

# SIP Strobe Operations Guide

Part #011087

Document Part #930425D for Firmware Version 1.0.1

CyberData Corporation

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## SIP Strobe Operations Guide 930425D Part # 011087

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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: <a href="http://www.cyberdata.net/support/contactsupportvoip.html">http://www.cyberdata.net/support/contactsupportvoip.html</a>

We have several technical support staff monitoring this form and they will contact you within 12 hours after receiving a submission.

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

Fax: (831) 373-4193

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

CyberData Corporation 930425D Operations Guide

## 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 SIP Strobe enclosure is not rated for any AC voltages!



#### 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.

#### Pictorial Alert Icons



#### General Alert

This pictoral 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 pictoral 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.

# 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
-	

## **Revision Information**

Revision 930425D, which corresponds to firmware version 1.0.1, was released on February 6, 2012 and has the following changes:

• Updates the description for the Enable Nightringer setting in Table 2-10, "Nightringer Configuration Parameters".

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## 1.1 How to Identify This Product

To identify the SIP Strobe, look for a model number label similar to the one shown in Figure 1-1. The model number on the label should be **011087**.

Figure 1-1. Model Number Label



SIP STROBE
SIP ENABLED
RAL 9003 RoHS
011087A / 021076C



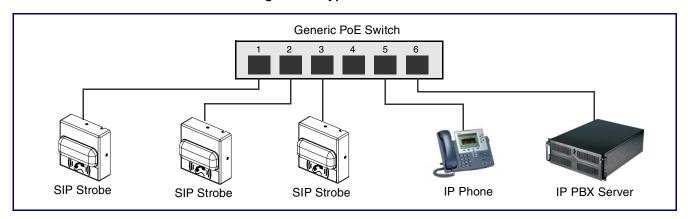
Model number

# 1.2 Typical System Installation

The Session Initiation Protocol (SIP) SIP Strobe is a SIP endpoint designed to provide VoIP phone connectivity in a tamper proof and secure package.

Figure 1-2 illustrate how the SIP Strobes can be installed as part of a VoIP phone system.

Figure 1-2. Typical Installation



GENERAL ALERT

#### Warning

Electrical Hazard: The SIP Strobe enclosure is not rated for any AC voltages.



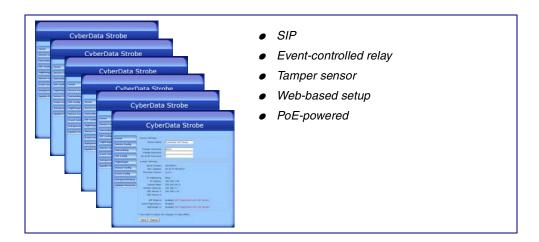
#### Warning

*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.



## 1.4 Supported Protocols

The SIP Strobe supports:

- SIP
- HTTP Web-based configuration

Provides an intuitive user interface for easy system configuration and verification of SIP Strobe operations.

DHCP Client

Dynamically assigns IP addresses in addition to the option to use static addressing.

- RTP
- RTP/AVP Audio Video Profile
- Audio Encodings

PCMU (G.711 mu-law)

PCMA (G.711 A-law)

Packet Time 20 ms

# 1.5 Supported SIP Servers

Go to the following link to find the SIP Strobe product page which will have information on how to configure the SIP Strobe for various supported SIP servers:

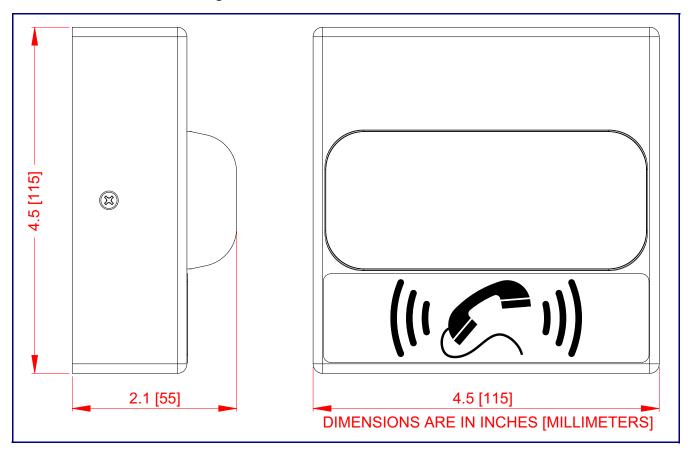
http://www.cyberdata.net/support/server/index.html

# 1.6 Product Specifications

Category	Specification
Network Rate	10/100 Mbps
Power Requirement	802.3af compliant or 10 to 20 VDC at 1000 mA
Protocol	SIP
Part Number	011087
Dimensions	4.5" x 4.5" x 1.5"
Weight	1.6 lbs./shipping weight of 2.2 lbs.
	(0.7 kg/shipping weight of 1.0kg)
Auxiliary Relay	1A at 30 VDC

