



SIP RFID/Keypad Secure Access Control Endpoint Operations Guide

Part #011426

Document Part #931426B
for Firmware Version 1.0.0

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SIP RFID/Keypad Secure Access Control Endpoint Operations Guide 931426B
Part # 011426

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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 931426B, which corresponds to firmware version 1.0.0, was released on August 20, 2018, and has the following changes:


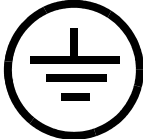
- Updates [Section 1.3, "Product Features"](#)
- Updates [Table 1-1, "Specifications"](#)

Browsers Supported

The following browsers have been tested against firmware version 1.0.0:

- Internet Explorer (version: 10)
- Firefox (also called Mozilla Firefox) (version: 33.0)
- Chrome (version 48.0.2564.116)
- Safari (version: 5.1.7)

Pictorial Alert Icons

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

Hazard Levels

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

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

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




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

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

Important Safety Instructions

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

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

 GENERAL ALERT	<p>Warning</p> <p><i>Electrical Hazard:</i> This product should be installed by a licensed electrician according to all local electrical and building codes.</p>
 GENERAL ALERT	<p>Warning</p> <p><i>Electrical Hazard:</i> To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.</p>
 GENERAL ALERT	<p>Warning</p> <p>The PoE connector is intended for intra-building connections only and does not route to the outside plant.</p>

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1 Product Overview

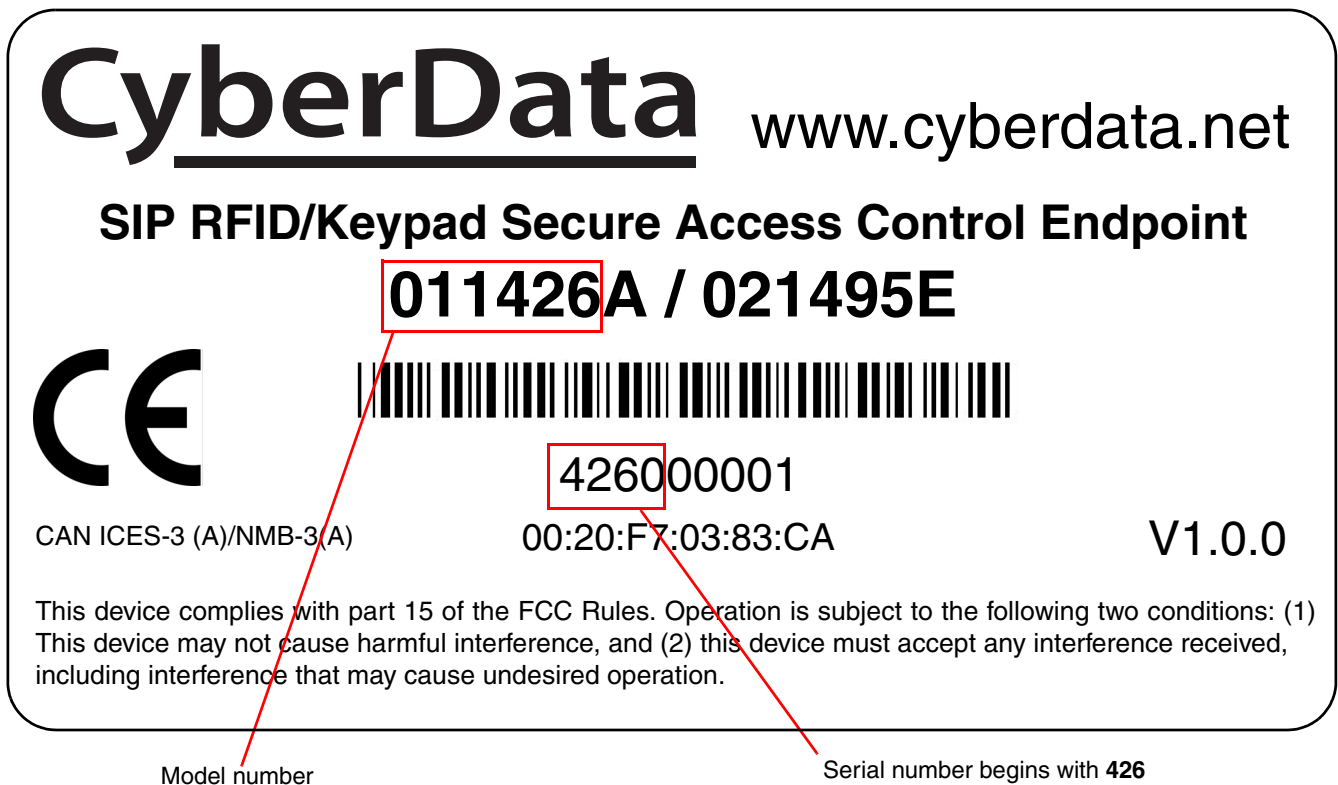
1.1 How to Identify This Product

To identify the SIP RFID/Keypad Secure Access Control Endpoint, look for a model number label similar to the one shown in

[Figure 1-1](#). Confirm the following:

- The model number on the label should be **011426**.
- The serial number on the label should begin with **426**.

Figure 1-1. Model Number Label



1.2 Typical System Installation

The following figures illustrate how the SIP RFID/Keypad Secure Access Control Endpoint can be installed as part of a VoIP phone system.

Figure 1-2. Typical Installation

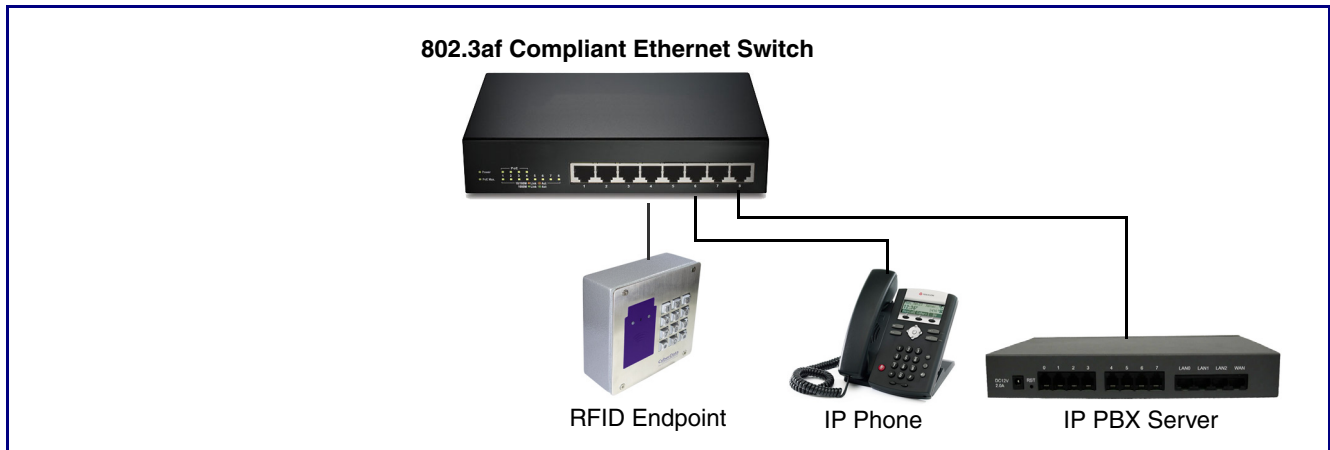


Figure 1-3. Installation with the Door Strike Relay Module

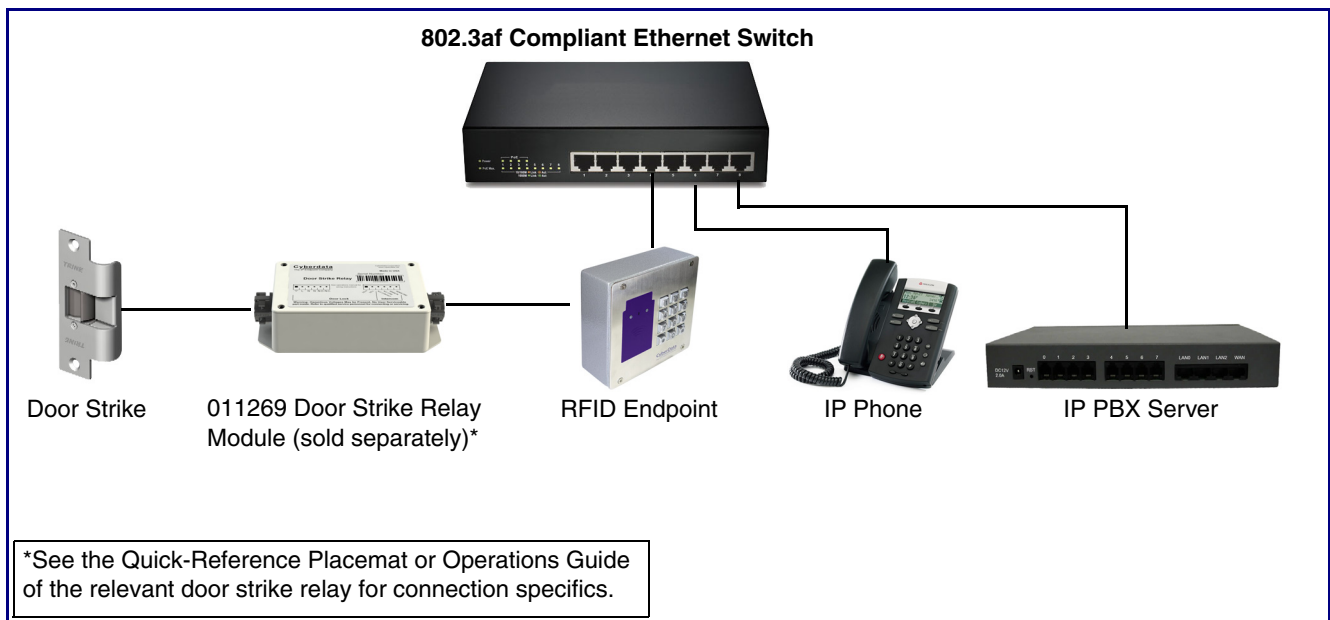
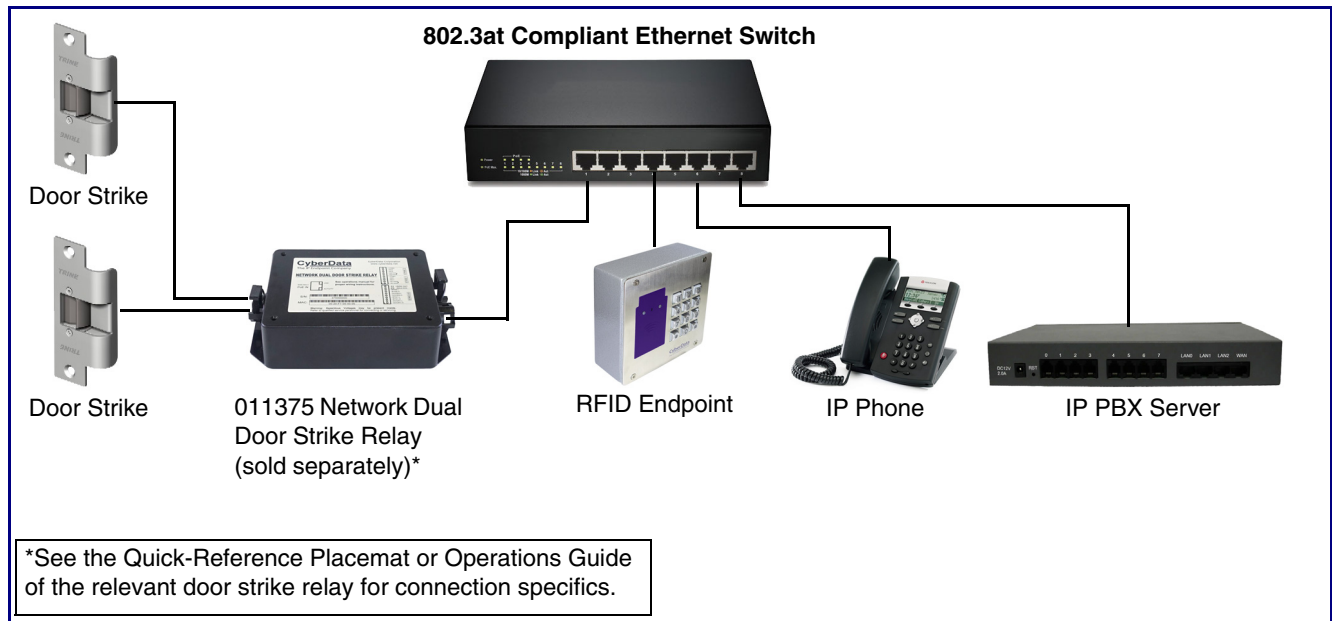


Figure 1-4. Installation with the Network Dual Door Strike Relay



1.3 Product Features

The SIP RFID/Keypad Secure Access Control Endpoint has the following features:

- SIP compliant
- PoE 802.3af enabled (Powered-over-Ethernet)
- Mifare Plus X 2K/4K cards are supported for a high level of encryption
- IP 65 outdoor-rated
- Optional weather shroud for even greater weather protection
- Alert buzzer
- Red/Green lock status lights
- Can operate in standalone mode. PBX not required. Future-proof and adaptable when upgrading to new VoIP PBX
- Built in time of access scheduler
- Local and remote logging with time stamp
- NTP time support
- Network web management
- Supports 500 Access Codes
- Blacklisted code alert via dialout and multicast stored message
- Network downloadable firmware
- Dry contact relay to trigger door lock or unlock gates
- Door closure and tamper alert signal
- Support for CyberData's Networked Dual Door Strike Relay (Part number 011375) and Intermediate Door Strike Relay (part number 011269)
- Security Torx screws with driver kit included
- Device ships with packet of 5 RFID cards. Additional packets of 10 cards per packet are sold separately (part number 011422)
- 12-key keypad

1.4 Supported Protocols

The SIP RFID/Keypad Secure Access Control Endpoint supports the following protocols:

- SIP (session initiation protocol)
- HTTP Web-based configuration

Provides an intuitive user interface for easy system configuration and verification of SIP RFID/Keypad Secure Access Control Endpoint operations.

- DHCP Client

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

- TFTP Client

Facilitates hosting for the Autoprovisioning configuration file.

- RTP

- Facilitates autoprovisioning configuration values on boot

- Audio Encodings

PCMU (G.711 mu-law)

PCMA (G.711 A-law)

1.5 Supported SIP Servers

The following link contains information on how to configure the device for the supported SIP servers:

<https://www.cyberdata.net/pages/connecting-to-ip-pbx-servers>

1.6 Specifications

Table 1-1. Specifications

Specifications	
Ethernet I/F	10/100 Mbps
Protocol	SIP RFC 3261 Compatible
RFID Card Protocol	ISO/IEC 14443 Type A - 13.56 MHz Standard
Power Input	PoE 802.3af compliant or +8 to +12VDC @ 1000mA Regulated Power Supply ^a
On-Board Relay	1A at 30 VDC
Supported RFID cards	Mifare Plus X 2k Mifare Plus X 4k
Operating Range	Temperature: -40° C to 55° C (-40° F to 131° F) Humidity: 5-95%, non-condensing
Storage Temperature	-40° C to 70° C (-40° F to 158° F)
Storage Altitude	Up to 15,000 ft. (4573 m)
Payload Types	G711, A-law and μ -law, G.722
Dimensions ^b	5.118 inches [130 mm] Length 2.252 inches [57.21 mm] Width 5.118 inches [130 mm] Height
Weight	2.0 lbs. (0.90 kg)
Boxed Weight	3.0 lbs. (1.36 kg)
Compliance	CE; EMC Directive – Class A EN 55032 & EN 55024, LV Safety Directive – EN 60950-1, RoHS Compliant, FCC; Part 15 Class A, Industry Canada; ICES-3 Class A, IEEE 802.3 Compliant
Part Number	011426 011188 Weather Shroud (sold separately)

a. Contacts 1 and 2 on the terminal block are only for powering the device from a non-PoE 12VDC power source as an alternative to Network PoE power. Use of these contacts for any other purpose will damage the device and void the product warranty.

b. Dimensions are measured from the perspective of the product being upright with the front of the product facing you.

1.7 Compliance

1.7.1 CE Testing

CE testing has been performed according to EN ISO/IEC 17050 for Emissions, Immunity, and Safety. The Declaration of Conformity can be supplied upon request.

1.7.2 FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.




2 Installing the SIP RFID/Keypad Secure Access Control Endpoint

2.1 Parts List

Table 2-1 illustrates the SIP RFID/Keypad Secure Access Control Endpoint parts.

Note See [Appendix A, "Mounting the SIP RFID/Keypad Secure Access Control Endpoint"](#) for physical mounting information.

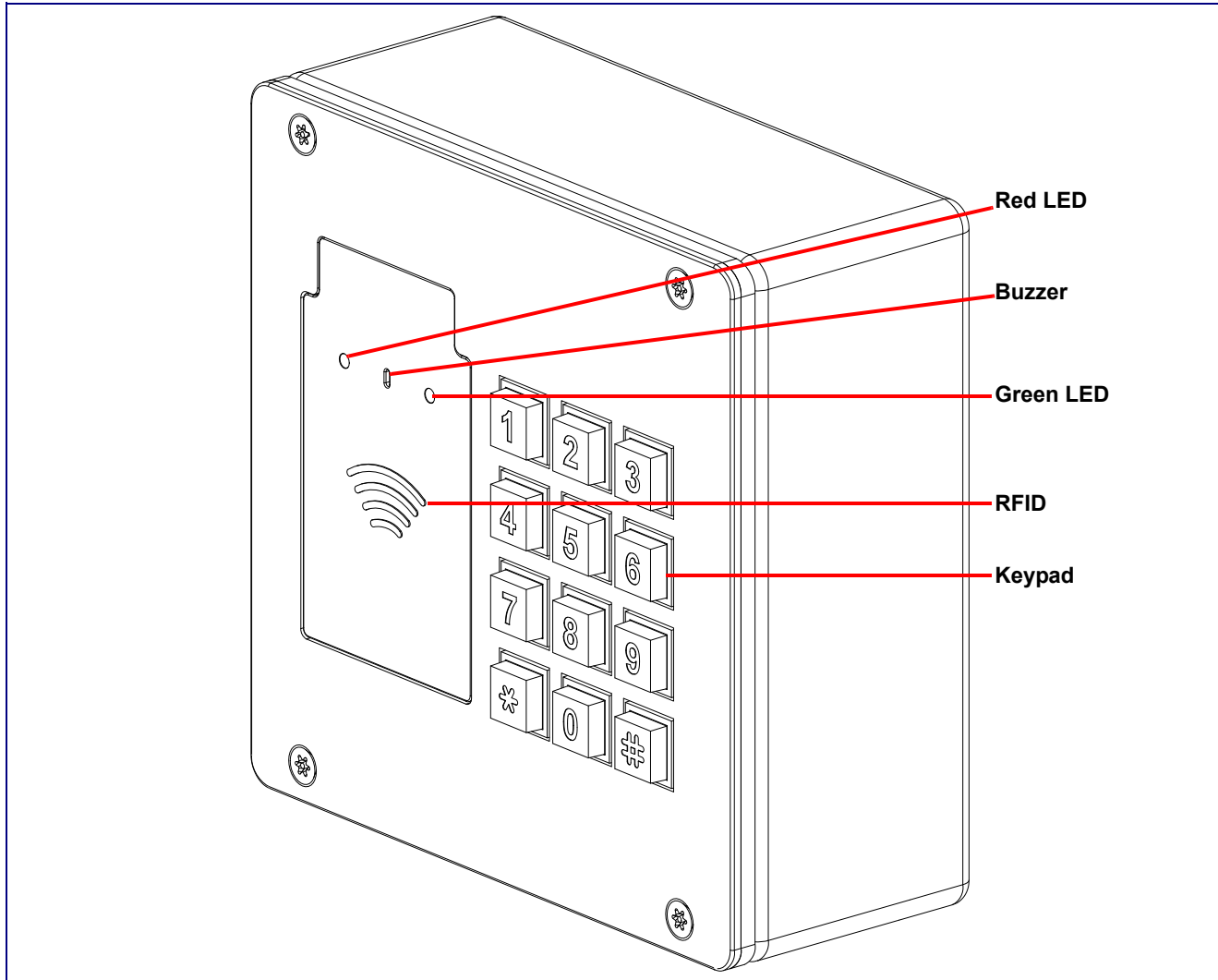
Table 2-1. Parts List

Quantity	Part Name	Illustration
1	SIP RFID/Keypad Secure Access Control Endpoint Assembly	
1	Installation Quick Reference Guide	
1	SIP RFID/Keypad Secure Access Control Endpoint Mounting Accessory Kit	

2.2 SIP RFID/Keypad Secure Access Control Endpoint Components

Figure 2-1 shows the components of the SIP RFID/Keypad Secure Access Control Endpoint.

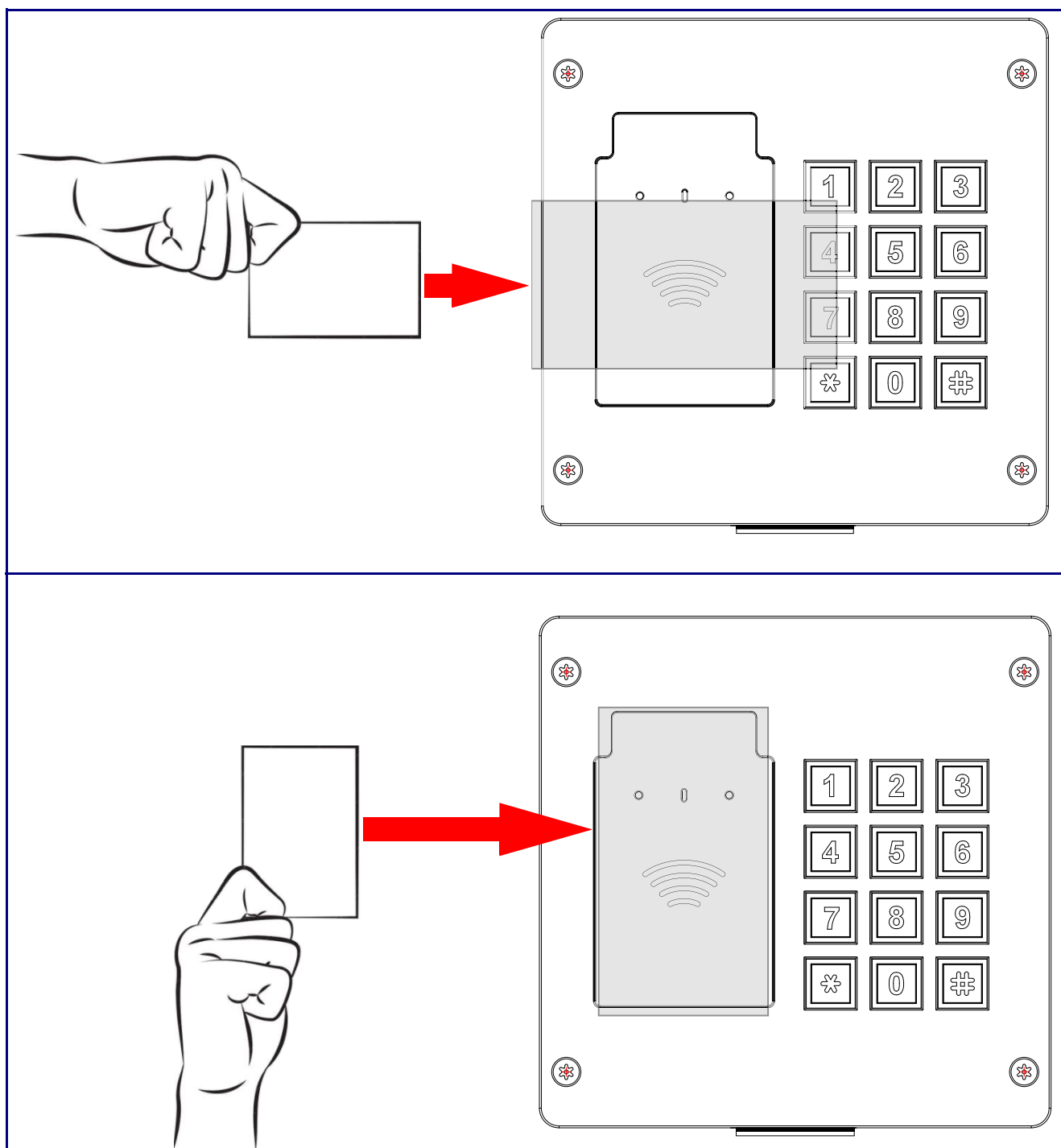
Figure 2-1. SIP RFID/Keypad Secure Access Control Endpoint Components



2.3 Optimal orientation of the RFID tags and location against the RFID unit

For best results, the tag should be oriented and touched to the location shown in [Figure 2-2](#) and held for at least one second.

