



Singlewire Paging Adapter Operations Guide

Part #011280

Document Part #930729G
for Firmware Version 3.0.0

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Singlewire Paging Adapter Operations Guide 930729G
Part #011280

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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://support.cyberdata.net/>

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 930729G, which corresponds to firmware version 3.0.0, was released on May 15, 2015, and has the following changes:



- Updates [Figure 2-1, "Typical Configuration"](#)
- Updates [Figure 2-2, "Connection Options"](#)
- Adds [Section 2.3.1, "Ground Connection"](#)
- Adds [Section 2.3.2, "Line Out"](#)
- Adds [Section 2.3.3, "Page Port Output Connections"](#)
- Updates [Section B.4, "Warranty and RMA Information"](#)

Browsers Supported

The following browsers have been tested against firmware version 3.0.0:

- Internet Explorer (version: 10)
- Firefox (also called Mozilla Firefox) (version: 22.0)
- Chrome (version: 27.0.1453.116)
- Safari (version: 6.0.5)

Pictorial Alert Icons

	<p>General Alert</p> <p><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</p> <p><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.

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

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1 Product Overview

The CyberData Singlewire Paging Adapter (SPA) is for use with Singlewire's paging and emergency notification software InformaCast® or InformaCast CK.

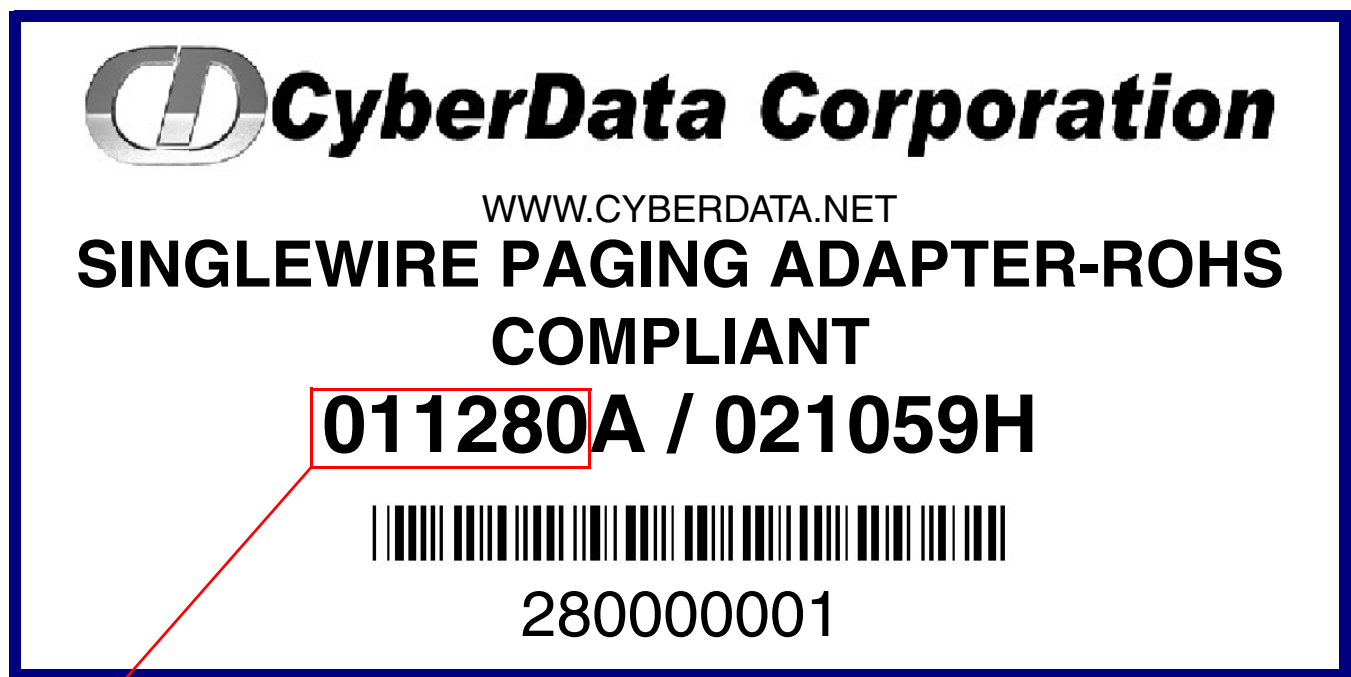
The Singlewire Paging Adapter provides a direct connection to legacy analog paging systems enabling Informacast paging events to be broadcast.

The on board relay can be controlled using InformaCast GPIO commands or can be set to activate when a page has begun.

1.1 How to Identify This Product

To identify the Singlewire 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 **011280**.