## 1.7 Dimensions

Figure 1-3. Dimensions—Size of Unit with Case

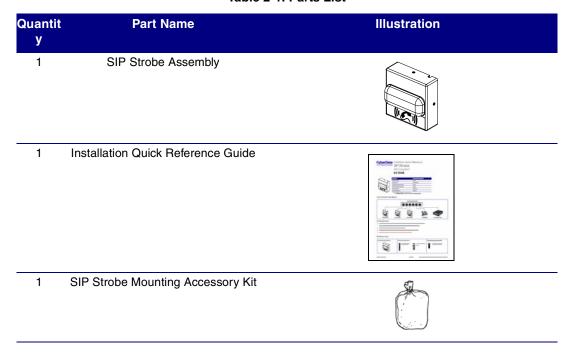


# 2 Installing the SIP Strobe

# 2.1 Parts List

Table 2-1 illustrates the SIP Strobe parts.

Table 2-1. Parts List



# 2.1 SIP Strobe Setup

#### 2.1.1 SIP Strobe Connections

Figure 2-1 shows the pin connections on the J7 (terminal block). This terminal block can accept 16 AWG gauge wire.

**Note** As an alternative to using PoE power, you can supply 12 to 24 VDC at 500 mA into the terminal block.

Alternate Power Input:

1 = +12 to 24 VDC at 500 mA

2 = Power Ground

Wire (IN)

Terminal Block
can accept
16 AWG wire

Relay Contact:
(1A at 30 VDC for continuous loads)
3 = Relay Common
4 = Relay Normally Open Contact
5 = Door Sense Input
6 = Door Sense Ground Reference

Terminal Block

Figure 2-1. SIP Strobe Connections

#### 2.1.2 Connecting a Device to the Auxiliary Relay

The SIP Strobe incorporates an on-board relay which enables users to control an external relay for activating an auxiliary device such as an electric door strike (see Figure 2-2). The SIP Strobe relay contacts are limited to 1 amp at 30VDC. The SIP Strobe relay activation time is selectable through the web interface and is controlled by DTMF tones generated from the phone being called. The DTMF tones are selectable from the web interface as well.



#### Warning

Electrical Hazard: The SIP Strobe enclosure is not rated for any AC voltages.



#### Warning

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

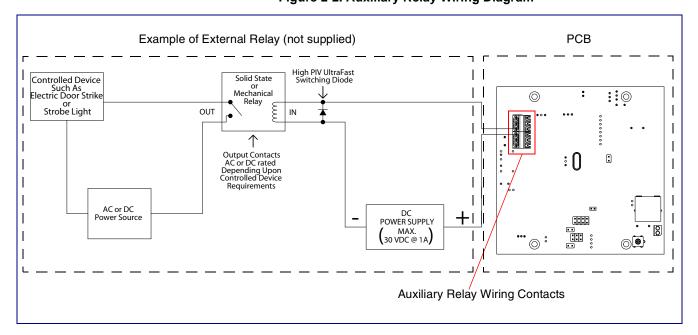


#### Warning

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

**Note** The three digit code for the auxiliary relay must be sent in conformance with RFC2833 DTMF generation.

Figure 2-2. Auxiliary Relay Wiring Diagram



## 2.1.3 Identifying the SIP Strobe Connectors and Jumpers

See the following figures and tables to identify the SIP Strobe connector locations and functions.

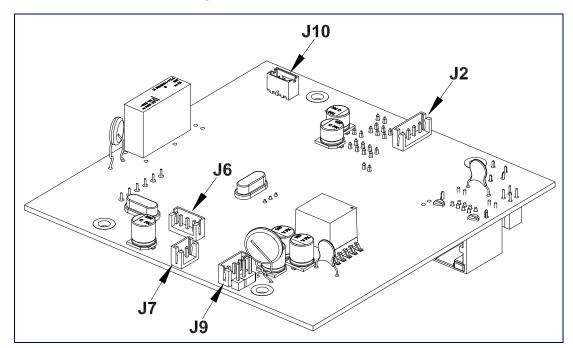


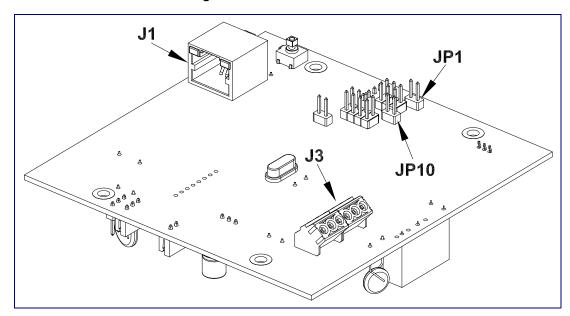
Figure 2-3. Connector Locations

**Table 2-2. Connector Functions** 

Connector	Function	
J2	Call Button Interface — Not Used	
J6	Microphone Interface — Not Used	
J7	Speaker Interface — Not Used	
J9	Strobe Power Interface — Not Used	
J10	Proximity Sensor Interface — Not Used	

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Figure 2-4. Connector Locations



**Table 2-3. Connector Functions** 

Connector	Function
J1	Ethernet Connector
J3	User Terminal Block Interface
JP1	Manual Reset — Factory only
JP10	Intrusion Sensor Disable. Place jumper on to disable.