Figure 2-2. Optimal orientation of the RFID tags and location against the RFID unit



2.4 Device Setup

2.4.1 SIP RFID/Keypad Secure Access Control Endpoint Connections

Figure 2-3 shows the pin connections on the terminal block. This terminal block can accept 16 AWG gauge wire.

Note As an alternative to using PoE power, you can supply +8 to +12VDC @ 1000mA Regulated Power Supply into the terminal block.


 GENERAL ALERT	<p>Caution</p> <p><i>Equipment Hazard:</i> Contacts 1 and 2 on the terminal block are only for powering the device from a non-PoE 12 VDC power source as an alternative to Network PoE power. Use of these contacts for any other purpose will damage the device and void the product warranty.</p>
--	--

Figure 2-3. Intercom Connections

Alternate Power Input:
1 = +8 to +12VDC @ 1000mA Regulated Power Supply*
2 = Power Ground*

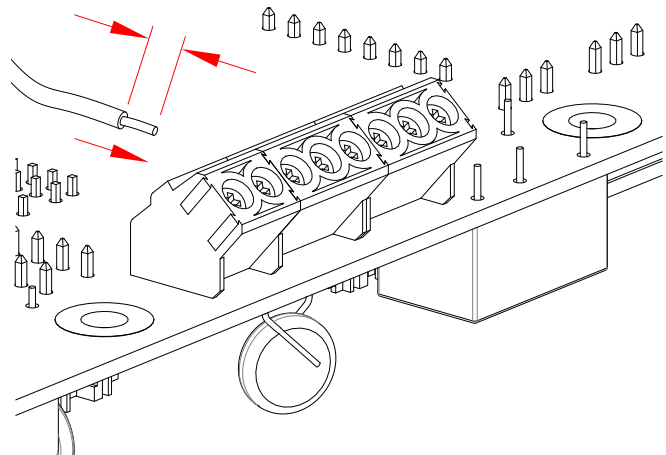


Relay Contact:
(1 A at 30 VDC for continuous loads)
3 = Relay Common
4 = Relay Normally Open Contact
5 = Sense Input
6 = Sense Ground
7 = Remote Switch "A"
8 = Remote Switch "B"




*Contacts 1 and 2 on the terminal block are only for powering the device from a non-PoE 12VDC power source as an alternative to Network PoE power. Use of these contacts for any other purpose will damage the device and void the product warranty.

Terminal block can accept up to 16 AWG wire.
Tool required for terminal block screw:
Size #00 Phillip Drive Screwdriver

Wire(s) in
Tin Wire to 0.25 inch [6mm]



2.4.2 Using the On-Board Relay

 GENERAL ALERT	<p>Warning</p> <p><i>Electrical Hazard:</i> This product should be installed by a licensed electrician according to all local electrical and building codes.</p>
 GENERAL ALERT	<p>Warning</p> <p><i>Electrical Hazard:</i> The relay contacts are dry and provided for a normally open and momentarily closed configuration. Neither the alternate power input nor PoE power can be used to drive a door strike.</p>
 GENERAL ALERT	<p>Warning</p> <p><i>Electrical Hazard:</i> The relay does not support AC powered door strikes. Any use of this relay beyond its normal operating range can cause damage to the product and is not covered under our warranty policy.</p>

The device has a built-in relay that can be activated by a web configurable DTMF string that can be received from a VoIP phone supporting out of band (RFC2833) DTMF as well as a number of other triggering events. See the [Device Configuration Page](#) on the web interface for relay settings.

This relay can be used to trigger low current devices like LED strobes and security camera input signals as long as the load is not an inductive type and the relay is limited to a maximum of 1 Amp @ 30 VDC. Inductive loads can cause excessive “hum” and can interfere with or damage the unit’s electronics.

We highly recommend that inductive load and high current devices use our Networked Dual Door Strike Relay (CD# 011375) (see [Section 2.4.3.2, "Network Dual Door Strike Relay Wiring Diagram with External Power Source"](#)).

This relay interface also has a general purpose input port that can be used to monitor an external switch and generate an event.

For more information on the sensor options, see the [Sensor Configuration Page](#) on the web interface.

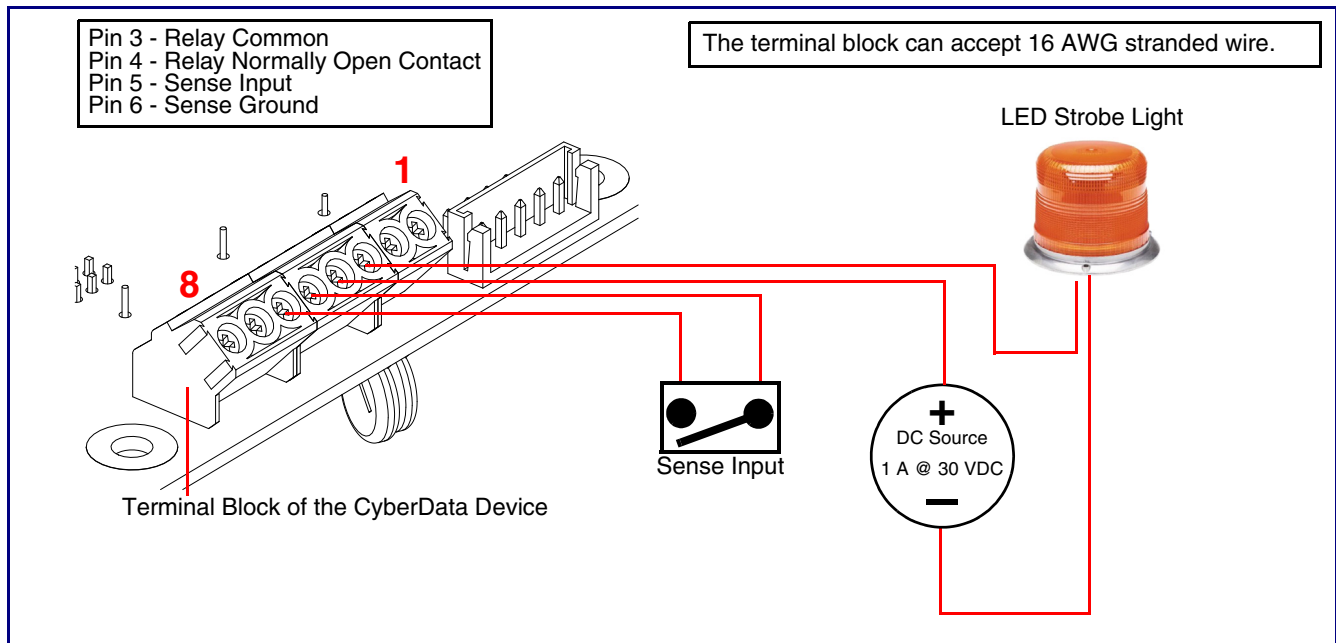
2.4.3 Wiring the Circuit

2.4.3.1 Devices Less than 1A at 30 VDC

If the power for the device is less than 1A at 30 VDC and is not an inductive load, then see [Figure 2-4](#) for the wiring diagram.

When configuring with an inductive load, please use an intermediary relay with a High PIV Ultrafast Switching Diode. We recommend using the Network Dual Door Strike Relay (CD# 011375) (see [Section 2.4.3.2, "Network Dual Door Strike Relay Wiring Diagram with External Power Source"](#)).


Figure 2-4. Devices Less than 1A at 30 VDC



2.4.3.2 Network Dual Door Strike Relay Wiring Diagram with External Power Source

For wiring an electronic door strike to work over a network, we recommend the use of our external Network Dual Door Strike Relay (CD# 011375).

This product provides an easier method of connecting standard door strikes as well as AC and higher voltage devices. See [Figure 2-5](#) and [Figure 2-6](#) for the wiring diagrams.

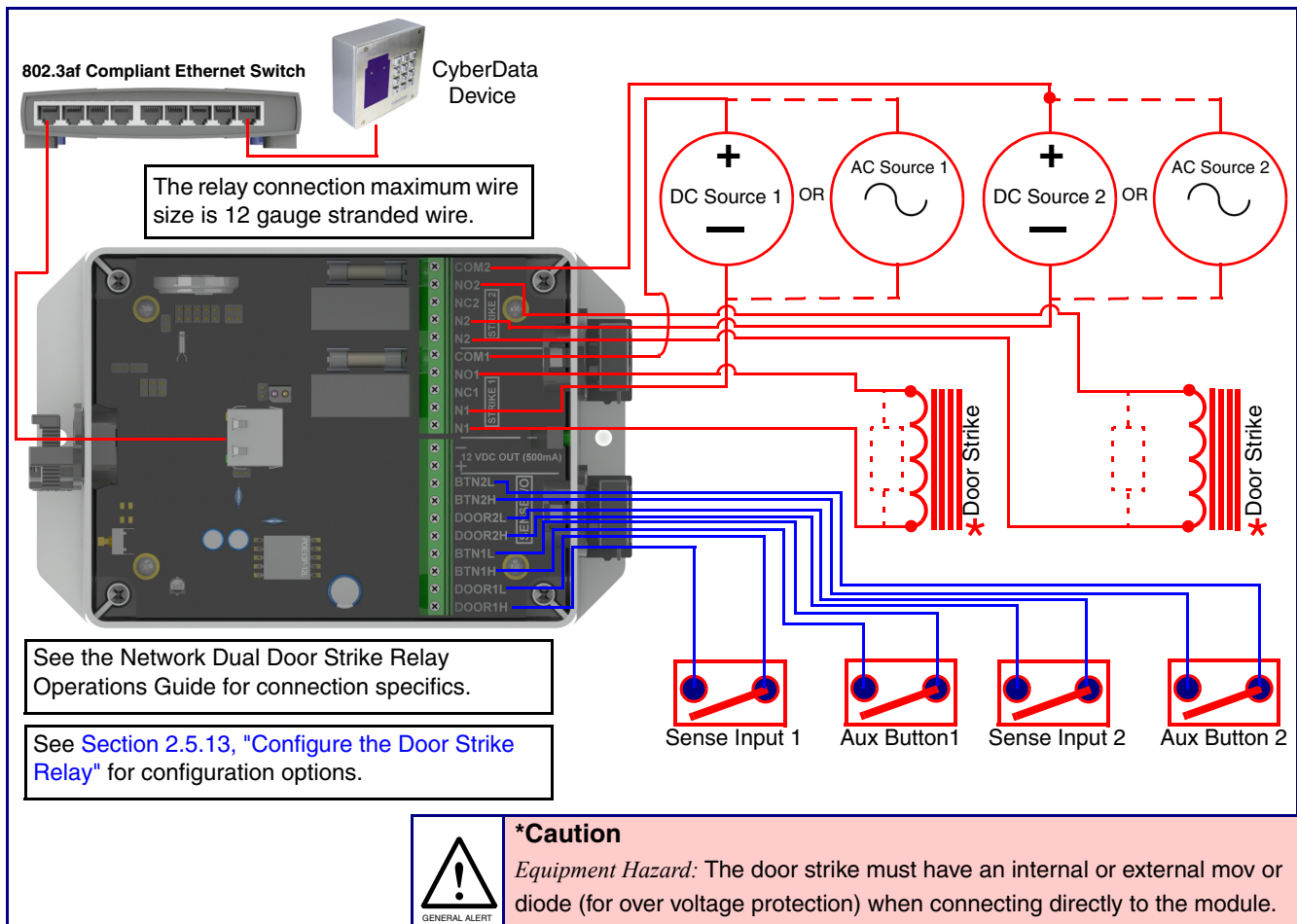


GENERAL ALERT

Warning

Electrical Hazard: Hazardous voltages may be present. No user serviceable part inside. Refer to qualified service personnel for connecting or servicing.

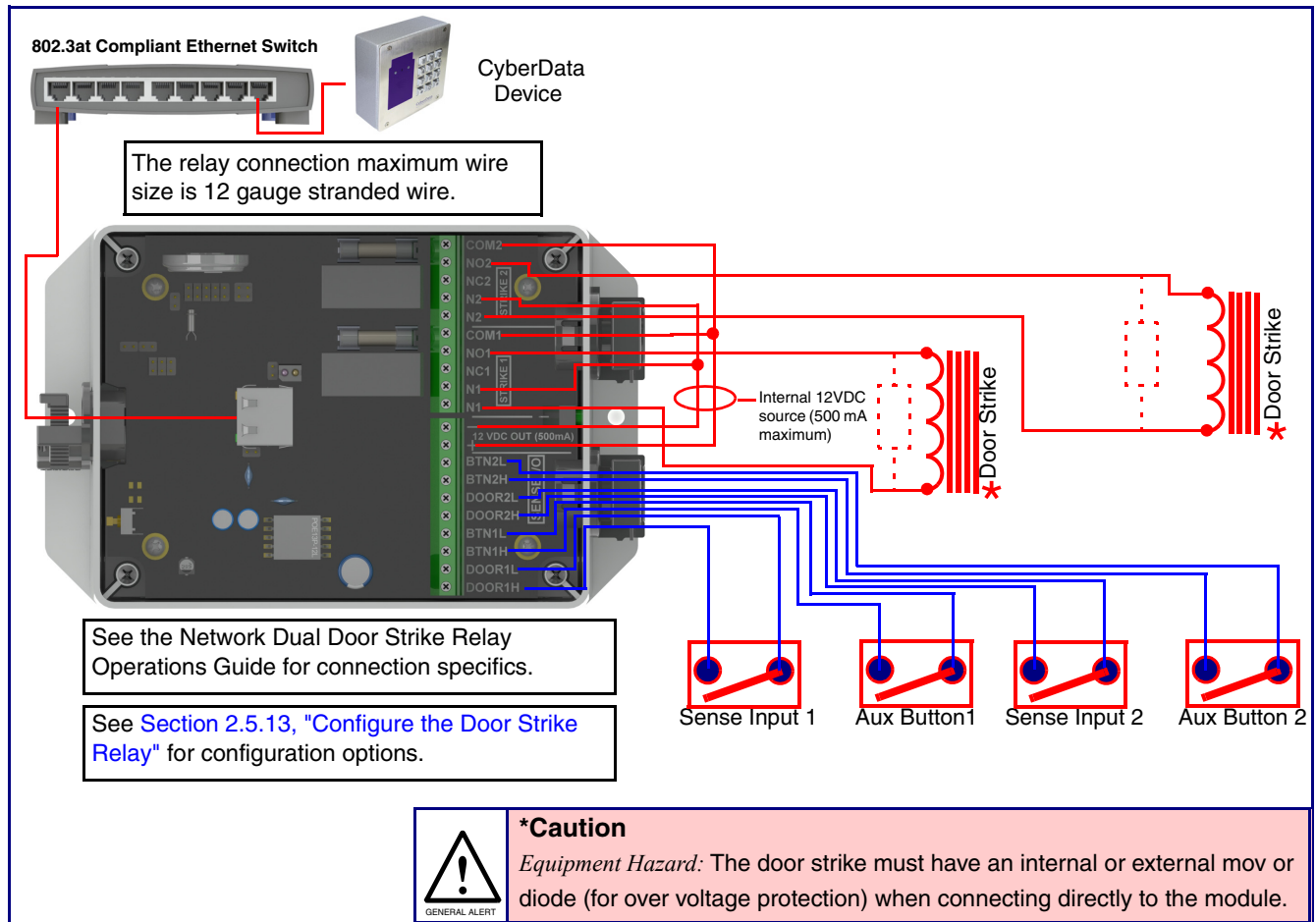
Figure 2-5. Network Dual Door Strike Relay Wiring Diagram with External Power Source



Note When **Activate DSR on Valid RFID** is enabled, a swipe of a valid RFID card will activate Relay 2.

2.4.3.3 Network Dual Door Strike Relay Wiring Diagram Using PoE+

Figure 2-6. Network Dual Door Strike Relay Wiring Diagram Using PoE+



Note When **Activate DSR on Valid RFID** is enabled, a swipe of a valid RFID card will activate Relay 2.

If you have questions about connecting door strikes or setting up the web configurable options, please contact our support department at the following website:

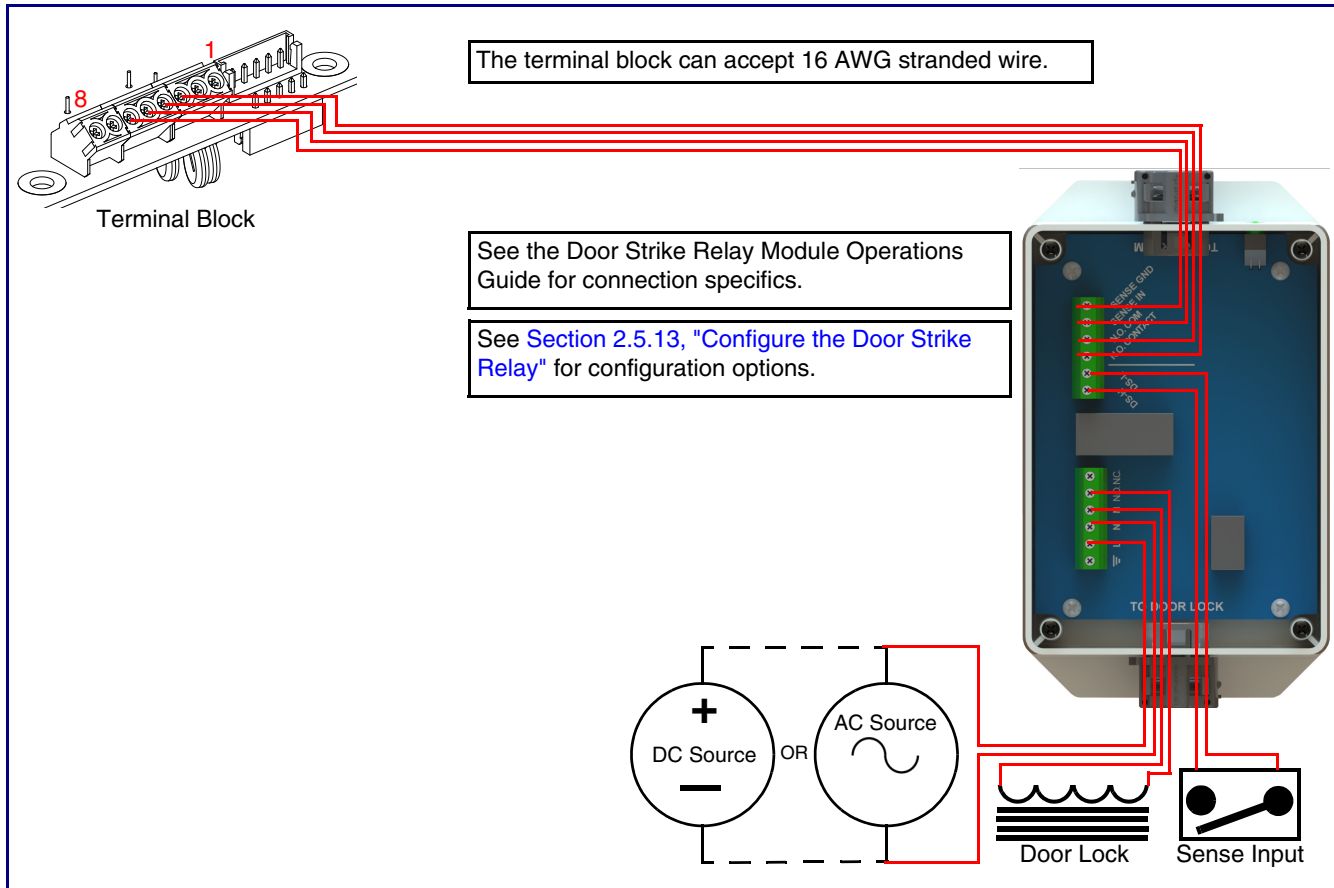
<http://support.cyberdata.net/>

2.4.3.4 Door Strike Relay Module Wiring Diagram from the Device

For wiring an electronic door strike, we recommend the use of our external Door Strike Relay Module (CD# 011269).

This product provides an easier method of connecting standard door strikes as well as AC and higher voltage devices. See [Figure 2-7](#) for the wiring diagram.

Figure 2-7. Door Strike Relay Module Wiring Diagram from the Device



Note When **Activate DSR on Valid RFID** is enabled, a swipe of a valid RFID card will activate Relay 2.

If you have questions about connecting door strikes or setting up the web configurable options, please contact our support department at the following website:

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

2.4.4 SIP RFID/Keypad Secure Access Control Endpoint Connectors

See the following figures and tables to identify the connectors and functions of the SIP RFID/Keypad Secure Access Control Endpoint.

