



VoIP Paging Gateway Operations Guide

Part #010846

Document Part #930098F
for Firmware Version 3.00

CyberData Corporation
3 Justin Court
Monterey, CA 93940
(831) 373-2601

VoIP Paging Gateway 930098F
SiP Compliant 010846

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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.html>

Phone: (831) 373-2601, Ext. 333



Email: support@cyberdata.net

Fax: (831) 373-4193



Company and product information is at www.cyberdata.net.

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.
- 14. WARNING: The VoIP Intercom enclosure is not rated for any AC voltages!**

 <p>GENERAL ALERT</p>	<p>Warning <i>Electrical Hazard:</i> This product should be installed by a licensed electrician according to all local electrical and building codes.</p>
 <p>GENERAL ALERT</p>	<p>Warning <i>Electrical Hazard:</i> To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.</p>

Pictorial Alert Icons

	<p>General Alert <i>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.</i></p>
	<p>Ground <i>This pictorial alert indicates the Earth grounding connection point.</i></p>

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.

Revision Information

Revision 930098F, which was released on August 31, 2012 and corresponds to firmware version 3.00, has the following changes:

- Updates [Section 1.2, "Supported Protocols"](#).

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1 Product Overview

The VoIP Paging Gateway enables access to existing paging speakers through a VoIP phone system. This interface uses a standard paging amplifier, and supports paging to multiple zones from a VoIP phone.



1.1 Product Features

- SIP compliancy
- Dual speeds of 10Mbps and 100 Mbps
- Multi-zone paging for up to 99 Zones
- Web-based firmware upgrades
- PoE enabled
- Connector for optional external power supply

1.2 Supported Protocols

- Asterisk™ SIP server
- Offers Open Source benefits with the rich and flexible feature set of a large, proprietary PBX system.
- HTTP Web-based configuration
- Provides an intuitive GUI for easy system configuration and verification of gateways operations.
- DHCP Client
- Dynamically assigns IP addresses in addition to the option to use static addressing.
- TFTP Client
- Facilitates Web-based firmware upgrades of the latest speaker capabilities.
- Audio Codec
- G.711 U-law
- Packet size: 20 ms
- DTMF detection/generation
- Echo cancellation

1.3 Product Specifications


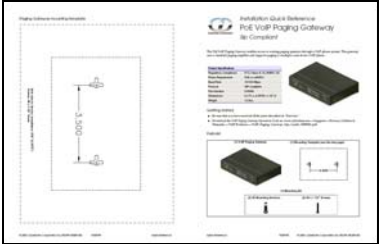
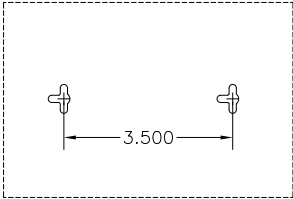

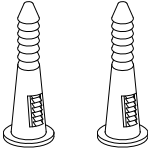
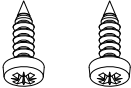
Specifications	
Power Requirement	PoE or 48V DC
Connection Speed	10/100 Mbps
Protocol	SiP compliant
Part Number	010846
Dimensions	6.11"L x 4.05"W x 1.15" H
Weight	1.2 pounds

2 Setting Up, Configuring, and Using the Paging Gateway

2.1 Parts List

The packaging for the VoIP Paging Gateway includes the parts shown in [Table 2-1](#).

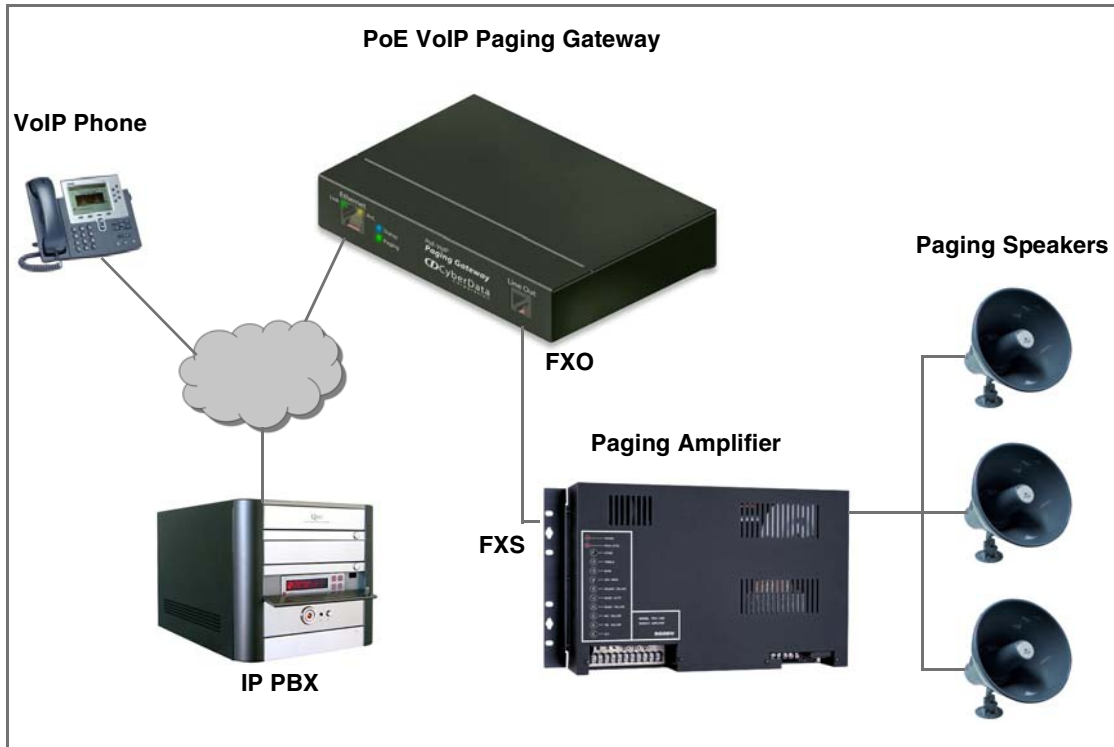
Table 2-1. Parts List

Quantity	Part Name	Illustration
1	VoIP Paging Gateway	
1	Installation Quick Reference Guide	
1	Mounting Template (located on the last page of the <i>Installation Quick Reference</i>)	
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	#4-6 x 7/8" Mounting Anchors	
2	#4 x 1-1/4" Round Phillips Wood Screws	

2.2 Typical Installation

Figure 2-1 illustrates how the VoIP Paging Gateway is normally installed as part of a paging system.