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## 2.1.4 Network Connectivity, and Data Rate

When you plug in the Ethernet cable or power supply:

• The square, green **Link** light above the Ethernet port indicates that the network connection has been established (see Figure 2-5).

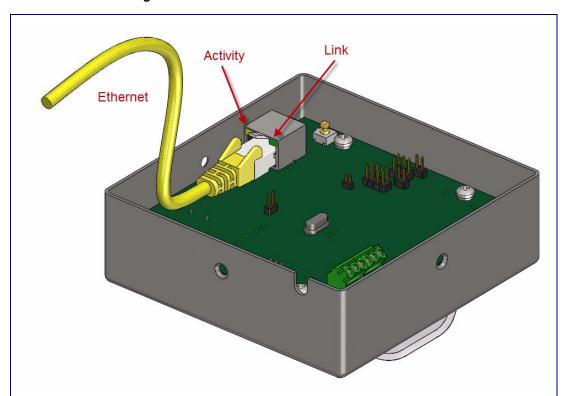


Figure 2-5. Network Connector Prior to Installation

#### 2.1.4.1 Verify Network Activity

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

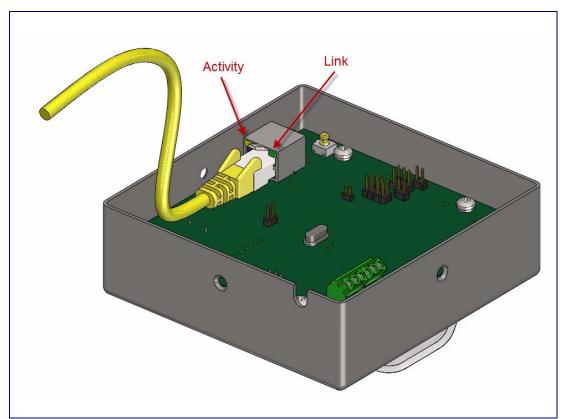


Figure 2-6. Network Connector

#### 2.1.5 RTFM Switch

When the SIP Strobe is operational and linked to the network, use the Reset Test Function Management (RTFM) switch (Figure 2-7) on the SIP Strobe board to restore the unit to the factory default settings.

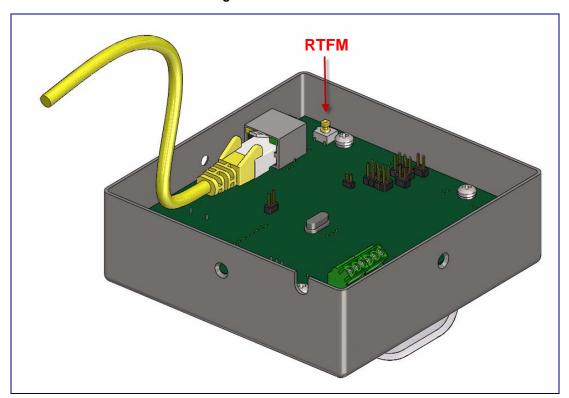


Figure 2-7. RTFM Switch

## 2.1.6 Restore the Factory Default Settings

#### 2.1.6.1 RTFM Switch

When the SIP Strobe is operational and linked to the network, use the Reset Test Function Management (RTFM) switch (Figure 2-8) to set the factory default settings.

Each SIP Strobe is delivered with factory set default values.

Note The SIP Strobe will use DHCP to obtain the new IP address (DHCP-assigned address or default to 10.10.10.10 if a DHCP server is not present).

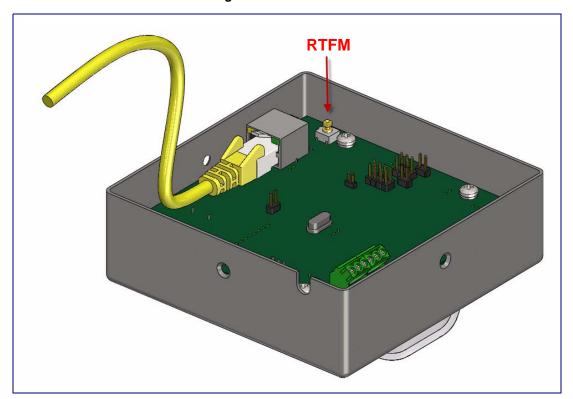


Figure 2-8. RTFM Switch

To set the factory default settings:

1. Press and hold the RTFM switch until the strobe flashes once (about eight seconds), and then release the RTFM switch.

# 2.2 Configure the SIP Strobe Parameters

To configure the SIP Strobe online, use a standard web browser.

Configure each SIP Strobe and verify its operation before you mount it. When you are ready to mount an SIP Strobe, refer to Appendix A, "Mounting the SIP Strobe" for instructions.

