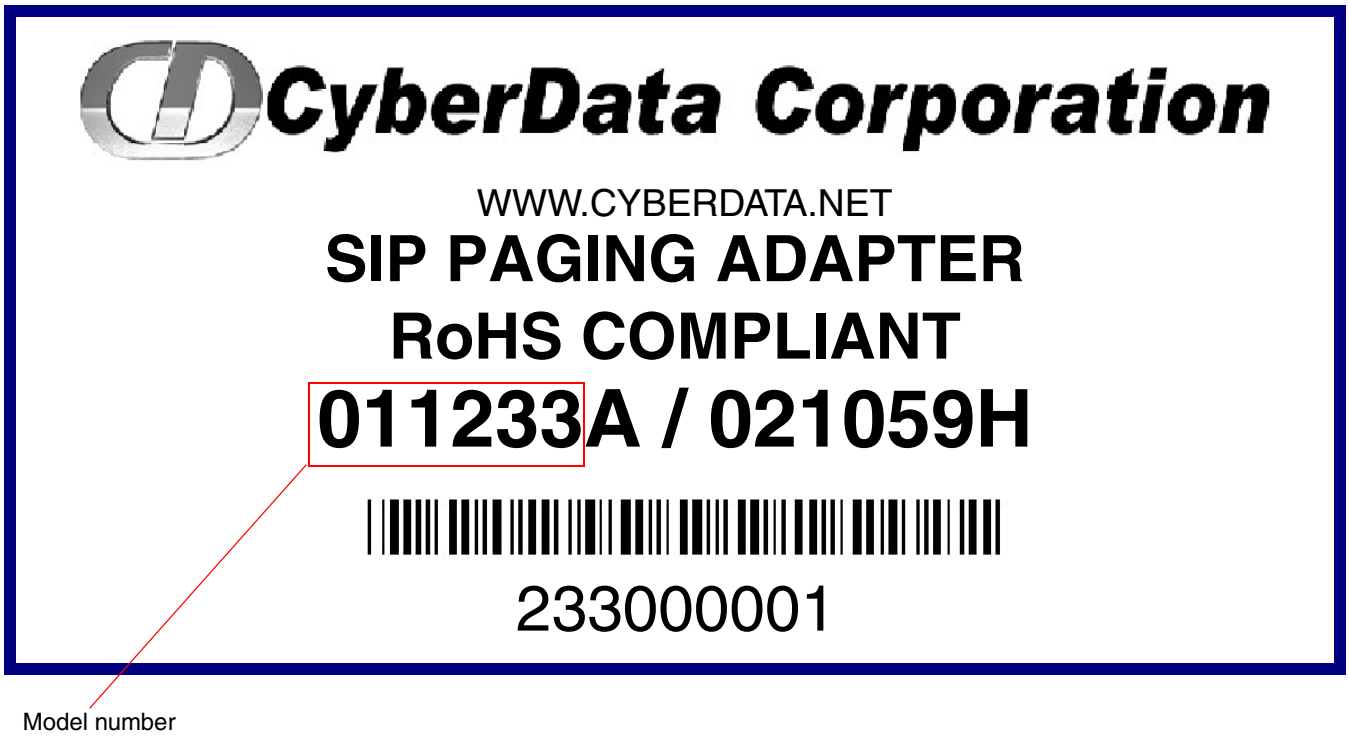
The SPA supports up to 9 user-uploadable messages that can be played by a DTMF command.

The SPA supports a line-In input for playing MOH. During a page or night ring, this input is muted with its output restored once the page has stopped.

1.1 How to Identify This Product

To identify the SIP Paging Adapter, look for a model number label similar to the one shown in Figure 1-1. The model number on the label should be **011233**.

Figure 1-1. Model Number Label



1.2 Product features

- Two SIP extensions[1]
- SIP RFC 3261
- Two SIP endpoints (one for Night Ringer)
- Menu system to allow for live pages or playing pre-recorded audio
- RTP Version 2 Multicast and Unicast
- 10k Ohm line out and 600 Ohm connectors for interfacing with analog amplifiers
- Audio Codecs
  - G.711 U-law
  - G.711 A-law
  - Speex
  - DTMF detection (via RFC 2833)
- Cisco SRST support
- 802.11Q VLAN support
- Ability to import and export configuration
- Auto Provisioning
- Support for NTP server for time keeping
  - TFTP or HTTP
  - Update at certain times of day
  - Update after a certain amount of idle time
- HTTP command interface
- Remote amp fault sensor
- Web-based configuration and firmware upload
- User uploadable audio files
- PoE 802.3af enabled (Power-over-Ethernet)
- 19-inch Rack mount option

1.One of these extensions is a dedicated "night ringer," which is not capable of answering a call, and will only play a stored message while the call is ringing.

1.3 Product Specifications

Table 1-1. Product Specifications

Specifications	
Protocol	SIP RFC 3261 Compatible
Power Requirement	PoE or 48V DC
Ethernet I/F	10/100 Mbps
Power Input	PoE 802.3af or 48VDC
Operating Temperature	-10° C to 50° C (14° F to 122° F)
Payload Types	G711
Page Port Output	Balanced 600 Ohm 5VPP
Line In:	
Input Signal Amplitudes	2.0 VPP maximum
Input Impedance	10k Ohm
Line Out:	
Output Signal Amplitudes	2.0 VPP maximum
Output Level	+2dBm nominal
Total Harmonic Distortion	0.5% maximum
Output Impedance	10k Ohm
Dimensions	6.11” L x 4.05” W x 1.15” H
Weight	1.2 pounds
Boxed Weight	1.8 pounds
Part Number	011233

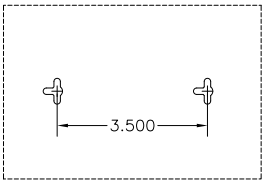
2 Setting Up the SIP Paging Adapter

The topics in this chapter provide information on setting up, configuring, and using the SIP Paging Adapter.

2.1 Parts List

The packaging for the SIP Paging Adapter includes the parts in Table 2-2.

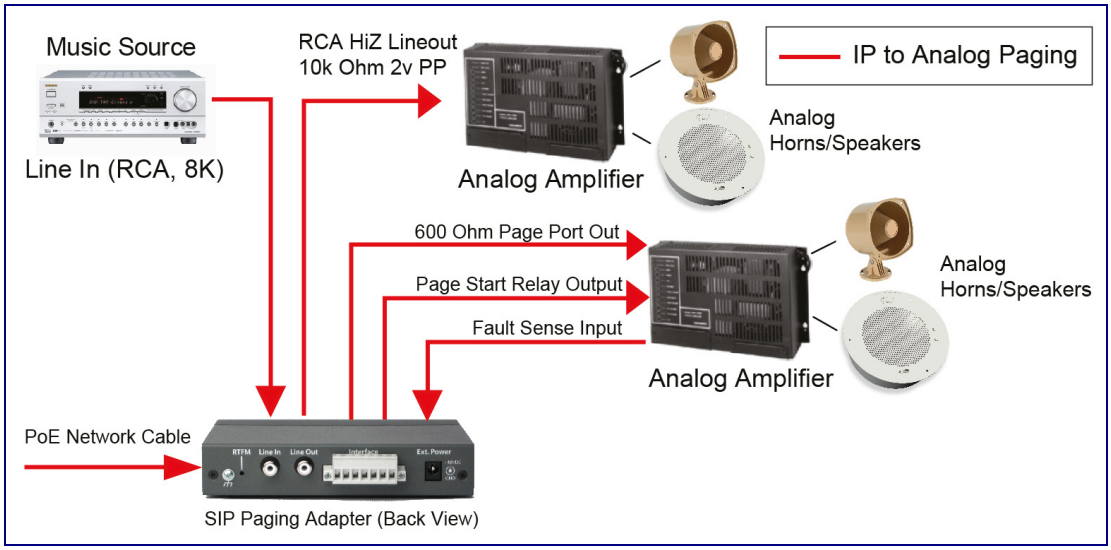
Table 2-2. Parts List

Quantity	Part Name	Illustration
1	SIP Paging Adapter	
1	Installation Quick Reference Guide	
1	Mounting Template (located on the last page of the *Installation Quick Reference*)	
1	Mounting Kit (part #070057A) which includes: (2) #4-6 x 7/8" Mounting Anchors (2) #4 x 1-1/4" Round Phillips Wood Screws	

2.2 Typical Installation

Figure 2-2 illustrates how the SIP Paging Adapter is normally installed as part of a paging system.

Figure 2-2. Typical Installation



2.3 Connecting the SIP Paging Adapter

Before you connect the SIP Paging Adapter, be sure that you have received all of the parts described in Section 2.1, "Parts List".

2.3.1 Connection Options

See Figure 2-3 and Table 2-1 for the connection options that are available for the SIP Paging Adapter.

Figure 2-3. Connection Options

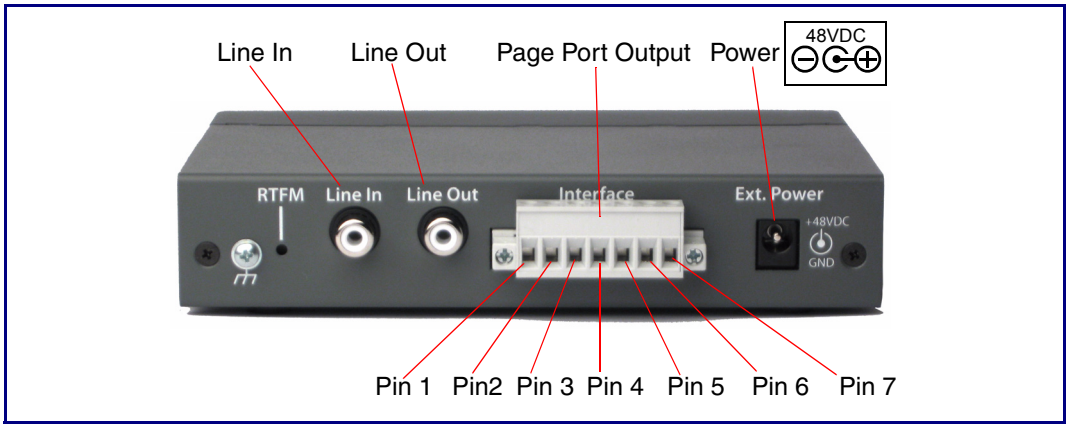


Table 2-1. Page Port Output Connections

Pin	Description
1	Fault Sense Input (Common). See Section 2.3.1.1, "Pin 1 and 2—Fault Sense Input (Common/Sense)".
2	Fault Sense Input (Sense). See Section 2.3.1.1, "Pin 1 and 2—Fault Sense Input (Common/Sense)".
3	Positive 600-Ohm Audio Output[a]. See Section 2.3.1.2, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference".
4	Negative 600-Ohm Audio Output.[a]. See Section 2.3.1.2, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference".
5	Audio Ground Reference. See Section 2.3.1.2, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference".
6	Relay Contact - Common[b]. See Section 2.3.1.3, "Pin 6 and 7—Relay Contact (Common/Normally Open)".
7	Relay Contact - Normally Open[b]. See Section 2.3.1.3, "Pin 6 and 7—Relay Contact (Common/Normally Open)".

a. The 600-Ohm audio output of the page port is also suited for interfaces with lower input impedances.
b. 1 Amp at 30 VDC for continuous loads

2.3.1.1 Pin 1 and 2—Fault Sense Input (Common/Sense)

This input was designed as a method of monitoring an external amplifier that is equipped with a fault sense relay.

When enabled via the web interface (Section 2.4.9, "Configure the Fault Detection Parameters"), this input (when closed) will play a user uploadable audio file out of the line-out connection and/or place a SIP call to a pre-determined extension and play that file.

2.3.1.2 Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference

This output allows direct connection to paging amplifiers requiring a "Page Port" type input that meets a balanced 600 Ohm 5VPP signal.

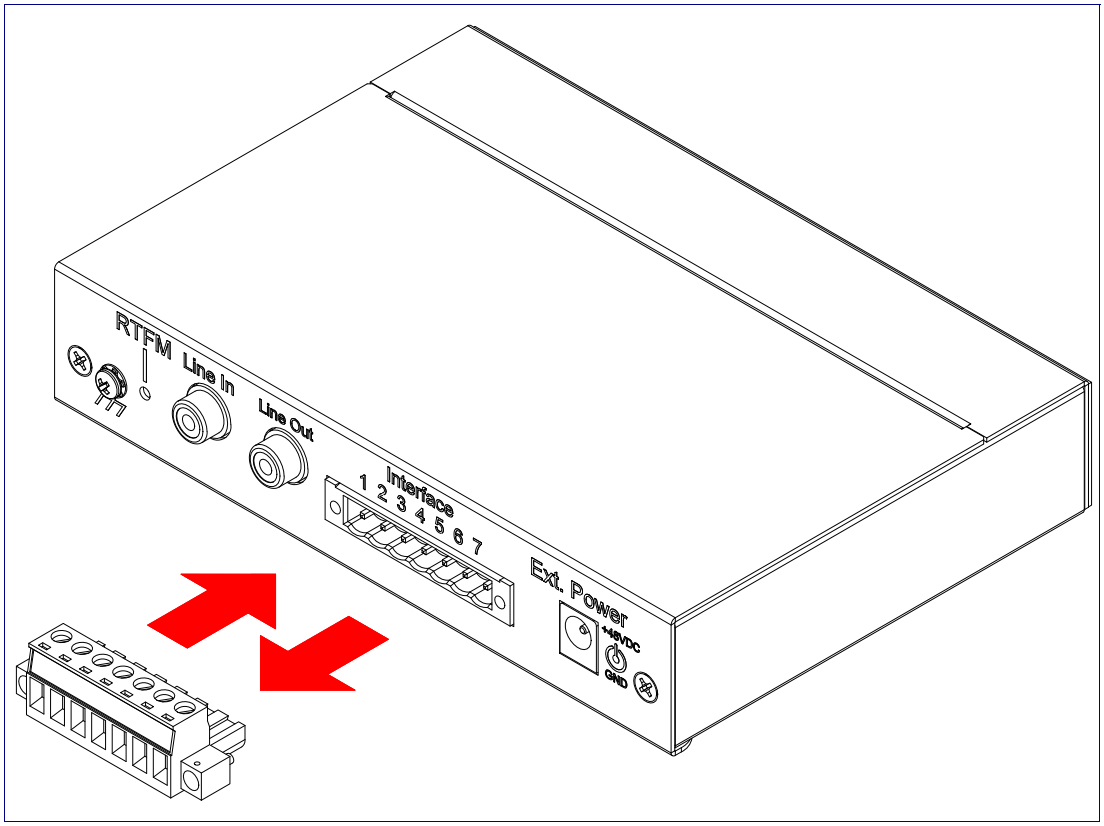
2.3.1.3 Pin 6 and 7—Relay Contact (Common/Normally Open)

When enabled on the web interface (Section 2.4.4, "Configure the Device Parameters"), every time an audio file is played out of the local line-out or 600 Ohm output, the relay will close, thereby enabling amplifiers with a remote turn-on capability to become active.