Figure 2-1. Typical Installation



Complete the following steps after installation:

1. Call to make a page. The VoIP Paging Gateway generates a tone over the phone.
2. When you hear the tone, enter the two-digit code for the zone that you want to page.
 - The VoIP Paging Gateway sends the code to the paging amplifier.
 - When the paging amp acknowledges the code, the VoIP Paging Gateway generates another tone to the phone.
3. When you hear the tone, you can begin paging.

2.3 Setting up the VoIP Paging Gateway

Before you set up the VoIP Paging Gateway, be sure that you have received all the parts described in [Section 2.1, "Parts List"](#).

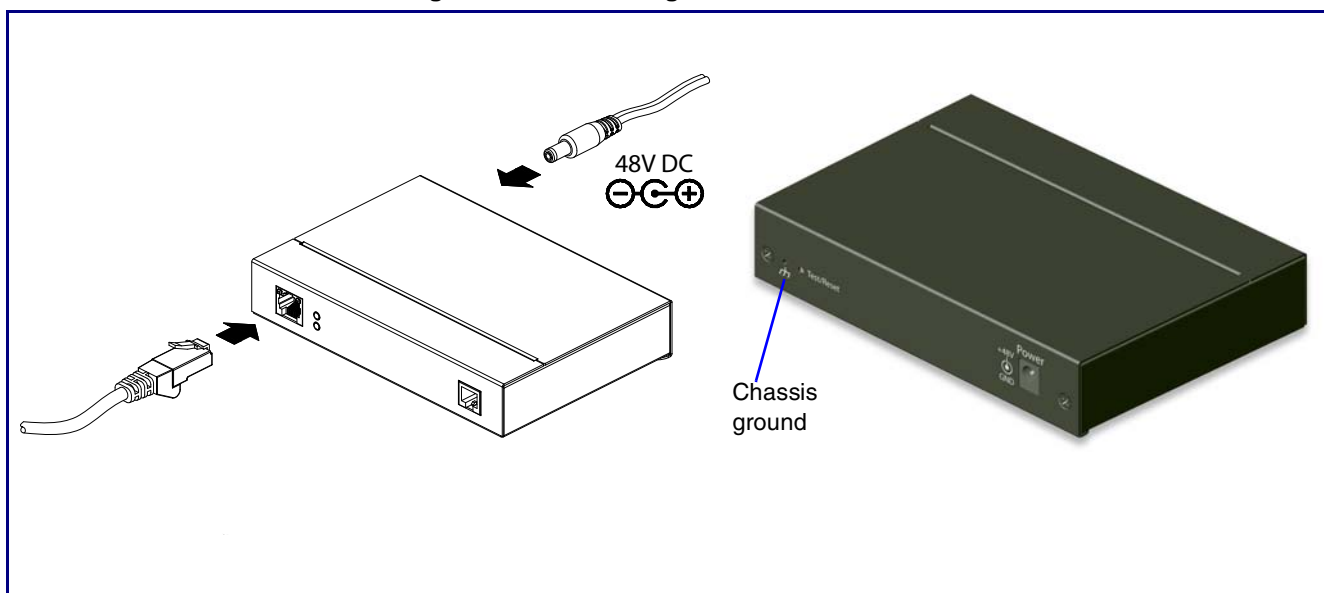
To set up the VoIP Paging Gateway, see the following sections:

- [Section 2.3.1, "Connect to the Power Source"](#)
- [Section 2.3.2, "Connect to the Network"](#)
- [Section 2.3.3, "Confirm that the VoIP Paging Gateway is Working Properly"](#)
- [Section 2.3.3.1, "Confirm Power on, Network Connectivity, and Connection Speed"](#)
- [Section 2.3.3.2, "Verify Network Activity"](#)
- [Section 2.3.4, "Connect to a Paging Device"](#)
- [Section 2.3.4.1, "Connect the VoIP Paging Gateway to a Paging Amplifier"](#)
- [Section 2.3.4.2, "Connect the VoIP Paging Gateway to a Telephone"](#)
- [Section 2.3.5, "Broadcast a test message to all paging zones"](#)
- [Section 2.3.6, "Restore the Factory Default Settings as Required"](#)

2.3.1 Connect to the Power Source

To use PoE, plug a Cat 5 Ethernet cable from the VoIP Paging Gateway **Ethernet** port to your network. As an alternative to PoE, you can plug one end of a +48V DC power supply into the Paging Gateway, and plug the other end into a receptacle. Connect the earth grounding wire to the chassis ground on the back of the unit.