Figure 2-8. Connector Locations

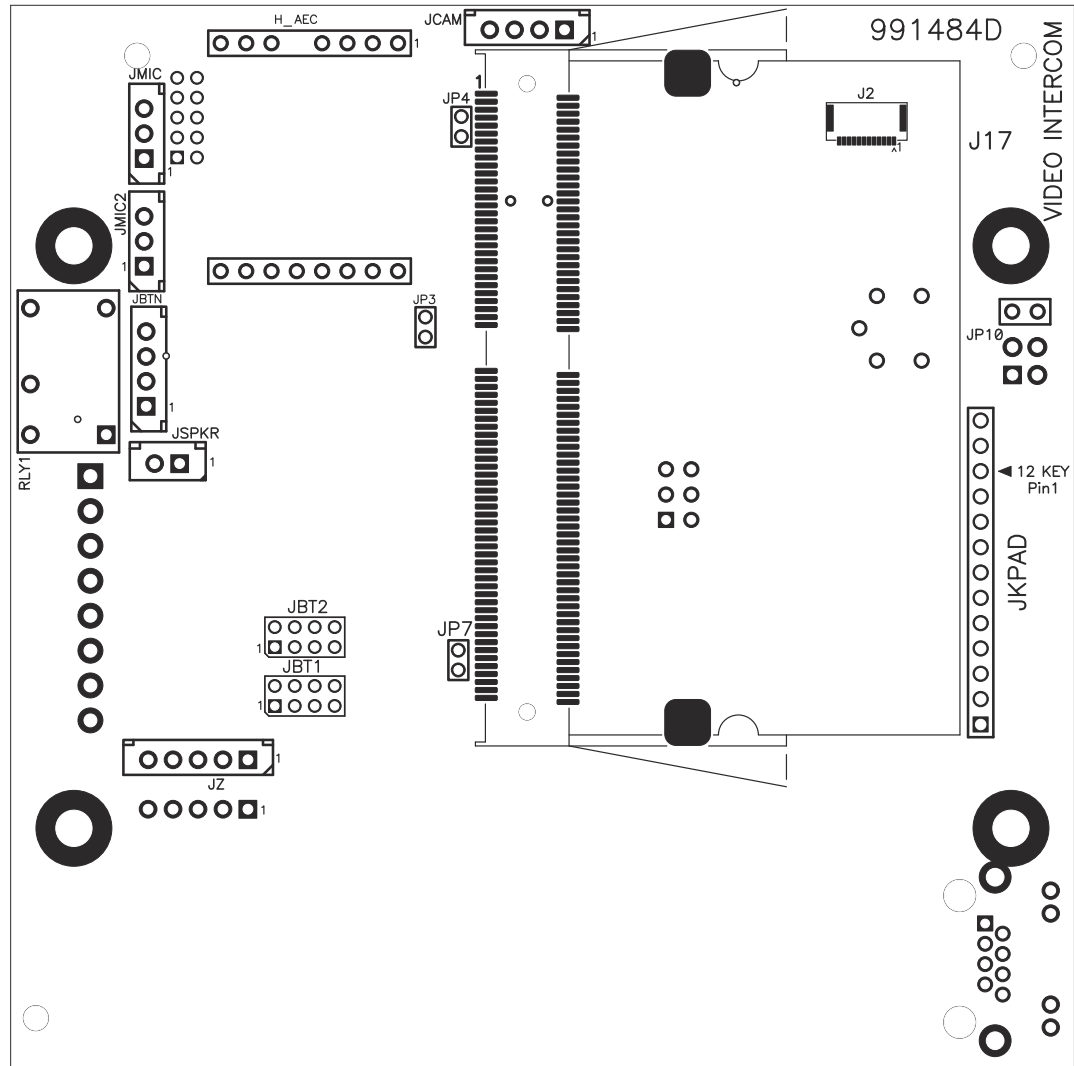


Table 2-2. Connector Functions

Connector	Function
JCAM	Camera Interface
H_AEC	Echo Cancellation Interface
JBTN	Call Button LED Interface
JMIC	Microphone Interface
JMIC2	Second Microphone Interface — Not Used
JSPKR	Speaker Interface
JKPAD	Keypad Interface — Not Used
JY	Sensor Interface — Not Used
JP3	Audio Mute — Factory Use Only
JP4	Boot from mSD Card — Factory Use Only
JP7	EPROM Write Protect — Factory Use Only
JP10	Disables the intrusion sensor when installed.
J17	Sitara Card Interface — Factory Use Only
JBT1	Touch Button -1 Interface — Not Used
JBT2	Touch Button -2 Interface — Not Used

Figure 2-9. Connector Locations

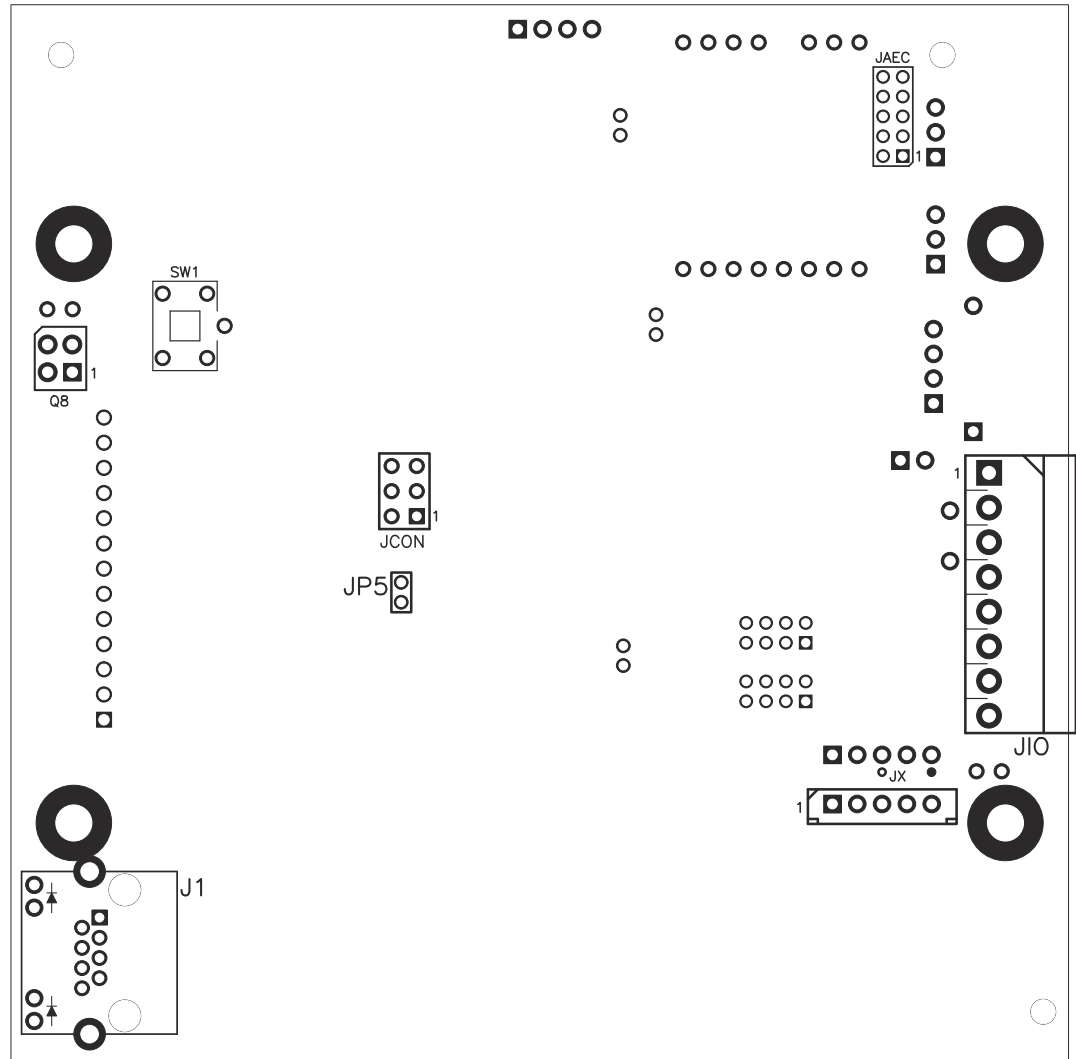


Table 2-3. Connector Functions

Connector	Function
J1	PoE Network Connection (RJ-45 ethernet)
JP5	Reset jumper ^a
JX	Auxiliary Strobe Interface
Q8	Intrusion Detector
JAEC	AEC Configuration Interface — Factory Use Only
JIO	Terminal Block (see Figure 2-3)
JCON	Console Port — Factory Use Only
JSPI	Reserved — Factory Use Only
SW1	See Section 2.4.6, "RTFM Button"

a.Do not install a jumper. Momentary short to reset. Permanent installation of a jumper would prevent the board from running all together.

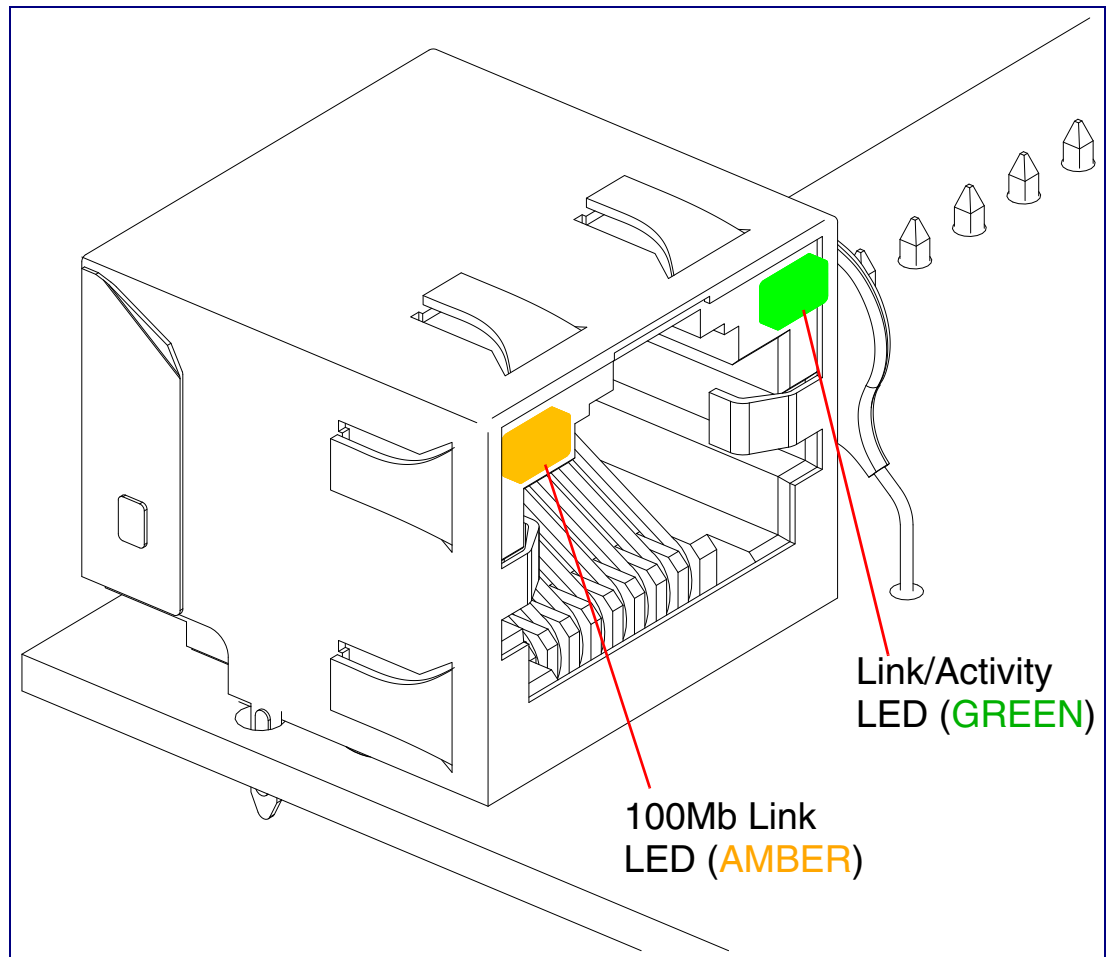
2.4.5 Activity and Link LEDs

2.4.5.1 Verifying the Network Connectivity and Data Rate

When you plug in the Ethernet cable or power supply to the Intercom, the following occurs:

- The square, **GREEN Link/Activity** LED blinks when there is network activity (see [Figure 2-10](#)).
- The square, **AMBER 100Mb Link** LED above the Ethernet port indicates that a 100Mb network connection has been established (see [Figure 2-10](#)).

Figure 2-10. Activity and Link LED

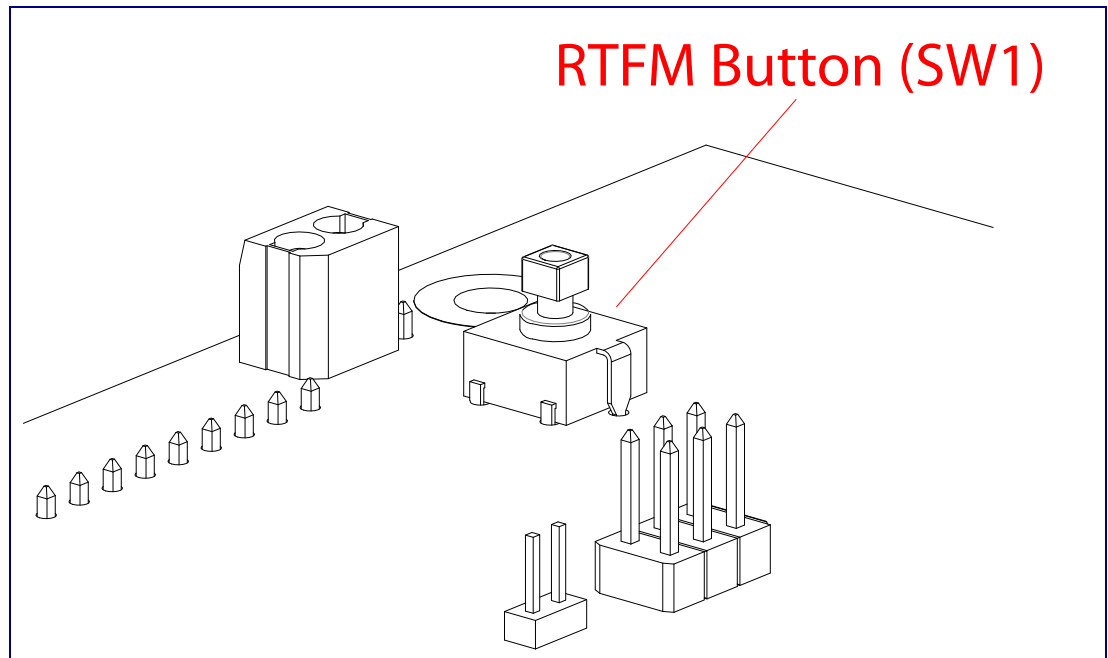


2.4.6 RTFM Button

When the SIP RFID/Keypad Secure Access Control Endpoint is operational and linked to the network, you can use the Reset Test Function Management (**RTFM**) button (see **SW1** in [Figure 2-11](#)) on the SIP RFID/Keypad Secure Access Control Endpoint board to announce and confirm the SIP RFID/Keypad Secure Access Control Endpoint's IP Address and test to see if the audio is working.

Note You must do these tests prior to final assembly.

Figure 2-11. RTFM Button



2.4.6.1 Announcing the IP Address

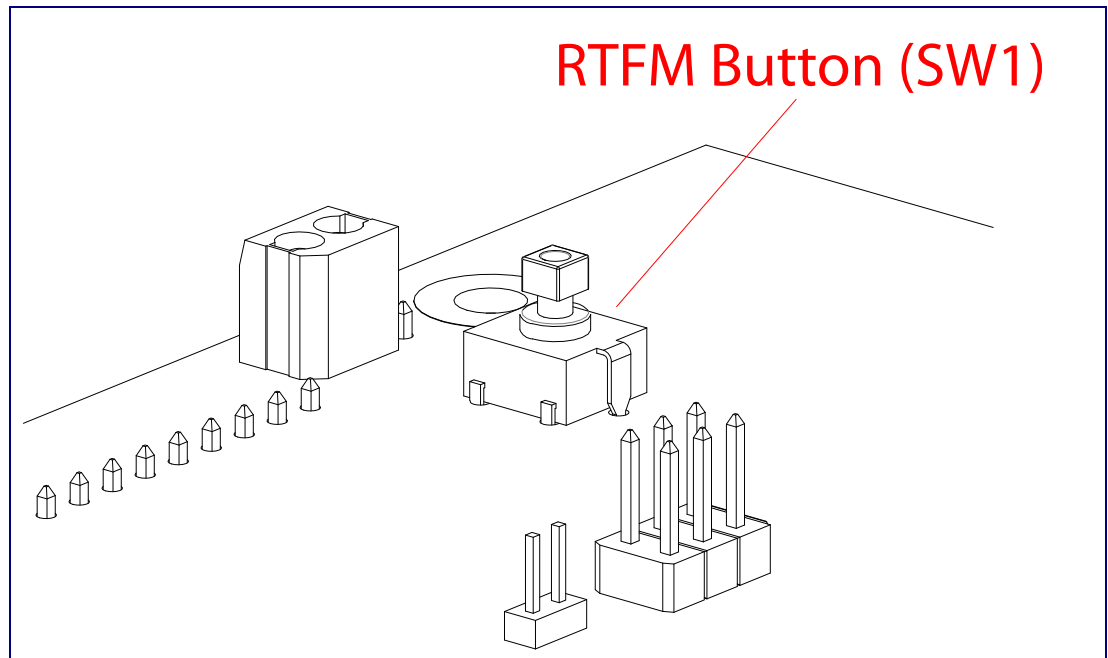
To announce a device's current IP address:

1. Press and release the RTFM button (see **SW1** in [Figure 2-12](#)) within a five second window.

Note The device 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).

Note Pressing and holding the RTFM button for longer than five seconds will restore the device to the factory default settings.

Figure 2-12. RTFM Button



2.4.6.2 Restoring the Factory Default Settings

When troubleshooting configuration problems, it is sometimes convenient to restore the device to a known state.

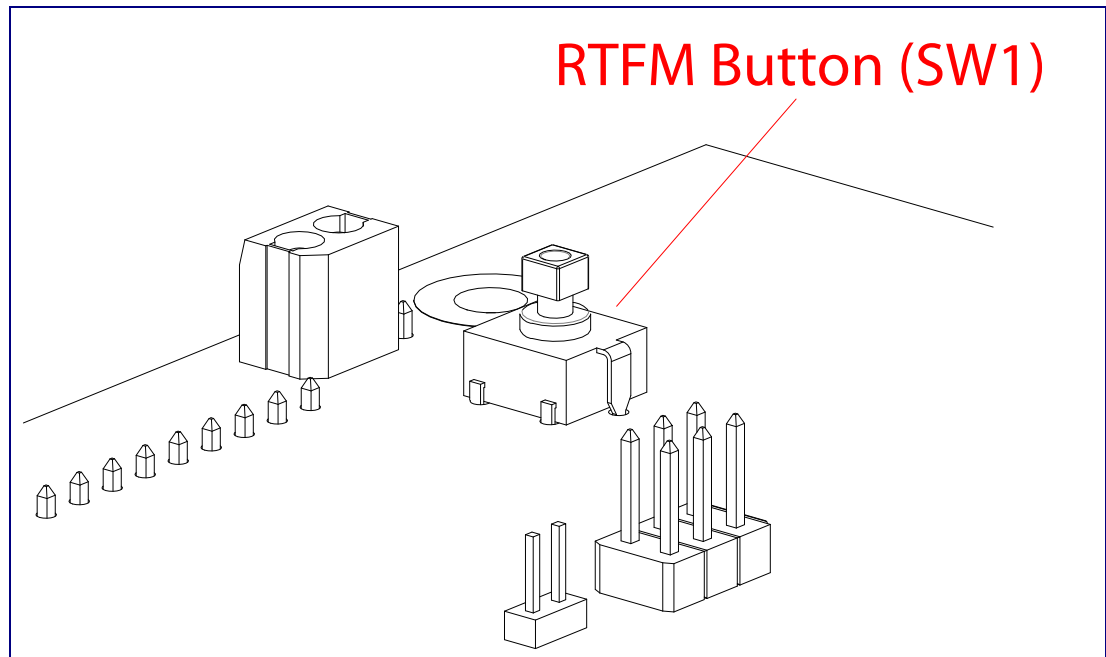
Note Each SIP RFID/Keypad Secure Access Control Endpoint is delivered with factory set default values.

To restore the factory default settings:

1. Press and hold the **RTFM button** (see **SW1** in [Figure 2-13](#)) for more than five seconds.
2. The device announces that it is restoring the factory default settings.

Note The device 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 2-13. RTFM Button



2.5 Configure the SIP RFID/Keypad Secure Access Control Endpoint Parameters

To configure the SIP RFID/Keypad Secure Access Control Endpoint online, use a standard web browser.

Configure each SIP RFID/Keypad Secure Access Control Endpoint and verify its operation *before* you mount it. When you are ready to mount an SIP RFID/Keypad Secure Access Control Endpoint, refer to [Appendix A, "Mounting the SIP RFID/Keypad Secure Access Control Endpoint"](#) for instructions.

2.5.1 Factory Default Settings

All SIP RFID/Keypad Secure Access Control Endpoints are initially configured with the following default IP settings:

When configuring more than one SIP RFID/Keypad Secure Access Control Endpoint, attach the SIP RFID/Keypad Secure Access Control Endpoints to the network and configure one at a time to avoid IP address conflicts.

Table 2-4. Factory Default Settings

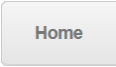
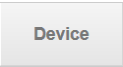
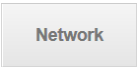


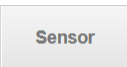
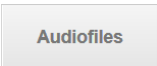
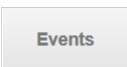

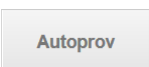
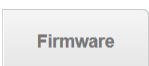
Parameter	Factory Default Setting
IP Addressing	DHCP
IP Address ^a	10.10.10.10
Web Access Username	admin
Web Access Password	admin
Subnet Mask ^a	255.0.0.0
Default Gateway ^a	10.0.0.1

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

2.5.2 SIP RFID/Keypad Secure Access Control Endpoint Web Page Navigation

Table 2-5 shows the navigation buttons that you will see on every SIP RFID/Keypad Secure Access Control Endpoint web page.

Table 2-5. Web Page Navigation

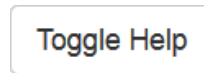
Web Page Item	Description
	Link to the Home page.
	Link to the Device page.
	Link to the Network page.
	Link to go to the SIP page.
	Link to the RFID page.
	Link to the Sensor page.
	Link to the Audiofiles page.
	Link to the Events page.
	Link to the Door Strike Relay page.
	Link to the Autoprovisioning page.
	Link to the Firmware page.

2.5.3 Using the Toggle Help Button

The **Toggle Help** button allows you to see a short description of some of the settings on the webpage. To use the **Toggle Help** button, do the following:

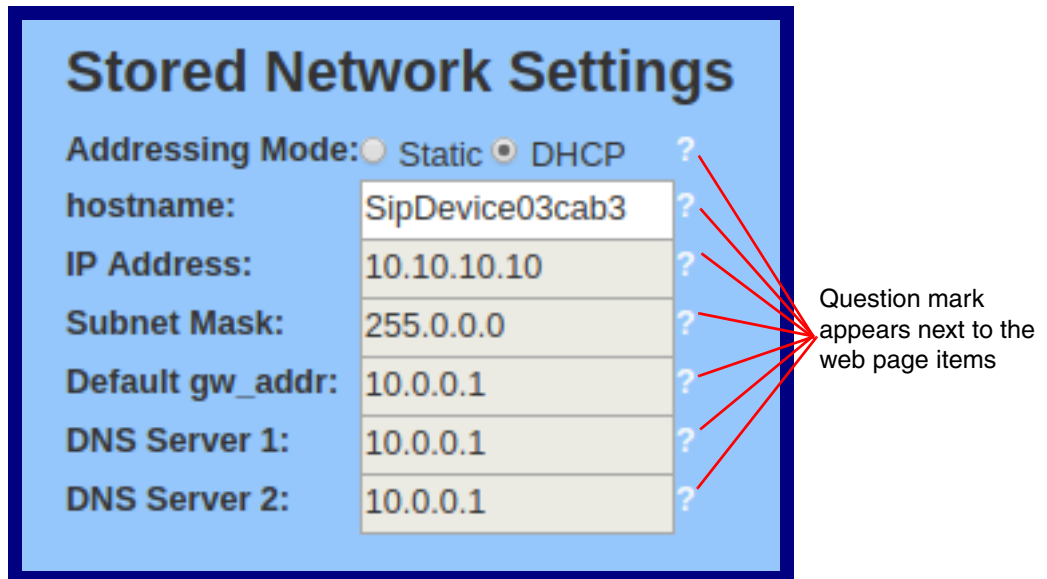
1. Click on the **Toggle Help** button that is on the UI webpage. See [Figure 2-14](#) and [Figure 2-15](#).