2.3.2 Removable Connector

Figure 2-4 shows the connector that is removable on the SIP Paging Adapter.

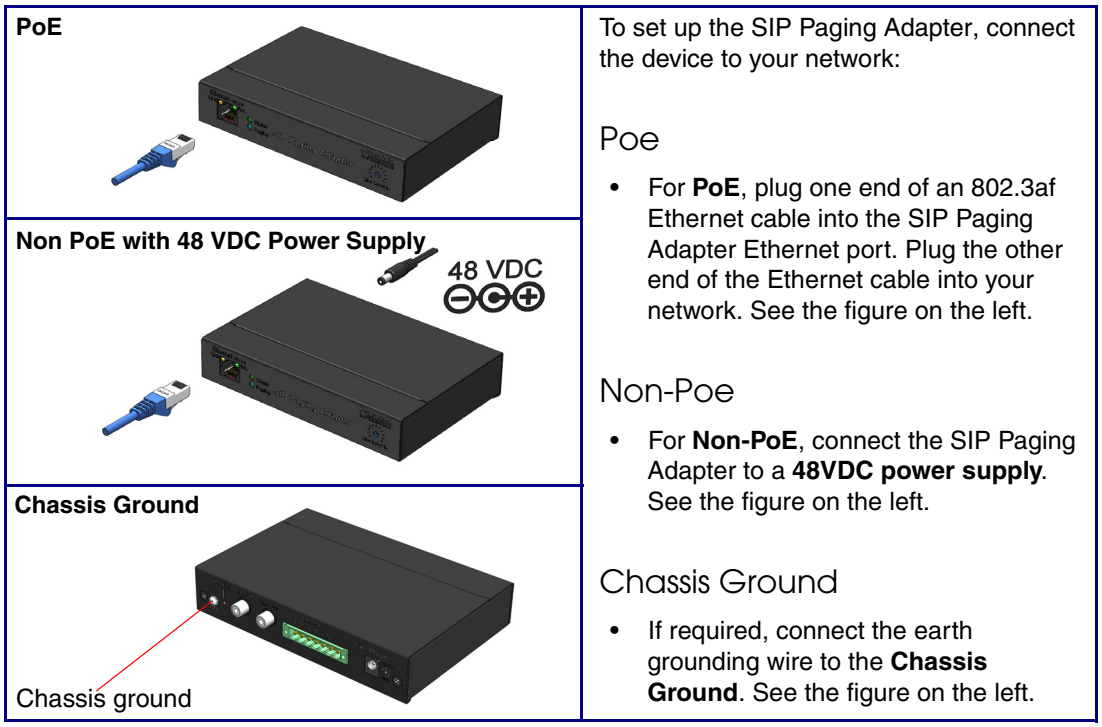
Figure 2-4. Removable Connector



2.3.3 Connect to the Power Source

To use PoE, plug a Cat 5 Ethernet cable from the SIP Paging Adapter **Ethernet** port to your network. As an alternative to PoE, you can plug one end of a +48V DC power supply into the SIP Paging Adapter, and plug the other end into a receptacle. If required, connect the earth grounding wire to the chassis ground on the back of the unit. See Figure 2-5.

Figure 2-5. Connecting to the Power Source



To set up the SIP Paging Adapter, connect the device to your network:

Poe

- For **PoE**, plug one end of an 802.3af Ethernet cable into the SIP Paging Adapter Ethernet port. Plug the other end of the Ethernet cable into your network. See the figure on the left.

Non-Poe

- For **Non-PoE**, connect the SIP Paging Adapter to a **48VDC power supply**. See the figure on the left.

Chassis Ground

- If required, connect the earth grounding wire to the **Chassis Ground**. See the figure on the left.

2.3.4 Connect to the Network

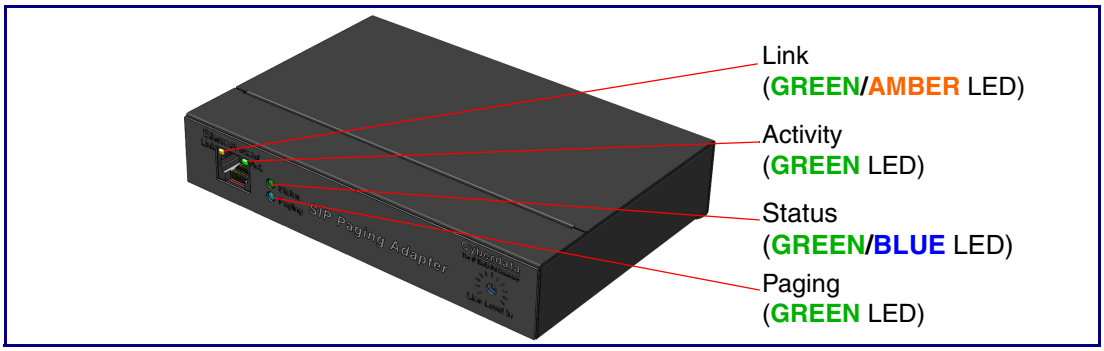
Plug one end of a standard Ethernet cable into the SIP Paging Adapter **Ethernet** port. Plug the other end into your network.

Figure 2-6. Connecting to the Network

2.3.5 Confirm that the SIP Paging Adapter is Up and Running

The LEDs on the front of the SIP Paging Adapter verify the unit's operations.

Figure 2-7. SIP Paging Adapter LEDs



2.3.5.1 Confirm Power on, Network Connectivity, and Connection Speed

When you plug in the Ethernet cable or power supply:

- The **GREEN/BLUE Status** LED and the **GREEN Paging** LED both blink at a rate of 10 times per second during the initial network setup.
- The round, **GREEN/BLUE Status** LED on the front of the SIP Paging Adapter comes on indicating that the power is on. Once the device has been initialized, this LED blinks at one second intervals.
- The square, **GREEN/AMBER Link** LED above the Ethernet port indicates that the network connection has been established. The Link LED changes color to confirm the auto-negotiated connection speed:
  - The Link LED is **GREEN** at 10 Mbps.
  - The Link LED is **AMBER** at 100 Mbps.
- The **GREEN Paging** LED comes on after the device is booted and initialized. This LED blinks when a page is in progress. You can disable **Beep on Initialization** on the **Device Configuration** page.

2.3.5.2 Verify Network Activity

The square, **GREEN Activity** LED blinks when there is network traffic.

2.3.6 Announcing the IP Address

To announce the IP address for the SIP Paging Adapter, briefly press and then quickly release the **RTFM** switch. See Figure 2-8.

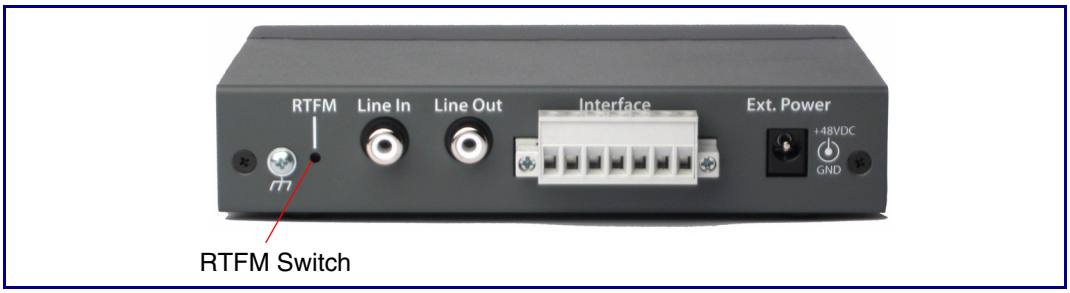
Note The IP address announcement can be heard if a speaker or amplified speaker is connected to the unit.

Figure 2-8. RTFM Switch

2.3.7 Restore the Factory Default Settings

The SIP Paging Adapter is delivered with factory set default values for the parameters in Table 2-3. Use the **RTFM** switch (see Figure 2-9) on the back of the unit to restore these parameters to the factory default settings.

Figure 2-9. RTFM Switch



Note When you perform this procedure, the factory default settings are restored. The default parameters for access are shown in Table 2-3.

Table 2-3. Factory Default Settings

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address[a]	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask[a]	255.0.0.0
Default Gateway[a]	10.0.0.1

a. Default if there is not a DHCP server present.

To restore these parameters to the factory default settings:

1. Press and hold the **RTFM** switch until the status and paging lights come on.
2. Continue to press the switch until after the indicator lights go off, and then release it.

Note The “Restoring Defaults” announcement can be heard if a speaker or amplified speaker is connected to the unit.

3. The SIP Paging Adapter settings are restored to the factory defaults.

2.4 Configuring the SIP Paging Adapter

Use this section to configure the SIP Paging Adapter.

2.4.1 Gather the Required Configuration Information

Have the following information available before you configure the SIP Paging Adapter.

2.4.1.1 Static or DHCP Addressing?

Know whether your system uses static or dynamic (DHCP) IP addressing. If it uses static addressing, you also need to know the values to assign to the following SIP Paging Adapter parameters:

- IP Address
- Subnet Mask
- Default Gateway

2.4.1.2 Username and Password for Configuration GUI

Determine the Username and Password that will replace the defaults after you initially log in to the configuration GUI.

- The Username is case-sensitive, and must be from four to 25 alphanumeric characters long.
- The Password is case-sensitive, and must be from four to 20 alphanumeric characters long.

2.4.1.3 SIP Settings

To configure the SIP parameters, determine whether you want to register with the server. If you do, determine the number of minutes the registration lease remains valid, and whether you want to automatically unregister when you reboot. To configure the SIP parameters, you also need to determine the values for these parameters:

- SIP Server IP Address
- Remote and Local SIP Port Numbers
- SIP User ID, and Authenticate ID and Password for this User ID

2.4.2 SIP Paging Adapter Web Page Navigation

Table 2-4 shows the navigation buttons that you will see on every SIP Paging Adapter web page.

Table 2-4. V3 Paging Amplifier Web Page Navigation

Web Page Item	Description
	Link to the **Home** page.
	Link to the **Device Configuration** page.
	Link to the **Networking** page.
	Link to go to the **SIP Configuration** page.
	Link to the **Multicast Configuration** page.
	Link to go to the **Nightringer** page.
	Link to go to the **Fault Detection** page.
	Link to the **Audio Configuration** page.
	Link to the **Event Configuration** page.
	Link to the **Autoprovisioning Configuration** page.
	Link to the **Upgrade Firmware** page.

2.4.3 Log in to the Configuration GUI

1. Open your browser to the SIP Paging Adapter IP address.

Note If the network does not have access to a DHCP server, the device will default to an IP address of 10.10.10.10.

Note Make sure that the PC is on the same IP network as the SIP Paging Adapter.

Note You may also download CyberData's VoIP Discovery Utility program which allows you to easily find and configure the default web address of the CyberData VoIP products.

CyberData's VoIP Discovery Utility program is available at the following website address:

http://www.cyberdata.net/support/voip/discovery_utility.html

The unit ships in DHCP mode. To get to the **Home** page, use the discovery utility to scan for the device on the network and open your browser from there.

Note To work with the SIP Paging Adapter configuration *after* the initial configuration, log in using the IP address you assign to the device. Section 2.4.5, "Configure the Network Parameters" provides instructions for entering the IP address.

2. When prompted, use the following default **Username** and **Password** to open the configuration Home page:

   Username: **admin**

   Password: **admin**

Change the Default Username and Password

To change the default Web access Username and Password:

1. Enter the new Username from four to 25 alphanumeric characters in the **Change Username** field. The Username is case-sensitive.
2. Enter the new Password from four to 20 alphanumeric characters in the **Change Password** field. The Password is case-sensitive.
3. Enter the new password again in the **Re-enter New Password** field.

   Click **Save Settings**.

Figure 2-10. Home Page

4. On the **Home Page**, review the setup details and navigation buttons described in Table 2-5.

Table 2-5. Home Page Overview

Web Page Item	Description
Device Settings	
Device Name	Shows the device name (25 character limit).
Change Username	Type in this field to change the username (25 character limit).
Change Password	Type in this field to change the password (20 character limit).
Re-enter Password	Type the password again in this field to confirm the new password (20 character limit).
Current Settings	
Serial Number	Shows the device serial number.
Mac Address	Shows the device Mac address.
Firmware Version	Shows the current firmware version.
IP Addressing	Shows the current IP addressing setting (**DHCP** or **Static**).
IP Address	Shows the current IP address.
Subnet Mask	Shows the current subnet mask address.
Default Gateway	Shows the current default gateway address.
DNS Server 1	Shows the current DNS Server 1 address.
DNS Server 2	Shows the current DNS Server 2 address.
SIP Mode is	Shows the current status of the SIP Mode.
Multicast Mode is	Shows the current status of the Multicast Mode.
Event Reporting is	Shows the current status of the Event Reporting.
Nightring is	Shows the current status of the Nightringer.
Primary SIP Server	Shows the current status of the Primary SIP Server.
Backup Server 1	Shows the current status of Backup Server 1.
Backup Server 2	Shows the current status of Backup Server 2.
Import/Export Settings	The user can export and edit the device's configuration (in XML format), and then reload it to a device (or devices) instead of making changes through the web interface.
Browse...	Press the **Browse** button to select a configuration file to import.
Import Configuration	Press the **Import Configuration** button to save a board configuration to the board. **Note**: The board will have to be reset before changes will take effect.
Export Configuration	Press the **Export Configuration** button to download the current board configuration.
Save	Click 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.