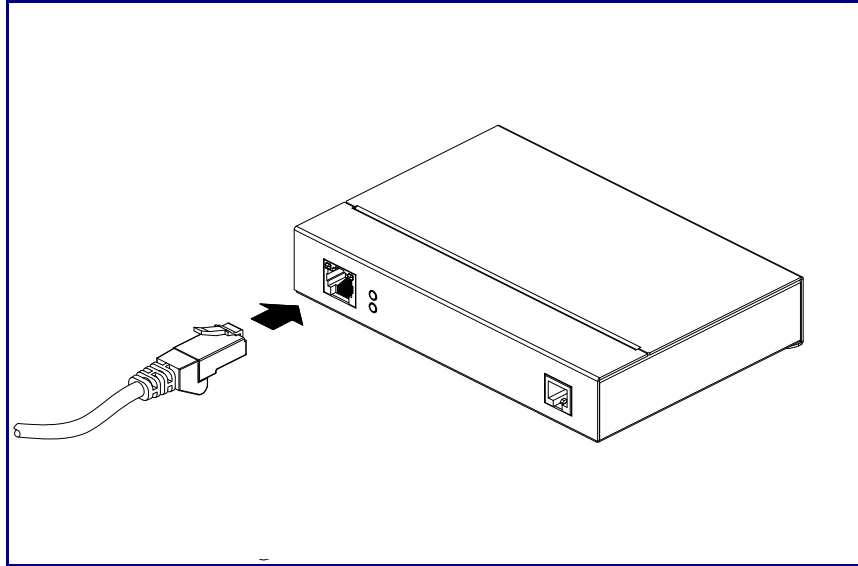
Figure 2-2. Connecting to the Power Source



2.3.2 Connect to the Network

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

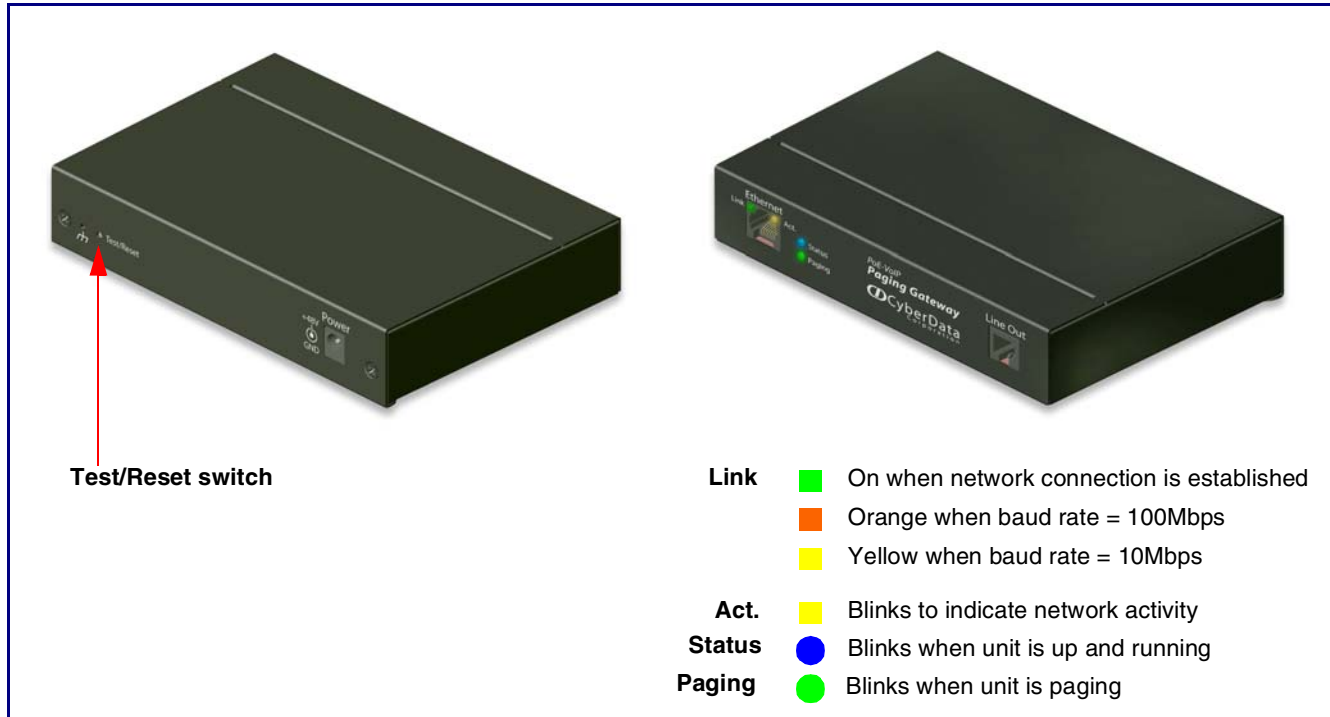
Figure 2-3. Connecting to the Network



2.3.3 Confirm that the VoIP Paging Gateway is Working Properly

The indicator lights on the front of the VoIP Paging Gateway verify the unit's operations.

Figure 2-4. Paging Gateway Indicator Lights



2.3.3.1 Confirm Power on, Network Connectivity, and Connection Speed

When you plug in the Ethernet cable or power supply:

- The round, blue **Status** light on the front of the VoIP Paging Gateway comes on indicating that the power is on. Once the device has been initialized, this light blinks at one second intervals.
- The square, green **Link** light above the Ethernet port indicates that the network connection has been established. The Link light changes color to confirm the auto-negotiated baud rate:
 - This light is yellow at 10 Mbps.
 - It is orange at 100 Mbps.
- The green **Paging** light comes on after the device is booted and initialized. This light blinks when a page is in progress.

2.3.3.2 Verify Network Activity

The square, yellow **Act** light blinks when there is network activity.