Figure 1-1. Model Number Label



Model number

1.2 Product features

- InformaCast
- 10k Ohm line out and 600 Ohm connectors for interfacing with analog amplifiers
- Audio Codecs
 - G.711 U-law
 - G.711 A-law
 - Singlewire's proprietary "high quality" audio format.
- 802.11Q VLAN support
- Web-based configuration and firmware upload
- PoE 802.3af enabled (Power-over-Ethernet)
- 19-inch rack mount option

1.3 Product Specifications

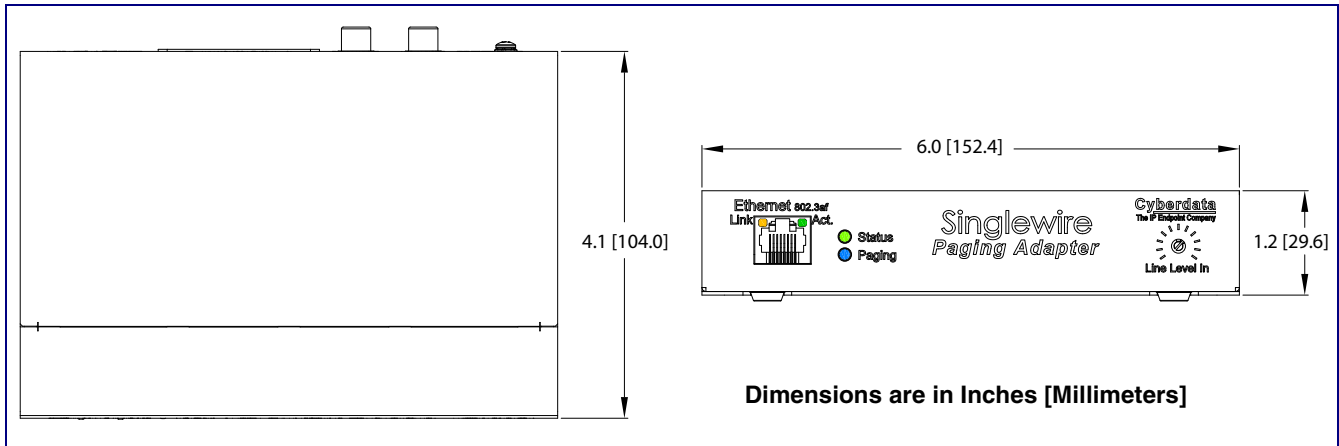
Table 1-1. Product Specifications

Specifications	
Protocol	Informacast 4.0 or later
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 Singlewire proprietary 'high quality' audio format
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	011280

1.4 Dimensions

Figure 1-2 shows the dimensions for the Singlewire Paging Adapter.

Figure 1-2. Dimensions


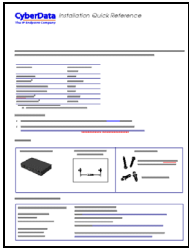
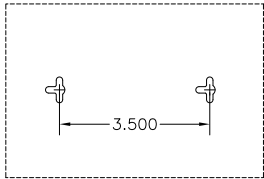



2 Installing the Singlewire Paging Adapter

2.1 Parts List

The packaging for the Singlewire Paging Adapter includes the parts in [Table 2-2](#).

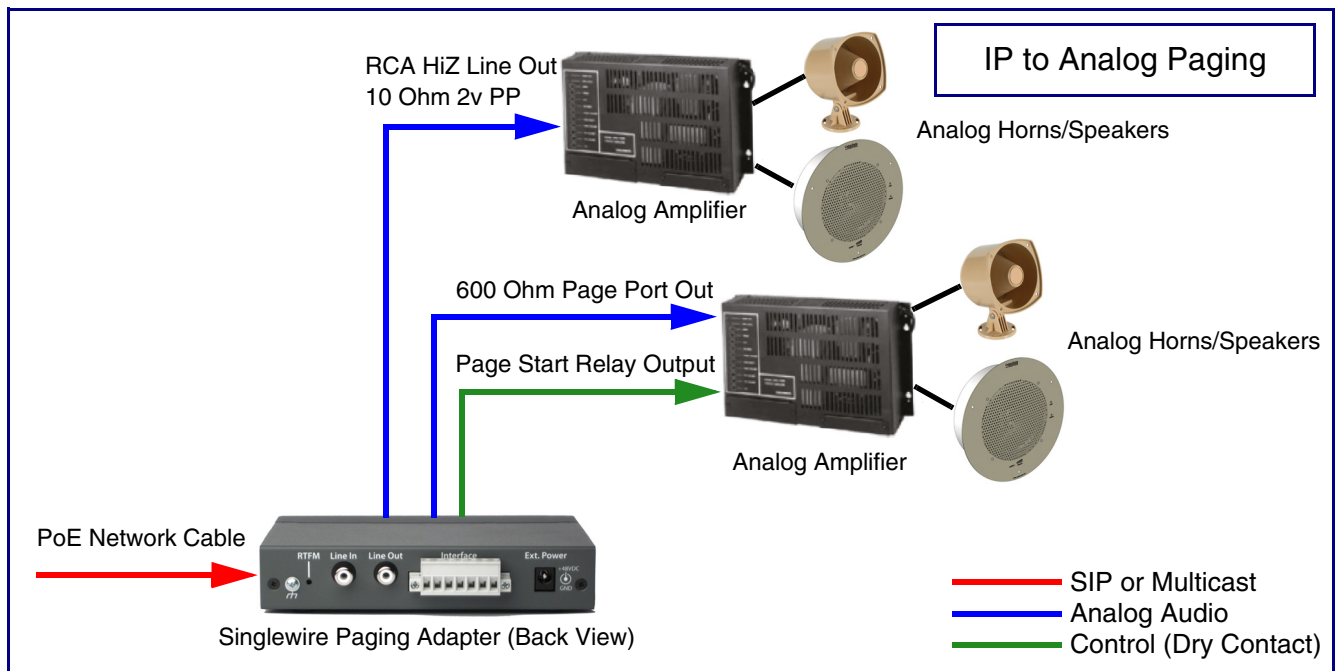
Table 2-2. Parts List

Quantity	Part Name	Illustration
1	Singlewire Paging Adapter	
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	

2.2 Installation

Figure 2-1 illustrates a typical configurations for the Singlewire Paging Adapter.