At this point you can:

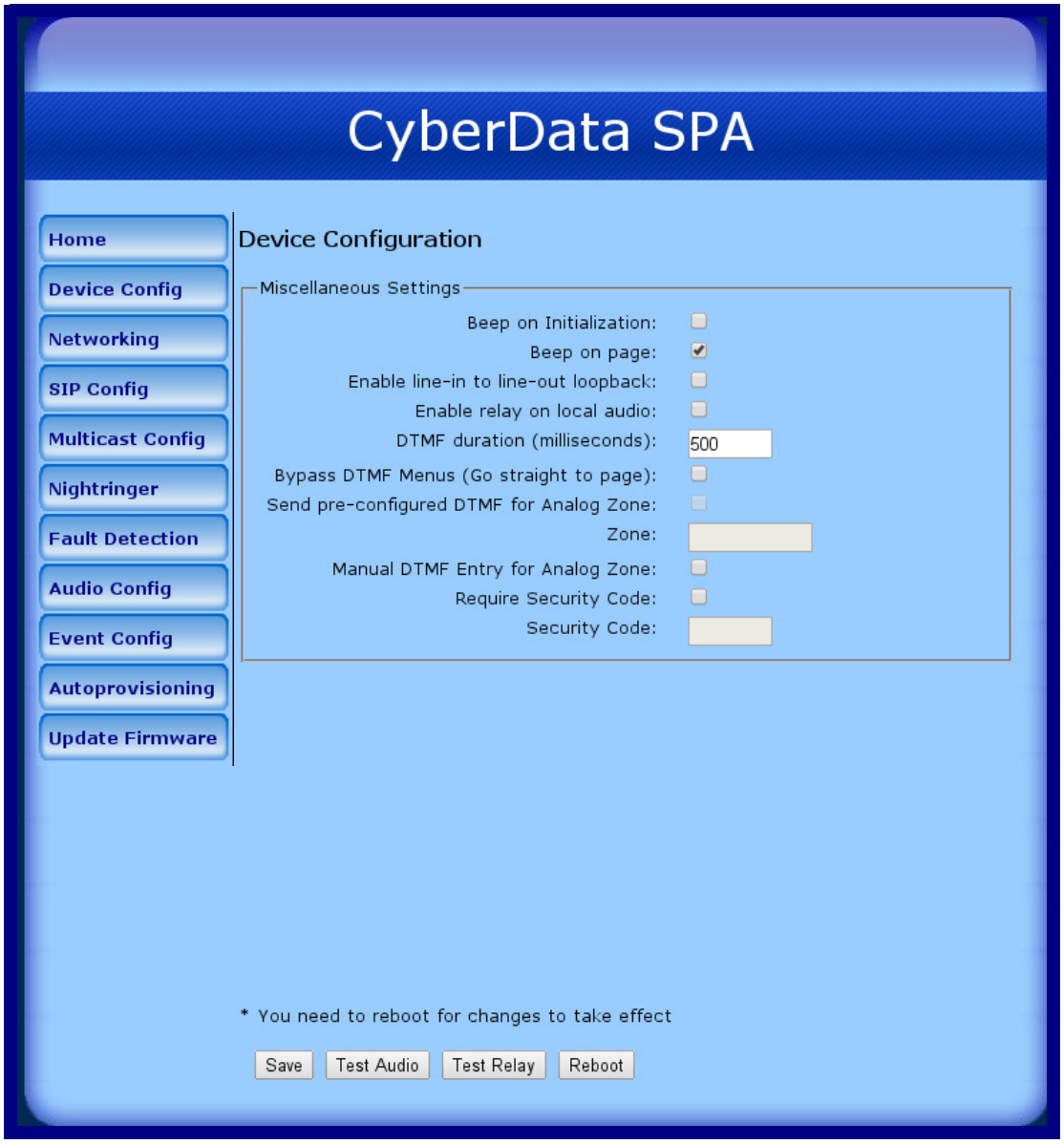
- Review the SIP Paging Adapter's **Current Settings**. Use the RTFM switch to restore the factory default settings. See Section 2.3.7, "Restore the Factory Default Settings".
- Configure the device parameters. Click on the **Device Config** button and see Section 2.4.4, "Configure the Device Parameters".
- Configure the network parameters. Click on the **Networking** button and refer to Section 2.4.5, "Configure the Network Parameters" for instructions.
- Configure the SIP parameters. Click on the **SIP Config** button and see Section 2.4.6, "Configure the SIP Parameters".
- Configure the multicast parameters. Click on the **Multicast Config** button and see Section 2.4.7, "Configure the Multicast Parameters" for instructions.
- Configure the Night Ringer parameters. Click on the **Nightringer** button and see Section 2.4.8, "Configure the Night Ringer Parameters".
- Configure the fault detection parameters. Click on the **Fault Detection** button and see Section 2.4.9, "Configure the Fault Detection Parameters".
- Configure the audio parameters. Click on the **Audio Config** button and see Section 2.4.10, "Configure the Audio Parameters" for instructions.
- Configure the event parameters. Click on the **Event Config** button and see Section 2.4.11, "Configure the Event Parameters" for instructions.
- Configure the autoprovisioning parameters. Click on the **Autoprovisioning** button and see Section 2.4.12, "Configure the Autoprovisioning Parameters" for instructions.

Note Click on the **Update Firmware** button any time you need to upload new versions of the firmware. See Section 2.5, "Upgrading the Firmware" for instructions.

2.4.4 Configure the Device Parameters

1. Click on the **Device Configuration** button to open the **Device Configuration** page. See Figure 2-11.

Figure 2-11. Device Configuration Page



2. On the **Device Configuration** page, you may enter values for the parameters indicated in Table 2-6.

Table 2-6. Device Configuration Parameters

Web Page Item	Description
Miscellaneous Settings	
Beep on Initialization	When selected, you will hear a beep when the device initializes.
Beep on page	When selected, the device will play a beep before a page is sent to the analog ports when “Lineout” is enabled on a paging group (works for both buffered and live pages).
Enable line in to line out loopback	When selected, audio is sent from the line -in to the line-out output.
Enable relay on local audio	When selected, the relay will be closed any time that audio is played out of the line-out/page port. This setting is for legacy analog amplifiers that are often connected to the page port. Analog amplifiers will often have a noticeable hum if they are turned on while there is no audio being played. The relay closure causes these amplifiers to turn on only when audio is sent to them.
DTMF duration (milliseconds)	Type the DTMF sound duration (in milliseconds).
Bypass DTMF Menus (Go straight to page)	When selected, the DTMF menu options are bypassed when a page is sent, and the device begins a live/buffered page (no ability to send stored messages).
Send pre-configured DTMF for Analog Zone	When selected, a pre-configured DTMF sequence is sent to activate an analog zone when the **Bypass DTMF Menus (Go straight to page)** setting is enabled.
Zone (field)	Type the pre-configured DTMF sequence for the analog zone. **Note**: This setting is only enabled when the **Send pre-configured DTMF for Analog Zone** setting is enabled.
Manual DTMF Entry for Analog Zone	When selected, the device will prompt the caller to enter a DTMF sequence to activate an analog zone before prompting the caller to press **1** through **9** to send a stored message or press **0** to page. **Note**: The user must press the **#** key after entering the zone.
Require Security Code	When selected, the user will be prompted to enter a **Security Code** (entered on this page) before being able to execute a page when calling the device.
Security Code	Type the security code in this field.
Save	Click the **Save** button to save your configuration settings. **Note**: You need to reboot for changes to take effect.
Test Audio	When the **Test Audio** button is pressed, you will hear a voice message for testing the device audio quality and volume.
Test Relay	Click on the **Test Relay** button to do a relay test.
Reboot	Click on the **Reboot** button to reboot the system.

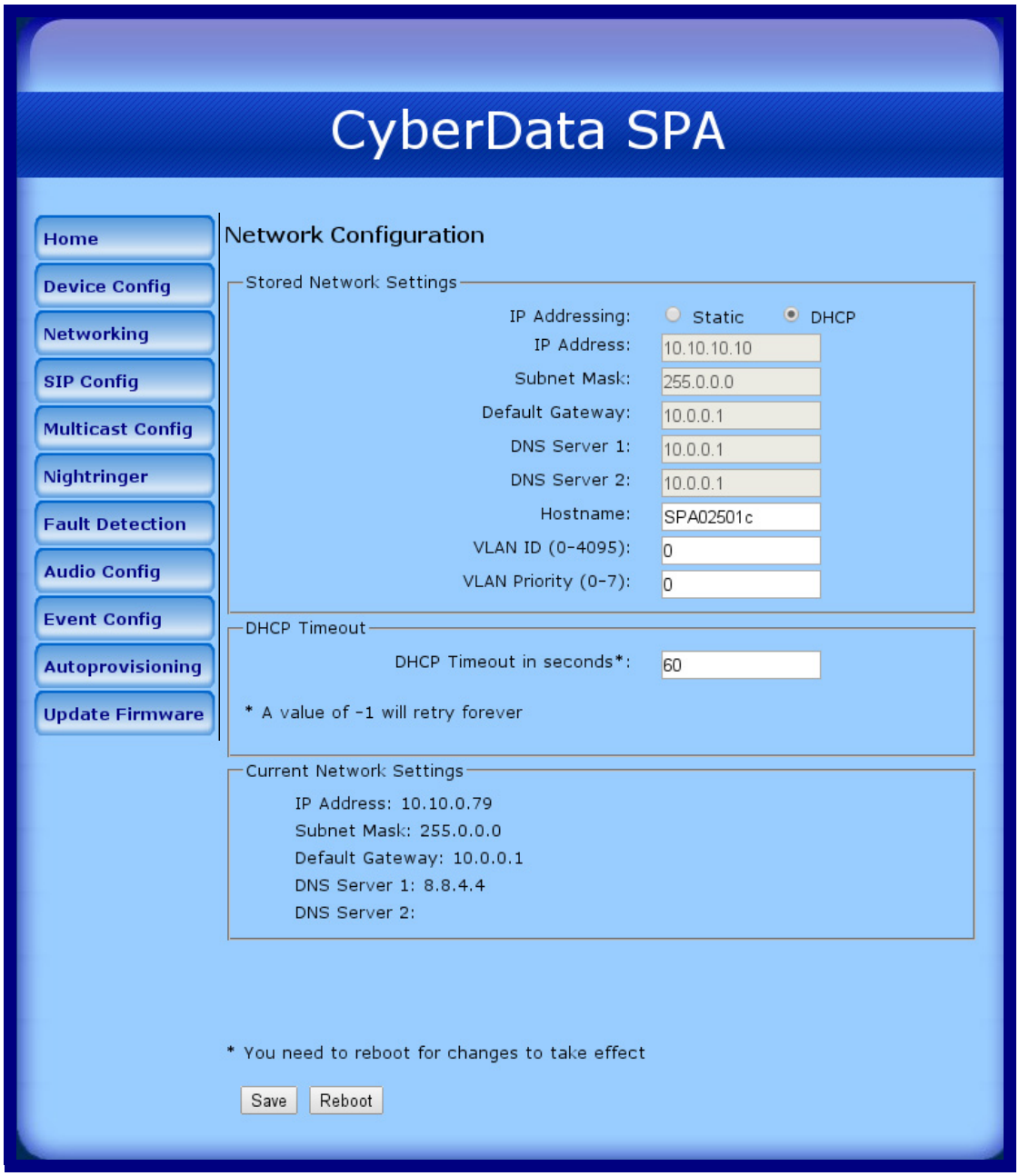
Note When **Send pre-configured DTMF for Analog Zone** or **Manual DTMF Entry for Analog Zone** is selected, the SIP Paging Adapter will send the DTMF tones to the line-out port, in addition to the analog amplifier connected to the Page Port Output. If secrecy or security of Analog Zone Codes is desired, CyberData recommends not connecting to the line-out port when these options are selected.

3. After changing the parameters, click the **Save** button.

2.4.5 Configure the Network Parameters

Configuring the network parameters enables your network to recognize the SIP Paging Adapter and communicate with it. Click on the **Networking** button to open the **Network Configuration** page.

Figure 2-12. Network Configuration Page



On the **Network Configuration** page, enter values for the parameters indicated in Table 2-7.

Table 2-7. Network Configuration Parameters

Web Page Item	Description
Stored Network Settings	Shows the settings stored in non-volatile memory.
IP Addressing	Select either **DHCP IP Addressing** or **Static IP Addressing** by marking the appropriate radio button. If you select **Static**, configure the remaining parameters indicated in Table 2-7. If you select **DHCP**, go to Step 3.
IP Address	Enter the Static IP address.
Subnet Mask	Enter the Subnet Mask address.
Default Gateway	Enter the Default Gateway address.
DNS Server 1	Enter the DNS Server 1 address.
DNS Server 2	Enter the DNS Server 2 address.
Hostname	This is the hostname provided to the DHCP server. This can be used in conjunction with a DNS server to address the device by host name instead of by IP address. Check your DHCP server and DNS server documentation for more information.
VLAN ID (0-4095)	Enter the VLAN ID number. **Note**: The device supports 802.11Q VLAN tagging support. The switch port connected to the device will need to be in “trunking mode” for the VLAN tags to propagate.
VLAN Priority (0-7)	Enter the VLAN priority number.
DHCP Timeout	
DHCP Timeout in seconds	Enter the desired timeout duration (in seconds) that the device will wait for a response from the DHCP server before defaulting back to the stored static IP address. **Note**: A value of **-1** will cause the device to retry indefinitely and a value of **0** will cause the device to reset to a default of 60 seconds.
Current Network Settings	Shows the current network settings.
IP Address	Shows the current Static IP address.
Subnet Mask	Shows the current Subnet Mask address.
Default Gateway	Shows the current Default Gateway address.
DNS Server 1	Shows the current DNS Server 1 address.
DNS Server 2	Shows the current DNS Server 2 address.
Save	Click 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.