Figure 2-14. Toggle/Help Button



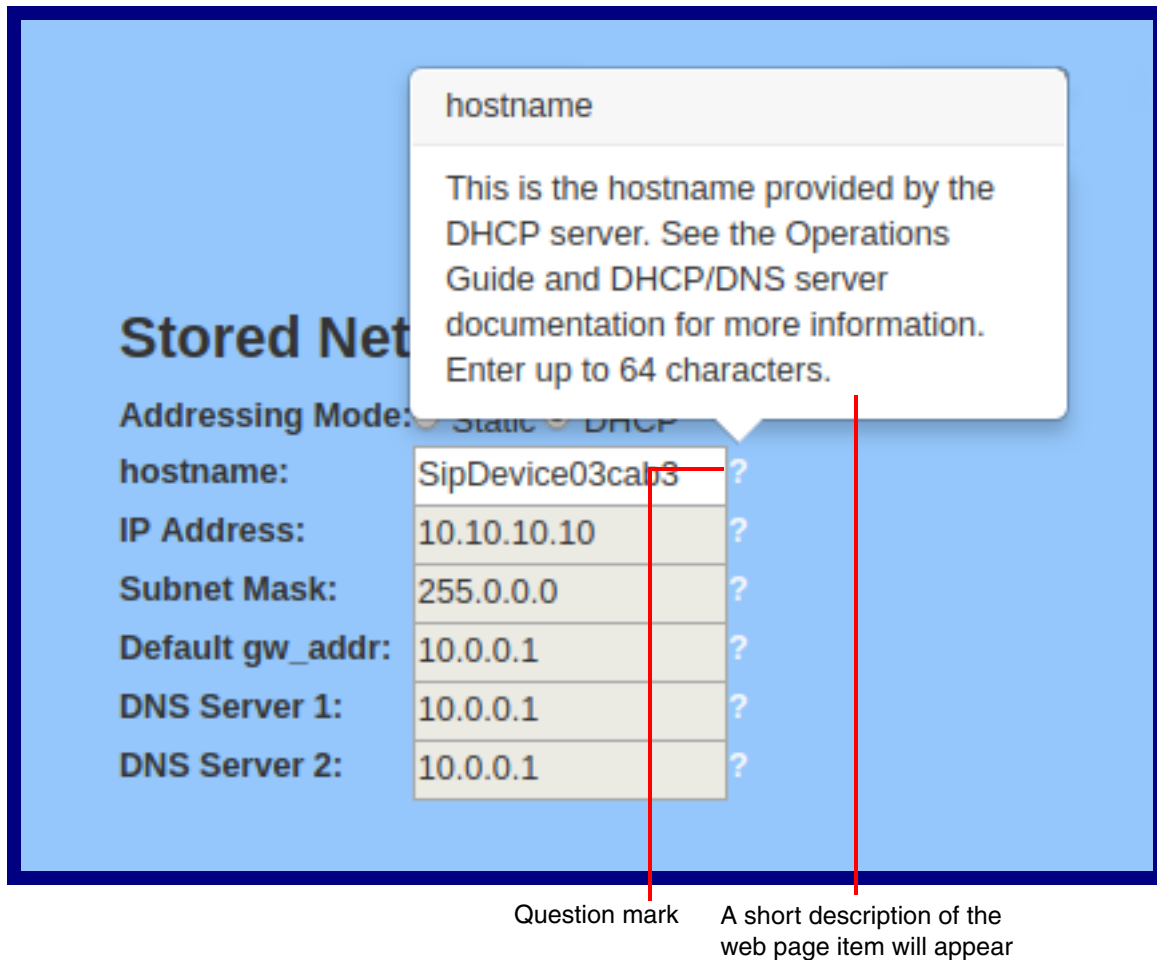
2. You will see a question mark (?) appear next to each web page item that has been provided with a short description by the Help feature. See [Figure 2-15](#).

Figure 2-15. Toggle Help Button and Question Marks



3. Move the mouse pointer to hover over the question mark (?), and a short description of the web page item will appear. See [Figure 2-16](#).

Figure 2-16. Short Description Provided by the Help Feature



2.5.4 Log in to the Configuration Home Page

1. Open your browser to the SIP RFID/Keypad Secure Access Control Endpoint 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 RFID/Keypad Secure Access Control Endpoint.

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:

<https://www.cyberdata.net/pages/discovery>

Note The device 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 2-17):

Web Access Username: **admin**

Web Access Password: **admin**

Figure 2-17. Home Page

Home	Device	Network	Sip	RFID	Sensor	Audiofiles	Events	DSR	Autopro	Firmware
------	--------	---------	-----	------	--------	------------	--------	-----	---------	----------

CyberData Keypad RFID

Current Status

Serial Number: 426000001

Mac Address: 00:20:f7:03:ca:b3

Firmware Version: v1.0.0

Partition 2: v1.0.0

Partition 3: v1.0.0

Booting From: partition 2

[Boot From Other Partition](#)

IP Addressing: 10.10.0.119

IP Address: 255.0.0.0

Subnet Mask: 10.0.0.1

Default gw_addr: 10.0.1.56

DNS Server 1: 10.0.1.56

DNS Server 2:

SIP Mode: Enabled

Event Reporting: Disabled

Primary SIP Server: **Not registered**

Backup Server 1: Not registered

Backup Server 2: Not registered

Admin Settings

Username:

Password:

Confirm Password:

[Save](#) [Reboot](#) [Toggle Help](#)

Import Settings

[Browse...](#) No file chosen

[Import Config](#)

Export Settings

[Export Config](#)

3. On the **Home** page, review the setup details and navigation buttons described in [Table 2-6](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-6. Home Page Overview


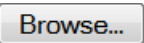





Web Page Item	Description
Admin Settings	
Username ?	The username to access the web interface. Enter up to 25 characters.
Password ?	The password to access the web interface. Enter up to 25 characters.
Confirm Password ?	Confirm the web interface password.
Current Status	
Serial Number	Shows the device serial number.
Mac Address	Shows the device Mac address.
Firmware Version	Shows the current firmware version.
Partition 2	Contains a complete copy of bootable software.
Partition 3	Contains an alternate, complete copy of boot.
Bootting From	Indicates the partition currently used for boot.
	Swap the boot partition.
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	Shows the current status of the SIP mode.
Event Reporting	Shows the current status of the Event Reporting mode.
Primary SIP Server	Shows the current status of the Primary SIP Server.
Backup Server 1	Shows the current status of Backup Server 1.
Backup Server 2	Shows the current status of Backup Server 2.
Import Settings	
	Use this button to select a configuration file to import.
	After selecting a configuration file, click Import to import the configuration from the selected file.
Export Settings	
	Click Export to export the current configuration to a file.

Table 2-6. Home Page Overview (continued)

Web Page Item	Description
	Click the Save button to save your configuration settings.
	Click on the Reboot button to reboot the system.
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

2.5.5 Configure the Device

1. Click the **Device** menu button to open the **Device** page. See [Figure 2-18](#).

Figure 2-18. Device Configuration Page

Home Device Network Sip RFID Sensor Audiofiles Events DSR Autopro Firmware

CyberData Keypad RFID

Relay Settings

Activate Relay with DTMF code: ☒

Relay Pulse Code:

Relay Pulse Duration (in seconds):

Relay Activation Code:

Relay Deactivation Code:

Activate Relay During Ring: ☐

Activate Relay While Call Active: ☐

Play Button Tones: ☒

Misc Settings

Device Name:

Keypad Lit when Idle: ☒

Keypad Brightness (0-255):

RFID LED Brightness (0-255):

Auto-Answer Incoming Calls: ☒

Disable HTTPS (NOT recommended): ☐

Clock Settings

Enable NTP: ☒

NTP Server:

Timezone:

Current Time: Tue, 10 Apr 2018 15:05:18






2. On the **Device** page, you may enter values for the parameters indicated in [Table 2-7](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-7. Device Page Parameters

Web Page Item	Description
Relay Settings	
Activate Relay with DTMF Code ?	Activates the relay when the DTMF Activation Code is entered on the phone during a SIP call with the device. RFC2833 DTMF payload types are supported.
Relay Pulse Code ?	DTMF code used to pulse the relay when entered on a phone during a SIP call with the device. Relay will activate for Relay Pulse Duration seconds then deactivate. Activate Relay with DTMF Code must be enabled. Enter up to 25 digits (* and # are supported).
Relay Pulse Duration (in seconds) ?	The length of time (in seconds) during which the relay will be activated when the DTMF Relay Activation Code is detected. Enter up to 5 digits.
Relay Activation Code ?	Activation code used to activate the relay when entered on a phone during a SIP call with the device. Relay will be active indefinitely, or until the DTMF Relay Deactivation code is entered. Activate Relay with DTMF Code must be enabled. Enter up to 25 digits (* and # are supported).
Relay Deactivation Code ?	Code used to deactivate the relay when entered on a phone during a SIP call with the device. Activate Relay with DTMF Code must be enabled. Enter up to 25 digits (* and # are supported).
Activate Relay During Ring ?	When selected, the relay will be activated when the device is contacted and auto answer is disabled. When Auto-Answer Incoming Calls is enabled, this option does nothing.
Activate Relay While Call Active ?	When selected, the relay will be activated as long as the SIP call is active.
Play Button Tones ?	Play a tone when the keypad buttons are pressed.
Misc Settings	
Device Name ?	Enter up to 25 characters.
Keypad Lit when Idle ?	When selected, the keypad LEDs are illuminated while the device is idle (a call is not in progress).
Keypad Brightness (0-255) ?	The desired keypad LED brightness level. Acceptable values are 0-255, where 0 is the dimmest and 255 is the brightest. Enter up to 3 digits.
RFID LED Brightness (0-255) ?	The desired brightness of the leds on the rfid reader. Acceptable values are 0-255, where 0 is off and 255 is max brightness. Enter up to 3 digits.
Auto-Answer Incoming Calls ?	When selected, the device will automatically answer incoming calls. When Auto-Answer Incoming Calls is disabled, the device will enter a ringing state until the caller disconnects.
Disable HTTPS (NOT recommended) ?	Disables the encrypted connection to the webpage. We do not recommend disabling HTTPS for security reasons.
Clock Settings	
Enable NTP ?	Sync device's local time with the specified NTP Server. Note: This function must be selected to limit the times valid for the RFID tags.

Table 2-7. Device Page Parameters (continued)

Web Page Item	Description
NTP Server 	Use this field to set the address (in IPv4 dotted decimal notation or as a canonical name) for the NTP Server. This field can accept canonical names of up to 64 characters in length.
Timezone	<p>Enter the tz database string of your timezone.</p> <p>Examples:</p> <p>America/Los_Angeles</p> <p>America/New_York</p> <p>Europe/London</p> <p>America/Toronto</p> <p>See https://en.wikipedia.org/wiki/List_of_tz_database_time_zones for a full list of valid strings.</p>
Current Time	Displays the current time.
	Click the Save button to save your configuration settings.
	Click on the Reboot button to reboot the system.
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark () appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

2.5.6 Configure the Network Parameters

1. Click the **Network** menu button to open the **Network** page (Figure 2-19).

Figure 2-19. Network Configuration Page

CyberData Keypad RFID

Stored Network Settings

Addressing Mode: ☐ Static ☒ DHCP

hostname: SipDevice03cab3

IP Address: 10.10.10.10

Subnet Mask: 255.0.0.0

Default gw_addr: 10.0.0.1

DNS Server 1: 10.0.0.1

DNS Server 2: 10.0.0.1

VLAN Settings

VLAN ID (0-4095): 0

VLAN Priority (0-7): 0

Current Network Settings

IP Address: 10.10.0.119

Subnet Mask: 255.0.0.0

Default gw_addr: 10.0.0.1

DNS Server 1: 10.0.1.56

DNS Server 2:

Save Reboot Toggle Help




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

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-8. Network Configuration Parameters

Web Page Item	Description
Stored Network Settings	
Addressing Mode ?	Select either DHCP IP Addressing or Static Addressing by marking the appropriate radio button. DHCP Addressing mode is enabled on default and the device will attempt to resolve network addressing with the local DHCP server upon boot. If DHCP Addressing fails, the device will revert to the last known IP address or the factory default address if no prior DHCP lease was established. See Section 2.5.1, "Factory Default Settings" for factory default settings. Be sure to click Save and Reboot to store changes when configuring a Static address.
Hostname ?	This is the hostname provided by the DHCP server. See the DHCP/DNS server documentation for more information. Enter up to 64 characters.
IP Address ?	Enter the Static IPv4 network address in dotted decimal notation.
Subnet Mask ?	Enter the Subnet Mask in dotted decimal notation.
Default Gateway ?	Enter the Default Gateway IPv4 address in dotted decimal notation.

Table 2-8. Network Configuration Parameters (continued)

Web Page Item	Description
DNS Server 1 ?	Enter the primary DNS Server IPv4 address in dotted decimal notation.
DNS Server 2 ?	Enter the secondary DNS Server IPv4 address in dotted decimal notation.
VLAN Settings	
VLAN ID (0-4095) ?	Specify the IEEE 802.1Q VLAN ID number. Enter up to 4 digits. Note: The device supports 802.1Q 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) ?	Specify the IEEE 802.1p VLAN priority level. Enter 1 digit. A value of 0 may cause the VLAN ID tag to be ignored.
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.
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

Note You must click on the **Save** button and then the **Reboot** button for the changes to take effect.

2.5.7 Configure the SIP (Session Initiation Protocol) Parameters

1. Click on the **SIP** menu button to open the **SIP** page (Figure 2-20).

Figure 2-20. SIP Configuration Page

Home Device Network Sip RFID Sensor Audiofiles Events DSR Autoprov Firmware

CyberData Keypad RFID

SIP Settings

Enable SIP operation: ☒

Primary SIP Server: 10.0.0.253

Primary SIP User ID: 199

Primary SIP Auth ID: 199

Primary SIP Auth Password: *****

Re-registration Interval (in seconds): 360

Backup SIP Server 1:

Backup SIP User ID:

Backup SIP Auth ID:

Backup SIP Auth Password:

Re-registration Interval (in seconds): 360

Backup SIP Server 2:

Backup SIP User ID:

Backup SIP Auth ID:

Backup SIP Auth Password:

Re-registration Interval (in seconds): 360

Remote SIP Port: 5060

Local SIP Port: 5060

Outbound Proxy:

Outbound Proxy Port: 0

Use Cisco SRST: ☐

Register with a SIP Server: ☒

Disable rport Discovery: ☐

Unregister on Boot: ☐

Keep Alive Period: 10000

Call Disconnection

Terminate Call after delay: 0

RTP Settings

RTP Port (even): 10500

Jitter Buffer: 50

Save Reboot Toggle Help

2. On the **SIP** page, enter values for the parameters indicated in [Table 2-9](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.



Table 2-9. SIP Page Parameters

Web Page Item	Description
SIP Settings	
Enable SIP Operation ?	When enabled, the device will transmit, receive, and process SIP messages according to the configured SIP settings below.
Primary SIP Server ?	Enter the SIP server address as an IPv4 address in dotted decimal notation or a fully qualified domain name. This parameter also becomes the host portion of the SIP-URI for the device's extension on the primary SIP server. This field can accept entries of up to 255 characters in length.
Primary SIP User ID ?	Specify the SIP User ID for the Primary SIP Server. This parameter becomes the user portion of the SIP-URI for the device's extension on the primary SIP server. Enter up to 64 alphanumeric characters.
Primary SIP Auth ID ?	Specify the Authenticate ID for the Primary SIP Server. This parameter is required for SIP registration authentication. Enter up to 64 alphanumeric characters.
Primary SIP Auth Password ?	Specify the Authenticate Password for the Primary SIP Server. This parameter is required for SIP registration authentication. Enter up to 64 alphanumeric characters.
Re-registration Interval (in seconds) ?	The SIP Re-registration interval (in seconds) is the SIP Registration lease time, also known as the expiry. The supported range is 30-3600 seconds. Enter up to 4 digits.
Backup SIP Server 1 ?	Enter the backup SIP server address as an IPv4 address in dotted decimal notation or a fully qualified domain name. This parameter also becomes the host portion of the SIP-URI for the device's extension on the backup SIP server. This field can accept entries of up to 255 characters in length.
Backup SIP User ID 1 ?	Specify the SIP User ID for the first backup SIP Server. This parameter becomes the user portion of the SIP-URI for the device's extension on the first backup SIP server. Enter up to 64 alphanumeric characters.
Backup SIP Auth ID 1 ?	Specify the Authenticate ID for the first backup SIP server. This parameter is required for SIP registration authentication. Enter up to 64 alphanumeric characters.
Backup SIP Auth Password 1 ?	Specify the Authenticate Password for the first backup SIP server. This parameter is required for SIP registration authentication. Enter up to 64 alphanumeric characters.
Re-registration Interval (in seconds) ?	The SIP Re-registration interval (in seconds) is the SIP Registration lease time, also known as the expiry. The supported range is 30-3600 seconds. Enter up to 4 digits.
Backup SIP Server 2 ?	Enter a second backup SIP server address as an IPv4 address in dotted decimal notation or a fully qualified domain name. This parameter also becomes the host portion of the SIP-URI for the device's extension on the second backup SIP server. This field can accept entries of up to 255 characters in length.
Backup SIP User ID 2 ?	Specify the SIP User ID for the second backup SIP Server. This parameter becomes the user portion of the SIP-URI for the device's extension on the second backup SIP server. Enter up to 64 alphanumeric characters.
Backup SIP Auth ID 2 ?	Specify the Authenticate ID for the second backup SIP server. This parameter is required for SIP registration authentication. Enter up to 64 alphanumeric characters.
Backup SIP Auth Password 2 ?	Specify the Authenticate Password for the second backup SIP server. This parameter is required for SIP registration authentication. Enter up to 64 alphanumeric characters.

Table 2-9. SIP Page Parameters (continued)

Web Page Item	Description
Re-registration Interval (in seconds) ?	The SIP Re-registration interval (in seconds) is the SIP Registration lease time, also known as the expiry. The supported range is 30-3600 seconds. Enter up to 4 digits.
Remote SIP Port ?	The Remote SIP Port is the port number the device will use as the destination port when sending SIP messages. The default Remote SIP Port is 5060. The supported range is 0-65536. Enter up to 5 digits.
Local SIP Port ?	The Local SIP Port is the port number the device will use to receive SIP messages. The default Local SIP Port is 5060. The supported range is 0-65536. Enter up to 5 digits.
Outbound Proxy ?	Enter the Outbound Proxy address as an IPv4 address in dotted decimal notation or a fully qualified domain name (FQDN). When an IP address is configured, the device will send all SIP messages to this IP address. When an FQDN is configured, the device will run DNS NAPTR, SRV, and A queries on the FQDN to resolve an IP address to which it will send all SIP messages. This field can accept entries of up to 255 characters in length.
Outbound Proxy Port ?	The Outbound Proxy Port is port number used as the destination port when sending SIP messages to the outbound proxy. A value of 0 will default to 5060. The supported range is 0-65536. Enter up to 5 digits.
Use Cisco SRST ?	When enabled, the backup servers are handled according to Cisco SRST (Survivable Remote Site Telephony). It is required for use in clustered Cisco Unified Communications Manager topologies.
Register with a SIP Server ?	When enabled, the device will attempt to register to the configured SIP Server(s) on this page. To configure the device to send and receive point-to-point SIP calls, enable SIP Operation and disable Register with a SIP Server (see Section 2.5.7.1, "Point-to-Point Configuration").
Disable rport Discovery ?	Disabling rport Discovery will prevent the device from including the public WAN IP address and port number in the contact information that is sent to the remote SIP servers. This will generally only need to be enabled when using an SBC or SIP ALG in conjunction with a remote SIP server.
Unregister on Boot ?	When enabled, the device will send one registration with an expiry of 0 on boot.
Keep Alive Period ?	The minimum time in milliseconds between keep-alive packets sent for nat traversal. A value of 0 will disable keep alive packets.
Call Disconnection	
Terminate Call After Delay ?	Automatically terminate an active call after a given delay in seconds. A value of 0 will disable this function. Enter up to 8 digits. Note: This setting does not require a reboot for the changes to take effect.
RTP Settings	
RTP Port (even) ?	Specify the port number used for the RTP stream after establishing a SIP call. This port number must be an even number and defaults to 10500. The supported range is 0-65536. Enter up to 5 digits.
Jitter Buffer ?	Specify the size of the jitter buffer (in milliseconds) used for SIP calls. Valid values are 50-1000.
Save	Click the Save button to save your configuration settings.

Table 2-9. SIP Page Parameters (continued)

Web Page Item	Description
	Click on the Reboot button to reboot the system.
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

Note You must click on the **Save** button for the changes to take effect.

Note For specific server configurations, go to the following website address:
<https://www.cyberdata.net/pages/connecting-to-ip-pbx-servers>

2.5.7.1 Point-to-Point Configuration

When the device is set to not register with a SIP server (see [Figure 2-21](#)), it is possible to set the device to dial out to a specified endpoint.

To make a point to point call, enter the IP address of the remote device in the **Dialout SIP Extension** setting on the RFID page, or the **Dialout Extension** setting of the **Sensor** or **DSR** page. Each of these fields may have the same dialout endpoint, or different ones.

Note Receiving point-to-point SIP calls may not work with all phones.

Figure 2-21. SIP Page Set to Point-to-Point Mode

The screenshot displays the 'SIP Settings' page for the CyberData Keypad RFID. The page has a navigation bar at the top with tabs: Home, Device, Network, Sip, RFID, Sensor, Audiofiles, Events, DSR, Autopro, and Firmware. The main title is 'CyberData Keypad RFID'. The 'SIP Settings' section includes the following fields:

- Enable SIP operation: ☒
- Primary SIP Server: 10.0.0.253
- Primary SIP User ID: 199
- Primary SIP Auth ID: 199
- Primary SIP Auth Password: *****
- Re-registration Interval (in seconds): 360
- Backup SIP Server 1: [empty]
- Backup SIP User ID: [empty]
- Backup SIP Auth ID: [empty]
- Backup SIP Auth Password: [empty]
- Re-registration Interval (in seconds): 360
- Backup SIP Server 2: [empty]
- Backup SIP User ID: [empty]
- Backup SIP Auth ID: [empty]
- Backup SIP Auth Password: [empty]
- Re-registration Interval (in seconds): 360
- Remote SIP Port: 5060
- Local SIP Port: 5060
- Outbound Proxy: [empty]
- Outbound Proxy Port: 0
- Use Cisco SRST: ☐
- Register with a SIP Server: ☐ (indicated by a red arrow)
- Disable rport Discovery: ☐
- Unregister on Boot: ☐
- Keep Alive Period: 10000

The 'Call Disconnection' section includes:

- Terminate Call after delay: 0

The 'RTP Settings' section includes:

- RTP Port (even): 10500
- Jitter Buffer: 50

At the bottom of the settings are three buttons: Save, Reboot, and Toggle Help.

Device is set to NOT register with a SIP server

2.5.8 Configure the RFID Configuration Parameters

1. Click the **RFID** menu button to open the **RFID** page (Figure 2-50).

Figure 2-22. RFID Configuration Page

[Home](#)
[Device](#)
[Network](#)
[Sip](#)
[RFID](#)
[Sensor](#)
[Audiofiles](#)
[Events](#)
[DSR](#)
[Autoprovisioning](#)
[Firmware](#)

CyberData RFID

Current Status

Waiting for RFID tag...