Figure 2-1. Typical Configuration

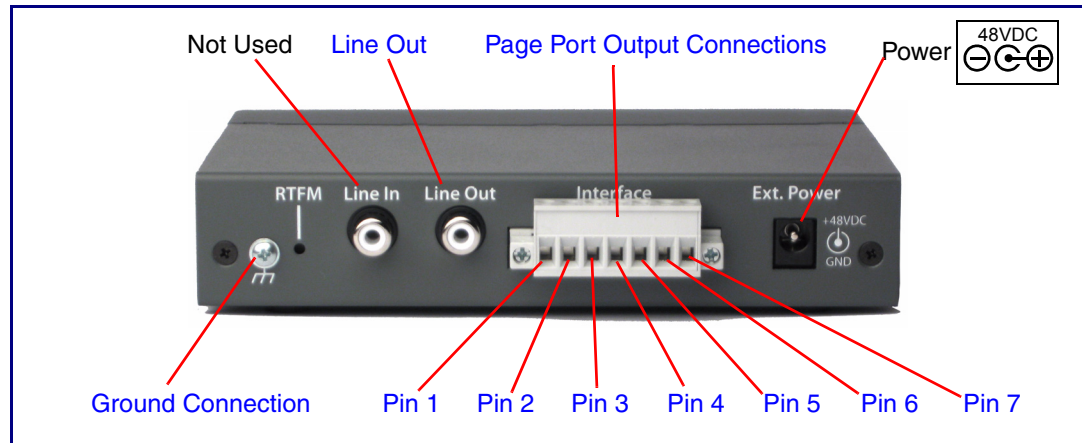


2.3 Connecting the Singlewire Paging Adapter

Before you connect the Singlewire Paging Adapter, be sure that you have received all of the parts described in [Section 2.1, "Parts List"](#).

See [Figure 2-2](#) for the connection options that are available for the Singlewire Paging Adapter.

Figure 2-2. Connection Options



2.3.1 Ground Connection

This connection allows you to connect the device to an electrical ground.

2.3.2 Line Out

This RCA 10K Ohm Hi-Z output connection allows you to connect the device to The RCA line-in (10K Ohm Hi-Z) of an external audio amplifier.

2.3.3 Page Port Output Connections

Table 2-1. Page Port Output Connections

Pin	Description
Pin 1	Not Used
Pin 2	Not Used
Pin 3	Positive 600-Ohm Audio Output ^a . See Section 2.3.3.1, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference" .
Pin 4	Negative 600-Ohm Audio Output. ^a See Section 2.3.3.1, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference" .
Pin 5	Audio Ground Reference. See Section 2.3.3.1, "Pin 3, 4, and 5—Positive/Negative 600-Ohm Audio Output/Audio Ground Reference" .
Pin 6	Relay Contact - Common ^b . See Section 2.3.3.2, "Pin 6 and 7—Relay Contact (Common/Normally Open)" .
Pin 7	Relay Contact - Normally Open ^b . See Section 2.3.3.2, "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

2.3.3.1 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.

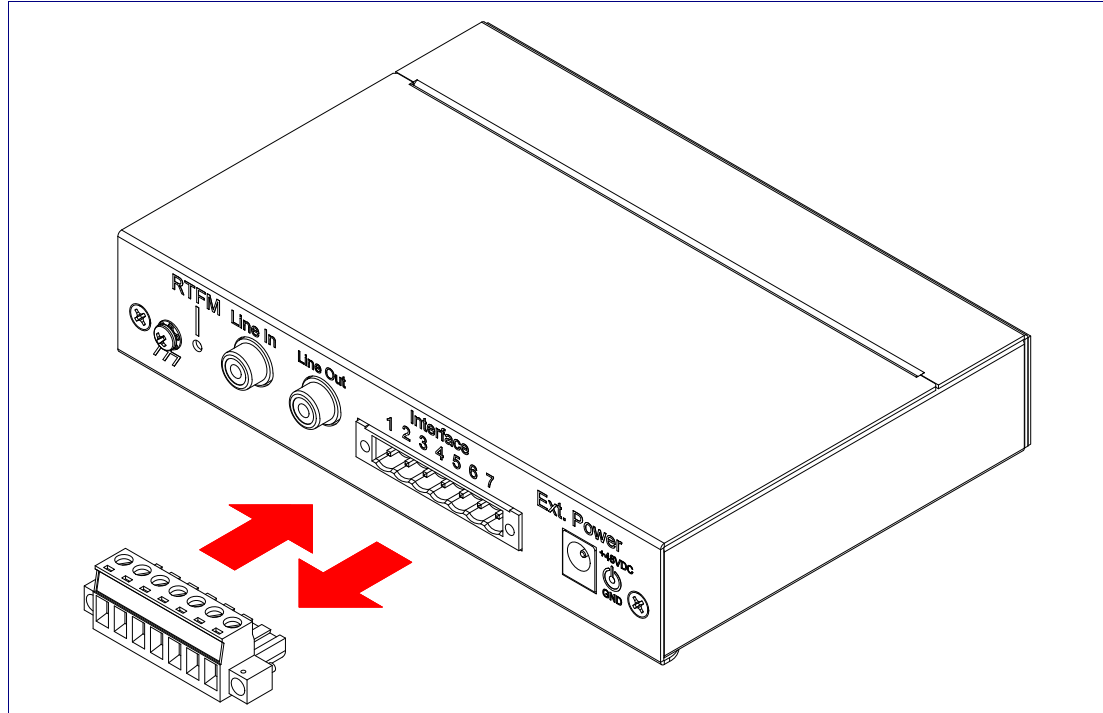
2.3.3.2 Pin 6 and 7—Relay Contact (Common/Normally Open)

When enabled on the web interface ([Section 2.4.2, "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.