All SIP Strobes are initially configured with the following default IP settings:

When configuring more than one SIP Strobe, attach the SIP Strobes to the network and configure one at a time to avoid IP address conflicts.

**Table 2-4. Factory Default Settings** 

Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address <sup>a</sup>	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask <sup>a</sup>	255.0.0.0
Default Gateway <sup>a</sup>	10.0.0.1

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

## 2.2.1 SIP Strobe Web Page Navigation

Table 2-5 shows the navigation buttons that you will see on every SIP Strobe web page.

Table 2-5. Web Page Navigation

Web Page Item	Description
Home	Link to the <b>Home</b> page.
Device Config	Link to the <b>Device Configuration</b> page.
Networking	Link to the <b>Networking</b> page.
SIP Config	Link to the SIP Configuration page.
Nightringer	Link to the <b>Nightringer</b> page.
Sensor Config	Link to the <b>Sensor Configuration</b> page.
Event Config	Link to the <b>Event Configuration</b> page.
Autoprovisioning	Link to the <b>Autoprovisioning Configuration</b> page.
Update Firmware	Link to the <b>Update Firmware</b> page.

## 2.2.2 Log in to the Configuration Home Page

1. Open your browser to the SIP Strobe 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 Strobe.

**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.

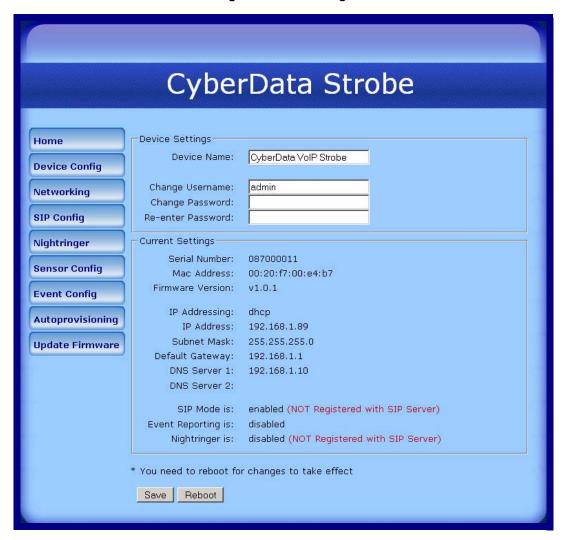
CyberData's VoIP Discovery Utility program is available at the following website address: http://www.cyberdata.net/support/voip/discovery\_utility.html

**Note** The SIP Strobe 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.

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



Operations Guide 930425D CyberData Corporation 3. On the **Home Page**, review the setup details and navigation buttons described in Table 2-6.

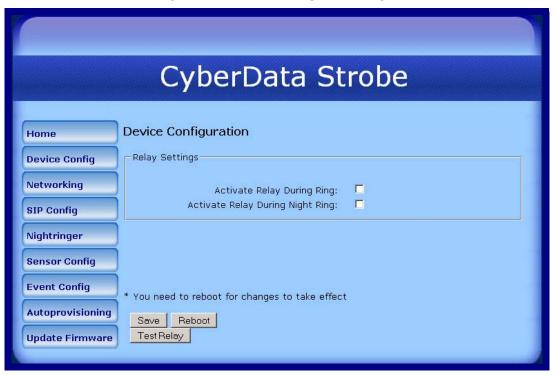
Table 2-6. Home Page Overview

Web Page Item	Description
Device Settings	
Device Name	Shows the device name.
Change Username	Type in this field to change the username.
Change Password	Type in this field to change the password.
Re-enter Password	Type the password again in this field to confirm the new password.
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.
Event Reporting is	Shows the current status of the Event Reporting mode.
Nightringer is	Shows the current status of the Nightringer mode.
	Click the <b>Save</b> button to save your configuration settings.
Save	Note: You need to reboot for changes to take effect.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

## 2.2.3 Configure the Device

1. Click the **Device Configuration** button to open the **Device Configuration** page. See Figure 2-10.

Figure 2-10. Device Configuration Page



**Table 2-7. Device Configuration Parameters** 

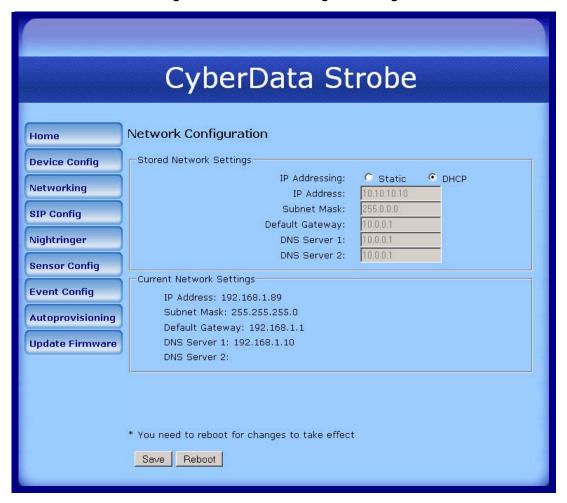
Web Page Item	Description
Relay Settings	
Activate Relay During Ring	When selected, the relay will be activated for as long as the call is ringing.
Activate Relay During Night Ring	Check this box to activate the relay for as long as a Night Ring tone is ringing.
0 1	Click the <b>Save</b> button to save your configuration settings.
Save	Note: You need to reboot for changes to take effect.
Test Relay	Click on the <b>Test Relay</b> button to do a relay test.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

<sup>3.</sup> After changing the parameters, click the **Save** button.