On this page:

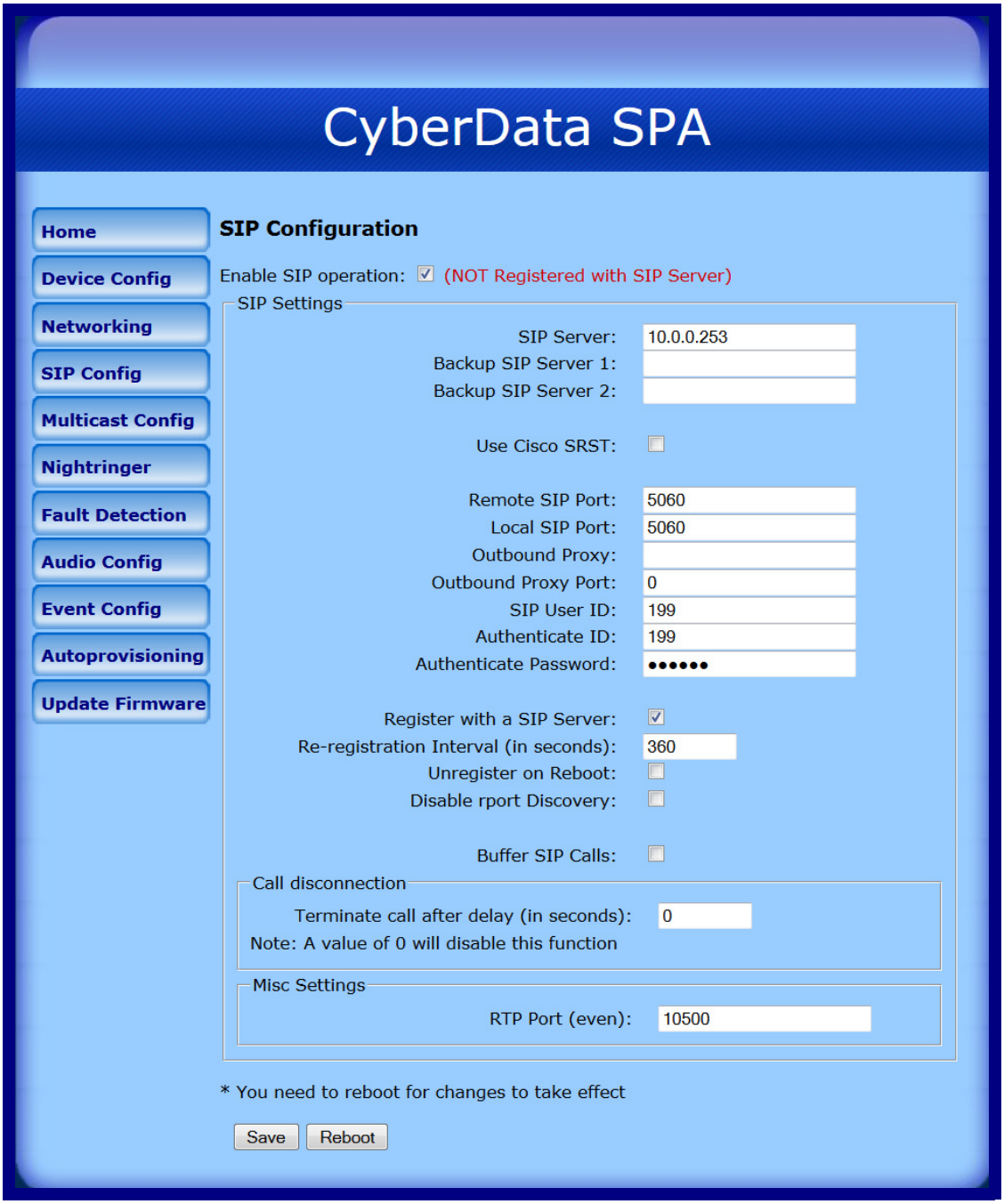
1. Specify whether you use **Static** or **DHCP IP Addressing** by marking the appropriate radio button. Then, if you select Static, go to Step 2.

2. For Static IP Addressing, also enter values for the following parameters:
   - The SIP Paging Adapter's **IP Address**: The SIP Paging Adapter is delivered with a factory default IP address. Change the default address to the correct IP address for your system.
   - The **Subnet Mask.**
   - The **Default Gateway.**
3. Click **Save** when you are finished.
4. Click **Reboot** for the new settings to take effect.

2.4.6 Configure the SIP Parameters

The SIP parameters enable the SIP Paging Adapter to contact and register with the SIP server. Click on the **SIP Config** button to open the **SIP Configuration** page.

Figure 2-13. SIP Configuration Page



5. On the **SIP Configuration** page, enter values for the parameters indicated in Table 2-8.

Table 2-8. SIP Configuration Parameters

Web Page Item	Description
Enable SIP Operation	Enables or disables SIP operation.
SIP Settings	
SIP Server	Type the SIP server represented as either a numeric IP address in dotted decimal notation or the fully qualified host name (255 character limit [FQDN]).
Backup SIP Server 1 Backup SIP Server 2	• If all of the **SIP Server** and **Backup SIP Server** fields are populated, the device will attempt to stay registered with all three servers all of the time. You can leave the **Backup SIP Server 1** and **Backup SIP Server 2** fields blank if they are not needed. • In the event of a registration failure on the **Primary SIP Server**, the device will use the next highest priority server for outbound calls (**Backup SIP Server 1**). If **Backup SIP Server 1** fails, the device will use **Backup SIP Server 2**. • If a higher priority SIP Server comes back online, the device will switch back to this server.
Use Cisco SRST	When selected, the backup servers are handled according to Cisco SRST (Survivable Remote Site Telephony).
Remote SIP Port	Type the **Remote SIP Port** number (default 5060) (5 character limit [values from 1 to 65535]).
Local SIP Port	Type the **Local SIP Port** number (default 5060) (5 character limit [values from 2000 to 65535]).
Outbound Proxy	Type the Outbound Proxy as either a numeric IP address in dotted decimal notation or the fully qualified host name (255 character limit [FQDN]).
Outbound Proxy Port	Type the Outbound Proxy Port number (5 character limit [values from 1 to 65535]).
SIP User ID	Type the **SIP User ID** (up to 64 alphanumeric characters).
Authenticate ID	Type the **Authenticate ID** (up to 64 alphanumeric characters).
Authenticate Password	Type the **Authenticate Password** (up to 64 alphanumeric characters).
Register with a SIP Server	Enable or disable SIP Registration.
Re-registration Interval (in seconds)	Type the SIP Registration lease time in seconds (default is 60 minutes) (4 character limit [values from 30 to 3600]). Re-registration Interval (in seconds)
Unregister on Reboot	When selected, on boot, the device will first register with a SIP server with a expiration delay of 0 seconds. This has the effect of unregistering any current devices on this extension.
Disable rport Discovery	Prevents the device from including the public WAN IP address in the contact information sent to remote SIP servers. This will generally only need to be enabled when using an SBC in conjunction with a remote SIP server.

Table 2-8. SIP Configuration Parameters (continued)

Web Page Item	Description
Buffer SIP Calls	When this is enabled, SIP calls to the device will be stored in memory and will play when either the call is terminated or the buffer is full. The receive buffer is 2MB in size and this is equal to about four minutes of ulaw encoded audio. **Note**: Please be advised it is NOT possible to pass DTMF tones through the SIP Paging Adapter when **Buffer SIP Calls** is enabled on the **SIP Configuration Page** of the web interface. Enabling **Buffer SIP Calls** to eliminate feedback is a working solution for installations where DTMF tones are not required by the Page Port input for zone access.
Call Disconnection	
Terminate call after delay (in seconds)	Type the desired number of seconds that you want to transpire after a connection delay before a call is terminated. Note: A value of **0** will disable this function.
Misc Settings	
RTP Port (even)	Specify the port number used for the RTP stream after establishing a SIP call. This port number has to be an even number and defaults to 10500 (values from 2000 to 65534).
Save	Click 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.

1. Enter the IP address of the **SIP Server**.
2. Enter the port numbers used for SIP signaling:
   a. **Remote SIP Port**
   b. **Local SIP Port**
3. Enter the SIP registration parameters:
   a. **SIP User ID**
   b. **Authenticate ID**
   c. **Authenticate Password**
4. For **SIP Registration**, designate whether you want the SIP Paging Adapter to register with your SIP server.
5. At **Unregister on Reboot**:
   a. Select **Yes** to automatically unregister the SIP Paging Adapter when you reboot it.
   b. Select **No** to keep the SIP Paging Adapter registered when you reboot it.
6. In the **Register Expiration** field, enter the number of seconds the SIP Paging Adapter registration lease remains valid with the SIP Server. The SIP Paging Adapter automatically re-registers with the SIP server before the lease expiration timeout.
7. Click **Save**.
8. Click **Reboot** for the new settings to take effect.

2.4.7 Configure the Multicast Parameters

Multicast groups use multicasting to create public address paging zones. Multicasting is based on the concept of a group. Multicast addresses specify an arbitrary group of IP hosts that have joined the group and want to receive traffic sent to the group. Group members send IGMP messages to their local multicast routers, allowing the group traffic traversal from the source.

The **Multicast Configuration** page allows the device to join up to 10 paging zones for receiving ulaw/alaw encoded RTP audio streams. A paging zone can consist of one or many CyberData multicast group-enabled products. There is no limit to how many devices can be in a given paging zone. Each multicast group is defined by a multicast address and port number. Each multicast group is assigned a priority, allowing simultaneously arriving pages to be serviced based on importance. Multicast groups are compatible with IGMP through version three. The device supports simultaneous SIP and Multicast.

1. Click on the **Multicast Configuration** button to open the **Multicast Configuration** page. See Figure 2-14.

Figure 2-14. Multicast Configuration Page

2. On the **Multicast Configuration** page, enter values for the parameters indicated in Table 2-9.

Table 2-9. Multicast Configuration Parameters

Web Page Item	Description
Enable Multicast Operation	Enables or disables multicast operation.
Device Settings	
Priority	Indicates the priority for the multicast group. Priority **9** is the highest (emergency streams). **0** is the lowest (background music). SIP calls are considered priority **4.5**. See Section 2.4.7.1, "Assigning Priority" for more details.
Address	Enter the multicast IP Address for this multicast group (15 character limit).
Port (range can be from 2000 to 65535)	Enter the port number for this multicast group (5 character limit). **Note**: The multicast ports have to be even values. The webpage will enforce this restriction.
Name	Assign a descriptive name for this multicast group (25 character limit).
Buffer	When this is enabled, multicast pages to the device will be stored in memory and will play when either the page is terminated or the buffer is full. The receive buffer is 2MB in size and this is equal to about four minutes of ulaw encoded audio.
Beep	When selected, the device will play a beep before multicast audio is sent.
Save	Click 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.

3. After changing the parameters, click on the **Save** button.

2.4.7.1 Assigning Priority

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.

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**.

Note SIP calls, multicast streams, ring tones, ringback tones, and nightring tones are all prioritized.

Ringtones and Nightringtones

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.

2.4.8 Configure the Night Ringer Parameters

1. Click on the **Nightringer** button to open the **Nightringer Configuration** page. See Figure 2-15.

Figure 2-15. Nightringer Configuration Page

2. On the **Nightringer Configuration** page, enter values for the parameters indicated in Table 2-10.

Table 2-10. Nightringer Configuration Parameters

Web Page Item	Description
Enable Nightringer	When the nightringer is enabled, the unit will attempt to register a second extension with the SIP server. Any calls made to this extension will play a ringtone.
Nightringer Settings	
SIP Server	Type the SIP server represented as either a numeric IP address in dotted decimal notation.
Remote SIP Port	Type the Remote SIP Port number (default 5060) (5 character limit [values from 1 to 65535]).
Local SIP Port	Type the Local SIP Port number (default 5061) (5 character limit [values from 2000 to 65535]). **Note**: This value cannot be the same as the **Local SIP Port** found on the **SIP Configuration Page**.
User ID	Type the **User ID** (up to 64 alphanumeric characters).
Authenticate ID	Type the **Authenticate ID** (up to 64 alphanumeric characters).
Authenticate Password	Type the **Authenticate Password** (up to 64 alphanumeric characters).
Re-registration Interval (in seconds)	Type the SIP Registration lease time in seconds (default is 60 minutes) (4 character limit [values from 30 to 3600]). Re-registration Interval (in seconds)
Save	Click 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.

3. After changing the parameters, click on the **Save** button.
4. Click **Reboot** for the new settings to take effect.

2.4.9 Configure the Fault Detection Parameters

1. Click on the **Fault Detection** button to open the **Fault Detection Configuration** page. See Figure 2-16.

Figure 2-16. Fault Detection Configuration Page

2. On the **Fault Detection Configuration** page, enter values for the parameters indicated in Table 2-11.

Table 2-11. Fault Detection Configuration Parameters

Web Page Item	Description
Triggered Settings	
Play Audio Locally	When selected, when the sensor is triggered, the audio file for "Sensor Triggered" will play out of the line-out and 600-Ohm connectors.
Play while active	The device will play the fault detection message while the fault is active.
Play fixed number	The device will play the fault detection message a fixed number of times when the fault is activated, regardless of activation duration.
Repeats	Type how many times the file playback will repeat. **0** means that the file will play once. **1** means that the file will play twice (repeat once).
Make call to extension	When selected, when the sensor is triggered, the SIP Paging Adapter will call the **Dial Out Extension** and play the "Sensor Triggered" audio file when someone answers.
Dial Out Extension	Enter the Dial Out Extension that you want the SIP Paging Adapter to call when the sensor is triggered.
Dial Out ID	Enter the caller ID for **Dial Out Extension**.
Test Fault	Click on the **Test Fault** button to test the fault detection feature.
Save	Click 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.

3. After changing the parameters, click on the **Save** button.
4. Click **Reboot** for the new settings to take effect.

2.4.10 Configure the Audio Parameters

Click on the **Audio Config** button to open the **Audio Configuration** page. See Figure 2-17. The **Audio Configuration** page is used to add custom audio to the board. User uploaded audio will take precedence over the audio files shipped with the device.