RFID Passphrase

Passphrase [Show](#)

[Set Master Key](#)

Authentication Settings

Enable Two-Factor Authentication: ☐

Two Factor Timeout:

Relay Settings

Activate Relay on Valid RFID: ☒

Activate DSR on Valid RFID: ☐

Relay Timeout (seconds):

Buzzer Settings

Buzz while Relay Active: ☐

Buzz on Rejected RFID Card: ☐

Sensor Settings

Buzz on Door Open Timeout: ☐

Door Sensor Normally Closed: ☐ Yes ☒ No

Sensor Open Timeout (in seconds):

DSR Open Timeout (in seconds):

Blacklist Actions

Play Message to SIP Extension: ☐

Dial Out SIP Extension:

Dial Out SIP ID:

Multicast Audio Message: ☐

Multicast Address:

Multicast Port:

Times to Play Multicast Message:

[Save](#)
[Reboot](#)
[Toggle Help](#)

Import Access List

[Browse...](#) No file chosen

[Import Access List](#)

Export Access List

[Export Access List](#)

Access List

	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	Edit	Delete
2		All	All	No	Add	Delete
3		All	All	No	Add	Delete
4		All	All	No	Add	Delete
5		All	All	No	Add	Delete
6		All	All	No	Add	Delete
7		All	All	No	Add	Delete
8		All	All	No	Add	Delete
9		All	All	No	Add	Delete
10		All	All	No	Add	Delete
11		All	All	No	Add	Delete
12		All	All	No	Add	Delete
13		All	All	No	Add	Delete
14		All	All	No	Add	Delete
15		All	All	No	Add	Delete
16		All	All	No	Add	Delete
17		All	All	No	Add	Delete
18		All	All	No	Add	Delete

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Figure 2-23. RFID Configuration Page

Security log

2018-04-10 11:53:57 Waiting for RFID tag...
2018-04-10 11:54:04 Deactivating the dsr relay after timeout
2018-04-10 11:54:04 Deactivating the local relay after timeout
2018-04-10 12:03:38 Device entering RFID Validate Mode
2018-04-10 12:03:38 Waiting for RFID tag...
2018-04-10 12:05:04 Device entering RFID Validate Mode
2018-04-10 12:05:04 Waiting for RFID tag...
2018-04-10 13:01:38 Device entering RFID Validate Mode
2018-04-10 13: RFID tag...
2018-04-10 14:26:39 Received rfid authentication for tag 4 2018-04-10 14:26:39
2018-04-10 14:26:39 Received rfid authentication for tag 4 2018-04-10 14:26:39

Get Security Log
Clear Security Log
Refresh Log

19	All	All	No	Add	Delete
20	All	All	No	Add	Delete
21	All	All	No	Add	Delete
22	All	All	No	Add	Delete
23	All	All	No	Add	Delete
24	All	All	No	Add	Delete
25	All	All	No	Add	Delete
26	All	All	No	Add	Delete
27	All	All	No	Add	Delete
28	All	All	No	Add	Delete
29	All	All	No	Add	Delete
30	All	All	No	Add	Delete
31	All	All	No	Add	Delete
32	All	All	No	Add	Delete
33	All	All	No	Add	Delete
34	All	All	No	Add	Delete
35	All	All	No	Add	Delete
36	All	All	No	Add	Delete
37	All	All	No	Add	Delete
38	All	All	No	Add	Delete
39	All	All	No	Add	Delete
40	All	All	No	Add	Delete
41	All	All	No	Add	Delete
42	All	All	No	Add	Delete
43	All	All	No	Add	Delete
44	All	All	No	Add	Delete

2. On the **Sensor** page, enter values for the parameters indicated in [Table 2-11](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-10. Sensor Page Parameters



Web Page Item	Description
Current Status	Display the current status of the RFID reader."
RFID Passphrase	
Passphrase ?	The master password or phrase used to setup the authentication tokens for your RFID tags. Make sure to write this down!
	Shows the Master Key.
	Launches the Set Master Key dialog box, allowing the user to set the master key. Please note that when a master key is set, all cards programmed with the old key will be invalidated.
Authentication Settings	
Enable Two-Factor Authentication ?	When selected, a registered user must scan a valid rfid card and enter a valid security code to activate the relay. The user name must match in both cases.
Two Factor Timeout (in seconds) ?	The length of time (in seconds) during which the device will wait for the second factor when doing two-factor authentication.
Relay Settings	
Activate Relay on Valid RFID ?	Activates the relay when a valid code is entered. This would likely be used to open a door.
Activate DSR on Valid RFID ?	Activates the remote relay when a valid code is entered. This would likely be used to open a door.
Relay Timeout (seconds) ?	Specifies how many seconds the relay will be activated after a valid code entry. In a typical use case, this would specify how long the door is unlocked.
Buzzer Settings	
Buzz while Relay Active ?	When selected, an audible buzz will indicate the relay is active.
Buzz on Rejected RFID Card ?	When selected, a pattern will play on the buzzer to indicate an invalid code was entered.
Sensor Settings	
Buzz on Door Open Timeout ?	When selected, the buzzer will beep until the on-board door sensor is deactivated.
Door Sensor Normally Closed ?	Select the inactive state of the door sensor. The door sensor is also known as the Sense Input on the device's terminal block. See the Operations Guide for more information.
Sensor Open Timeout (in seconds) ?	The time (in seconds) the device will wait before it performs an action when the on-board door sensor is activated. The action(s) performed are based on the configured Door Sensor Settings below. Enter up to 5 digits.

Table 2-10. Sensor Page Parameters (continued)

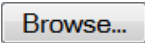

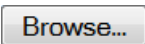



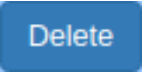





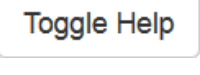
Web Page Item	Description
DSR Open Timeout (in seconds) ?	The time (in seconds) the device will wait before it performs an action when the remote (DSR) door sensor is activated. The action(s) performed are based on the configured Remote Door Sensor Settings below.
Blacklist Settings	
Play Message to SIP Extension ?	When selected, the device will make a SIP call and play the "blacklist" audio file when a blacklisted code is entered.
Dial Out SIP Extension ?	The extension that will be dialed if "Play Message to SIP Extension" is selected above. Enter up to 64 alphanumeric characters.
Dial Out SIP ID ?	Additional caller identification string added to outbound calls. Enter up to 64 alphanumeric characters.
Multicast Audio Message ?	When selected, the device will multicast the "blacklist" audio file to the specified address and port.
Multicast Address ?	The multicast address that the "blacklist" audio file will be played to.
Multicast Port ?	The multicast port that the "blacklist" audio file will be played to.
Times to Play Multicast Message ?	The number of times the "blacklist" audio file will be played via multicast. Enter a value between 1 and 65535.
Import Access List ?	After selecting an access list file, click on the Import Access List button to import the access list from the selected file.
	Use this button to select a file to import.
	This button imports an access list that it is in .xml format.
Export Access List ?	Click on the Export Access List button to export the current access list to a file.
	Use this button to select a file to export.
	This button exports the list of access records in xml format.
Access List	List of Access records.
Name ?	Tag user's name.
Valid From ?	Date and time in the form "DOWHH:MM". The field must contain a three-letter string indicating the day of week, Weekday (Wdy), Weekend (Wnd), or "All". The optional time is in 24 hour format and the range is inclusive.
Valid To ?	Date and time in the form "DOWHH:MM". The field must contain a three-letter string indicating the day of week, Weekday (Wdy), Weekend (Wnd), or "All". The optional time is in 24 hour format and the range is inclusive.
Blacklist ?	Mark this tag for immediate rejection and optional blacklist alerts.
	Launches the Configure Access Record edit box, allowing the user to add a new record.

Table 2-10. Sensor Page Parameters (continued)

Web Page Item	Description
	Launches the Configure Access Record edit box, allowing the user to make changes to an existing record.
	Deletes a record.
Security Log	A file with a maximum of three log files, each 1 M, that records security actions.
	Downloads a file with a maximum of 3 log files, each 1 M.
	Clears the on screen display of the log.
	Refreshes the on screen display of the log to show the most recent activity.
	Click the Save button to save your configuration settings.
	Click on the Reboot button to reboot the system.
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

Note You must click on the **Save** button for the changes to take effect.

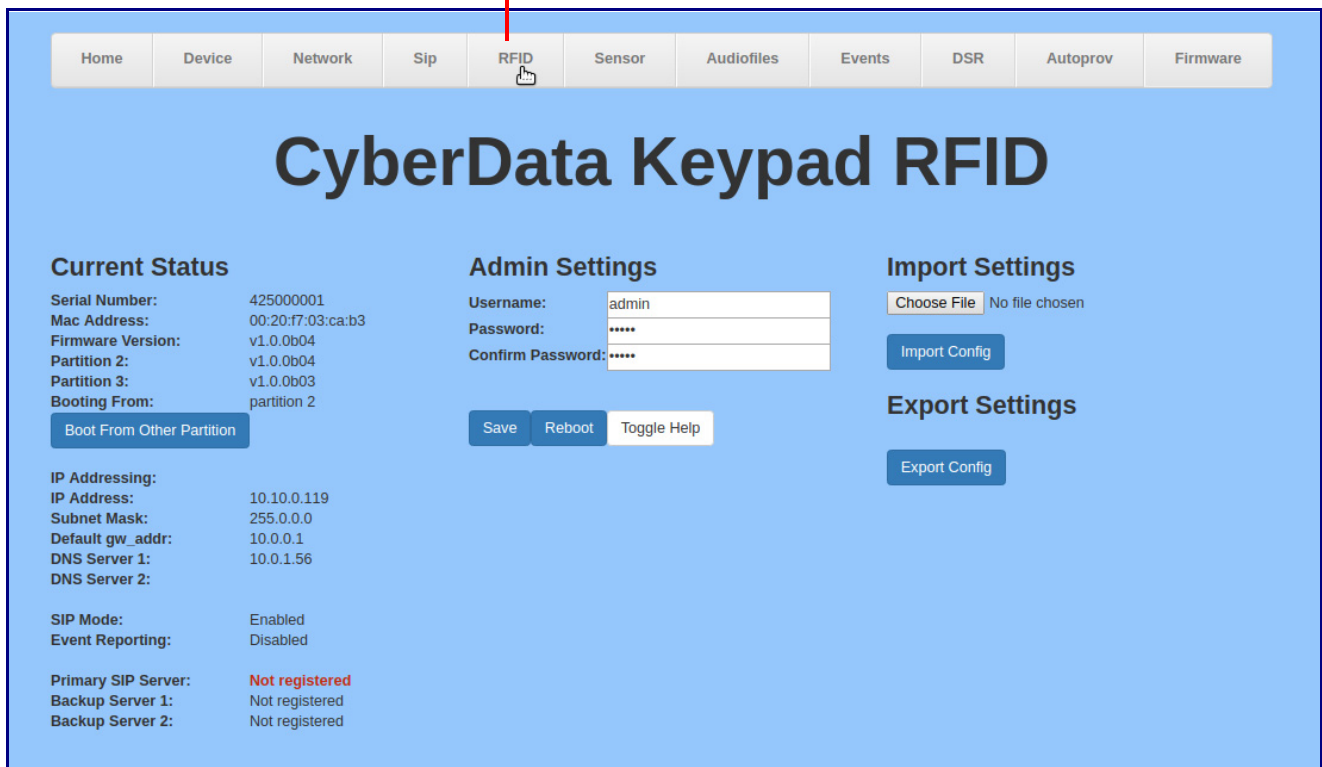
2.5.9 Enrollment Procedure

Welcome to the CyberData Keypad RFID, featuring two-factor authentication. This document illustrates the user friendly, intuitive process you will use to enroll your RFID cards and set keypad codes to enhance your security.

1. From the **Home Page** (Figure 2-24), click on the **RFID** menu button (Figure 2-24) to navigate to the **RFID** page (Figure 2-25).

Figure 2-24. From the Home Page, navigate to the RFID page

Click on the **RFID** menu button to navigate to the **RFID** page



Home Device Network Sip **RFID** Sensor Audiofiles Events DSR Autopro Firmware

CyberData Keypad RFID

Current Status

Serial Number: 425000001
Mac Address: 00:20:f7:03:ca:b3
Firmware Version: v1.0.0b04
Partition 2: v1.0.0b04
Partition 3: v1.0.0b03
Bootting From: partition 2

Boot From Other Partition

Admin Settings

Username: admin
Password: *****
Confirm Password: *****

Save Reboot Toggle Help

Import Settings

Choose File No file chosen

Import Config

Export Settings

Export Config

IP Addressing:
IP Address: 10.10.0.119
Subnet Mask: 255.0.0.0
Default gw_addr: 10.0.0.1
DNS Server 1: 10.0.1.56
DNS Server 2:

SIP Mode: Enabled
Event Reporting: Disabled

Primary SIP Server: **Not registered**
Backup Server 1: Not registered
Backup Server 2: Not registered

Figure 2-25. RFID Page

HomeDeviceNetworkSipRFIDSensorAudiofilesEventsDSRAutoprovFirmware

CyberData Keypad RFID

Current Status

Waiting for RFID tag...

RFID Passphrase

Passphrase

Authentication Settings

Enable Two-Factor Authentication: ☐

Two Factor Timeout:

Relay Settings

Activate Relay on Valid RFID ☒

Activate DSR on Valid RFID ☐

Relay Timeout (seconds)

Buzzer Settings

Buzz while Relay Active ☐

Buzz on Rejected RFID Card ☐

Sensor Settings

Buzz on Door Open Timeout: ☐

Door Sensor Normally Closed: ☐ Yes ☒ No

Sensor Open Timeout (in seconds):

DSR Open Timeout (in seconds):

Blacklist Actions

Play Message to SIP Extension ☐

Dial Out SIP Extension

Dial Out SIP ID

Multicast Audio Message ☐

Multicast Address

Multicast Port

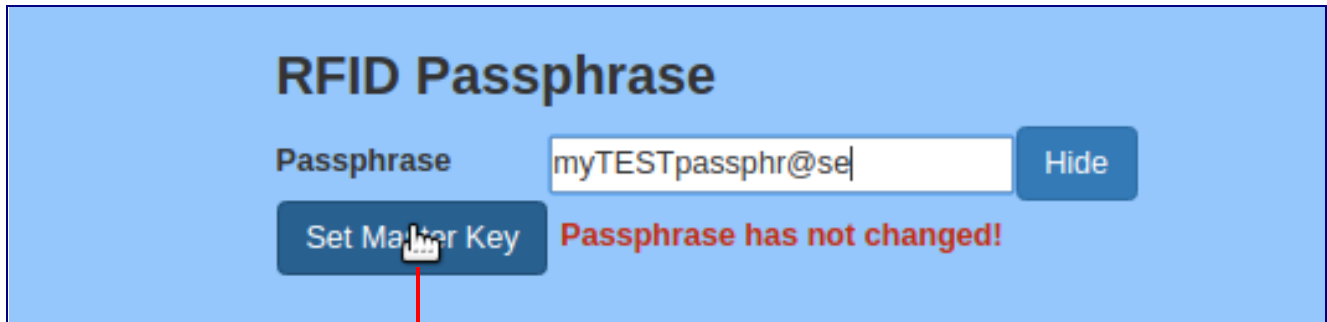
Times to Play Multicast Message

RFID Settings

	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
2		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
3		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
4		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
5		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
6		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
7		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
8		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
9		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
10		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
11		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
12		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
13		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
14		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
15		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
16		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
17		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
18		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
19		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
20		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
21		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
22		All	All	No	<input type="button" value="Add"/>	<input type="button" value="Delete"/>

2. From the **RFID** page (Figure 2-25), the user will be prompted for a Passphrase that will serve as the Master Key. Enter a passphrase (Figure 2-26), and copy it to a secure location.

Figure 2-26. Enter a passphrase

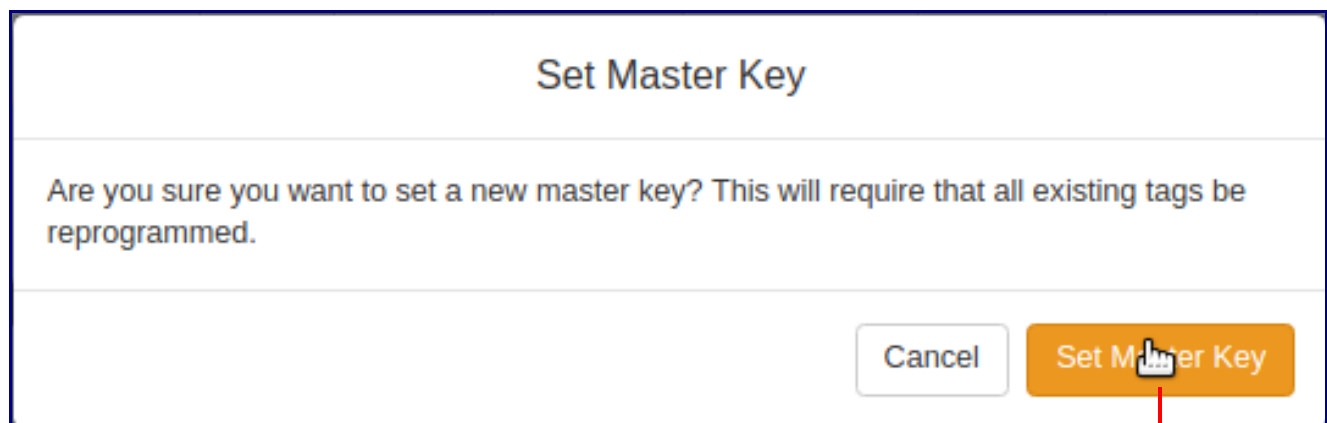


The screenshot shows the 'RFID Passphrase' interface. At the top, the title 'RFID Passphrase' is displayed. Below it, there is a 'Passphrase' label followed by a text input field containing 'myTESTpassphr@se'. To the right of the input field is a 'Hide' button. Below the input field is a 'Set Master Key' button. To the right of this button, a red message states 'Passphrase has not changed!'.

Click on the **Set Master Key** button

3. When the user clicks on the **Set Master Key** button (Figure 2-26), a **Set Master Key** dialog box will appear. See Figure 2-27.
4. In the dialog box, click on the **Set Master Key** button. See Figure 2-27.

Figure 2-27. Set Master Key dialog box will appear

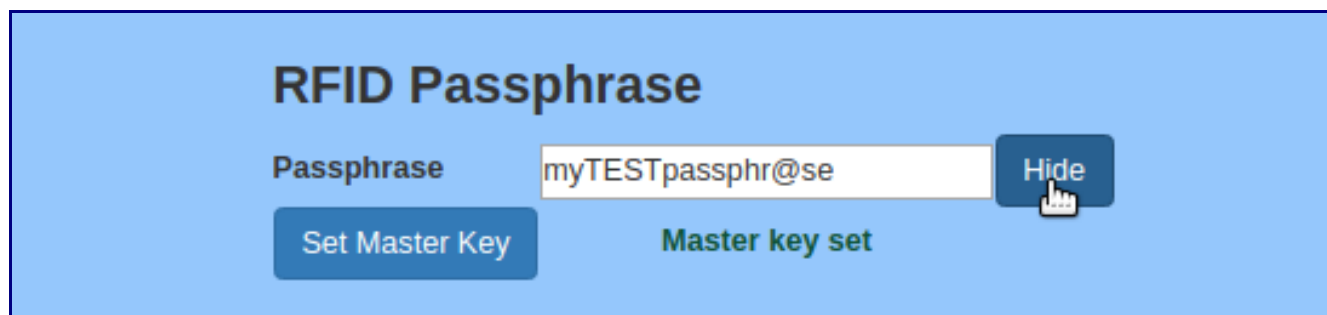


The screenshot shows the 'Set Master Key' dialog box. The title 'Set Master Key' is at the top. Below the title, a message asks: 'Are you sure you want to set a new master key? This will require that all existing tags be reprogrammed.' At the bottom right, there are two buttons: 'Cancel' and 'Set Master Key'.

Click on the **Set Master Key** button

5. The Master Key will be set. See Figure 2-28.

Figure 2-28. The Master Key will be set



The screenshot shows the 'RFID Passphrase' interface after the master key has been set. The title 'RFID Passphrase' is at the top. Below it, the 'Passphrase' label is followed by the same text input field 'myTESTpassphr@se' and the 'Hide' button. Below the input field, the 'Set Master Key' button is still present, but now a green message 'Master key set' is displayed to its right.

6. To enroll a user, select an empty record and click on the **Add** button. See [Figure 2-29](#).

Figure 2-29. Select an empty record and click on the Add button

	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	Edit	Delete
2		All	All	No	Add	Delete
3						

Select an empty record and click on **Add** button

7. This is action will launch an edit box named **Configure Access Record #2**. See [Figure 2-30](#).

Figure 2-30. An edit box named Configure Access Record #2

Configure Access Record #2

Name

Tag UID

Key Code

Valid From

Valid To

Blacklist ☐

Current Status:
Waiting for RFID tag...

Enroll Tag Save Changes Cancel Toggle Help

- Click on the **Enroll Tag** button, and place the card flat against the RFID reader. See [Figure 2-31](#).

Figure 2-31. Click on the Enroll Tag button

Configure Access Record #3 [X]

Name	James Smith	?
Tag UID		?
Key Code		?
Valid From	All	?
Valid To	All	?
Blacklist	<input type="checkbox"/>	?

Current Status:
Place RFID tag flat against reader...

Save changes after programming!

Enroll Tag **Save Changes** **Cancel** **Toggle Help**

Click on the **Enroll Tag** button, and place the card flat against the RFID reader.

9. The **Tag UID** field will be populated. See [Figure 2-32](#) and [Figure 2-33](#).

Figure 2-32. The Tag UID field will be populated

Configure Access Record #2 [X]

Name	James Smith	?
Tag UID	04188102423180	?
Key Code		?
Valid From		?
Valid To		?
Blacklist	<input type="checkbox"/>	?

Current Status:
Successfully programmed RFID Tag uid=04188102423180
Save changes after programming!

Buttons: Enroll Tag, Save Changes, Cancel, Toggle Help

The **Tag UID** field will be populated

Figure 2-33. The Tag UID field will be populated

Configure Access Record #2 [X]

Name: James Smith ?

Tag UID: 04188102423180 ?

Key Code: []

Valid From: []

Valid To: []

Blacklist: ☐

Current Status:

Successfully programmed RFID Tag uid=04188102423180

Save changes after programming!

[Enroll Tag] [Save Changes] [Cancel] [Toggle Help]

UID
Read-only Unique ID of the tag that was scanned. The UID is programmed by the tag manufacturer and is impossible to change.

The **Tag UID** field will be populated

10. Click on the **Toggle Help** button for assistance in populating the other fields. See [Figure 2-34](#).
11. Move the mouse pointer to hover over the question mark, and a short description of the web page item will appear.

Figure 2-34. Use the Toggle Help button for assistance in populating the other fields

Configure Access Record #2

Name ?

Tag UID ?

Key Code ?

Valid From ?

Valid To ?

Blacklist ☐ ?

Current Status:
Waiting for RFID tag...

Move the mouse pointer to hover over the question mark, and a short description of the web page item will appear.

Use the **Toggle Help** button for assistance in populating the other fields.

12. Click on the **Toggle Help** button for assistance in populating the **Name** field. See [Figure 2-35](#).

Figure 2-35. Click on the Toggle Help button for assistance in populating the Name fields

Configure Access Record #2

Name James Smith ?

Tag UID

Key Code

Valid From All

Valid To All ?

Blacklist ☐

Current Status:
Waiting for RFID tag...

Enroll Tag Save Changes Cancel Toggle Help

For assistance in populating the **Name** field, click on the **Toggle Help** button.

13. Use the **Toggle Help** button for assistance in populating the **Key Code** field. See [Figure 2-36](#).

Figure 2-36. Use the Toggle Help button for assistance in populating the Key Code field

Configure Access Record #2

Name James Smith ?

Tag UID 041c8402423180 ?

Key Code 123456 ?

Valid From All

Valid To All

Blacklist ☐

Current Status:
Waiting for RFID tag...

Enroll Tag Save Changes Cancel Toggle Help

Key Code
Key code. Must be unique.

For assistance in populating the **Key Code** field, click on the **Toggle Help** button.

Note In the **Key Code** field, make sure that the key code is unique. See [Figure 2-37](#).

Figure 2-37. Be certain that the key code is unique

Configure Access Record #2

Name	James Smith	?
Tag UID	041c8402423180	?
Key Code	123456	?
Valid From	Wdy08:30	?
Valid To	Wdy18:00	?
Blacklist	<input type="checkbox"/>	?