## 2.2.4 Configure the Network Parameters

1. Click the Networking button to open the Network Configuration page (Figure 2-11).

Figure 2-11. Network Configuration Page



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

**Table 2-8. Network Configuration Parameters** 

Web Page Item	Description
IP Addressing	Select either <b>DHCP IP Addressing</b> or <b>Static IP Addressing</b> by marking the appropriate radio button. If you select <b>Static</b> , configure the remaining parameters indicated in Table 2-8. If you select <b>DHCP</b> , go to Step 3.
Stored Network Settings	
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.
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.
0	Click the <b>Save</b> button to save your configuration settings.
Save	Note: You need to reboot for changes to take effect.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

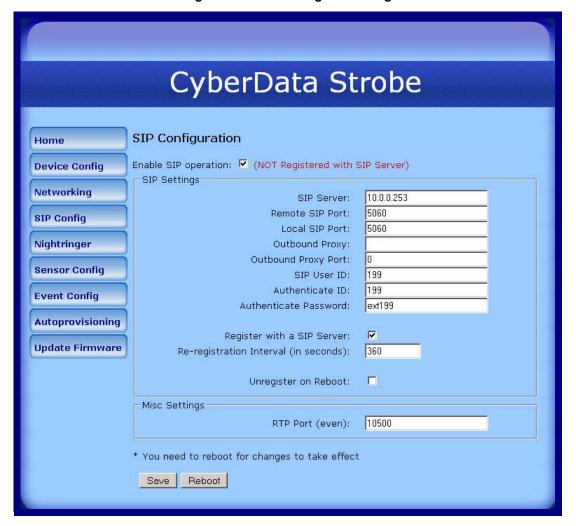
- 3. After changing the parameters, click **Save Settings**. This updates the changed parameters and reboots the SIP Strobe if appropriate.
- 4. Connect the SIP Strobe to the target network.
- 5. From a system on the same network as the SIP Strobe, open a browser with the new IP address of the SIP Strobe.

## 2.2.5 Configure the SIP Parameters

1. Click **SIP Config** to open the **SIP Configuration** page (Figure 2-12).

**Note** For specific server configurations, go to the following website address: <u>http://www.cyberdata.net/support/server/index.html</u>

Figure 2-12. SIP Configuration Page



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

**Table 2-9. 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]).
Remote SIP Port*	Type the <b>Remote SIP Port</b> number (default 5060) (8 character limit).
Local SIP Port*	Type the <b>Local SIP Port</b> number (default 5060) (8 character limit).
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 (8 character limit).
SIP User ID*	Type the SIP User ID (up to 64 alphanumeric characters).
Authenticate ID*	Type the <b>Authenticate ID</b> (up to 64 alphanumeric characters).
Authenticate Password*	Type the <b>Authenticate Password</b> (up to 64 alphanumeric characters).
Register with a SIP Server*	Check this box to enable SIP Registration.
Re-registration Interval (in seconds)*	Type the SIP Registration lease time in minutes (default is 60 minutes) (8 character limit). 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.
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.
0	Click the <b>Save</b> button to save your configuration settings.
Save	Note: You need to reboot for changes to take effect.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

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

## 2.2.6 Configure the Night Ringer Parameters

1. Click on the **Nightringer** button to open the **Nightringer Configuration** page. See Figure 2-13.

Figure 2-13. Nightringer Configuration Setup



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 SIP Strobe will attempt to register a second extension with the SIP server. Any calls made to this extension will cause the strobe to flash.
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) (8 character limit).
Local SIP Port	Type the Local SIP Port number (default 5060) (8 character limit).  Note: This value cannot be the same as the Local SIP Port* found on the SIP Configuration Page.
User ID	Type the <b>User ID</b> (up to 64 alphanumeric characters).
Authenticate ID	Type the <b>Authenticate ID</b> (up to 64 alphanumeric characters).
Authenticate Password	Type the <b>Authenticate Password</b> (up to 64 alphanumeric characters).
Re-registration Interval (in seconds)*	Type the SIP Registration lease time in minutes (default is 60 minutes) (8 character limit). Re-registration Interval (in seconds)*
	Click the <b>Save</b> button to save your configuration settings.
Save	Note: You need to reboot for changes to take effect.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

<sup>3.</sup> After changing the parameters, click on the **Save** button.