2.3.4 Connect to a Paging Device

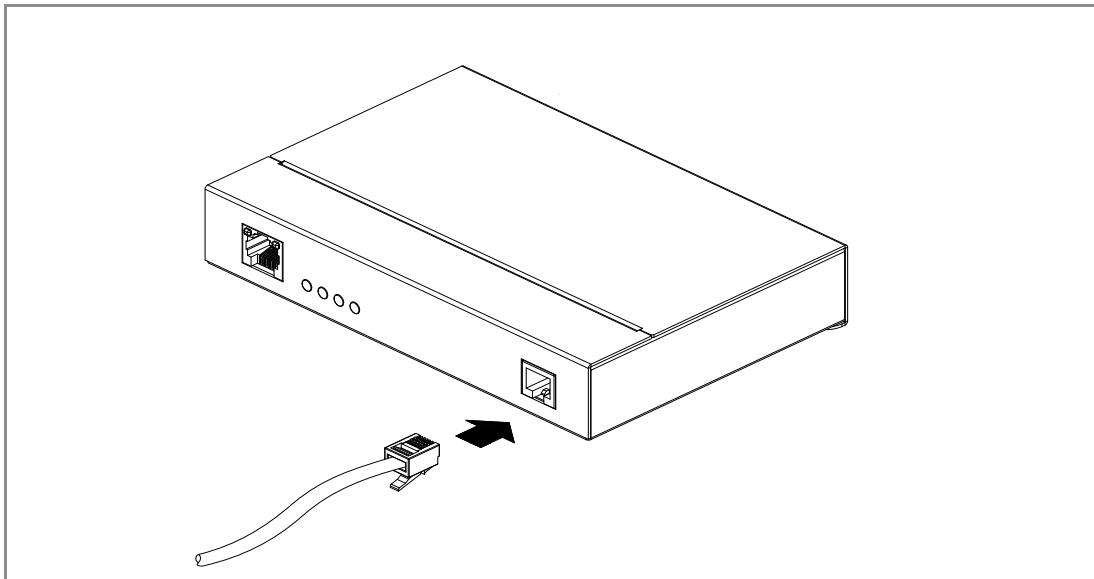
You can broadcast test messages via two different paging devices:

- A paging amplifier, which you use for normal paging operations, broadcasts the test message to the speakers in a specified paging zone. To do so, you need to first see [Section 2.3.4.1, "Connect the VoIP Paging Gateway to a Paging Amplifier"](#).
- Via a Plain Old Telephone (POT), which broadcasts the test message to you over the phone. See [Section 2.3.4.2, "Connect the VoIP Paging Gateway to a Telephone"](#).

2.3.4.1 Connect the VoIP Paging Gateway to a Paging Amplifier

Plug one end of a modular telephone cord into the Paging Gateway **Line Out** port. Plug the other end into your paging amplifier.

Figure 2-5. Connecting to a Paging Amplifier



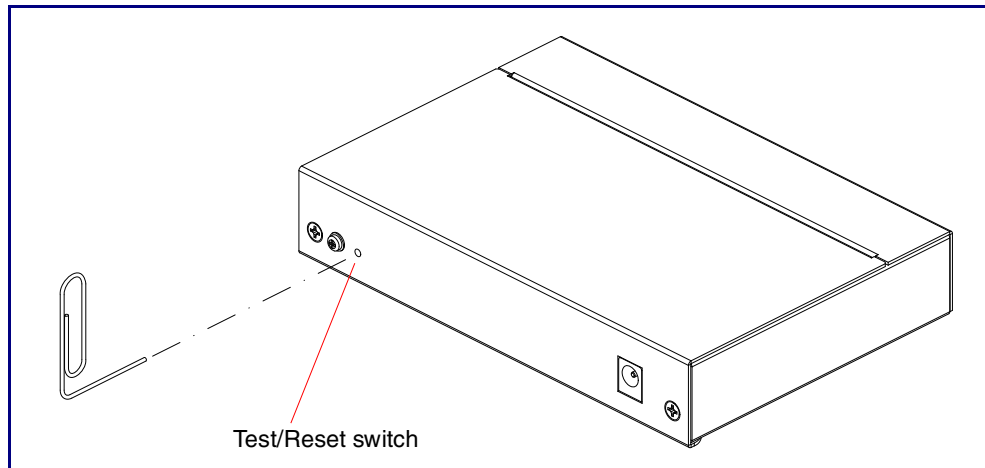
2.3.4.2 Connect the VoIP Paging Gateway to a Telephone

Plug one end of a modular telephone cord into the Paging Gateway **Line Out** port. Plug the other end into a touch tone telephone.

2.3.5 Broadcast a test message to all paging zones

The **Test/Reset** switch is located on the back of the VoIP Paging Gateway (see [Figure 2-6](#)). The **Test/Reset** switch enables testing to all paging zones and lets you restore the VoIP Paging Gateway to its factory default settings.

Figure 2-6. Test/Reset Switch



Once the VoIP Paging Gateway is running and connected to a paging device, use the **Test/Reset** switch to broadcast a test message to all of the zones in the paging system.

When the VoIP Paging Gateway has been configured and connected to a paging device, you can also broadcast a test message to a paging zone that you specify. See [Section 2.4.5, "Broadcast a Test Message to a Specific Paging Zone"](#).

To use the Test/Reset switch to broadcast a test message to *all* zones, complete the following steps:

1. Press the end of a paper clip into the switch only until it beeps after one second.
2. *Immediately* release the switch. The VoIP Paging Gateway sends the audio message, via the paging amplifier, to zone 00, which is the code for all zones, and the test message is broadcast to all enabled paging zones. The round, green **Paging** light below the Status light blinks when the page is in progress.



Caution

Pressing the Test/Reset switch for longer than one second might restore the VoIP Paging Gateway settings to the factory defaults.

2.3.6 Restore the Factory Default Settings as Required

The VoIP Paging Gateway is delivered with factory set default values for the following parameters. Use the **Test/Reset** switch on the back of the unit to restore these parameters to the factory default settings.

When you perform this procedure, the factory default settings are restored for *all* the following parameters.

Parameter	Factory Default Setting
IP Addressing	static
IP Address	192.168.3.10
Username	admin
Password	admin
Subnet Mask	255.255.255.0
Default Gateway	192.168.3.1

To restore these parameters to the factory default settings:

1. Press and hold the **Test/Reset** switch while the unit beeps after one second and all indicator lights on the front of the unit come on.
2. Continue to press the switch until after the indicator lights go off, and then release it. The following will then occur:
 - The VoIP Paging Gateway settings are restored to the factory defaults.
 - The unit announces the restored default IP address:
 - 192.168.3.10
 - Then, a voice message announces that the unit is rebooting.