2.3.4 Removable Interface Connector

Figure 2-3 shows the interface connector that is removable on the Singlewire Paging Adapter.


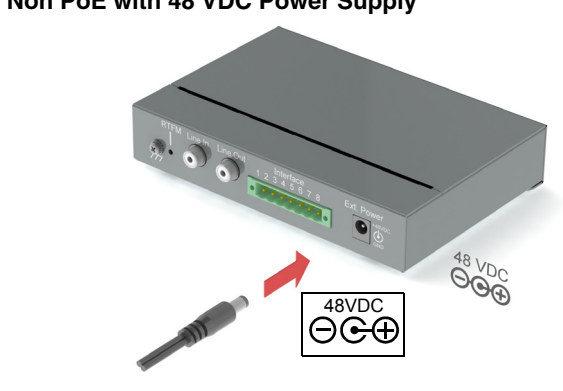

Figure 2-3. Removable Interface Connector



2.3.5 Connect to the Power Source

To use PoE, plug a Cat 5 Ethernet cable from the Singlewire 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 2-4](#).

Figure 2-4. Connecting to the Power Source

<p>PoE</p> 	<p>To set up the Singlewire Paging Adapter, connect the device to your network:</p> <p>Poe</p> <ul style="list-style-type: none"> For PoE, plug one end of an 802.3af Ethernet cable into the Singlewire Paging Adapter Ethernet port. Plug the other end of the Ethernet cable into your network. See the figure on the left.
<p>Non PoE with 48 VDC Power Supply</p> 	<p>Non-Poe</p> <ul style="list-style-type: none"> For Non-PoE, connect the Singlewire Paging Adapter to a 48VDC power supply. See the figure on the left. Note: Do not use both PoE and external power. Alternatively, you can use our part# 010867 PoE Power Injector as a cost-effective option.
<p>Chassis Ground</p>  <p>Chassis ground</p>	<p>Chassis Ground</p> <ul style="list-style-type: none"> If required, connect the earth grounding wire to the Chassis Ground. See the figure on the left.

2.3.6 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.

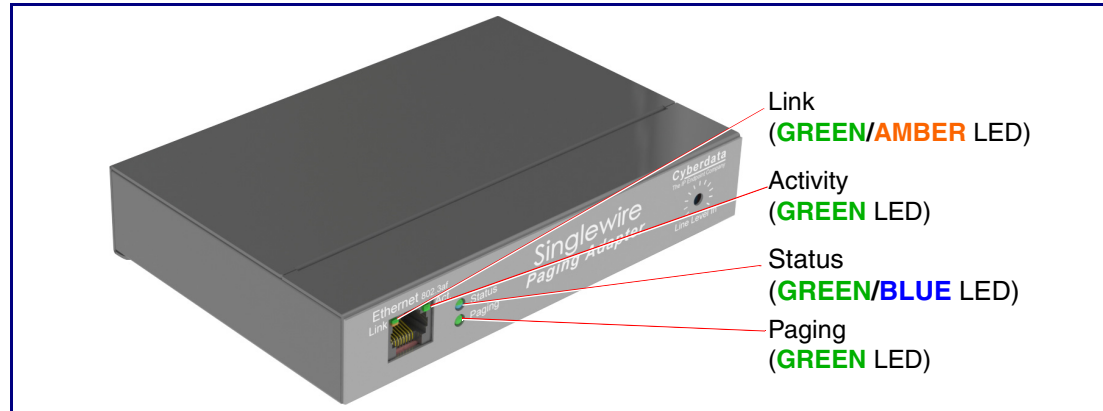
Figure 2-5. Connecting to the Network



2.3.7 Confirm that the Singlewire Paging Adapter is Up and Running

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

Figure 2-6. SIP Paging Adapter LEDs



2.3.7.1 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 Singlewire 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.

2.3.7.2 Verify Network Activity

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

2.3.8 Announcing the IP Address

To announce the IP address for the Singlewire Paging Adapter, briefly press and then quickly release the **RTFM** switch. See [Figure 2-7](#).

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

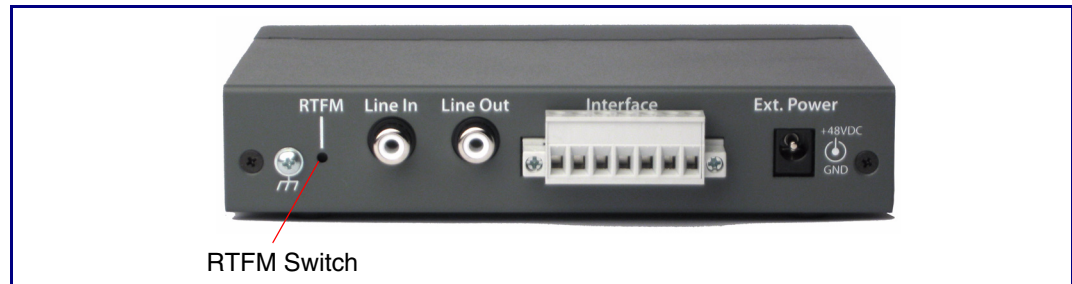
Figure 2-7. RTFM Switch



2.3.9 Restore the Factory Default Settings

The Singlewire Paging Adapter is delivered with factory set default values for the parameters in [Table 2-3](#). Use the **RTFM** switch (see [Figure 2-8](#)) on the back of the unit to restore these parameters to the factory default settings.