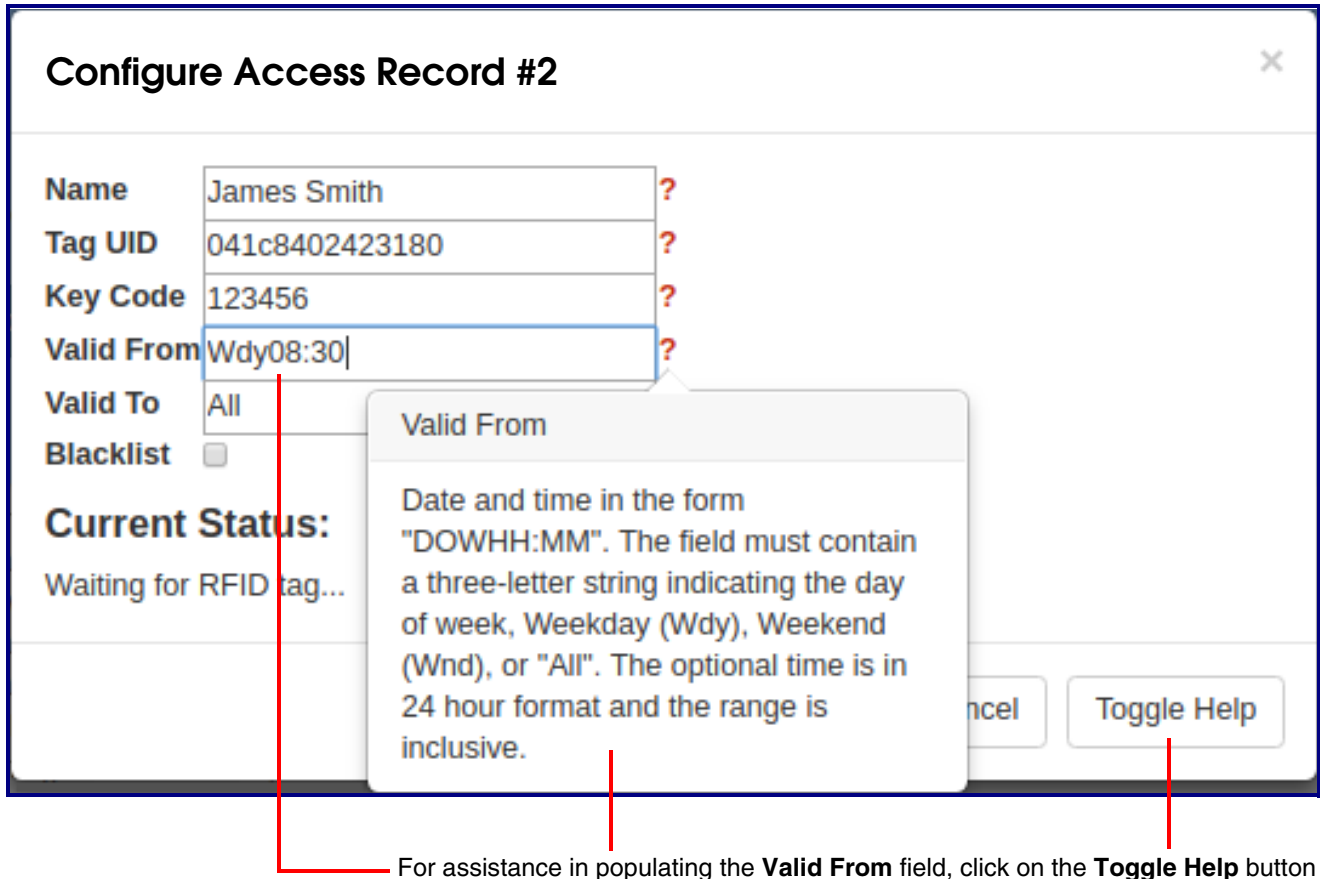
Current Status:
This code already exists at index 1!

Buttons: Enroll Tag, Save Changes, Cancel, Toggle Help

In the **Key Code** field, make sure that the key code is unique.

14. Use the **Toggle Help** button for assistance in populating the **Valid From** field. See [Figure 2-38](#).

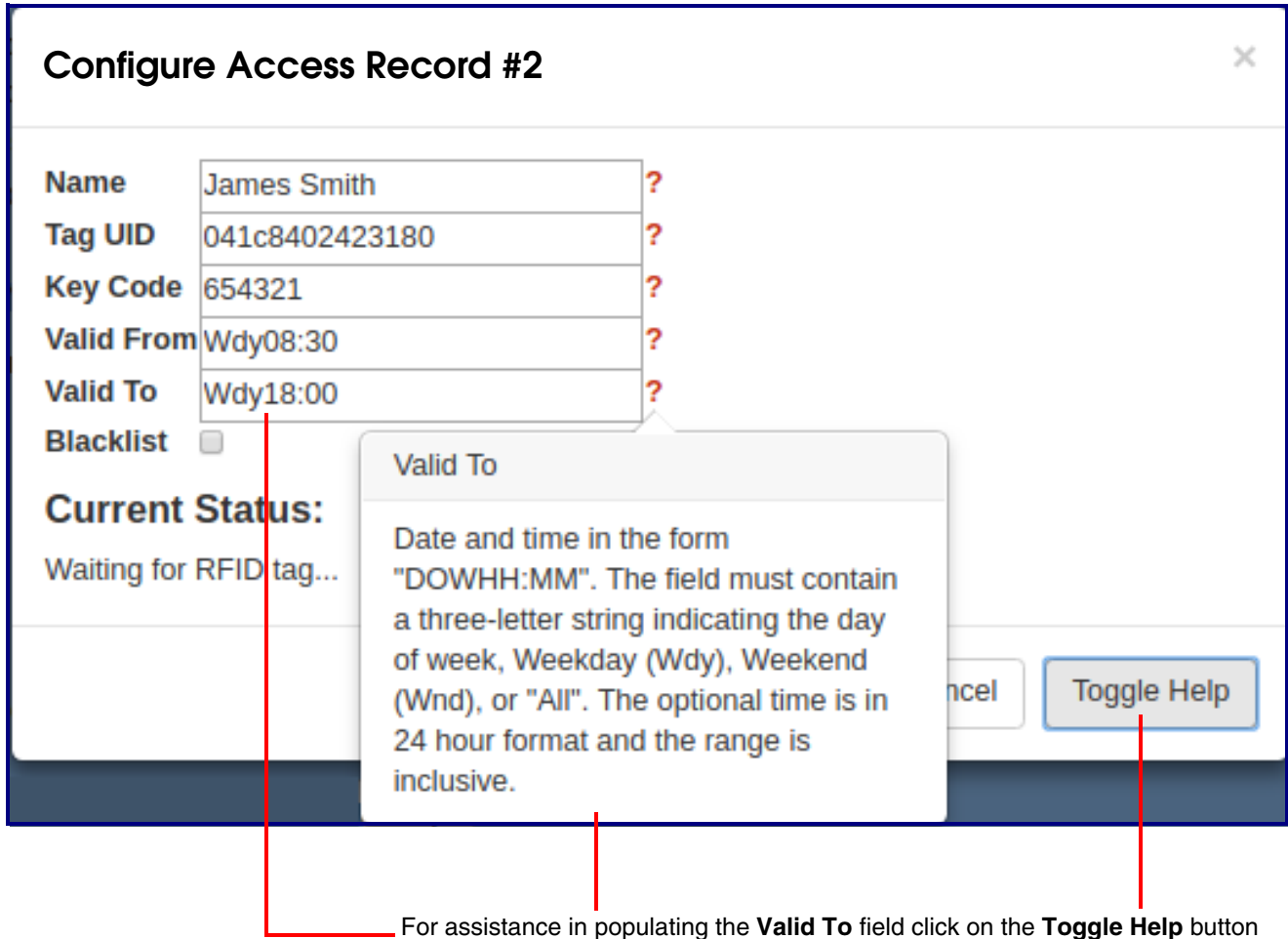
Figure 2-38. Use the Toggle Help button for assistance in populating the Valid From field



15. Use the **Toggle Help** button for assistance in populating the **Valid To** field. See [Figure 2-39](#).

Note The [Enable NTP](#) setting on the **Device** page must be selected to limit the times valid for the RFID tags.

Figure 2-39. Use the Toggle Help button for assistance in populating the Valid To field



16. Click on the **Toggle Help** button for assistance in populating the **Blacklist** check box. See [Figure 2-40](#).

Figure 2-40. Click on the Toggle Help button for assistance in populating the Blacklist check box

Configure Access Record #2

Name	James Smith	?
Tag UID	041c8402423180	?
Key Code	123456	?
Valid From	Wdy08:30	?
Valid To	Wdy18:00	?
Blacklist	<input type="checkbox"/>	?

Current Status:
Waiting for RFID tag...

Blacklist

Mark this tag for immediate rejection and optional blacklist alerts.

Enroll Tag Save Changes Cancel Toggle Help

For assistance in populating the **Blacklist** check box, click on the **Toggle Help** button

17. Click on the **Save Changes** button (Figure 2-41), and your record will appear in the web page list. See Figure 2-42.

Figure 2-41. Click on the Save Changes button



Click on the **Save Changes** button

Figure 2-42. Your record will appear in the web page list

RFID Settings						
	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	Edit	Delete
2	James Smith	Wdy08:30	Wdy18:00	No	Edit	Delete
3		All	All	No	Add	Delete
4		All	All	No	Add	Delete

Your record will appear in the web page list

Note The CyberData RFID Keypad will accept either an RFID card or a key code. If **Two Factor Authorization** is enabled, the RFID Keypad will require you to use an RFID card and to also enter a key code into the keypad to gain entry.

18. To delete a record, click on the **Delete** button. See Figure 2-43.

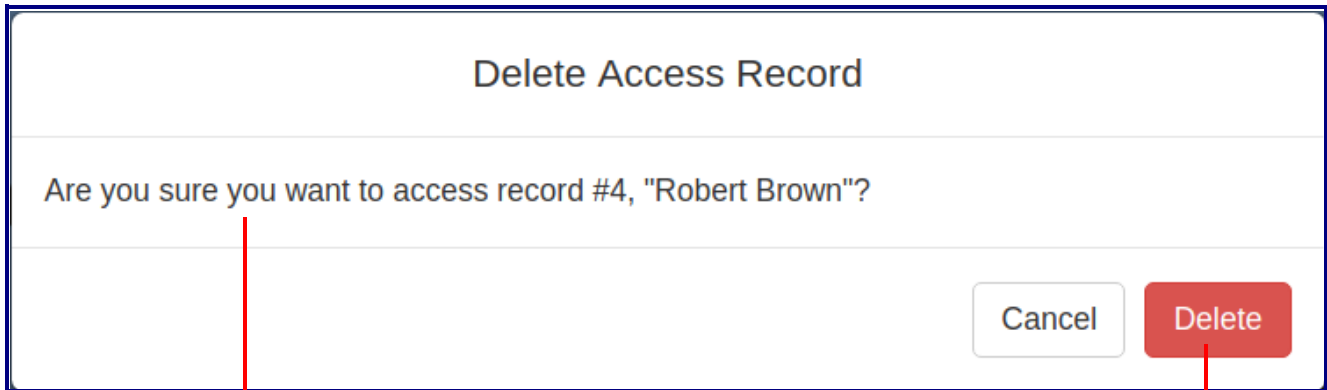
Figure 2-43. To delete a record, select the Delete button

RFID Settings						
	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	Edit	Delete
2	James Smith	Wdy08:30	Wdy18:00	No	Edit	Delete
3	Maria Garcia	All	All	No	Edit	Delete
4	Robert Brown	All	All	No	Edit	Delete

To delete a record, click on the **Delete** button.

19. You will be prompted to delete the record. See [Figure 2-44](#).
20. Click on the **Delete** button to confirm the deletion. See [Figure 2-44](#).

Figure 2-44. You will be prompted to delete the record

A dialog box titled "Delete Access Record" with a light gray background. It contains the text "Are you sure you want to access record #4, 'Robert Brown'?" in a dark gray font. At the bottom right, there are two buttons: a white "Cancel" button and a red "Delete" button. A red vertical line points to the "Delete" button.

You will be prompted to delete the record.

Click on the **Delete** button to confirm the deletion

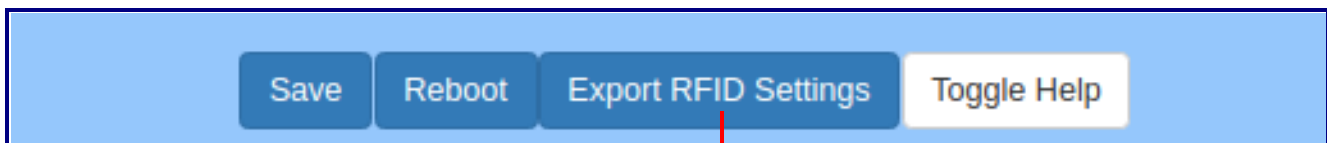
21. The record will no longer appear in your settings. See [Figure 2-45](#).

Figure 2-45. The record will no longer appear in your settings

RFID Settings						
	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	Edit	Delete
2	James Smith	Wdy08:30	Wdy18:00	No	Edit	Delete
3	Maria Garcia	All	All	No	Edit	Delete
4		All	All	No	Add	Delete

22. To export the RFID records, to provide a backup copy, or to share the enrolled tags with another device, click on the **Export RFID Settings** button. See [Figure 2-46](#).

Figure 2-46. Click on the Export RFID Settings button

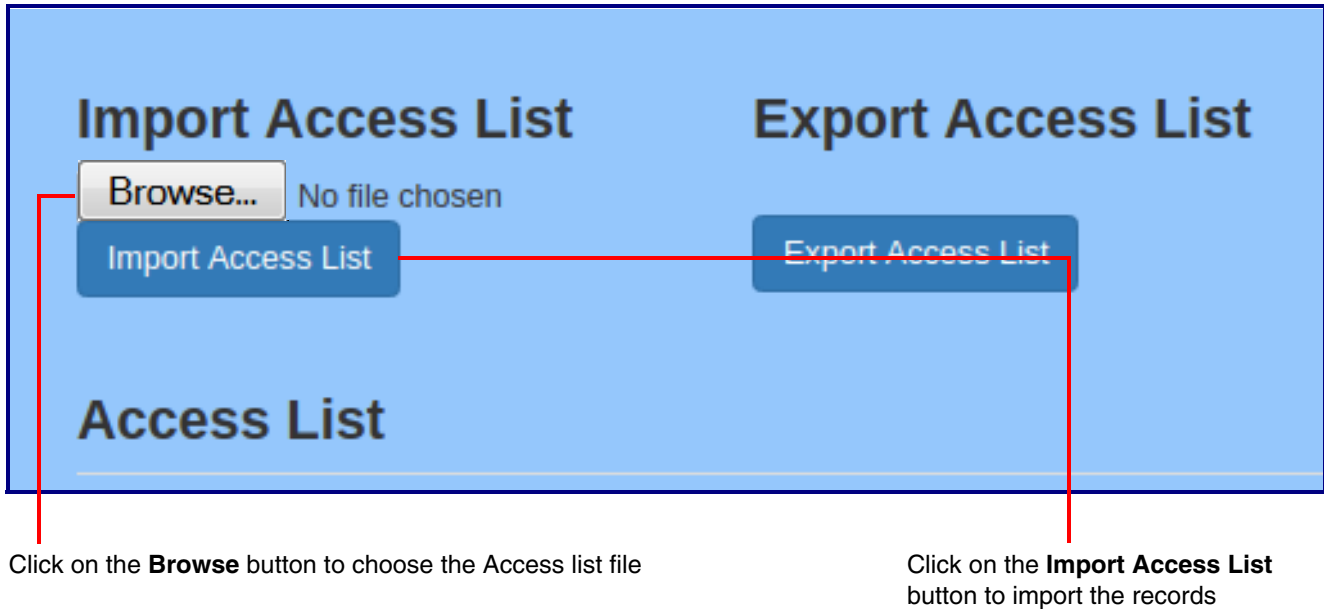
A horizontal bar with a light blue background containing four buttons: "Save", "Reboot", "Export RFID Settings", and "Toggle Help". The "Export RFID Settings" button is highlighted with a red vertical line pointing to it.

Click on the **Export RFID Settings** button

Exporting RFID will create an xml file in the directory specified in your browser's **Downloads** location. Devices that require this file may use **Import Config** setting on the **Home Page**, or use Autoprovisioning (see the Operations Guide.)

23. To share the configuration via **Import Config**, navigate to the **RFID** page of the second device, and click on the **Browse** (or **Choose File**) button to choose the Access List file. See [Figure 2-47](#).

Figure 2-47. Click on the Browse button to choose the Access List file



24. Click on the **Import Config** button ([Figure 2-47](#)) to import the records, and they will be added to the RFID page. See [Figure 2-48](#).

Figure 2-48. The imported records will be added to the RFID page

RFID Settings						
	Name	Valid From	Valid To	Blacklist		
1	Jason	All	All	No	Edit	Delete
2	James Smith	Wdy08:30	Wdy18:00	No	Edit	Delete
3	Maria Garcia	All	All	No	Edit	Delete
4		All	All	No	Add	Delete

2.5.9.1 Optional RFID Reader Stand—used on the desktop for a dedicated reader for the enrollment process

Note This requires either the 011425 or 011426 reader purchase as shown in [Figure 2-49](#).

011423A is an optional programming stand. This stand is especially useful for users who would like to have a CyberData RFID Reader dedicated to enrolling RFID cards. Follow the enrollment process documented in [Section 2.5.9, "Enrollment Procedure"](#).

Figure 2-49. Optional RFID Reader Stand



2.5.10 Configure the Sensor Configuration Parameters

The door sensor (pins 5 and 6) on the header can be used to monitor a door's open or closed state. There is an option on the **Sensor** page to trigger on an open or short condition on these pins. The door sensor alarm will be activated when the **Door Open Timeout** parameter has been met.

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

Each sensor can trigger the following actions:

- Activate the relay until the sensor is deactivated
- Call an extension, with optional pre-recorded audio

Note Calling a preset extension can be set up as a point-to-point call, but currently can't send delayed DTMF tones.

1. Click **Sensor** menu button to open the **Sensor** page ([Figure 2-50](#)).

Figure 2-50. Sensor Configuration Page

Home Device Network Sip RFID **Sensor** Audiofiles Events DSR Autopro Firmware

CyberData Keypad RFID

Door Sensor Settings

Door Sensor Normally Closed: ☐ Yes ☒ No

Door Open Timeout (in seconds):

Activate Relay: ☐

Make call to extension: ☐

Dial Out Extension:

Dial Out ID:

Play recorded audio: ☐

Repeat Sensor Message:

Save Reboot Toggle Help

Test Door Sensor Test Intrusion Sensor

Intrusion Sensor Settings

Activate Relay: ☐

Make call to extension: ☐

Dial Out Extension:

Dial Out ID:

Play recorded audio: ☐

Repeat Intrusion Message:






2. On the **Sensor** page, enter values for the parameters indicated in [Table 2-11](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-11. Sensor Page Parameters

Web Page Item	Description
Door Sensor Settings	
Door Sensor Normally Closed ?	Select the inactive state of the door sensor. The door sensor is also known as the Sense Input on the device's terminal block.
Door Open Timeout (in seconds) ?	The time (in seconds) the device will wait before it performs an action when the on-board door sensor is activated. The action(s) performed are based on the configured Door Sensor Settings below. Enter up to 5 digits.
Activate Relay ?	When selected, the device's on-board relay will be activated until the on-board door sensor is deactivated.
Make call to extension ?	When selected, the device will call an extension when the on-board door sensor is activated. Use the Dial Out Extension field below to specify the extension the device will call.
Dial Out Extension ?	Specify the extension the device will call when the on-board door sensor is activated. Enter up to 64 alphanumeric characters.
Dial Out ID ?	An additional Caller identification string added to outbound calls. Enter up to 64 alphanumeric characters.
Play recorded audio ?	When selected, the device will call the Dial Out Extension and play an audio file to the phone answering the SIP call (corresponds to Door Ajar on the Audiofiles page).
Repeat Sensor Message ?	The number of times to repeat the audio message through the local speaker or to the remote endpoint. A value of 0 will repeat forever. Enter a value from 0-65536.
Intrusion Sensor Settings	
Activate Relay ?	When selected, the device's on-board relay will be activated until the intrusion sensor is deactivated.
Make call to extension ?	When selected, the device will call an extension when the intrusion sensor is activated. Use the Dial Out Extension field below to specify the extension the device will call.
Dial Out Extension ?	Specify the extension the device will call when the intrusion sensor is activated. Enter up to 64 alphanumeric characters.
Dial Out ID ?	An additional Caller identification string added to outbound calls. Enter up to 64 alphanumeric characters.
Play recorded audio ?	When selected, the device will call the Dial Out Extension and play an audio file (corresponds to Intrusion Sensor Triggered on the Audiofiles page) to the phone answering the SIP call when the intrusion sensor is activated.
Repeat Intrusion Message ?	The number of times to repeat the audio message through the local speaker or to the remote endpoint. A value of 0 will repeat forever. Enter a value from 0-65536.

Table 2-11. Sensor Page Parameters (continued)

Web Page Item	Description
	Click the Test Door Sensor button to test the door sensor.
	Click the Test Intrusion Sensor button to test the Intrusion sensor.
	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.
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

2.5.11 Configure the Audio Configuration Parameters

The **Audiofiles** page is used to add custom audio to the board. User uploaded audio will take precedence over the audio files shipped with the device.

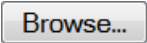

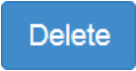

1. Click on the **Audiofiles** menu button to open the **Audiofiles** page (Figure 2-51).

Figure 2-51. Audiofiles Configuration Page

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

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-12. Audiofiles Page Parameters

Web Page Item	Description
Available Space	Shows the space available for the user to save custom audio files if they want to change the message when the door or sensor is triggered.
Intrusion Sensor Triggered	Corresponds to the message “Intrusion Sensor Triggered” (24 character limit).
Door Ajar	Corresponds to the message “Door Ajar” (24 character limit).
Blacklist Message	The audio file that will play if a blacklisted security code is entered.
	Click on the Browse button to navigate to and select an audio file.
	The Play button will play that audio file.
	The Delete button will delete any user uploaded audio and restore the stock audio file.
	The Save button will download a new user audio file to the board once you've selected the file by using the Browse button. The Save button will delete any pre-existing user-uploaded audio files.

2.5.11.1 User-created Audio Files

User created audio files should be saved in the following format:

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

You can use the free utility *Audacity* to convert audio files into this format. See [Figure 2-52](#) through [Figure 2-54](#).