2.4 Configuring the VoIP Paging Gateway

Complete the following sections to configure the VoIP Paging Gateway online:

- [Section 2.4.1, "Gather the Required Configuration Information"](#)
- [Section 2.4.2, "Log in to the Configuration GUI"](#)
- [Section 2.4.3, "Configure the Network Parameters"](#)
- [Section 2.4.4, "Change the Default Username and Password"](#)
- [Section 2.4.6, "Configure the SIP Parameters"](#)

2.4.1 Gather the Required Configuration Information

Gather all of the information indicated in the following sections before you configure the VoIP Paging Gateway.

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 VoIP Paging Gateway 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 Zone Numbers for Testing Purposes

To audio test the VoIP Paging Gateway you need to enter the zone number you are testing. Be sure to have this information on hand so that you can audio test the gateway with each paging zone.

2.4.1.4 SIP Settings

To configure the SIP parameters, determine whether you want to register 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 Log in to the Configuration GUI

To log in:

1. For the initial configuration of the VoIP Paging Gateway, open your browser and enter the following address:

`http://192.168.3.10`

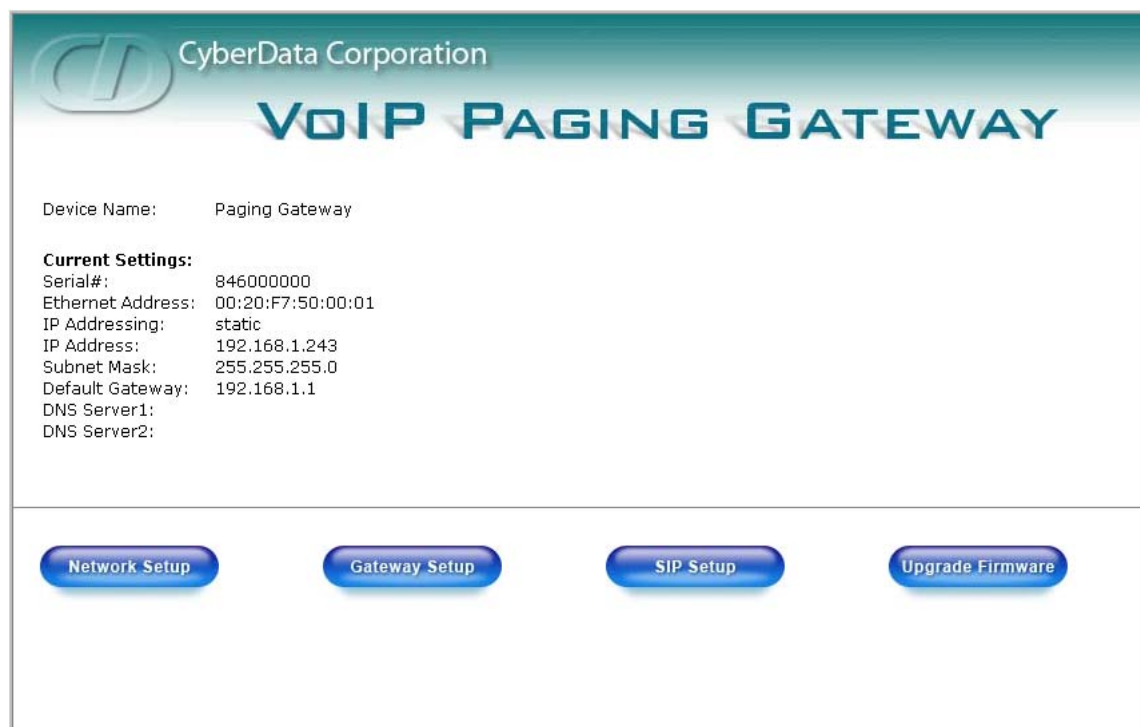
To work with the VoIP Paging Gateway configuration *after* the initial configuration, log in using the IP address you assign to the device. [Section 2.4.3, "Configure the Network Parameters"](#) provides instructions for entering the IP address.

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

Username: **admin**

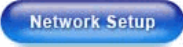
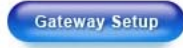


Password: **admin**

Figure 2-7. Home Page



3. On the **Home Page**, review the setup details and navigation buttons described in [Table 2-1](#).

Table 2-1. Home Page Overview

Web Page Item	Description
Device Name	Shows the device name.
Serial #	Device serial number.
Ethernet Address	Device ethernet address.
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.
	Link to the Network Setup web page.
	Link to the Gateway Setup web page.
	Link to the SIP Setup web page.
	Link to the Upgrade Firmware web page.

At this point you can do the following:

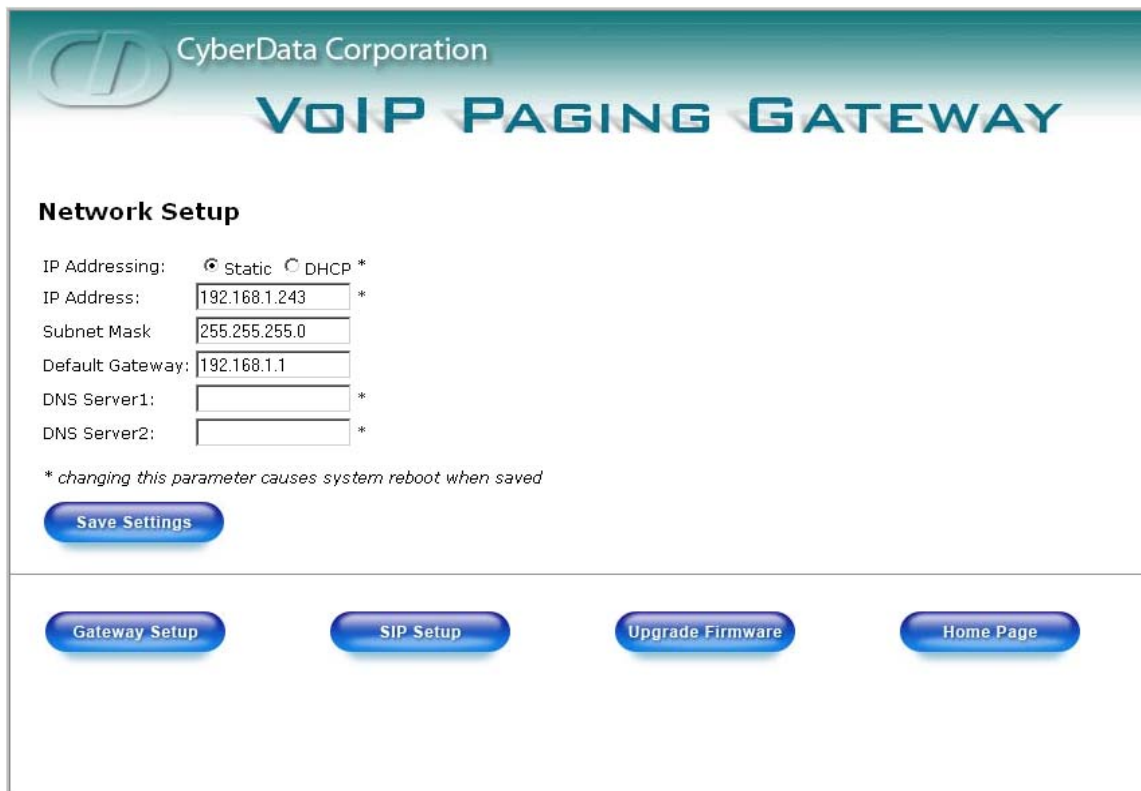
- Review the VoIP Paging Gateway's **Current Settings**. Use the Test/Reset switch to restore the factory default settings. See [Section 2.3.6, "Restore the Factory Default Settings as Required"](#).
- Configure the network parameters. Click **Network Setup** and see [Section 2.4.3, "Configure the Network Parameters"](#) for instructions.
- Configure the VoIP Paging Gateway parameters. Click **Gateway Setup** and see [Section 2.4.4, "Change the Default Username and Password"](#) for instructions.
- Configure the SIP parameters. Click **SIP Setup** and see [Section 2.4.6, "Configure the SiP Parameters"](#).

Click the **Upgrade Firmware** button any time that you need to upload new versions of the firmware or **Reboot** the VoIP Paging Gateway. See [Section 2.5, "Upgrading the Firmware"](#) and [Section 2.6, "Rebooting the VoIP Paging Gateway"](#) for instructions.

2.4.3 Configure the Network Parameters

Configuring the network parameters enables your network to recognize the VoIP Paging Gateway and communicate with it. Click **Network Setup** on the Home page to open the **Network Configuration** page.

Figure 2-8. Network Setup Page



CyberData Corporation
VOIP PAGING GATEWAY

Network Setup

IP Addressing: Static DHCP *

IP Address: *

Subnet Mask:

Default Gateway:

DNS Server1: *

DNS Server2: *






** changing this parameter causes system reboot when saved*

[Save Settings](#)

[Gateway Setup](#) [SIP Setup](#) [Upgrade Firmware](#) [Home Page](#)

4. On the **Network Setup** page, enter values for the parameters indicated in [Table 2-2](#).

Table 2-2. Network Setup Parameters

Web Page Item	Description
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 2-2 . 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.
	Click on this button to save your configuration settings. Changing a parameter that has an asterisk next to it will cause a system reboot when saved.
	Link to the Gateway Setup web page.
	Link to the SIP Setup web page.
	Link to the Upgrade Firmware web page.
	Link to the Home page.

On this page, complete the following steps:

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.

Changing the **IP Addressing** selection causes the system to reboot after you select **Save Settings**.

2. For **Static IP Addressing**, also enter values for the following parameters:
 - a. The VoIP Paging Gateway's **IP Address**: The VoIP Paging Gateway is delivered with a factory default IP address. Change the default address to the correct IP address for your system.

Changing the VoIP Paging Gateway's **IP Address** causes the system to reboot after you select **Save Settings**.

- b. The **Subnet Mask**.
 - c. The **Default Gateway**.
3. Click **Save Settings** when you are finished.

2.4.4 Change the Default Username and Password

On the Home page, click **Gateway Setup** to open the **Gateway Configuration** page. After changing the **Username** and **Password** settings on this page, you will be required to log in using these new parameters.

You can also run an audio test from this page. See [Section 2.4.5, "Broadcast a Test Message to a Specific Paging Zone"](#) for more information.

Figure 2-9. Gateway Configuration Page


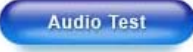




The screenshot shows the 'Gateway Configuration' page for a 'VoIP Paging Gateway' by CyberData Corporation. The page has a teal header with the company logo and name. Below the header, the title 'VOIP PAGING GATEWAY' is displayed in large, bold, blue letters. The main content area is titled 'Gateway Setup' and contains several configuration options:

- Device Name:** A text input field containing 'Paging Gateway'.
- Change Username:** A text input field containing 'admin'.
- Change Password:** An empty text input field.
- Re-enter New Password:** An empty text input field.
- Ring Out:** Radio buttons for 'Yes' (selected) and 'No'.
- Zone Digits (0-2):** A text input field containing '2'.

At the bottom of the configuration section, there are two buttons: 'Save Settings' and 'Audio Test'. The 'Audio Test' button has a 'Zone:' label and a text input field containing '0'. Below this section, there is a horizontal line, and then four buttons: 'Network Setup', 'SIP Setup', 'Upgrade Firmware', and 'Home Page'.