Figure 2-17. Audio Configuration Page

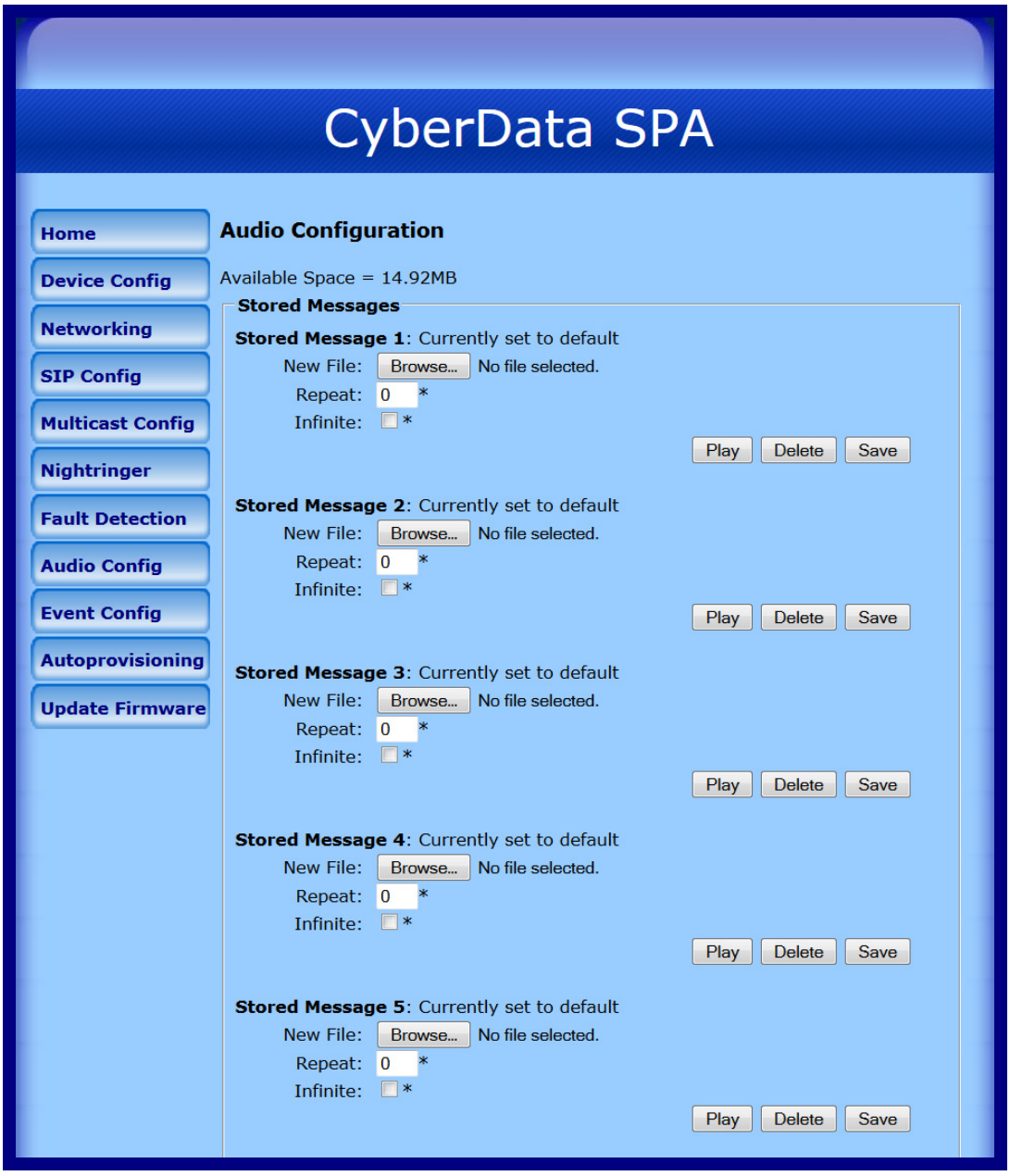


Figure 2-18. Audio Configuration Page (continued)

Figure 2-19. Audio Configuration Page (continued)

Figure 2-20. Audio Configuration Page (continued)

Figure 2-21. Audio Configuration Page (continued)

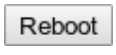
On the **Audio Configuration** page, enter values for the parameters indicated in Table 2-12.

Note Each entry on the **Audio Configuration** page replaces one of the stock audio files on the board. When the input box displays the word **default**, the SIP Paging Adapter is using the stock audio file. If that file is replaced with a user file, it will display the uploaded filename.

Table 2-12. Audio Configuration Parameters

Web Page Item	Description
Stored Messages	Stored Messages are user-uploadable messages that the caller can choose to play by pressing 1 through 9 on a phone keypad after calling the device.
Stored Message 1 through 9	**Stored Message 1** corresponds to the message played after pressing **1** on a phone keypad.
	Stored Message 2 corresponds to the message played after pressing **2** on a phone keypad.
	Stored Message 3 corresponds to the message played after pressing **3** on a phone keypad.
	Stored Message 4 corresponds to the message played after pressing **4** on a phone keypad.
	Stored Message 5 corresponds to the message played after pressing **5** on a phone keypad.
	Stored Message 6 corresponds to the message played after pressing **6** on a phone keypad.
	Stored Message 7 corresponds to the message played after pressing **7** on a phone keypad.
	Stored Message 8 corresponds to the message played after pressing **8** on a phone keypad.
	Stored Message 9 corresponds to the message played after pressing **9** on a phone keypad.
Repeat	Type the number of times that you want the specific **Stored Message** to repeat. A value of **0** means the message will play once (no repeat). A value of **1** means the message will play twice (one repeat).
Infinite	When selected, the specific **Stored Message** will repeat indefinitely after pressing the specific number key on a phone keypad.
Audio Files	The name of the audio configuration option is the same as the spoken audio that plays on the board (24 character limit).
0-9	**0** corresponds to the spoken word “zero.”
	1 corresponds to the spoken word “one.”
	2 corresponds to the spoken word “two.”
	3 corresponds to the spoken word “three.”
	4 corresponds to the spoken word “four.”
	5 corresponds to the spoken word “five.”
	6 corresponds to the spoken word “six.”
	7 corresponds to the spoken word “seven.”
	8 corresponds to the spoken word “eight.”
	9 corresponds to the spoken word “nine.”
Dot	Corresponds to the spoken word “dot.” (24 character limit).
Audio test	Corresponds to the message “This is the CyberData IP speaker test message...” (24 character limit).
Page tone	Corresponds to a simple tone that is unused by default (24 character limit).
Your IP Address is	Corresponds to the message “Your IP address is...” (24 character limit).
Rebooting	Corresponds to the message “Rebooting” (24 character limit).
Restoring default	Corresponds to the message “Restoring default” (24 character limit).

Table 2-12. Audio Configuration Parameters (continued)

Web Page Item	Description
Sensor Triggered	Corresponds to the message “Sensor Triggered” (24 character limit).
Night Ring	Specifies the ringtone for nightring. By default this parameter uses the same audio file that is selected for the **Ring Tone** parameter.
Menu Audio Files	**Menu Audio Files** are user-uploadable messages that create the audio menu played to the caller.
Cancel	Corresponds to the word "Cancel" used in the audio menu played to the caller. (24 character limit).
Currently Playing	Corresponds to the words "Currently Playing" used in the audio menu played to the caller. (24 character limit).
Fault Detection Message	Corresponds to the words "Fault Detection Message" used in the audio menu played to the caller. (24 character limit).
Invalid Entry	Corresponds to the words "Invalid Entry" used in the audio menu played to the caller. (24 character limit).
Page	Corresponds to the word "Page" used in the audio menu played to the caller. (24 character limit).
Play Stored Message	Corresponds to the words "Play Stored Message" used in the audio menu played to the caller. (24 character limit).
Pound (#)	Corresponds to whatever word or phrase the user wishes to call the pound key in the audio menu played to the caller (24 character limit).
Press	Corresponds to the word "Press" used in the audio menu played to the caller. (24 character limit).
Stored Message	Corresponds to the words "Stored Message" used in the audio menu played to the caller. (24 character limit).
Through	Corresponds to the word "Through" used in the audio menu played to the caller. (24 character limit).
To	Corresponds to the word "To" used in the audio menu played to the caller. (24 character limit).
Enter Zone	Corresponds to the words "Enter Zone" used in the audio menu played to the caller. (24 character limit).
	The **Browse** button will allow you to navigate to and select an audio file.
	The **Play** button will play that audio file.
	The **Delete** button will delete any user uploaded audio and restore the stock audio file.
	The **Save** button will download a new user audio file to the board once you've selected the file by using the **Choose File** button. The **Save** button will delete any pre-existing user-uploaded audio files.
	Click on the **Reboot** button to reboot the system.

2.4.10.1 User-created Audio Files

User-created audio files must be saved in one of the following formats:

- RIFF (little-endian) data,
- WAVE audio, Microsoft PCM
- 16 bit, mono 8000 Hz

Note These audio format restrictions are enforced by the webpage.

You can use the free utility *Audacity* to convert audio files into this format. See Figure 2-22 through Figure 2-24.

Figure 2-22. Audacity 1

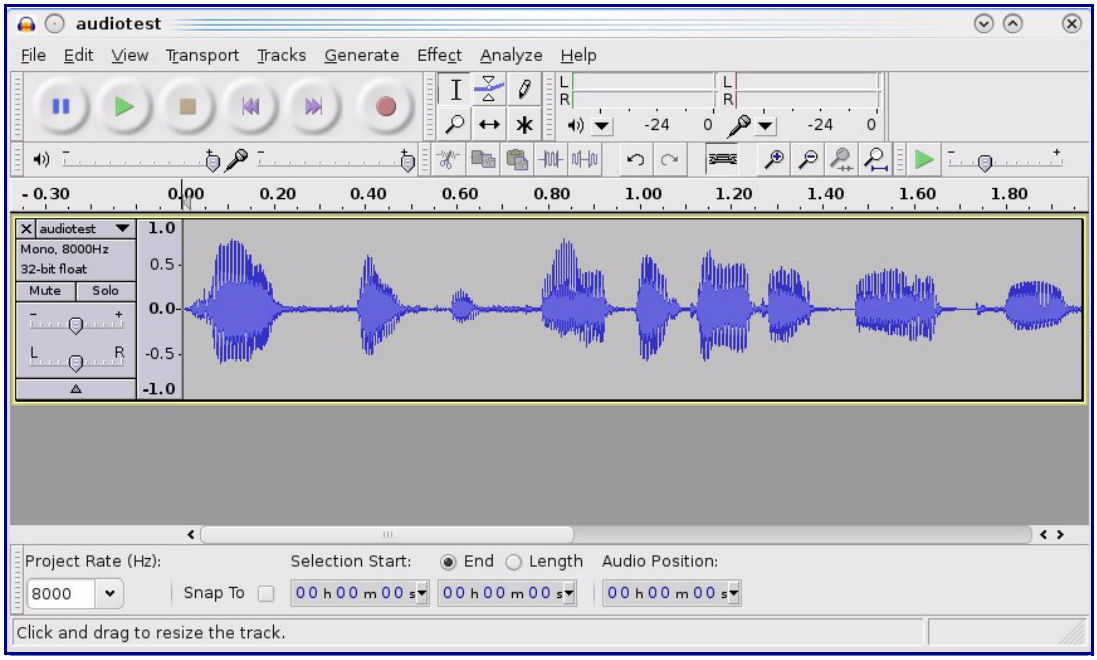
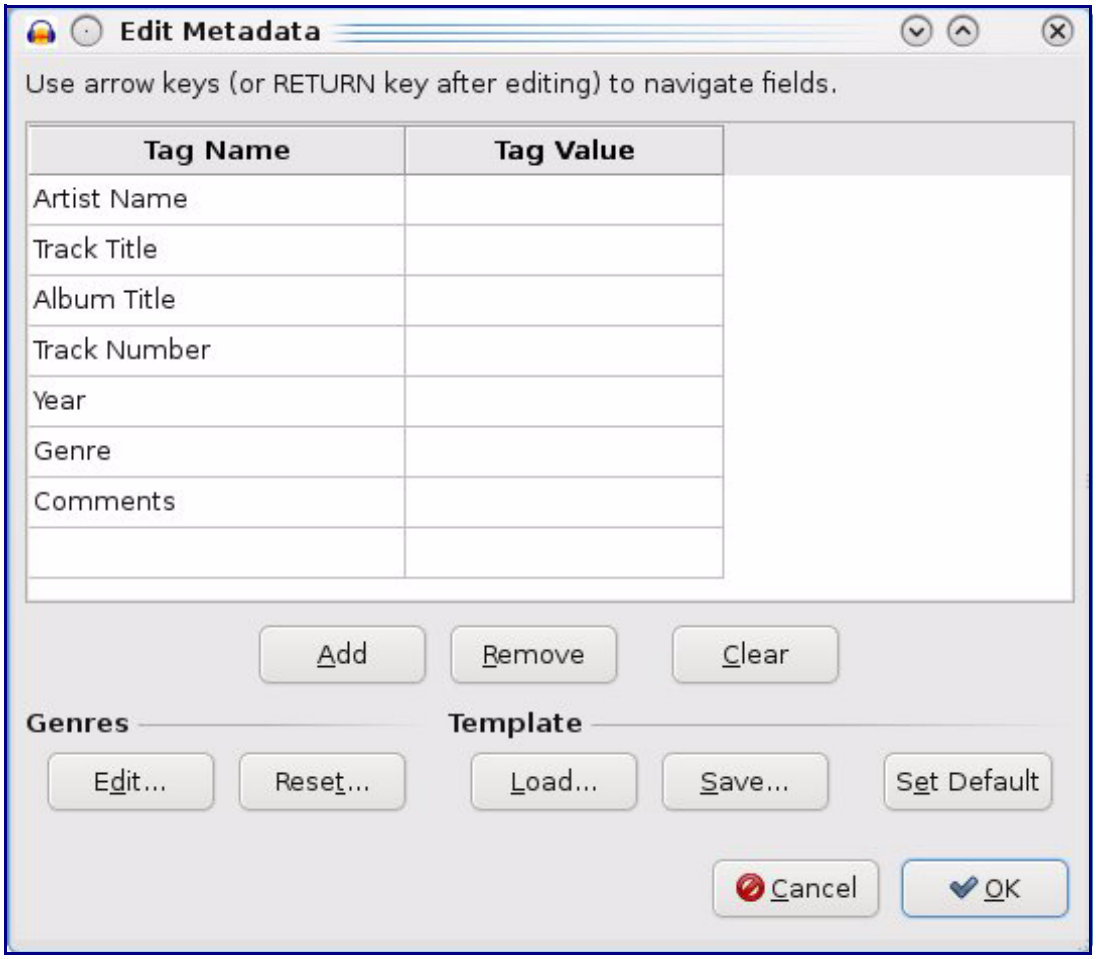