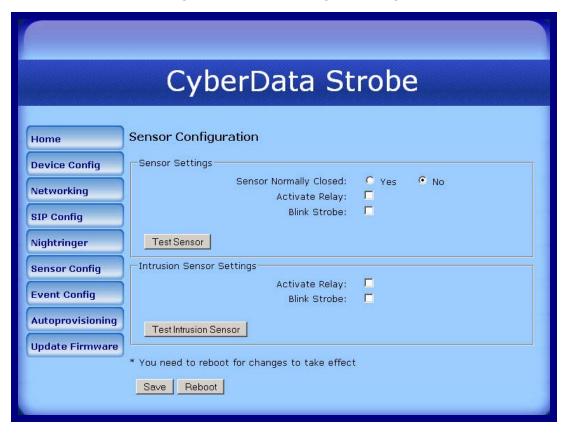
The sensor (pins 5 and 6) on the header can be used to monitor the open or closed state of a switch. There is an option on the **Sensor Configuration** page to trigger on an open or short condition on these pins.

The intrusion sensor is an optical sensor installed on the SIP Strobe board and will be activated when the SIP Strobe is removed from the case.

For each sensor there are two actions the SIP Strobe can take:

- Flash the LED until the sensor is deactivated (roughly 10 times/second)
- Activate the relay until the sensor is deactivated
- 1. Click **Sensor Config** to open the **Sensor Configuration** page (Figure 2-14).

Figure 2-14. Sensor Configuration Page



**Table 2-11. Sensor Configuration Parameters** 

Web Page Item	Description
Sensor Settings	
Sensor Normally Closed	Select the inactive state of the sensors.
Activate Relay	Check this box to blink the strobe light until the sensor is deactivated.
Blink Strobe	Check this box to activate the blinking strobe until the sensor is deactivated.
Test Sensor	Use this button to test the sensor.
Intrusion Sensor Settings	
Activate Relay	Check this box to activate the relay until the sensor is deactivated.
Blink Strobe	Check this box to blink the strobe light until the sensor is deactivated.
Test Intrusion Sensor	Use this button to test the Intrusion sensor.
Save	Click the <b>Save</b> button to save your configuration settings.
	Note: You need to reboot for changes to take effect.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

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

## 2.2.8 Configure the Event Parameters

Click the **Event Config** button to open the **Event Configuration** page (Figure 2-15). The **Event Configuration** page specifies a remote server that can be used to receive HTTP POST events when actions take place on the board.

CyberData Strobe **Event Configuration** Home **Device Config** Enable Event Generation: [ Remote Event Server Networking 10.0.0.250 Remote Event Server IP: 8080 Remote Event Server Port: **SIP Config** Remote Event Server URL: xmlparse\_engine Nightringer **Sensor Config** Enable Relay Activated Events: Enable Relay Deactivated Events: **Event Config** Enable Ring Events: Enable Night Ring Events: **Autoprovisioning** Enable Power on Events: Enable 60 second Heartbeat Events: **Update Firmware** \* You need to reboot for changes to take effect Test Event Reboot

Figure 2-15. Event Configuration Page

**Table 2-12. 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 Relay Activated Events	When selected, Relay Activated Events are enabled.
Enable Relay Deactivated Events	When selected, Relay Deactivated Events are enabled.
Enable Ring Events	When selected, Ring Events are enabled.
Enable Night Ring Events	When selected, there is a notification when the device receives a night ring.
Enable Power On Events	When selected, Power On Events are enabled.
Enable 60 Second Heartbeat Events	When selected, 60 Second Heartbeat Events are enabled.
Save	Click the <b>Save</b> button to save your configuration settings.
	Note: You need to reboot for changes to take effect.
Test Event	Click on the <b>Test Event</b> button to test an event.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

#### 2.2.8.1 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 SIP 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 SIP Device' MAC='0020f70015b6'>
<event>HEARTBEAT
</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 SIP 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 SIP Device' MAC='0020f70015b6'>
<event>CALL ACTIVE
</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 SIP Device' MAC='0020f70015b6'>
<event>CALL TERMINATED
</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 SIP Device' MAC='0020f70015b6'>
<event>RINGING
</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 SIP Device' MAC='0020f70015b6'>
<event>MULTICAST START
<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 SIP 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 SIP Device' MAC='0020f70015b6'>
<event>RELAY ACTIVATED
</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 SIP 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 SIP Device' MAC='0020f70015b6'>
<event>NIGHTRINGING</event>
</cyberdata>
```

## 2.2.9 Configure the Autoprovisioning Parameters

1. Click the **Autoprovisioning** button to open the **Autoprovisioning Configuration** page. See Figure 2-16.

Figure 2-16. Autoprovisioning Configuration Page



2. On the Autoprovisioning Configuration page, you may enter values for the parameters indicated in Table 2-13.

**Table 2-13. Autoprovisioning Configuration Parameters** 

Web Page Item	Description
Autoprovisioning	
Enable Autoprovisioning	See Section 2.2.9.1, "Autoprovisioning".
Get Autoprovisioning from DHCP	See Section 2.2.9.1, "Autoprovisioning".
Autoprovisioning Server (IP Address)	See Section 2.2.9.1, "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).
Autoprovisioning file name	Displays the current autoprovisioning file name.
Save	Click the <b>Save</b> button to save your configuration settings.
	Note: You need to reboot for changes to take effect.
Reboot	Click on the <b>Reboot</b> button to reboot the system.

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

Enable Autoprovisioning Option With autoprovisioning enabled, the board will get its configuration from a remote TFTP 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 server. CyberData will provide a template for this XML file and the user can 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 server directory and manually set the TFTP 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:

Networking

The board will only apply networking settings or firmware upgrades after a reboot.

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-servername) 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;
                                         "voiplab";
        option domain-name
        option domain-name-servers
                                          10.0.0.1;
        option time-offset
                                                 # Pacific Standard Time
                                         "10.0.0.254";
        option tftp-server-name
        option option-150
                                         10.0.0.254;
        range 10.10.0.1 10.10.2.1;}
```