Figure 2-8. 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 Singlewire Paging Adapter settings are restored to the factory defaults.

2.4 Configure the Device Parameters

To configure the device online, use a standard web browser.

Configuration of the device is taken care of by the InformaCast server. If an InformaCast server can not be found, the device will return to factory defaults as shown in [Table 2-4..](#)

Table 2-4. 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.

2.4.1 Log in to the Configuration Home Page

1. Open your browser to the Singlewire Paging Adapter IP address. This can be found within the InformaCast Server Test Menu.

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 Singlewire Paging Adapter.

2. When prompted, use the following default **Web Access Username** and **Web Access Password** to access the **Home Page** (Figure 2-9):

Web Access Username: **admin**

Web Access Password: **admin**

Figure 2-9. Home Page

The screenshot shows the 'CyberData SWPA' web interface. On the left is a navigation menu with buttons for 'Home', 'Device Config', 'Networking', and 'Update Firmware'. The 'Home' button is selected. The main content area is divided into three sections: 'Device Settings', 'Current Settings', and 'Import/Export Settings'. The 'Device Settings' section contains fields for 'Device Name' (CyberData SWPA), 'Change Username' (admin), 'Change Password', and 'Re-enter Password'. The 'Current Settings' section displays various system parameters including Serial Number, Mac Address, Firmware Version, IP Addressing, IP Address, Subnet Mask, Default Gateway, DNS Servers, Boot Time, Current Time, InformaCast Server, Configuration File, and statistics for B'casts Accepted, B'castss Rejected, B'casts Active, and RTP Packets Rx'd. The 'Import/Export Settings' section includes a file selection area with 'Browse...', 'Import Configuration', and 'Export Configuration' buttons. At the bottom, a note states '* You need to reboot for changes to take effect' with 'Save' and 'Reboot' buttons.

Device Settings	
Device Name:	CyberData SWPA
Change Username:	admin
Change Password:	
Re-enter Password:	

Current Settings	
Serial Number:	233000001
Mac Address:	00:20:f7:01:e7:8e
Firmware Version:	v3.0.0
IP Addressing:	dhcp
IP Address:	192.168.70.48
Subnet Mask:	255.255.240.0
Default Gateway:	192.168.64.1
DNS Server 1:	192.168.65.20
DNS Server 2:	192.168.65.10
Boot Time:	
Current Time:	2007/01/01 00:03:47
InformaCast Server:	
Configuration File:	
B'casts Accepted:	0
B'castss Rejected:	0
B'casts Active:	0
RTP Packets Rx'd:	0

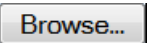
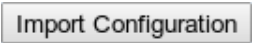
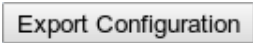


Import/Export Settings	
Please specify a configuration file*:	
Browse...	No file selected.
Import Configuration	
Export Configuration	

* You need to reboot for changes to take effect

Save Reboot

- 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	
Change Username	Type in this field to change the username (25 character limit).
Change Password	Type in this field to change the password (19 character limit).
Re-enter Password	Type the password again in this field to confirm the new password (19 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.
DNS Server 1	Shows the current DNS Server 1 address.
DNS Server 2	Shows the current DNS Server 2 address.
Boot Time	Shows the boot time.
Current Time	Shows the current time.
InformaCast Server	Shows the InformaCast Server IP address.
Configuration File	Shows the configuration file.
B'casts Accepted	Shows the number of B'casts accepted.
B'casts Rejected	Shows the number of B'casts rejected.
B'casts Active	Shows the number of active B'casts.
RTP Packets Rx'd	Shows the number of RTP packets Rx'd.
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.
	Press the Browse button to select a configuration file to import.
	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.
	Press the Export Configuration button to download the current board configuration.
	Click the Save button to save your configuration settings. Note: You need to reboot for changes to take effect.
	Click on the Reboot button to reboot the system.

2.4.2 Configure the Device Parameters

1. Click on the **Device Configuration** button to open the **Device Configuration** page. See [Figure 2-10](#).

Figure 2-10. Device Configuration Page

CyberData SWPA

Device Configuration

Home
Device Config
Networking
Update Firmware

Miscellaneous Settings





Beep on Initialization: ☐
Enable line-in to line-out loopback: ☐
Enable relay on local audio: ☐

* You need to reboot for changes to take effect

Save Test Audio Test Relay Reboot

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.
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.
	Click the Save button to save your configuration settings. Note: You need to reboot for changes to take effect.
	When the Test Audio button is pressed, you will hear a voice message for testing the device audio quality and volume.
	Click on the Test Relay button to do a relay test.
	Click on the Reboot button to reboot the system.