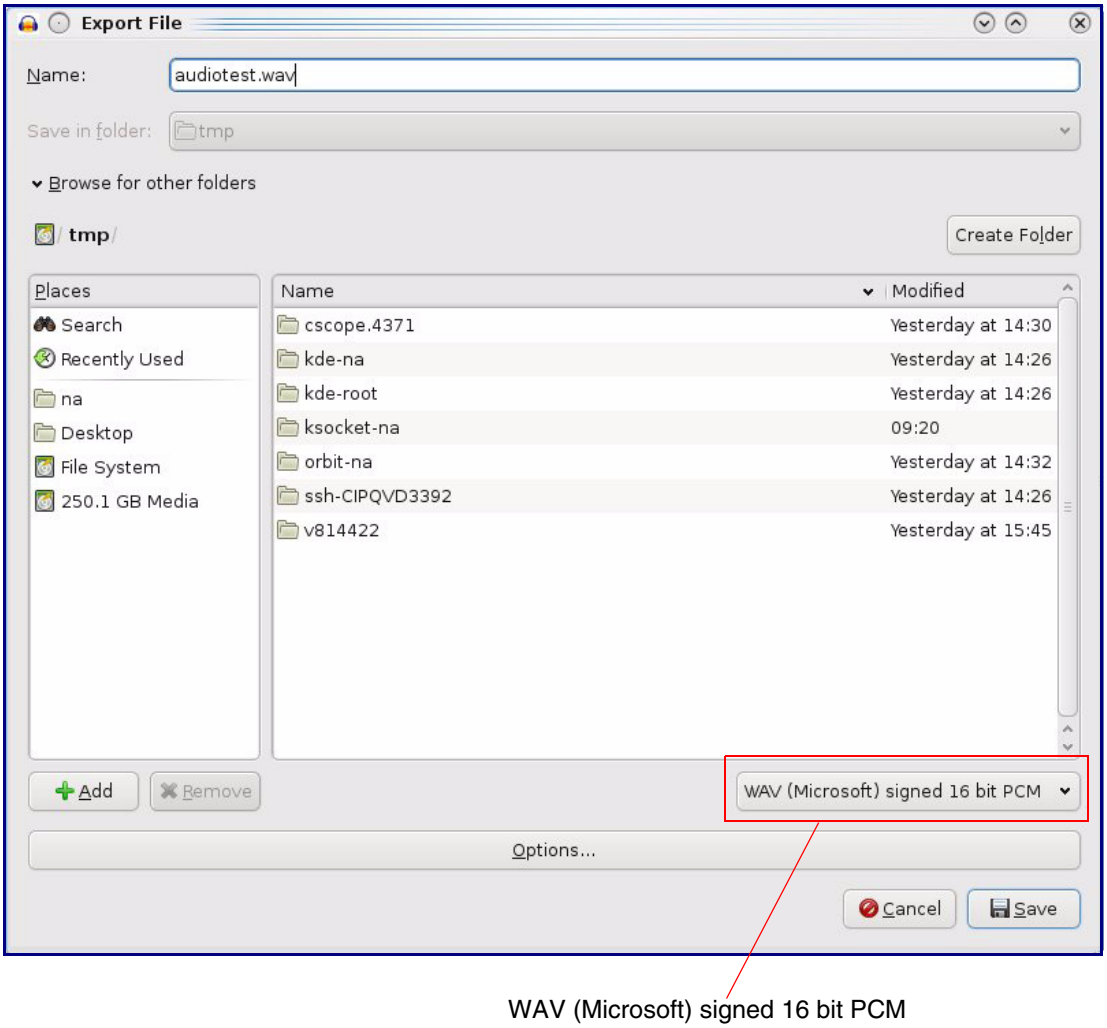
Figure 2-23. Audacity 2



When you export an audio file with Audacity, save the output as:

- **WAV (Microsoft) signed 16 bit PCM**.

Figure 2-24. WAV (Microsoft) signed 16 bit PCM



2.4.11 Configure the Event Parameters

Click on the **Event Config** button to open the **Event Configuration** page (Figure 2-25). The **Event Configuration** page specifies a remote server that can be used to receive HTTP POST events when actions take place on the board.

Figure 2-25. Event Configuration Page

Table 2-13 shows the web page items on the **Event Configuration** page.

Table 2-13. Event Configuration

Web Page Item	Description
Enable Event Generation	When selected, Event Generation is enabled.
Remote Event Server	
Remote Event Server IP	Type the Remote Event Server IP address. (64 character limit)
Remote Event Server Port	Type the Remote Event Server port number. (8 character limit)
Remote Event Server URL	Type the Remote Event Server URL. (127 character limit)
Events	
Enable Call Active Events	When selected, Call Active Events are enabled.
Enable Call Terminated Events	When selected, Call Terminated Events are enabled.
Enable Relay Activated Events	When selected, Relay Activated Events are enabled.
Enable Relay Deactivated Events	When selected, Relay Deactivated Events are enabled.
Enable Night Ring Events	When selected, there is a notification when the unit receives a night ring.
Enable Multicast Start Events	When selected, Multicast Start Events are enabled.
Enable Multicast Stop Events	When selected, Multicast Stop Events are enabled.
Enable Power On Events	When selected, Power On Events are enabled.
Enable Security Events	When selected, Security Events are enabled.
Enable 60 Second Heartbeat Events	When selected, 60 Second Heartbeat Events are enabled.
Save	Click on the **Save** button to save your configuration settings. **Note**: You need to reboot for changes to take effect.
Test Event	Click on the **Test Event** button to test an event.
Reboot	Click on the **Reboot** button to reboot the system.

2.4.11.1 Example Packets for Events

The server and port are used to point to the listening server and the 'Remote Event Server URL' is the destination URL (typically the script running on the remote server that's used to parse and process the POST events).

Note The XML is URL-encoded before transmission so the following examples are not completely accurate.

Here are example packets for every event:

```
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 197
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>POWERON</event>
</cyberdata>


POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 199
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>HEARTBEAT</event>
</cyberdata>


POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 196
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>BUTTON</event>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 201
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>CALL_ACTIVE</event>
</cyberdata>
POST xmlparse_engine HTTP/1.1
```

```
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 205
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>CALL_TERMINATED</event>
</cyberdata>


POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 197
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>RINGING</event>
</cyberdata>


POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>MULTICAST_START</event>
<index>8</index>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 233
Content-Type: application/x-www-form-urlencoded

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>MULTICAST_STOP</event>
<index>8</index>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>RELAY_ACTIVATED</event>
</cyberdata>
POST xmlparse_engine HTTP/1.1
```

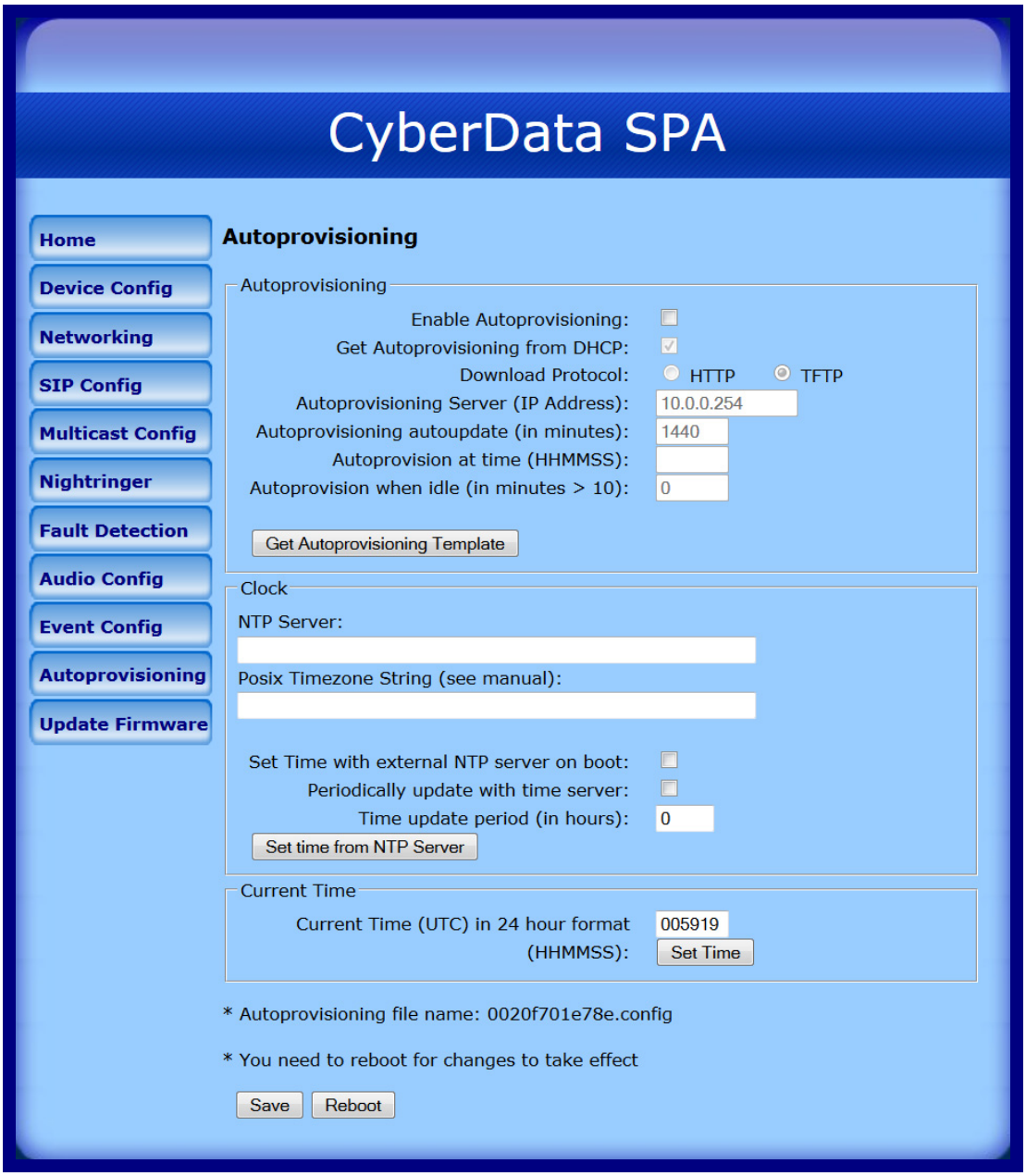
```
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>RELAY_DEACTIVATED</event>
</cyberdata>

POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
User-Agent: CyberData/1.0.0
Content-Length: 234
Content-Type: application/x-www-form-urlencoded
<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>NIGHTRINGING</event>
</cyberdata>
```

2.4.12 Configure the Autoprovisioning Parameters

1. Click on the **Autoprovisioning** button to open the **Autoprovisioning Configuration** page. See Figure 2-26.

Figure 2-26. Autoprovisioning Configuration Page



2. On the **Autoprovisioning Configuration** page, you may enter values for the parameters indicated in Table 2-14.

Table 2-14. Autoprovisioning Configuration Parameters

Web Page Item	Description
Autoprovisioning	
Enable Autoprovisioning	See Section 2.4.12.1, "Autoprovisioning".
Get Autoprovisioning from DHCP	See Section 2.4.12.1, "Autoprovisioning".
Download Protocol	Allows you to select whether the autoprovisioning file is acquired via **TFTP** or **HTTP**.
Autoprovisioning Server (IP Address)	See Section 2.4.12.1, "Autoprovisioning" (15 character limit).
Autoprovisioning autoupdate (in minutes)	Type the desired time (in minutes) that you want the Autoprovisioning feature to update (6 character limit).
Autoprovision at time (HHMMSS)	Type the desired time of day that you want the Autoprovisioning feature to update (must be 6 characters).
Autoprovision when idle (in minutes > 10)	Type the desired time (in minutes greater than 10) that you want the Autoprovisioning feature to update after a certain amount of idle time (6 character limit).
Get Autoprovisioning Template	Press the **Get Autoprovisioning Template** button to create an autoprovisioning file for this unit. See Section 2.4.12.2, "Get Autoprovisioning Template Button"
Clock	
NTP Server	Allows you to select the NTP server (64 character limit).
Posix Timezone String	See Section 2.4.12.3, "Time Zone Strings" (43 character limit).
Set Time with External NTP Server on boot	When selected, the time is set with an external NTP server when the device restarts.
Periodically update with time server	When selected, the time is periodically updated with a time server.
Time update period (in hours)	Allows you to select the time updated period (in hours) (4 character limit).
Set time from NTP Server	Allows you to set the time from the NTP server.
Current Time	
Current Time (UTC) in 24 hour format (**HHMMSS**)	Allows you to input the current time in the 24 hour format. (6 character limit)
Set Time	Click on this button to set the clock after entering the current time.
Autoprovisioning file name	Displays the Autoprovisioning file name.
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.

3. After changing the parameters, click the **Save** button.

2.4.12.1 Autoprovisioning

Enable Autoprovisioning Option

With autoprovisioning enabled, the board will get its configuration from a remote TFTP or HTTP server on startup or periodically on a scheduled delay. Autoprovisioned values will override values stored in on-board memory and will be visible on the web page. The board gets its autoprovisioning information from an XML-formatted file hosted from a TFTP or HTTP server. The user generates or downloads a template for this XML file through the web interface and the user can then modify it for their own use.