**Autoprovisioning** Instead of using DHCP to provide the autoprovisioning tftp server address, you can specify an Server (IP Address) 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** An Autoprovisioned firmware upgrade only happens after a reboot, will take roughly three Firmware Upgrades minutes, and the web page will be unresponsive during this time.

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

```
<FirmwareVersion>v5.0.5b01</FirmwareVersion>
<FirmwareFile>505b01-uImage-SIP Strobe</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 Firmware Version line in the XML file and let the board boot as it normally does.

## 2.3 Upgrade the Firmware and Reboot the SIP Strobe

To guard against failed firmware upgrades, units shipped from CyberData with firmware version 1.0.2 and later feature a built-in "fail safe" mechanism.

To upload the firmware from your computer:

- 1. Retrieve the latest SIP Strobe firmware file from the SIP Strobe **Downloads** page at: http://www.cyberdata.net/products/voip/digitalanalog/strobe/downloads.html
- 2. Unzip the firmware version file. This file may contain the following:
- Firmware file
- Release notes
- 3. Log in to the SIP Strobe home page as instructed in Section 2.2.2, "Log in to the Configuration Home Page".
- 4. Click the **Update Firmware** button to open the **Upgrade Firmware** page. See Figure 2-17.

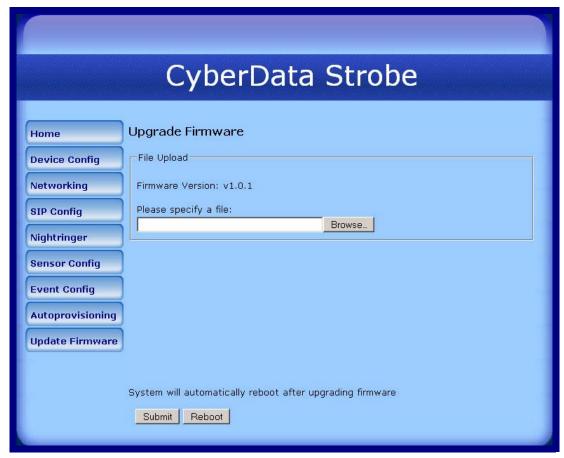


Figure 2-17. Upgrade Firmware Page

- 5. Select **Browse**, and then navigate to the location of the SIP Strobe firmware file.
- 6. Click Submit.

Note This starts the upgrade process. Once the SIP Strobe has uploaded the file, the Uploading Firmware countdown page appears, indicating that the firmware is being written to flash. The SIP Strobe 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 2-14 shows the web page items on the **Upgrade Firmware** page.

**Table 2-14. Firmware Upgrade Parameters** 

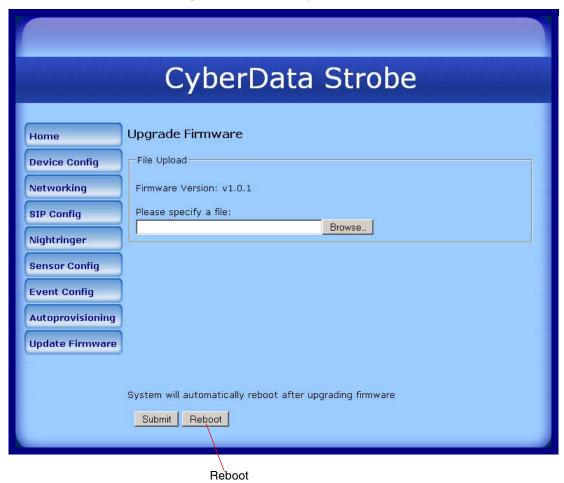
Web Page Item	Description
File Upload	
Firmware Version	Shows the current firmware version.
Browse	Use the <b>Browse</b> button to navigate to the location of the firmware file that you want to upload.
Submit	Click on the <b>Submit</b> button to automatically upload the selected firmware and reboot the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