4. On the **Gateway Setup** page, enter values for the parameters indicated in [Table 2-3](#).

Table 2-3. Gateway Setup Parameters

Web Page Item	Description
Device Name	Enter the name of the device.
Change Web Access Username	Use this field to change the Web Access Username
Change Web Access Password	Use this field to change the Web Access Password
Re-enter New Password	Use this field to re-enter a new password
Ring Out	This selects the option for the gateway to either provide a ring to the attached device or to connect without ringing. Select Yes or No whether you want to enable the Ring.
Zone Digits (0-2)	Selecting 0 Zone digits enables the caller to connect directly to the attached device without having to enter in a DTMF tone. Selecting either 1 or 2 digits forces the entry of the DTMF tones.
Zone	Enter the Zone number to be tested.
	Click on this button to save your configuration settings. Changing a parameter that has an asterisk next to it will cause a system reboot when saved.
	Click on this button to do an audio test. Generates a voice message for testing the speaker audio quality and volume.
	Link to the Network Setup web page.
	Link to the SIP Setup web page.
	Link to the Upgrade Firmware web page.
	Link to the Home page.

To change the default Web access Username and Password, complete the following steps:

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.
4. Select **Save Settings**.

2.4.5 Broadcast a Test Message to a Specific Paging Zone

Once the VoIP Paging Gateway is set up and configured, you can broadcast test messages to different paging zones that you specify. On the Home page, click **Gateway Setup** to open the **Gateway Configuration** page.

You can broadcast a test message to *all* paging zones by using the **Test/Reset** switch on the back of the VoIP Paging Gateway. See [Section 2.3.5, "Broadcast a test message to all paging zones"](#) for instructions.

Figure 2-10. Gateway Configuration Page

The screenshot shows the 'Gateway Configuration Page' for a VoIP Paging Gateway. The page header includes the CyberData Corporation logo and the title 'VOIP PAGING GATEWAY'. The main section is titled 'Gateway Setup' and contains the following fields and controls:

- Device Name:** A text input field containing 'Paging Gateway'.
- Change Username:** A text input field containing 'admin'.
- Change Password:** An empty text input field.
- Re-enter New Password:** An empty text input field.
- Ring Out:** Radio buttons for 'Yes' (selected) and 'No'.
- Zone Digits (0-2):** A text input field containing '2'.

At the bottom of the configuration area, there are several buttons:

- Save Settings:** A blue button.
- Audio Test:** A blue button with a 'Zone:' label and a text input field containing '0'.
- Network Setup:** A blue button.
- SIP Setup:** A blue button.
- Upgrade Firmware:** A blue button.
- Home Page:** A blue button.

To broadcast a test message to a specific paging zone, complete the following steps:

1. Enter the paging **Zone** you want to test.
2. Click **Audio Test**. The VoIP Paging Gateway sends a brief audio message to that zone. Notice that the round, green **Paging** light below the Status light blinks when a page is in progress

2.4.6 Configure the SiP Parameters

The SIP parameters enable the VoIP Paging Gateway to contact and register with the SIP server. On the Home page, click **SIP Setup** to open the **SIP Configuration** page.

Figure 2-11. SIP Configuration Page

The screenshot shows the SIP Configuration page for the VoIP Paging Gateway. The page header includes the CyberData Corporation logo and the text "VOIP PAGING GATEWAY". The main section is titled "SIP Setup" and contains several configuration fields:



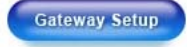


- SIP Server: 192.168.3.1 *
- Outbound Proxy: *
- Remote SIP Port: 5060 *
- Local SIP Port: 5060 *
- SIP User ID: 205 *
- Authenticate ID: 205 *
- Authenticate Password: ext205 *
- SIP Registration: Yes No *
- Unregister on Reboot: Yes No *
- Register Expiration (minutes): 60 *

A note below the fields states: ** changing this parameter causes system reboot when saved*

At the bottom of the configuration section is a blue button labeled "Save Settings". Below this, there are four navigation buttons: "Network Setup", "Gateway Setup", "Upgrade Firmware", and "Home Page".

3. On the **SIP Setup** page, enter values for the parameters indicated in [Table 2-4](#).

Table 2-4. SIP Setup Parameters

Web Page Item	Description
SIP Server*	Enter the SIP server represented as either a numeric IP address in dotted decimal notation or the fully qualified host name (FQHN) up to 64 characters.
Outbound Proxy	Enter the Outbound Proxy as either a numeric IP address in dotted decimal notation or the fully qualified host name (FQHN) up to 64 characters.
Remote SIP Port*	Enter the Remote SIP Port number (default is 5060).
Local SIP Port*	Enter the Local SIP Port number (default is 5060).
SIP User ID*	Enter the SIP User ID (up to 25 alphanumeric characters).
Authenticate ID*	Enter the Authenticate ID (up to 25 alphanumeric characters).
Authenticate Password*	Enter the Authenticate Password (up to 25 alphanumeric characters).
SIP Registration*	Enable/Disable SIP Registration.
Unregister on Reboot*	<ul style="list-style-type: none"> • Select Yes to automatically unregister the speaker when it is rebooted. • Select No to keep the speaker registered when it is rebooted.
Register Expiration*	Enter the SIP Registration lease time in minutes (default is 60 minutes).
	Click on this button to save your configuration settings. Changing a parameter that has an asterisk next to it will cause a system reboot when saved.
	Link to the Network Setup web page.
	Link to the Gateway Setup web page.
	Link to the Upgrade Firmware web page.
	Link to the Home page.

Complete the following steps:

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 IP Gateway to register with your SIP server.
5. At **Unregister on Reboot**:
 - a. Select **Yes** to automatically unregister the VoIP Paging Gateway when you reboot it. [Section 2.6, "Rebooting the VoIP Paging Gateway"](#) provides instructions on that process.
 - b. Select **No** to keep the VoIP Paging Gateway registered when you reboot it.
6. In the **Register Expiration** field, enter the number of minutes the VoIP Paging Gateway registration lease remains valid with the SIP Server. The VoIP Paging Gateway automatically re-registers with the SIP server before the lease expiration timeout.