To use autoprovisioning, create a copy of the autoprovisioning template with the desired settings and name this file with the mac address of the device to configure (for example: **0020f7350058.config**). Put this file into your TFTP or HTTP server directory and manually set the TFTP or HTTP server address on the board.

It is not necessary to set every option found in the autoprovisioning template. As long as the XML is valid, the file can contain any subset. Options not autoprovisioned will default to the values stored in the on board memory. For example if you only wanted to modify the device name, the following would be a valid autoprovisioning file:

```
<?xml version="1.0" encoding="utf-8" ?>
<specific>
    <MiscSettings>
        <DeviceName>auto SIP Paging Adapter</DeviceName>
    </MiscSettings>

</specific>
```

Get Autoprovisioning from DHCP

When this option is checked, the device will automatically fetch its autoprovisioning server address from the DHCP server. The device will use the address specified in **OPTION 150** (TFTP-server-name) or **OPTION 66**. If both options are set, the device will use **OPTION 150**.

Refer to the documentation of your DHCP server for setting up **OPTION 150**.

To set up a Linux DHCPD server to serve autoprovisioning information (in this case using both option 66 and 150), here's an example dhcpd.conf:

```
# dhcpd.conf
#
# Configuration file for ISC dhcpd (see 'man dhcpd.conf')
#
ddns-update-style ad-hoc;

option option-150 code 150 = ip-address;

subnet 10.0.0.0 netmask 255.0.0.0 {
        max-lease-time 120;
        default-lease-time 120;

        option routers                  10.0.0.1;
        option subnet-mask              255.0.0.0;

        option domain-name              "voiplab";
        option domain-name-servers       10.0.0.1;

        option time-offset              -8;     # Pacific Standard Time

        option tftp-server-name         "10.0.0.254";

        option option-150               10.0.0.254;

        range 10.10.0.1 10.10.2.1;}
```

Autoprovisioning Server (IP Address)

Instead of using DHCP to provide the autoprovisioning tftp server address, you can specify an address manually.

Autoprovisioning Autoupdate

If **Autoprovisioning** is enabled and the **Autoprovisioning Autoupdate** value is something other than **0** minutes, a service is started on startup that will wait the configured number of minutes and then try to re-download its autoprovisioning file. It will compare its previously autoprovisioned file with this new file and if there are differences, it will reboot the board.

Autoprovisioned Firmware Upgrades

An Autoprovisioned firmware upgrade only happens after a reboot, will take roughly three minutes, and the web page will be unresponsive during this time.

The '**FirmwareVersion**' value in the xml file *must* match the version stored in the '**FirmwareFile**'.

```
<FirmwareVersion>v5.0.5b01</FirmwareVersion>
<FirmwareFile>505b01-uImage-ceilingspeak</FirmwareFile>
```

If these values are mismatched, the board can get stuck in a loop where it goes through the following sequence of actions:

1. The board downloads and writes a new firmware file.
2. After the next reboot, the board recognizes that the firmware version does not match.
3. The board downloads and writes the firmware file again.

CyberData has timed a firmware upgrade at 140 seconds. Therefore, if you suspect the board is stuck in a loop, either remove or comment out the **FirmwareVersion** line in the XML file and let the board boot as it normally does.

Note For information about TFTP servers, see Appendix A, "Setting Up a TFTP Server.

Autoprovisioned Audio Files

Audio files are stored in non-volatile memory and an autoprovisioned audio file will only have to be downloaded once for each device. Loading many audio files to the device from the web page could cause it to appear unresponsive. If this happens, wait until the transfer is complete and then refresh the page.

The device uses the file name to determine when to download a new audio file. This means that if you used autoprovisioning to upload a file and then changed the contents of this file at the TFTP server, the device will not recognize that the file has changed (because the file name is the same).

Since audio files are stored in non-volatile memory, if autoprovisioning is disabled after they have been loaded to the board, the audio file settings will not change. You can force a change to the audio files on the board by one of the following two ways:

- Click **Delete** for each file that you want to restore to the factory default audio file on the **Audio Configuration** page**.**
- Change the autoprovisioning file with the word "***default***" set as the file name.

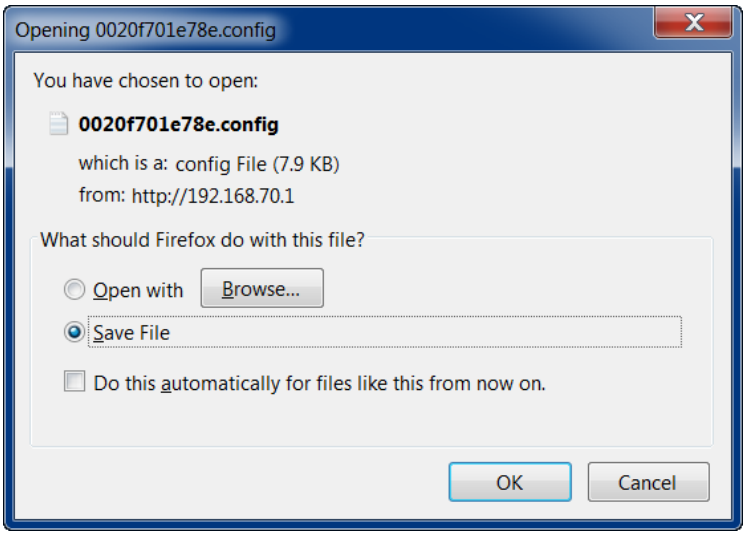
2.4.12.2 Get Autoprovisioning Template Button

The **Get Autoprovisioning Template** button allows the user to generate, download, edit, and then store an autoprovisioning template on the server that serves the autoprovisioning files for devices.

To generate an autoprovisioning template directly from the device, complete the following steps:

1. On the **Autoprovisioning** page, click on the **Get Autoprovisioning Template** button.
2. You will see a window prompting you to save a configuration file (**.config**) to a location on your computer (Figure 2-27). The configuration file is the basis for the default configuration settings for your unit).
3. Choose a location to save the configuration file and click on **OK**. See Figure 2-27.

Figure 2-27. Configuration File



4. At this point, you can open and edit the autoprovisioning template to change the configuration settings in the template for the unit.
5. You can then upload the autoprovisioning file to a TFTP or HTTP server where the file can be loaded onto other devices.

2.4.12.3 Time Zone Strings

The posix time zone string tells the internal date and time utilities how to handle daylight savings time for different time zones. Table 2-15 shows some common strings.

Table 2-15. Common Time Zone Strings

Time Zone	Time Zone String
US Pacific time	PST8PDT,M3.2.0/2:00:00,M11.1.0/2:00:00
US Mountain time	MST7MDT,M3.2.0/2:00:00,M11.1.0/2:00:00
US Eastern Time	EST5EDT,M3.2.0/2:00:00,M11.1.0/2:00:00
Phoenix Arizona[a]	MST7
US Central Time	CST6DST,M3.2.0/2:00:00,M11.1.0/2:00:00

a.Phoenix, Arizona does not use daylight savings time.

Table 2-16 shows a breakdown of the parts that constitute the following time zone string:

- ***CST6DST,M3.2.0/2:00:00,M11.1.0/2:00:00***

Table 2-16. Time Zone String Parts

Time Zone String Part	Meaning
CST6CDT	The time zone offset from GMT and three character identifiers for the time zone.
CST	Central Standard Time
6	The (hour) offset from GMT/UTC
CDT	Central Daylight Time
M3.2.0/2:00:00	The date and time when daylight savings begins.
M3	The third month (March)
.2	The 2nd occurrence of the day (next item) in the month
.0	Sunday
/2:00:00	Time of day to change
M11.1.0/2:00:00	The date and time when daylight savings ends.
M11	The eleventh month (November)
.1	The 1st occurrence of the day (next item) in the month
.0	Sunday
/2:00:00	Time of day to change

Time Zone String Examples

Table 2-17 has some more examples of time zone strings.

Table 2-17. Time Zone String Examples

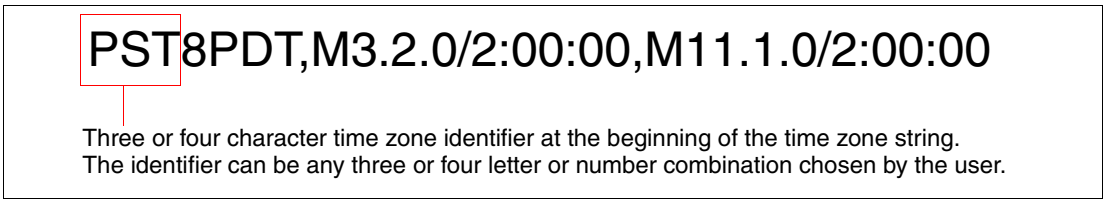
Time Zone	Time Zone String
Tokyo[a]	IST-9
Berlin[b]	CET-1MET,M3.5.0/1:00,M10.5.0/1:00

a.Tokyo does not use daylight savings time.
b.For Berlin, daylight savings time starts on the last Sunday in March at 01:00 UTC, and ends on the last Sunday in October at 01:00 UTC, and is one hour ahead of UTC.

Time Zone Identifier

A user-definable three or four character time zone identifier (such as PST, EDT, IST, MUT, etc) is needed at the beginning of the posix time zone string to properly set the time. However, the specific letters or numbers used for the time zone identifier are not important and can be any three or four letter or number combination that is chosen by the user. However, the time zone identifier cannot be blank.

Figure 2-28. Three or Four Character Time Zone Identifier



You can also use the following URL when a certain time zone applies daylight savings time:

http://www.timeanddate.com/time/dst/2011.html

World GMT Table

Table 2-18 has information about the GMT time in various time zones.

Table 2-18. World GMT Table

Time Zone	City or Area Zone Crosses
GMT-12	Eniwetok
GMT-11	Samoa
GMT-10	Hawaii
GMT-9	Alaska
GMT-8	PST, Pacific US
GMT-7	MST, Mountain US
GMT-6	CST, Central US
GMT-5	EST, Eastern US
GMT-4	Atlantic, Canada
GMT-3	Brazilia, Buenos Aries
GMT-2	Mid-Atlantic
GMT-1	Cape Verdes
GMT	Greenwich Mean Time, Dublin

Table 2-18. World GMT Table (continued)

Time Zone	City or Area Zone Crosses
GMT+1	Berlin, Rome
GMT+2	Israel, Cairo
GMT+3	Moscow, Kuwait
GMT+4	Abu Dhabi, Muscat
GMT+5	Islamabad, Karachi
GMT+6	Almaty, Dhaka
GMT+7	Bangkok, Jakarta
GMT+8	Hong Kong, Beijing
GMT+9	Tokyo, Osaka
GMT+10	Sydney, Melbourne, Guam
GMT+11	Magadan, Soloman Is.
GMT+12	Fiji, Wellington, Auckland

2.5 Upgrading the Firmware

1. Click on the **Update Firmware** button to open the **Upgrade Firmware** page. See Figure 2-29.

Figure 2-29. Upgrade Firmware Page

Table 2-19 shows the web page items on the **Upgrade Firmware** page.

Table 2-19. Upgrade Firmware Parameters

Web Page Item	Description
File Upload	
Firmware Version	Shows the current firmware version.
Please specify a file	Click on the **Choose File** button to navigate to the application firmware file that you want to upload.
Browse...	The **Browse** button will allow you to navigate to and select an application firmware file.
Submit	Click on the **Submit** button to automatically upload the selected firmware and reboot the system.

2.5.0.1 Upgrade the Firmware

To upload the firmware from your computer:

1. Retrieve the latest SIP Paging Adapter firmware from the SIP Paging Adapter **Downloads** page at:

   http://www.cyberdata.net/products/voip/legacyanalog/sippagingadapter/downloads.html

2. Unzip the SIP Paging Adapter version file. This file may contain the following:
   - Firmware file
   - Release notes
3. Log in to the SIP Paging Adapter home page as instructed in Section 2.4.3, "Log in to the Configuration GUI".
4. Click on the **Update Firmware** button to open the **Upgrade Firmware** page. See Figure 2-29.
5. Click **Browse**, and then navigate to the location of the SIP Paging Adapter firmware file.
6. Click **Submit**.