#### 2.3.1 Reboot the SIP Strobe

To reboot a SIP Strobe, log in to the web page as instructed in Section 2.2.2, "Log in to the Configuration Home Page".

1. Click **Update Firmware** to open the **Upgrade Firmware** page (Figure 2-18).

Figure 2-18. Reboot System Section



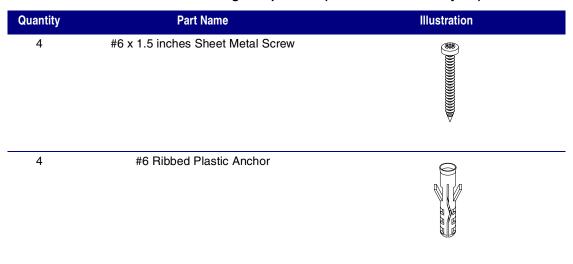
2. Click **Reboot**. A normal restart will occur.

# Appendix A: Mounting the SIP Strobe

## A.1 Mount the SIP Strobe

Before you mount the SIP Strobe, make sure that you have received all the parts for each SIP Strobe. Refer to Table A-1.

Table A-1. Wall Mounting Components (Part of the Accessory Kit)



**Table A-2. Gang Box Mounting Components** 

Quantity	Part Name	Illustration
4 F	#6-32 x 0.625-inch lat-Head Machine Screw.	H H H H H H H H H H H H H H H H H H H

After the SIP Strobe is assembled, plug the Ethernet cable into the SIP Strobe Assembly (see Figure A-19).

Section 2.1.4, "Network Connectivity, and Data Rate" explains how the Link and Status LEDs work.



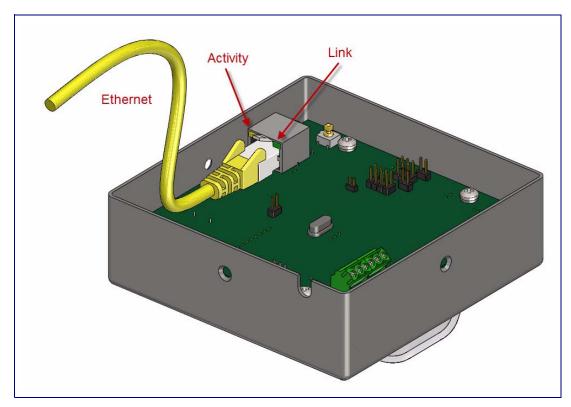


Figure A-20 shows the mounting options for the SIP Strobe.

**Note** Be sure to connect the SIP Strobe up to the Earth Ground.

Figure A-20. Mounting Options

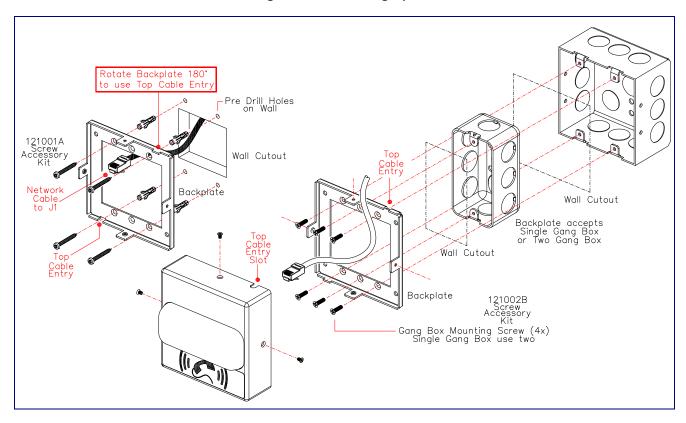
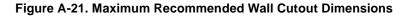
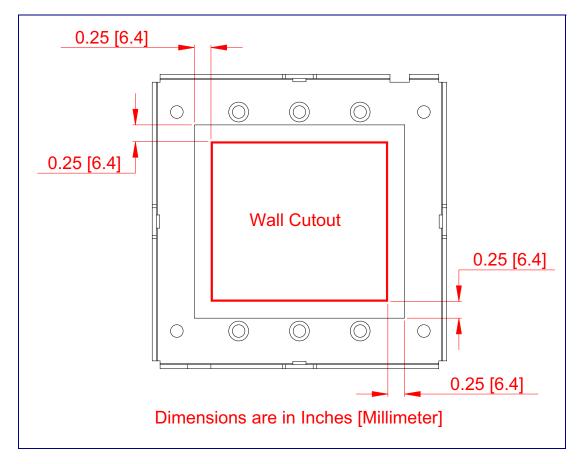


Figure A-21 shows the maximum recommended wall cutout dimensions for mounting the SIP Strobe.





# Appendix B: Troubleshooting/Technical Support

## B.1 Frequently Asked Questions (FAQ)

A list of frequently asked questions (FAQs) are available on the SIP Strobe product page at:

http://www.cyberdata.net/products/voip/digitalanalog/strobe/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 SIP Strobe product page at:

http://www.cyberdata.net/products/voip/digitalanalog/strobe/docs.html

## **B.3** 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 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.html

We have several technical support staff monitoring this form and they will contact you within 12 hours after receiving a form submission.

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. No product will 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.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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