2.5 Upgrading the Firmware

The firmware on the board consists of two files: a Kernel and an Application, that can be loaded separately. Uploading the firmware files requires a host machine running a TFTP server. If you need to set up this server, see [Appendix A, "Setting up a TFTP server"](#) for instructions.

Figure 2-12. Firmware Upgrade Page

CyberData Corporation
VOIP PAGING GATEWAY

Firmware Upgrade

System Configuration

Bootname: 400-uboot-sip

	Partition 1	Partition 2
Kernel	▶ 200-image-pgw-sip.bin	200-image-pgw-sip.bin
Application	▶ 200-romdisk-pgw-sip.img	200-romdisk-pgw-sip.img

Load New Firmware to Partition 1

TFTP Server IP:

New Filename:

Upload File

Reboot System

Reboot

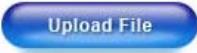
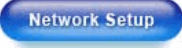
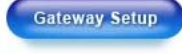

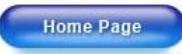

Network Setup **Gateway Setup** **SIP Setup** **Home Page**

To upload a firmware file, log in as instructed in [Section 2.4.2, "Log in to the Configuration GUI"](#). [Table 2-5](#) shows the web page items on the **Firmware Upgrade** page.

Table 2-5. Firmware Upgrade Parameters

Web Page Item	Description
System Configuration	Shows the current configuration.
Bootname	Shows the current boot loader filename.
Kernel	Shows the current kernel filename for partition 1 and 2.
Application	Shows the current application filename for partition 1 and 2.
TFTP Server IP address	Enter the TFTP Server IP address.
New Filename	Use this field to enter the new file name for the kernel or application firmware file that you are uploading.

Table 2-5. Firmware Upgrade Parameters (continued)

Web Page Item	Description
	Click on this button to automatically upload the selected firmware and reboot the system.
	Link to the Network Setup web page.
	Link to the Gateway Setup web page.
	Link to the SIP Setup web page.
	Link to the Home page.
	Click on this button to reboot the system.

To upgrade the firmware for the Paging Gateway, complete the following steps:

1. On the Home page, click **Upgrade Firmware** to open the **Firmware Upgrade** page.
2. Enter the **TFTP Server IP** address.
3. Enter the Kernel or Application **New Filename** for the firmware file you are uploading.
4. Select the **Partition** to which the firmware is uploaded.
5. Click **Upload File** to automatically upload the selected firmware, and reboot your system.

2.6 Rebooting the VoIP Paging Gateway

To reboot the system, complete the following steps:

1. Log in as instructed in [Section 2.4.2, "Log in to the Configuration GUI"](#).
2. On the Home page, click **Upgrade Firmware** to open the **Firmware Upgrade** page. See [Figure 2-13](#).

Figure 2-13. Firmware Upgrade Page

Firmware Upgrade

System Configuration		Reboot System	
Bootname:	400-uboot-sip		
	Partition 1	Partition 2	
Kernel	▶ 200-image-pgw-sip.bin	200-image-pgw-sip.bin	
Application	▶ 200-romdisk-pgw-sip.img	200-romdisk-pgw-sip.img	

Load New Firmware to Partition 1

TFTP Server IP:

New Filename:

Upload File

Reboot

Network Setup **Gateway Setup** **SIP Setup** **Home Page**

3. Go to the **Reboot** section on the right side of the page.
4. Select **Partition 1** or **Partition 2** for the **Kernel** and the **Application**.
5. Click **Reboot**.

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 freeware TFTP server, which you can download from the following website address:

<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**.
3. 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)

A list of frequently asked questions (FAQs) are available on the VoIP Paging Gateway product page at:

<http://www.cyberdata.net/products/voip/legacyanalog/paginggateway/faqs.html>

Select the support page for your product to see a list of frequently asked questions for the CyberData product:

B.2 Documentation

The documentation for this product is released in an English language version only. You can download PDF copies of CyberData product documentation from the VoIP Paging Gateway product page at:

<http://www.cyberdata.net/products/voip/legacyanalog/paginggateway/docs.html>

B.3 Contact Information

Contact	<p>CyberData Corporation 3 Justin Court Monterey, CA 93940 USA www.CyberData.net Phone: 800-CYBERDATA (800-292-3732) Fax: 831-373-4193</p>
Sales	<p>Sales 831-373-2601 Extension 334</p>
Technical Support	<p>The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:</p> <p>http://www.cyberdata.net/support/contactsupportvoip.html</p> <p>Phone: (831) 373-2601, Ext. 333 Email: support@cyberdata.net</p>
Returned Materials Authorization	<p>To return the product, contact the Returned Materials Authorization (RMA) department:</p> <p>Phone: 831-373-2601, Extension 136 Email: RMA@CyberData.net</p> <p>When returning a product to CyberData, an approved CyberData RMA number must be printed on the outside of the original shipping package. No product will be accepted for return without an approved RMA number. Send the product, in its original package, to the following address:</p> <p>CyberData Corporation 3 Justin Court Monterey, CA 93940 Attention: RMA "your RMA number"</p>
RMA Status Form	<p>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:</p> <p>http://www.cyberdata.net/support/rmastatus.html</p>

B.4 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 the warranty period, CyberData will repair or replace the product free of charge. This warranty includes all parts and labor.

Should the product fail out-of-warranty, a flat rate repair charge of one half of the purchase price of the product will be assessed. Repairs that are in warranty but are damaged by improper modifications or abuse, will be charged at the out-of-warranty rate. Products shipped to CyberData, both in and out-of-warranty, are shipped at the expense of the customer. Shipping charges for repaired products shipped back to the customer by CyberData, will be paid by CyberData.

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.4.1 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.4.2 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.4.3 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.4.4 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.4.5 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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