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

2.4.3 Configure the Network Parameters

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

Figure 2-11. Network Configuration Page

CyberData SWPA

Home **Device Config** **Networking** **Update Firmware**

Network Configuration

Stored Network Settings

IP Addressing: ☐ Static ☒ DHCP

IP Address:

Subnet Mask:

Default Gateway:

DNS Server 1:

DNS Server 2:

VLAN ID (0-4095):

VLAN Priority (0-7):

DHCP Timeout

DHCP Timeout in seconds*:

* A value of -1 will retry forever

Current Network Settings

IP Address: 192.168.70.48

Subnet Mask: 255.255.240.0

Default Gateway: 192.168.64.1



DNS Server 1: 192.168.65.20

DNS Server 2: 192.168.65.10

* You need to reboot for changes to take effect

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.
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.
	Click the Save button to save your configuration settings. Note: You need to reboot for changes to take effect.
	Click on the Reboot button to reboot the system.

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 Singlewire Paging Adapter’s **IP Address**: The Singlewire 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.

2.4.4 Updating the Firmware

Note Updating from firmware versions earlier than 2.0.0 require a factory reset after the update has been completed. This is due to a change in the way that the device stores its configuration file.

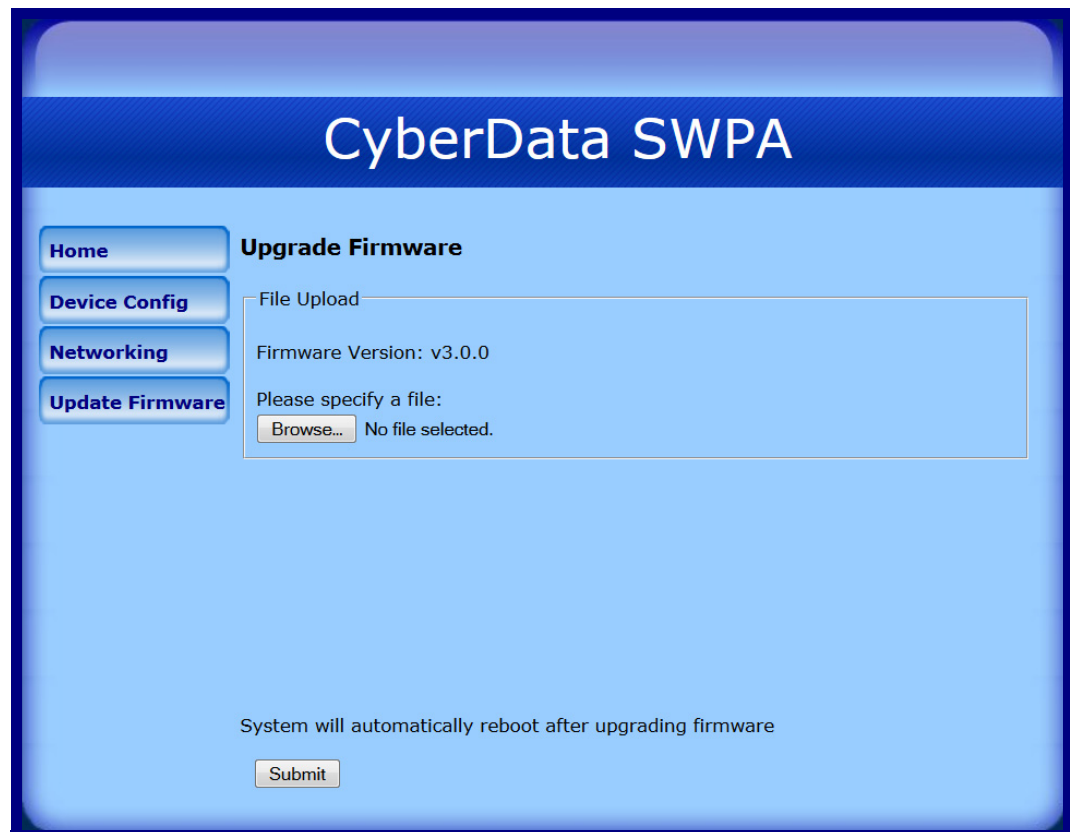
To update the firmware from your computer:

1. Please contact VoIP Technical Support to obtain the latest Singlewire Paging Adapter firmware file by submitting a contact form at the following website address:

<http://support.cyberdata.net/>

2. Log in to the Singlewire Paging Adapter home page as instructed in [Section 2.4.1, "Log in to the Configuration Home Page"](#).

Figure 2-12. Upgrade Firmware Page



The screenshot shows the 'Upgrade Firmware' page of the CyberData SWPA. The page has a blue header with the text 'CyberData SWPA'. On the left, there is a sidebar with four buttons: 'Home', 'Device Config', 'Networking', and 'Update Firmware'. The main content area is titled 'Upgrade Firmware' and contains a 'File Upload' section. This section displays 'Firmware Version: v3.0.0' and a prompt 'Please specify a file:'. Below this prompt is a 'Browse...' button and the text 'No file selected.'. At the bottom of the page, there is a message 'System will automatically reboot after upgrading firmware' and a 'Submit' button.

3. Select **Browse**, and then navigate to the location of the Singlewire Paging Adapter firmware file.
4. Click **Submit**.



Note Do not reboot the board after pressing the **Submit** button.

Note This starts the update process. Once the Singlewire Paging Adapter has updated the file, the **Firmware** countdown page appears, indicating that the firmware is being written to flash. The Singlewire 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).

Table 2-8 shows the web page items on the **Upgrade Firmware** page.

Table 2-8. Firmware Upgrade Parameters

Web Page Item	Description
File Upload	
Firmware Version	Shows the current firmware version.
	Use the Browse button to navigate to the location of the firmware file that you want to upload.
	Click on the Submit button to automatically upload the selected firmware and reboot the system.