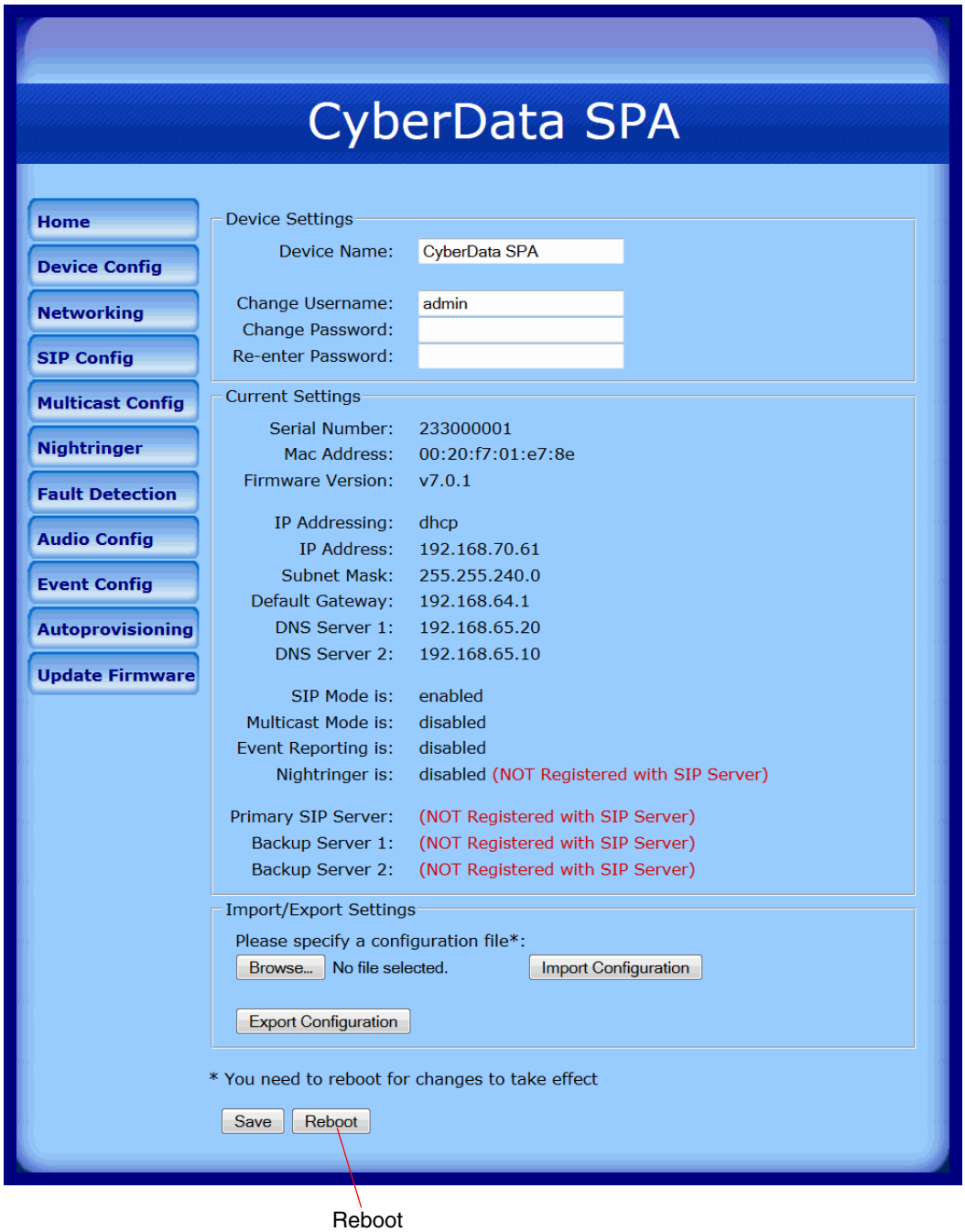
Note This starts the upload process. Once the SIP Paging Adapter has uploaded the file, the **Uploading Firmware** countdown page appears, indicating that the firmware is being written to flash. The SIP Paging Adapter will automatically reboot when the upload is complete. When the countdown finishes, the **Upgrade Firmware** page will refresh. The uploaded firmware filename should be displayed in the system configuration (indicating successful upload and reboot).

2.5.1 Reboot the SIP Paging Adapter

To reboot a SIP Paging Adapter, log in to the web page as instructed in Section 2.4.3, "Log in to the Configuration GUI".

1. Click **Reboot** (Figure 2-30). A normal restart will occur.

Figure 2-30. Home Page



2.6 Command Interface

Some functions on the device can be activated using simple POST commands to the web interface. The examples in Table 2-20 use the free unix utility, **wget commands**. However, any program that can send HTTP POST commands to the device should work.

2.6.1 Command Interface Post Commands

The commands in Table 2-20 require an authenticated session (a valid username and password to work).

Table 2-20. Command Interface Post Commands

Device Action	HTTP Post Command[a]
Trigger relay (fixed at 5 seconds)	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/command.cgi" --post-data "test_relay=yes"
Terminate active call	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/command.cgi" --post-data "terminate=yes"
Stop current playback[b]	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/command.cgi" --post-data "stop_playback=yes"
Force reboot	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/command.cgi" --post-data "reboot=yes"
Play “audio test message”	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/command.cgi" --post-data "test_audio=yes"
Announce IP address	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/command.cgi" --post-data "speak_ip_address=yes"
Play the "0" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_0=yes"
Play the "1" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_1=yes"
Play the "2" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_2=yes"
Play the "3" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_3=yes"
Play the "4" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_4=yes"

Table 2-20. Command Interface Post Commands (continued)

Play the "5" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_5=yes"
Play the "6" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_6=yes"
Play the "7" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_7=yes"
Play the "8" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_8=yes"
Play the "9" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_9=yes"
Play the "Dot" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_d=yes"
Play the "Page Tone" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_pagetone=yes"
Play the "Your IP Address Is" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_youripaddressis=yes"
Play the "Rebooting" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_rebooting=yes"
Play the "Restoring Default" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_restoringdefault=yes"
Play the "Sensor Triggered" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_sensortriggered=yes"
Play the "Night Ring" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_nightring=yes"
Play the "Stored Message "1" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_1=yes"
Play the "Stored Message "2" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_2=yes"
Play the "Stored Message "3" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_3=yes"
Play the "Stored Message "4" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_4=yes"

Table 2-20. Command Interface Post Commands (continued)

Play the "5" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_5=yes"
Play the "6" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_6=yes"
Play the "7" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_7=yes"
Play the "8" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_8=yes"
Play the "9" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_9=yes"
Play the "Dot" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_d=yes"
Play the "Page Tone" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_pagetone=yes"
Play the "Your IP Address Is" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_youripaddressis=yes"
Play the "Rebooting" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_rebooting=yes"
Play the "Restoring Default" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_restoringdefault=yes"
Play the "Sensor Triggered" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_sensortriggered=yes"
Play the "Night Ring" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_nightring=yes"
Play the "Stored Message "1" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_1=yes"
Play the "Stored Message "2" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_2=yes"
Play the "Stored Message "3" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_3=yes"
Play the "Stored Message "4" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_4=yes"

Table 2-20. Command Interface Post Commands (continued)

Play the "Stored Message "5" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_5=yes"
Play the "Stored Message "6" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_6=yes"
Play the "Stored Message "7" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_7=yes"
Play the "Stored Message "8" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_stored_8=yes"
Play the "Stored Message "9" audio file	wget --user admin --password admin --auth-no- challenge --quiet -
Play the "Cancel" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_cancel=yes"
Play the "Currently Playing" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_currentlyplaying=yes"
Play the "Fault Detection Message" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_faultdetectionmessage=yes"
Play the "Invalid Entry" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_invalidentry=yes"
Play the "Page" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_page=yes"
Play the "Play Stored Message" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_playstoredmessage=yes"
Play the "Pound (#)" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_pound=yes"
Play the "Press" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_press=yes"
Play the "Stored Message" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_storedmessage=yes"
Play the "Through" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_through=yes"
Play the "To" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "play_menu_to=yes"

Table 2-20. Command Interface Post Commands (continued)

Delete the "0" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_0=yes"
Delete the "1" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_1=yes"
Delete the "2" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_2=yes"
Delete the "3" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_3=yes"
Delete the "4" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_4=yes"
Delete the "5" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_5=yes"
Delete the "6" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_6=yes"
Delete the "7" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_7=yes"
Delete the "8" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_8=yes"
Delete the "9" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_9=yes"
Delete the "Audio Test" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_audiotest=yes"
Delete the "Page Tone" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_pagetone=yes"
Delete the "Your IP Address Is" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_youripaddressis=yes"
Delete the "Rebooting" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_rebooting=yes"
Delete the "Restoring Default" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_restoringdefault=yes"
Delete the "Sensor Triggered" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_sensortriggered=yes"

Table 2-20. Command Interface Post Commands (continued)

Delete the "Night Ring" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_nightring=yes"
Delete the "Stored Message "1" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_1=yes"
Delete the "Stored Message "2" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_2=yes"
Delete the "Stored Message "3" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_3=yes"
Delete the "Stored Message "4" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_4=yes"
Delete the "Stored Message "5" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_5=yes"
Delete the "Stored Message "6" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_6=yes"
Delete the "Stored Message "7" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_7=yes"
Delete the "Stored Message "8" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_8=yes"
Delete the "Stored Message "9" audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_stored_9=yes"
Delete the "Cancel" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_cancel=yes"
Delete the "Currently Playing" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_currentlyplaying=yes"
Delete the "Fault Detection Message" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_faultdetectionmessage=yes"
Delete the "Invalid Entry" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_invalidentry=yes"
Delete the "Page" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_page=yes"
Delete the "Play Stored Message" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet -O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_playstoredmessage=yes"

Table 2-20. Command Interface Post Commands (continued)

Delete the "Pound (#)" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet - O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_pound=yes"
Delete the "Press" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet - O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_press=yes"
Delete the "Stored Message" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet - O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_storedmessage=yes"
Delete the "Through" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet - O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_through=yes"
Delete the "To" menu audio file	wget --user admin --password admin --auth-no- challenge --quiet - O /dev/null "http://10.0.3.71/cgi- bin/audioconfig.cgi" --post-data "delete_menu_to=yes"
Trigger the Fault Detection Test (Fault Detection page)	wget --user admin --password admin --auth-nochallenge--quiet - O /dev/null "http://10.0.3.71/cgi bin/sensorconfig.cgi" --post-data "intrusiontest=yes"

a.Type and enter all of each http POST command on one line.
b.This command will only stop the playback of stored audio messages.

Appendix A: Setting Up a TFTP Server

A.1 Set up a TFTP Server

Autoprovisioning requires a TFTP server for hosting the configuration file.

A.1.1 In a LINUX Environment

To set up a TFTP server on LINUX:

1. Create a directory dedicated to the TFTP server, and move the files to be uploaded to that directory.
2. Run the following command where **`/tftpboot/`** is the path to the directory you created in Step 1: the directory that contains the files to be uploaded. For example:

   ```
   in.tftpd -l -s /tftpboot/your_directory_name
   ```

A.1.2 In a Windows Environment

You can find several options online for setting up a Windows TFTP server. This example explains how to use the Solarwinds freewareSIP Paging Adapter TFTP server, which you can download at:

http://www.cyberdata.net/support/voip/solarwinds.html

To set up a TFTP server on Windows:

1. Install and start the software.
2. Select **File**/**Configure**/**Security** tab/**Transmit Only**.

Make a note of the default directory name, and then move the firmware files to be uploaded to that directory.

Appendix B: Troubleshooting/Technical Support

B.1 Frequently Asked Questions (FAQ)

Go to the following URL to see CyberData's list of frequently asked questions:

http://www.cyberdata.net/products/voip/legacyanalog/sippagingadapter/faqs.html

B.1.1 Documentation

The documentation for this product is released in an English language version only. You can download PDF copies of CyberData product documentation at:

http://www.cyberdata.net/products/voip/legacyanalog/sippagingadapter/docs.html

B.2 Contact Information

Contact

CyberData Corporation
3 Justin Court
Monterey, CA 93940 USA
www.CyberData.net
Phone: 800-CYBERDATA (800-292-3732)
Fax: 831-373-4193

Sales

Sales 831-373-2601 Extension 334

Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:

http://www.cyberdata.net/support/contactsupportvoip.php

The Support Form initiates a ticket which CyberData uses for tracking customer requests. Most importantly, the Support Form tells us which PBX system and software version that you are using, the make and model of the switch, and other important information. This information is essential for troubleshooting. Please also include as much detail as possible in the **Comments** section of the Support Form.

Phone: (831) 373-2601, Ext. 333
Email: support@cyberdata.net

Returned Materials Authorization

To return the product, contact the Returned Materials Authorization (RMA) department:

Phone: 831-373-2601, Extension 136
Email: RMA@CyberData.net

When returning a product to CyberData, an approved CyberData RMA number must be printed on the outside of the original shipping package. Also, RMA numbers require an active VoIP Technical Support ticket number. A product will not be accepted for return without an approved RMA number. Send the product, in its original package, to the following address:

CyberData Corporation
3 Justin Court
Monterey, CA 93940
Attention: RMA "your RMA number"

RMA Status Form

If you need to inquire about the repair status of your product(s), please use the CyberData RMA Status form at the following web address:

http://www.cyberdata.net/support/rmastatus.html

B.3 Warranty

CyberData warrants its product against defects in material or workmanship for a period of two years from the date of purchase. Should the product fail Within Warranty, CyberData will repair or replace the product free of charge. This warranty includes all parts and labor.

Should the product fail Out of the Warranty period, a flat rate repair charge of one half of the purchase price of the product will be assessed. Repairs that are Within Warranty period but are damaged by improper installation, modification, or abuse are deemed Out of Warranty and will be charged at the Out of Warranty rate. A device is deemed Out of Warranty when its purchase date is longer than two years or when the device has been damaged due to human error during installation, modification, or abuse. A replacement unit will be offered at full cost if the device cannot be repaired.

End of Life Devices are included under this policy. End of Life devices are devices that are no longer produced or sold. Technical support is still available for these devices. However, no firmware revisions or updates will be provided. If an End of Life device cannot be repaired, the replacement offered may be the current version of the device.

Products shipped to CyberData, both within and out of warranty, are shipped at the expense of the customer. CyberData will pay return shipping charges for repaired products.

CyberData shall not under any circumstances be liable to any person for any special, incidental, indirect or consequential damages, including without limitation, damages resulting from use or malfunction of the products, loss of profits or revenues or costs of replacement goods, even if CyberData is informed in advance of the possibility of such damages.

B.3.1 Warranty & RMA Returns within the United States

If service is required, you must contact CyberData Technical Support prior to returning any products to CyberData. Our Technical Support staff will determine if your product should be returned to us for further inspection. If Technical Support determines that your product needs to be returned to CyberData, an RMA number will be issued to you at this point.

Your issued RMA number must be printed on the outside of the shipping box. No product will be accepted for return without an approved RMA number. The product in its original package should be sent to the following address:

CyberData Corporation

3 Justin Court.

Monterey, CA 93940

Attn: RMA "xxxxxx"

B.3.2 Warranty & RMA Returns outside of the United States

If you purchased your equipment through an authorized international distributor or reseller, please contact them directly for product repairs.

B.3.3 Spare in the Air Policy

CyberData now offers a *Spare in the Air* no wait policy for warranty returns within the United States and Canada. More information about the *Spare in the Air* policy is available at the following web address:

http://www.cyberdata.net/support/warranty/spareintheair.html

B.3.4 Return and Restocking Policy

For our authorized distributors and resellers, please refer to your CyberData Service Agreement for information on our return guidelines and procedures.

For End Users, please contact the company that you purchased your equipment from for their return policy.

B.3.5 Warranty and RMA Returns Page

The most recent warranty and RMA information is available at the CyberData Warranty and RMA Returns Page at the following web address:

http://www.cyberdata.net/support/warranty/index.html

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