Figure 2-52. Audacity 1

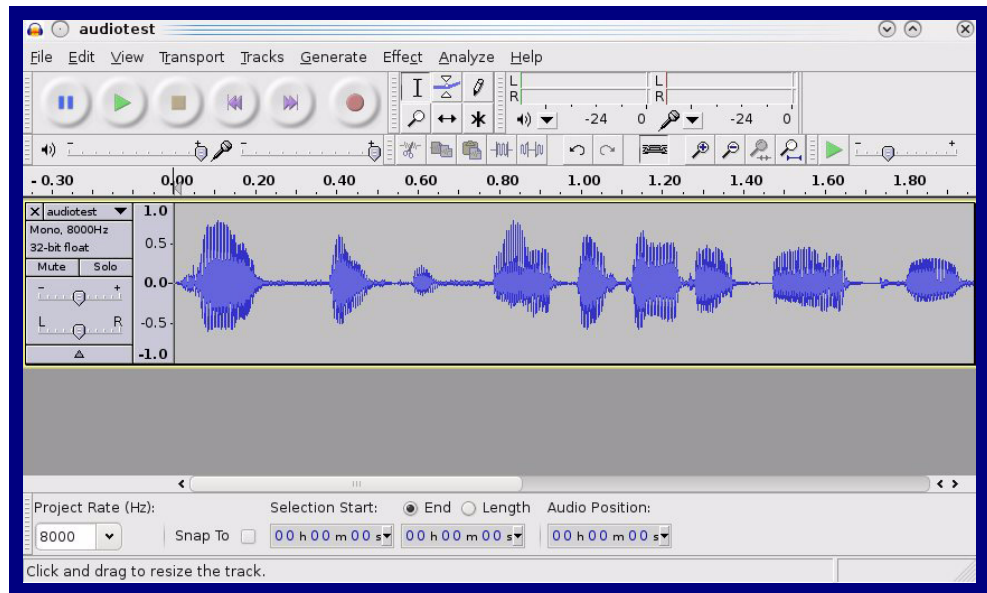
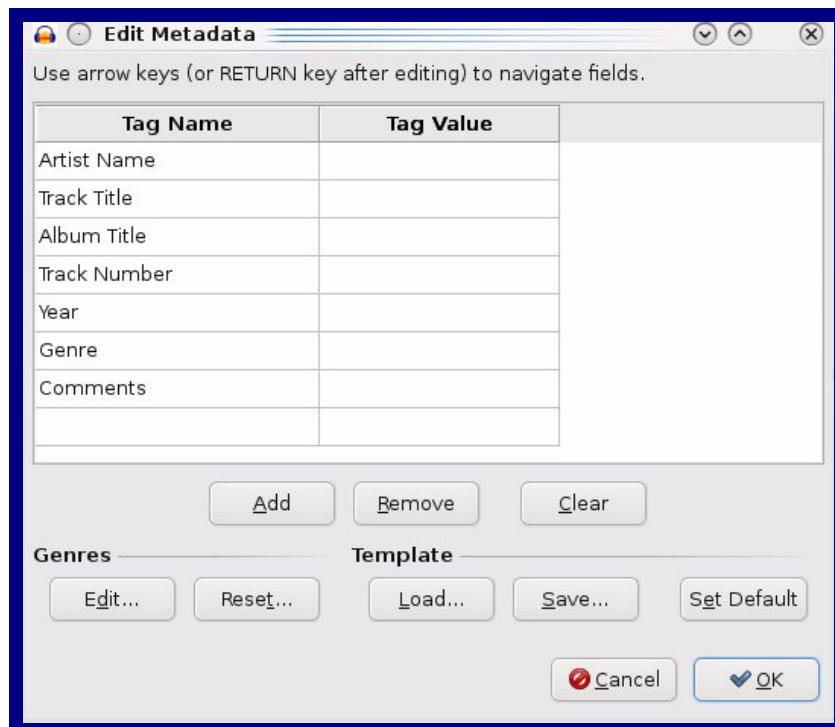


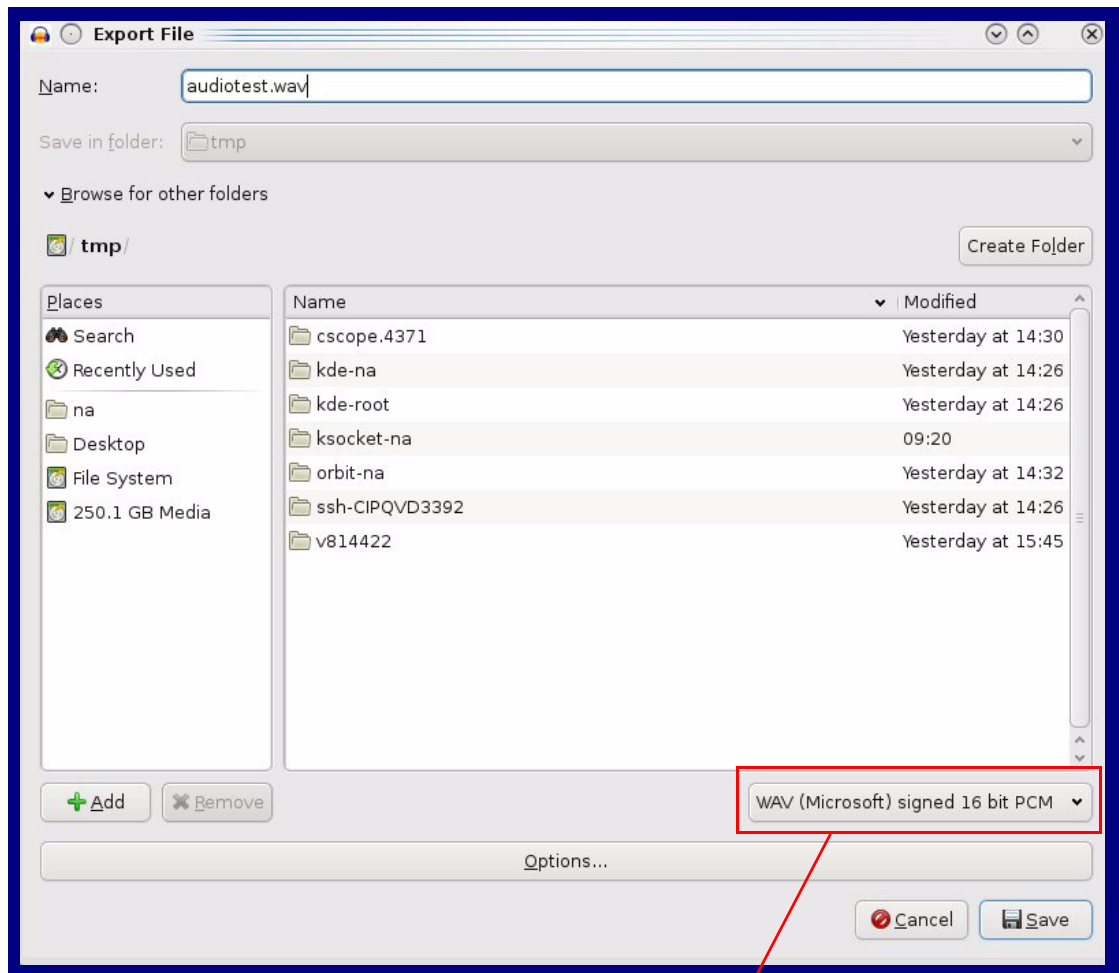
Figure 2-53. Audacity 2



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

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

Figure 2-54. WAV (Microsoft) signed 16 bit PCM



WAV (Microsoft) signed 16 bit PCM

2.5.12 Configure the Events Parameters

The **Events** page specifies a remote server that can be used to receive HTTP POST events when actions take place on the board.

1. Click on the **Events** menu button to open the **Events** page ([Figure 2-55](#)).

Figure 2-55. Event Configuration Page

Home Device Network Sip RFID Sensor Audiofiles Events DSR Autopro Firmware

CyberData Keypad RFID

Enable Event Generation: ☐

Events

Enable Call Start Events: ☐

Enable Call Terminated Events: ☐

Enable Relay Activated Events: ☐

Enable Relay Deactivated Events: ☐

Enable Ring Events: ☐

Enable Multicast Start Events: ☐

Enable Multicast Stop Events: ☐

Enable Power On Events: ☐

Enable Sensor Events: ☐

Enable Remote Relay Events: ☐

Enable 60 Second Heartbeat: ☐

Event Server

Server IP Address: 10.0.0.250

Server Port: 8080

Server URL: xmlparse_engine

Save Reboot Toggle Help


2. On the **Events** page, enter values for the parameters indicated in [Table 2-13](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-13. Events Page Parameters

Web Page Item	Description
Enable Event Generation ?	The device will send HTTP POST events to the specified remote server and port number whenever a certain action takes place. Select an event type below to generate an HTTP POST event. Note: Enabling Event Generation requires a reboot for the changes to take effect.
Events	
Enable Call Start Events ?	When selected, the device will report the start of a SIP call.
Enable Call Terminated Events ?	When selected, the device will report the end of a SIP call.
Enable Relay Activated Events ?	When selected, the device will report relay activation.
Enable Relay Deactivated Events ?	When selected, the device will report relay deactivation.
Enable Ring Events ?	When selected, the device will report when it starts ringing upon an incoming SIP call. A Ring Event will not be generated when Auto-Answer Incoming Calls is enabled on the Device page.
Enable Multicast Start Events ?	When selected, the device will report when the device starts playing a multicast audio stream.
Enable Multicast Stop Events ?	When selected, the device will report when the device stops playing a multicast audio stream.
Enable Power On Events ?	When selected, the device will report when it boots.
Enable Sensor Events ?	When selected, the device will report when the on-board sensor is activated.
Enable Remote Relay Events ?	When selected, the device will report when the remote relay (DSR) is activated.
Enable 60 Second Heartbeat Events ?	When enabled, the device will report a Heartbeat event every 60 seconds. SIP registration is not required to generate Heartbeat events.
Event Server	Note: Changing an Event Server setting requires a reboot for the changes to take effect.
Server IP Address ?	The IPv4 address of the event server in dotted decimal notation.
Server Port ?	Specify the event server port number. The supported range is 0-65536. Enter up to 5 digits.
Server URL ?	Generally, the destination URL is the name of the application that receives the events and the string in the HTTP POST command. It can be a script used to parse and process the HTTP POST events. Enter up to 127 characters.
Save	Click the Save button to save your configuration settings. Note: You need to reboot for changes to take effect.
Reboot	Click on the Reboot button to reboot the system.

Table 2-13. Events Page Parameters(continued)

Web Page Item	Description
	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

Note You must click on the **Save** button for the changes to take effect.

Note Selecting particular events does not require a reboot for the changes to take effect.

2.5.12.1 Example Packets for Events

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

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

Here are example packets for every event:

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

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

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

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

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

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

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

<?xml version="1.0" encoding="ISO-8859-1"?>
<cyberdata NAME='CyberData VoIP Device' MAC='0020f70015b6'>
<event>CALL_ACTIVE</event>
</cyberdata>
POST xmlparse_engine HTTP/1.1
Host: 10.0.3.79
```

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

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

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

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

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

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

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

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

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

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

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

2.5.13 Configure the Door Strike Relay

The Door Strike Relay (DSR) is a network device designed to control an electronic door strike. The DSR is meant to be used as a replacement for (or an addition to) the on-board relay. In addition to being a drop-in 12 Amp relay, the DSR can monitor and record when the door is open or closed.

The DSR can be configured to trigger in the following ways: on the entry of a DTMF code, manually through the web interface, or by using a Windows application.

This section describes operations for running firmware version 4.8 or later of the Dual Door Strike Relay. If you have an older version of the firmware, then please contact CyberData Technical Support. The version number appears in the [Discovered Remote Relays](#) section on the **DSR** page ([Figure 2-56](#)).

Note When **Activate DSR on Valid RFID** is enabled, a swipe of a valid RFID card will activate Relay 2.

1. Click on the **DSR** menu button to open the **DSR** page ([Figure 2-56](#)).

Figure 2-56. DSR Page (not associated with any DSRs)

Home Device Network Sip RFID Sensor Audiofiles Events **DSR** Autopro Firmware

CyberData Keypad RFID

Remote Relay Settings

Not associated with any DSRs

Save Reboot Toggle Help

Discovered Remote Relays

Product Type	IP Address	MAC Address	Serial Number	Name	Version		
DoorLock	10.10.1.45	00:20:F7:02:A7:9A	270000004	LOCK270000004	V2.2AM	View	Associate
DoorLock	10.10.1.19	00:20:F7:03:54:BE	375000016	LOCK375000016	V4.8T	View	Associate
DoorLock	10.10.0.45	00:20:F7:03:74:D4	375000046	LOCK375000046	V4.8T	View	Associate

This is the default page when the device is **not associated with any DSRs**. Please see the Dual Door Strike Relay Operations Guide for more settings and options on the DSR page when the device is associated with a DSR.

2. On the **DSR** page, enter values for the parameters indicated in [Table 2-14](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-14. DSR Configuration Parameters (not associated with any DSRs)

Web Page Item	Description
Remote Relay Settings	The settings in this section will activate an associated door strike relay. If a door strike relay is not associated with the device, then you will only see the words Not associated with any DSRs .
Save	Click the Save button to save your configuration settings. Note: You need to reboot for changes to take effect.
Reboot	Click on the Reboot button to reboot the system.
Toggle Help	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.
Discovered Remote Relays	The Discovered Remote Relays section lists all of the networked door strike relays on the network. To associate your device with a door strike relay, click on the Associate button. This action allows the user to configure the door strike relay. Keep in mind that a device may only be associated with one door strike relay.
Product Type	Displays the product type of the remote relay.
IP Address	Displays the IP address of the remote relay.
MAC Address	Displays the MAC address of the remote relay.
Serial Number	Displays the serial number of the remote relay.
Name	Displays the name of the remote relay.
Version	Displays the version of the remote relay.
Discover	Use this button to search for and find any remote relays that are available on the network.
View	Use this button to view the settings of a remote relay that has been “discovered” after pressing the Discover button.
Associate	Use this button to associate the remote relay with the device. Only one relay may be associated with a device.
Disassociate	Use this button to disassociate the remote relay from the device. Only one relay may be associated with a device. This button is only available when a relay is associated with a device.

Note You must click on the **Save** button and then the **Reboot** button for the changes to take effect.

Note Associating a DSR does not require a reboot. However, you should reboot the device after disassociating a DSR.

2.5.14 Configure the Autoprovisioning Parameters

Autoprovisioning can be used to automatically configure your device. The autoprovisioning file is an xml file with the device configuration. Values found in this file will override values stored in on-board memory.

Note By default, the device will try to set up its configuration with autoprovisioning.

1. Click the **Autoprov** menu button to open the **Autoprovisioning** page. See [Figure 2-57](#).

Figure 2-57. Autoprovisioning Page

Home Device Network Sip RFID Sensor Audiofiles Events DSR Autoprov Firmware

CyberData Keypad RFID

Enable Autoprovisioning: ☒

Autoprovisioning Server:

Autoprovisioning Filename:

Use tftp: ☐

Username:

Password:

Autoprovisioning autoupdate (in minutes):

Autoprovision at time (HHMM):

Autoprovision when idle (in minutes > 10):

See the manual to learn how to use autoprovisioning to configure your device.

Autoprovisioning happens on boot.

The device will first look for a configured server address and filename.

If these haven't been configured, it will look for an autoprovisioning server in your list of DHCP options and try to download '0020f703cab3.xml' and if this fails, '000000cd.xml'.

Save Reboot Toggle Help

Download Template

Autoprovisioning log

```
2018-04-05 15:57:16 Autoprovd: no autoprov triggers. Exiting...
2018-04-05 15:57:17 Autoprovisioning on boot
2018-04-05 15:57:17 Autoprov found server="" in dhcp option 43
2018-04-05 15:57:17 Autoprov looking for http://0020f703cab3.xml
2018-04-05 15:57:17 Autoprov: https download failed
2018-04-05 15:57:17 Autoprov looking for 000000cd.xml at
2018-04-05 15:57:17 Autoprov looking for http://000000cd.xml
2018-04-05 15:57:17 Autoprov: https download failed
2018-04-05 15:57:17 Failed to fetch autoprov file
2018-04-05 15:57:17 Autoprov found server='10.0.0.242' in dhcp option 72
```


2. On the **Autoprovisioning** page, you may enter values for the parameters indicated in [Table 2-15](#).

Note The question mark icon (?) in the following table shows which web page items will be defined after the **Toggle Help** button is pressed.

Table 2-15. Autoprovisioning Page Parameters

Web Page Item	Description
Enable Autoprovisioning ?	The device will automatically fetch a configuration file, also known as the 'autoprovisioning file', based on the configured settings below.
Autoprovisioning Server ?	Enter the IPv4 address of the provisioning server in dotted decimal notation.
Autoprovisioning Filename ?	<p>The autoprovisioning filename is the configuration filename. The default autoprovisioning filename is in the format of <mac address>.xml.</p> <p>Supported filename extensions are .txt, and .xml. The current filename is denoted by an asterisk at the bottom of the Autoprovisioning Page. Enter up to 256 characters.</p> <p>A file may have any name with an xml extension. If a file name is entered, the device will look for the specified file name, and only that file.</p>
Use tftp ?	The device will use TFTP (instead of http) to download autoprovisioning files.
Username ?	The username used to authenticate with an autoprovisioning server. Leave this field blank to disable authentication.
Password ?	The password used to authenticate with an autoprovisioning server. Leave this field blank to disable authentication.
Autoprovisioning Autoupdate (in minutes) ?	The reoccurring time (in minutes) the device will wait before checking for new autoprovisioning files. Enter up to 6 digits. A value of 0 will disable this option.
Autoprovision at time (HHMMSS) ?	The time of day the device will check for a new autoprovisioning file. The time must be 6 characters in length and in HHMMSS format. An empty value will disable this option.
Autoprovision when idle (in minutes > 10) ?	The idle time (in minutes greater than 10) after which the device will check for a new autoprovisioning file. Enter up to 6 digits. A value of 0 will disable this option.
Save	Click the Save button to save your configuration settings.
Reboot	Click on the Reboot button to reboot the system.
Toggle Help	Click on the Toggle Help button to see a short description of some of the web page items. First click on the Toggle Help button, and you will see a question mark (?) appear next to some of the web page items. Move the mouse pointer to hover over a question mark to see a short description of a specific web page item.

Table 2-15. Autoprovisioning Page Parameters (continued)

Web Page Item	Description
	Press the Download Template button to create an autoprovisioning file for the device. See Section 2.5.14.3, "Download Template Button"
Autoprovisioning log	The autoprovisioning log provides information about the latest autoprovisioning attempt (i.e. dhcp options and server accessed and files parsed or not found).

2.5.14.1 Autoprovisioning

On boot, the device will look for an autoprovisioning server configured on the [Autoprovisioning Page](#) or specified as a DHCP option. When it finds a server, it will try to download the following (in order of preference):

1. The file configured on the autoprovisioning page.
2. A file named according to it's mac address (for example: 0020f7350058.xml).
3. The file 000000cd.xml

The file can be hosted using a standard web server (like apache, IIS, or nginx), and the device can download over SSL. The file server can be an ipv4 address in dotted decimal notation or a fully qualified domain name.

By default, the device will get its autoprovisioning server from the DHCP options. See [Section 2.5.14.2, "Sample dhcpd.conf"](#) for an example of how to configure dhcpd to offer autoprovisioning server addresses. If multiple options are set, the device will attempt to download autoprovisioning files from every server.

The DHCP option determines the protocol used to download the autoprovisioning file. The device looks for DHCP options in the following order:

1. Option 43 - a FQDN or an IP address to an http server
2. Option 72 - an IP address to an http server
3. Option 150 - an IP address to a tftp server
4. Option 66 - an IP address to a tftp server or if the entry starts with 'http', a FQDN to a http server.

You can download an autoprovisioning template file from the [Autoprovisioning Page](#) using the **Download Template** button (see [Table 2-15](#)). This file contains every configuration option that can be set on the board.

Autoprovisioning files can contain the whole configuration or a subset of this file. The first autoprovisioning file can also contain links to other autoprovisioning files.

The <MiscSettings> section contains some examples of additional autoprovisioning files:

```
<MiscSettings>
    <DeviceName>CyberData VoIP Device</DeviceName>
<!--    <AutoprovFile>common.xml</AutoprovFile>-->
<!--    <AutoprovFile>sip_reg[macaddress].xml</AutoprovFile>-->
<!--    <AutoprovFile>audio[macaddress]</AutoprovFile>-->
<!--    <AutoprovFile>device[macaddress].xml</AutoprovFile>-->
</MiscSettings>
```


After downloading the first autoprovisioning file, the device will step through up to twenty additional <AutoprovFile> entries and try to download these files from the same server.

When the device finds a filename with the string **[macaddress]**, it will replace this string with the mac address.

As an example, the user has configured option 43 on their DHCP server to "http://example.com," and on their server, they have a file named **0020f7123456.xml** (the same as the mac address of the device).

The file 0020f7123456.xml contains:

```
<?xml version="1.0" encoding="utf-8" ?>
<specific>
  <MiscSettings>
    <DeviceName>Newname</DeviceName>
    <AutoprovFile>common.xml</AutoprovFile>
    <AutoprovFile>sip_reg[macaddress].xml</AutoprovFile>
    <AutoprovFile>audio[macaddress]</AutoprovFile>
    <AutoprovFile>device.xml</AutoprovFile>
  </MiscSettings>
</specific>
```

1. The device will first set it's name to 'Newname'.
2. It will try to download http://example.com/common.xml.
3. It will try to download http://example.com/sip_reg0020f7123456.xml.
4. It will try to download http://example.com/audio0020f7123456.
5. It will try to download http://example.com/device.xml.

The device is reconfigured every time it downloads a new file so if two files configure the same option the last one will be the one that is saved.

It is possible to autoprovision autoprovisioning values (for example, to disable autoprovisioning or to configure a time to check for new files).

Checking for New Autoprovisioning Files after Boot

The device will always check for an autoprovisioning files on boot but it can be configured to also check after a periodic delay, when idle, or at a specified time. When one of these options is set, the device will download its autoprovisioning files again, and if it finds any differences from the files it downloaded on boot, it will force a reboot and reconfigure.

The
Autoprovisioning
Filename

The autoprovisioning filename can contain a file, a file path, or a directory.

Table 2-16. Autoprovisioning File Name

Autoprovisioning Filename	Autoprovisioning Server	File Downloaded
config.xml	10.0.1.3	10.0.1.3/config.xml
/path/to/config.xml	10.0.1.3	10.0.1.3/path/to/config.xml
subdirectory/path/	10.0.1.3	10.0.1.3/subdirectory/path/0020f7020002.xml

TFTP options may not support subdirectories. If a directory is set in the filename field, firmware and audio files will also be downloaded from this subdirectory.

If the filename ends with a forward slash “/,” the device will treat it as a subdirectory.

For example:

The autoprovisioning server is set to “https://www.example.com”

The autoprovisioning filename is set to “cyberdata/”

On boot, the device will try to download:

https://www.example.com/cyberdata/0020f7123456.xml

...and if this fails:

https://www.example.com/cyberdata/000000cd.xml

Audio files and firmware files will also add “cyberdata” to the URL before downloading.

```

Autoprovisioning <FirmwareSettings>
Firmware Updates <FirmwareFile>505-ulmage-ceilingspeaker</FirmwareFile>
                  <FirmwareServer>10.0.1.3</FirmwareServer>
                  <OutdoorIntercom30>firmware_file_v9.3.0</OutdoorIntercom30>
                  <OutdoorIntercom31>firmware_file_v10.3.0</OutdoorIntercom31>
                  <CallButton31>firmware_file_v10.3.0</CallButton31>
                  </FirmwareSettings>

```

In the <FirmwareSettings> section, the <FirmwareServer> element can be used to specify a different server for hosting firmware files. When this element is not available, the device will try to download the file from the autoprovisioning server.

The device will use the filename to determine when to autoprovision firmware updates. The default configuration is blank, so the first time you set a value in your autoprovisioning file, it may force a firmware update even if the firmware version has not changed.

The <FirmwareFile> name can contain path elements (i.e. /path/to/firmware/10.3.0-ulmage-[device_file_name]).

The device also supports product strings for downloading firmware. If the <FirmwareFile> option is not set, the device will look for its particular product string for a firmware filename. In this way, a generic autoprovisioning file can specify unique firmware for a range of products.

The list of valid product strings:

```

<ProductString>CallButton31</ProductString>
<ProductString>EmergencyIntercom31</ProductString>
<ProductString>EmergencyIntercom31SW</ProductString>
<ProductString>IndoorIntercom31</ProductString>
<ProductString>IndoorIntercom31SW</ProductString>
<ProductString>IndoorKeypad31</ProductString>
<ProductString>IndoorKeypad31SW</ProductString>
<ProductString>OfficeRinger31</ProductString>
<ProductString>OfficeRinger31SW</ProductString>
<ProductString>OutdoorIntercom31</ProductString>
<ProductString>OutdoorIntercom31SW</ProductString>
<ProductString>OutdoorKeypad31</ProductString>
<ProductString>OutdoorKeypad31SW</ProductString>
<ProductString>Strobe31</ProductString>
<ProductString>Strobe31SW</ProductString>

```

Autoprovisioning
Example 1

Here's a simple example using four autoprovisioning files to configure two devices:

We boot up two devices with mac addresses **00:20:f7:02:00:01** and **00:20:f7:02:00:02** (Device1 and Device2).

The devices are set to use DHCP and that server provides an autoprovisioning server address with option 43. The address is “https://autoprovtest.server.net.” The files on this server are as follows:

000000cd.xml

```
<MiscSettings>
<DeviceName>CyberData Autoprovisioned</DeviceName>
<AutoprovFile>sip_common.xml</AutoprovFile>
<AutoprovFile>sip_[macaddress].xml</AutoprovFile>
</MiscSettings>
```

sip_common.xml

```
<SIPSettings>
<SIPServer>10.0.0.253</SIPServer>
<RemoteSIPPort>5060</RemoteSIPPort>
</SIPSettings>
```

sip_0020f7020001.xml

```
<SIPSettings>
<SIPUserID>198</SIPUserID>
<SIPAuthPassword>ext198</SIPAuthPassword>
<DialoutExtension0>204</DialoutExtension0>
</SIPSettings>
```

sip_0020f7020002.xml