2.4.5 Reboot the Singlewire Paging Adapter

To reboot a Singlewire Paging Adapter, log in to the web page as instructed in [Section 2.4.1, "Log in to the Configuration Home Page"](#).

1. Click the **Reboot** button ([Figure 2-13](#)).

Figure 2-13. Reboot Button

Reboot button

2. Click **Reboot**. A normal restart will occur and you will see the following **Reboot** page.

Figure 2-14. Reboot Page

2.5 Identifying and Testing a Device when Using InformaCast 4.0 or Later

This section describes the basic process for identifying and testing the CyberData device when using Singlewire's InformaCast software version 4.0 or later.

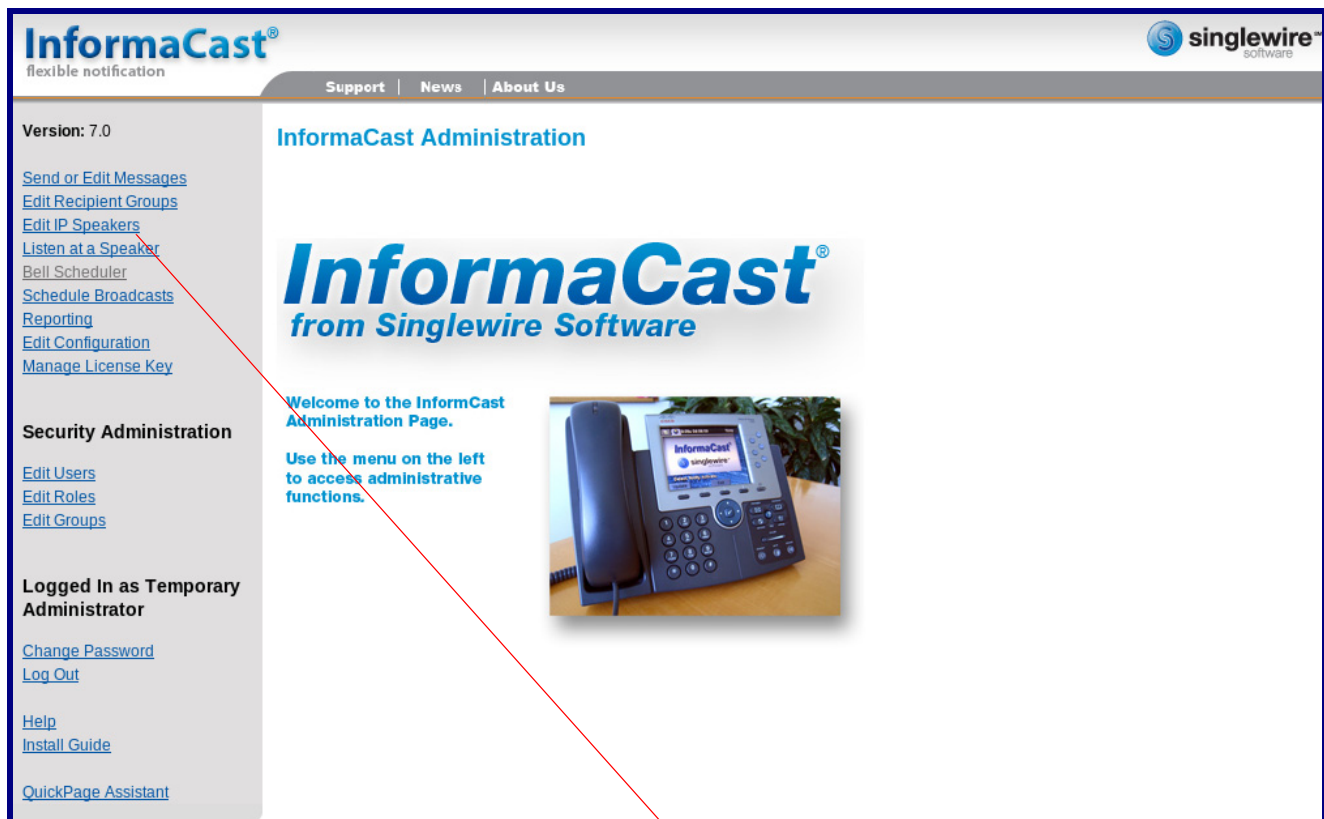
Note If you have questions or need help, please consult your InformaCast documentation and or contact the CyberData support team.

Note CyberData's support is limited to IP endpoint functionality when used with an InformaCast system.

To add the Singlewire Paging Adapter to the InformaCast server:

1. Click **Edit IP Speakers** on the **Main Screen** of the **Singlewire Informacast Server Web Interface**.

Figure 2-15. Main Screen of the Singlewire InformaCast Server Web Interface



Edit IP Speakers

2. On the **IP Speaker Configuration** page, InformaCast will indicate that it has detected new speakers. Click **View**.

Figure 2-16. IP Speaker Configuration Page

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[Send or Edit Messages](#)
[Edit Recipient Groups](#)
[Edit IP Speakers](#)
[Listen at a Speaker](#)
[Bell Scheduler](#)
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InformaCast Administration: IP Speaker Configuration

InformaCast has detected new IP Speakers on the network. [View](#)

Filter:

There are no IP Speakers known to InformaCast.

You can reboot IP speakers using these options:

Only selected speakers will be rebooted. The number of selected speakers is shown above.

This will attempt to reboot all speakers that have registered with InformaCast, whether they are listed on this page or are "new" speakers.

You can adjust IP speaker volume using these options:

Volume Adjustment:

Only selected speakers will have their volume adjusted. The number of selected speakers is shown above.

This will attempt to adjust the volume of all configured speakers.

If you have many IP Speakers to define, they can be imported from a Comma Separated Values file, exported from a spreadsheet. Please refer to the InformaCast documentation regarding the format of the CSV file, or visit the [Help Page](#) (under "Tools") to find an Excel spreadsheet you can start.

InformaCast has detected new devices.

View

3. The **IP Speaker Configuration** page will show four newly detected speakers. Click **Test**.

Figure 2-17. IP Speaker Configuration Page

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InformaCast Administration: IP Speaker Configuration

0

MAC address	Registration Status	Action
0020f7002dc2	Registered at Thu Dec 17 12:05:55 GMT-07:00 2009 (can record), IP=10.10.1.190	Add Test
0020f7002dc3	Registered at Thu Dec 17 12:05:52 GMT-07:00 2009 (can record), IP=10.10.0.192	Add Test
0020f7002dc4	Registered at Thu Dec 17 12:06:12 GMT-07:00 2009 (can record), IP=10.10.1.191	Add Test
0020f7002dc5	Registered at Thu Dec 17 12:05:59 GMT-07:00 2009 (can record), IP=10.10.0.193	Add Test

[View](#) configured speakers.

Test

4. On the **Test IP Speaker** page, Enter a number into the **Test duration** field.
5. Click **Test**.
6. You will hear a tone from the speaker being testing.
7. After the test, click **Cancel** to return to the **IP Configuration** page.

Figure 2-18. Test IP Speaker Page

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InformaCast Administration: Test IP Speaker

IP Speaker MAC: 0020f7002dc2

Registration status: Registered at Thu Dec 17 12:05:55 GMT-07:00 2009 (can record), IP=10.10.1.190
[View Speaker's Status Page](#). [Reboot](#) Speaker.

Test duration: (seconds, 1-300, required)

Test duration View Speaker's Status Page Cancel Test

Note When viewing the device's status page via Informacast, Informacast links to the wrong port and path.

Informacast expects our device's status page to be at:

<http://<ipaddr>:10004/status>.

The status page is actually at:

[http://<ipaddr>/ \(port 80\)](http://<ipaddr>/ (port 80))

Therefore, if a user clicks the link to view the status page and is directed to:

<http://10.10.10.10:1004/status>

The user will need to edit the url in the address bar to:

<http://10.10.10.10/>

8. On the **IP Speaker Configuration** page, Click **Add** to add a speaker to the InformaCast server.

Figure 2-19. IP Configuration Page

The screenshot displays the InformaCast Administration interface for IP Speaker Configuration. The left sidebar contains navigation links for various system functions. The main content area shows a table of registered speakers. A red arrow originates from the 'Add' button in the table's action column and points to the 'Add' button located at the bottom of the page.

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InformaCast Administration: IP Speaker Configuration

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MAC address	Registration Status	Action
0020f7002dc2	Registered at Thu Dec 17 12:05:55 GMT-07:00 2009 (can record), IP=10.10.1.190	Add Test
0020f7002dc3	Registered at Thu Dec 17 12:05:52 GMT-07:00 2009 (can record), IP=10.10.0.192	Add Test
0020f7002dc4	Registered at Thu Dec 17 12:06:12 GMT-07:00 2009 (can record), IP=10.10.1.191	Add Test
0020f7002dc5	Registered at Thu Dec 17 12:05:59 GMT-07:00 2009 (can record), IP=10.10.0.193	Add Test

[View](#) configured speakers.

[Add](#)

9. On the **Add IP Speaker** page, Fill out appropriate fields and click **Add**.

Figure 2-20. Add IP Speaker Page

The screenshot displays the 'InformaCast Administration: Add IP Speaker' web interface. The left sidebar contains navigation links such as 'Send or Edit Messages', 'Edit Recipient Groups', 'Edit IP Speakers', 'Listen at a Speaker', 'Bell Scheduler', 'Schedule Broadcasts', 'Reporting', 'Edit Configuration', 'Manage License Key', 'Security Administration', 'Logged In as Temporary Administrator', 'Change Password', 'Log Out', 'Help', 'Install Guide', and 'QuickPage Assistant'. The main content area has the title 'InformaCast Administration: Add IP Speaker' and the following fields:

- IP Speaker Name: (required)
- Speaker Description:
- Dial Code: (numeric shortcut for optional phone interface)
- MAC Address: (required, 12 hex digits)
- Volume:

At the bottom of the form are 'Cancel' and 'Add' buttons. A red arrow points from the 'Add' button to the word 'Add' located below the screenshot.

Your device is now registered to the InformaCast server. You now can configure this device as part of the InformaCast system setup as required.

Appendix A: Setting up a TFTP Server

A.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.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 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**.
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)

To see a list of frequently asked questions, go to the following URL:

<http://www.cyberdata.net/products/voip/digitalanalog/singlewirepagingadapter/faqs.html>

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 by going to the following URL:

<http://www.cyberdata.net/products/voip/digitalanalog/singlewirepagingadapter/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://support.cyberdata.net/</p> <p>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.</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. 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:</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://support.cyberdata.net/</p>

B.4 Warranty and RMA Information

The most recent warranty and RMA information is available at the following website address:

<http://support.cyberdata.net/>

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