```
<SIPSettings>
<SIPUserID>500</SIPUserID>
<SIPAuthPassword>ext500</SIPAuthPassword>
<DialoutExtension0>555</DialoutExtension0>
</SIPSettings>
```

On boot, Device1 tries to fetch the file **0020f7023614.xml** from “https://autoprovtest.server.net”. This file is not available, so device1 then tries to fetch the file **000000cd.xml**. This file exists, and Device1 parses the three elements.

1. Device1 changes its device name to **CyberData Autoprovisioned**.
2. Device1 finds an AutoprovFile element containing the filename **sip_common.xml**. The device downloads **sip_common.xml** from “https://autoprovtest.server.net,” and imports this configuration, setting the sip server to **10.0.0.253** and the remote port to **5060.3**.
3. Device1 finds another AutoprovFile element containing the filename **sip_[macaddress].xml**. The device replaces the **[macaddress]** with its own mac address value creating **sip_0020f7020001.xml**, downloads this file from “https://autoprovtest.server.net,” and imports this configuration. This sets the user ID to **198**, the password to **ext198**, and the dialout extension to **204**. Device1 is now finished with autoprovisioning.

Device2 goes through the same steps by setting its device name to **CyberData Autoprovisioned**, its SIP server to **10.0.0.253**, and its port to **5060**. When Device2 “sees” **sip_[macaddress].xml**, Device2 replaces it with its own mac address and downloads **sip_0020f7020002.xml** from “https://autoprotest.server.net.” Device2 sets the SIP User ID to **500**, the password to **ext500**, and the dialout extension to **555**.

Autoprovisioning Example 2

Here is another example of setting up your autoprovisioning files:

We boot up two devices with mac addresses **00:20:f7:02:00:01** and **00:20:f7:02:00:02** (Device1 and Device2) and boot them on a network with a DHCP server configured with an autoprovisioning server at **10.0.1.3** on option **150**. Our TFTP server has three files:

0020f7020001.xml

```
<MiscSettings>
<AutoprovFile>common_settings.xml</AutoprovFile>
</MiscSettings>
<SIPSettings>
<SIPUserID>198</SIPUserID>
<SIPAuthPassword>ext198</SIPAuthPassword>
<DialoutExtension0>204</DialoutExtension0>
</SIPSettings>
```

0020f7020002.xml

```
<MiscSettings>
<AutoprovFile>common_settings.xml</AutoprovFile>
</MiscSettings>
<SIPSettings>
<SIPUserID>500</SIPUserID>
<SIPAuthPassword>ext500</SIPAuthPassword>
<DialoutExtension0>555</DialoutExtension0>
</SIPSettings>
```

common_settings.xml

```
<MiscSettings>
<DeviceName>CyberData Autoprovisioned</DeviceName>
</MiscSettings>
<SIPSettings> <SIPServer>10.0.0.253</SIPServer>
<RemoteSIPPort>5060</RemoteSIPPort>
</SIPSettings>
```

1. On boot, Device1 downloads **0020f7020001.xml** from **10.0.1.3** and imports these values. The SIP User ID is **198**, the password is **ext198**, and the dialout extension is **204**.

2. Device1 then gets the filename **common_settings.xml** from the AutoprovFile element and downloads this file from the TFTP server at **10.0.1.3**. and imports these settings. The device name is set to **CyberData Autoprovisioned**, the SIP server is set to **10.0.0.253**, and the port is set to **5060**.

Device2 does the same except it downloads **0020f7020002.xml** on boot and imports these values instead. The Sip User ID is **500**, password is **ext500**, and dialout extension is **555**. Device2 then downloads the **common_settings.xml** file and imports those values. The device name is set to **CyberData Autoprovisioned**, the SIP server is set to **10.0.0.253**, and the port is set to **5060**.

XML Files

XML files can contain <AutoprovFile> elements. If multiple DHCP options are specified, the device will try to download autoprovisioning files from each in turn. The device will only look for <AutoprovFile> elements in the first file downloaded from each server. You can specify up to 20 <AutoprovFile> elements in the first autoprovisioning file.

There are numerous ways to change an element of the **configuration(xml)** file. Using **sip ext** as an example, the extension can be changed:

Within the device-specific xml, i.e. **[macaddress].xml**, via the AutoprovFile element:<SIPSettings>/<SIPExt>

From the device specific xml, a pointer to a sip_common file

From the device specific xml, a pointer to the device specific sip_[macaddress].xml

From the common file, a pointer to sip_common.xml

From the common file, a pointer to the device specific (sip_[macaddress].xml)

Autoprovisioned Audio Files

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

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

Since audio files are stored in non-volatile memory, if autoprovisioning is disabled after they have been loaded to the board, the audio file settings will not change. You can force a change to the audio files on the board by clicking **Restore Default** on the **Audio** page or by changing the autoprovisioning file with "**default**" set as the file name.

2.5.14.2 Sample dhcpd.conf

```

#
# Sample configuration file for ISC dhcpd for Debian
#

ddns-update-style none;

option domain-name "voiplab";
option domain-name-servers 10.0.0.252;
option option-150 code 150 = ip-address;
option ntp-servers north-america.pool.ntp.org;
option space VendorInfo;
option VendorInfo.text code 10 = { text };
authoritative;
log-facility local7;

subnet 10.0.0.0 netmask 255.0.0.0 {
    max-lease-time 3600;
    default-lease-time 3600;

    option routers                10.0.0.1;
    option subnet-mask            255.0.0.0;

    option domain-name            "voiplab";
    option domain-name-servers    10.0.0.252;

    option time-offset            -8;                # Pacific Standard Time

#    option www-server            99.99.99.99;        # OPTION 72

#    option tftp-server-name      "10.0.1.52";        # OPTION 66
#    option tftp-server-name      "http://test.cyberdata.net"; # OPTION 66

#    option option-150            10.0.0.252;        # OPTION 150

# These two lines are needed for option 43
#    vendor-option-space VendorInfo;                # OPTION 43
#    option VendorInfo.text "http://test.cyberdata.net"; # OPTION 43

    range 10.10.0.1 10.10.2.1; }

```

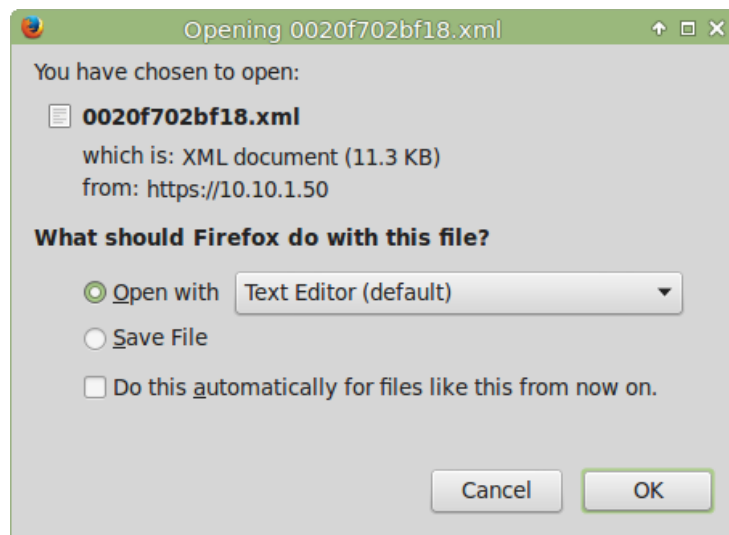
2.5.14.3 Download Template Button

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

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

1. On the **Autoprovisioning** page, click on the **Download Template** button.
2. You will see a window prompting you to save a configuration file (**.xml**) to a location on your computer ([Figure 2-58](#)). The configuration file is the basis for the default configuration settings for your unit).
3. Choose a location to save the configuration file and click on **OK**. See [Figure 2-58](#).

Figure 2-58. Configuration File



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

2.6 Upgrade the Firmware

Note CyberData strongly recommends that you do not upgrade the firmware when the device is likely to be in use.

To upgrade the firmware of your device:

1. Download the latest firmware file from the **Downloads** tab at the following webpage:
<https://www.cyberdata.net/products/011426>
2. Unzip the firmware version file. This file may contain the following:
 - Firmware file
 - Release notes
 - Autoprovisioning template
3. Log in to the **Home** page as instructed in [Section 2.5.4, "Log in to the Configuration Home Page"](#).
4. Click on the **Firmware** menu button to open the **Firmware** page ([Figure 2-59](#)).


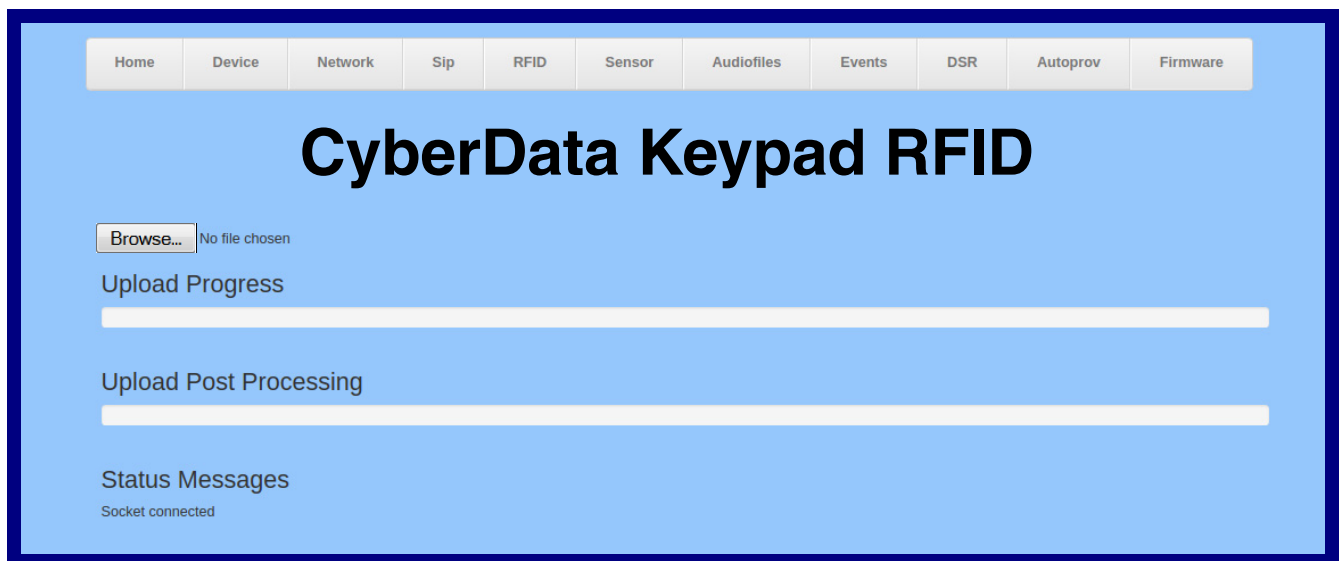
 GENERAL ALERT	Caution Equipment Hazard: CyberData strongly recommends that you first reboot the device before attempting to upgrade the firmware of the device. See Section 2.7, "Reboot the Device" .
---	---

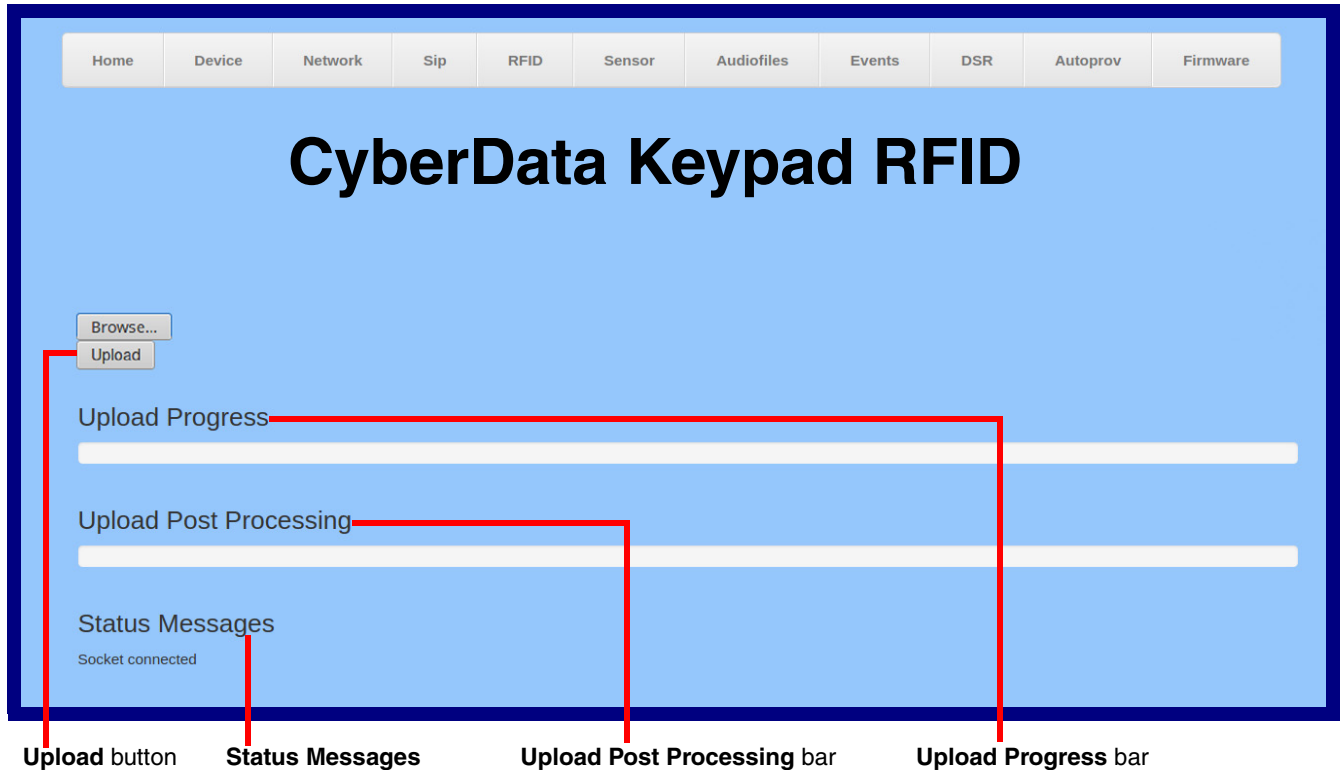
Figure 2-59. Firmware Page



5. Click on the **Browse** button, and then navigate to the location of the firmware file.

6. Select the firmware file. This reveals the **Upload** button (Figure 2-60).

Figure 2-60. Upload Button



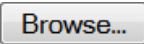

7. Click on the **Upload** button. After selecting the **Upload** button, you will see the progress of the upload in the **Upload Progress** bar.
8. When the upload is complete, you will see the words **Upload finished** under **Status Messages**.
9. At this point, you will see the progress of the upload's post processing in the **Upload Post Processing** bar.

Note Do not reboot the device before the upgrading process is complete.

10. When the process is complete, you will see the words **SWUPDATE Successful** under **Status Messages**.
11. The device will reboot automatically.
12. The **Home** page will display the version number of the firmware and indicate which boot partition is active.

Table 2-17 shows the web page items on the **Firmware** page.

Table 2-17. Firmware Page Parameters

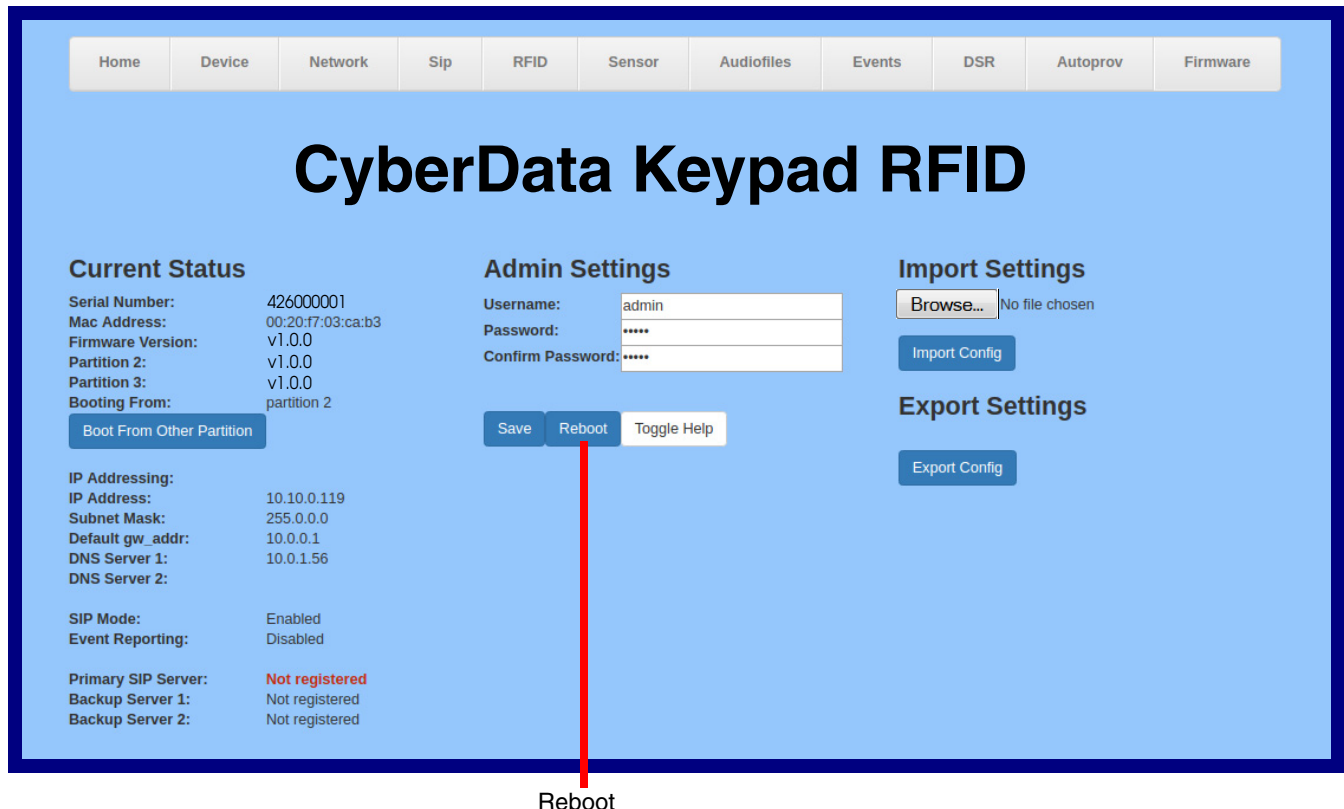
Web Page Item	Description
	Use the Browse button to navigate to the location of the firmware file that you want to upload.
	Click on the Upload button to automatically upload the selected firmware and reboot the system. Note: This button only appears after the user has selected a firmware file.
Upload progress	Status bar indicates the progress in uploading the file.
Upload Post Processing	Status bar indicates the progress of the software installation.
Status Messages	Messages relevant to the firmware update process appear here.

2.7 Reboot the Device

To reboot the device, complete the following steps:

1. Log in to the **Home** page as instructed in [Section 2.5.4, "Log in to the Configuration Home Page"](#).
2. Click on the **Reboot** button on the **Home** page ([Figure 2-61](#)). A normal restart will occur.

Figure 2-61. Home Page



Reboot

2.8 Command Interface

Some functions on the device can be activated using simple POST commands to the web interface. The examples in [Table 2-18](#) use the free unix utility, **wget** commands. However, any program that can send HTTP POST commands to the device should work.

2.8.1 Command Interface Post Commands

Note These commands require an authenticated session (a valid username and password to work).

Table 2-18. Command Interface Post Commands

Device Action	HTTP Post Command ^a
Reboot	wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.154/command" --post-data "request=reboot"
Place call to extension (example: extension 600)	wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.154/command" --post-data "request=call&extension=600"
Test Relay	wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.154/command" --post-data "request=test_relay"
Swap boot partitions	wget --user admin --password admin --auth-no-challenge --quiet -O /dev/null --no-check-certificate "https://10.10.1.154/command" --post-data "request=swap_boot_partition"

a. Type and enter all of each http POST command on one line.

Appendix A: Mounting the SIP RFID/Keypad Secure Access Control Endpoint

A.1 Mounting Components

Before you mount the SIP RFID/Keypad Secure Access Control Endpoint, make sure that you have received all the parts for each SIP RFID/Keypad Secure Access Control Endpoint. Refer to the following tables.

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


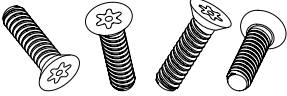
Quantity	Part Name	Illustration
1	T-15H Torx Key	
4	Security Torx Screw	

Table A-2. Optional Accessories (for gooseneck mounting)

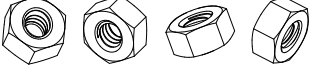
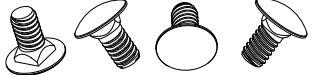
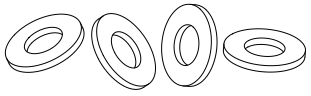

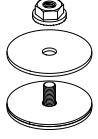
Quantity	Part Name	Illustration
4	Carriage bolt nuts	
4	Carriage bolts	
4	Carriage bolt washers	

Table A-3. Optional Accessories

Quantity	Part Name	Illustration
1	Spacer for half-inch set conduit connector	
1	531085B hole plug assembly	

A.2 Dimensions

Figure A-1. Unit Dimensions—Front and Side View

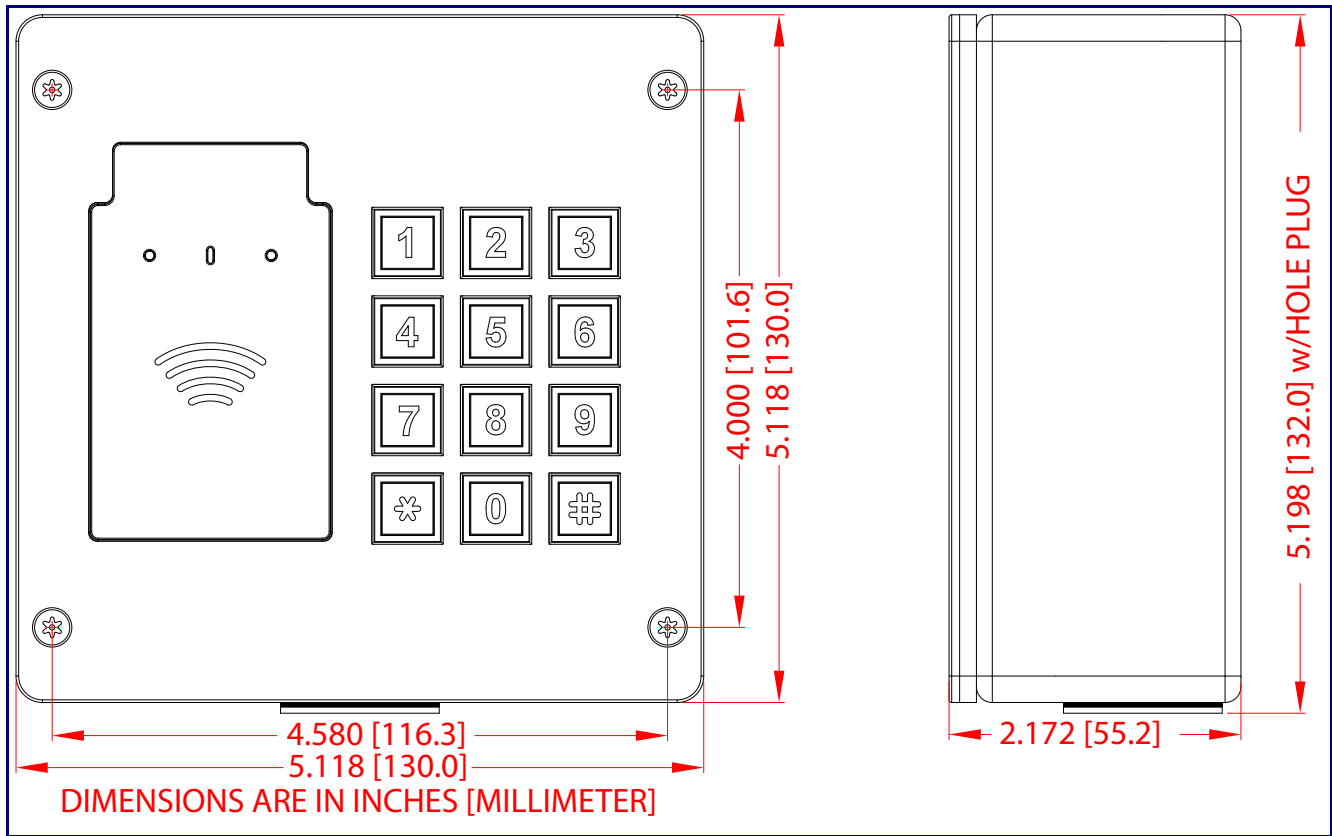


Figure A-2. Unit Dimensions—Rear View with Mounting Hole Locations

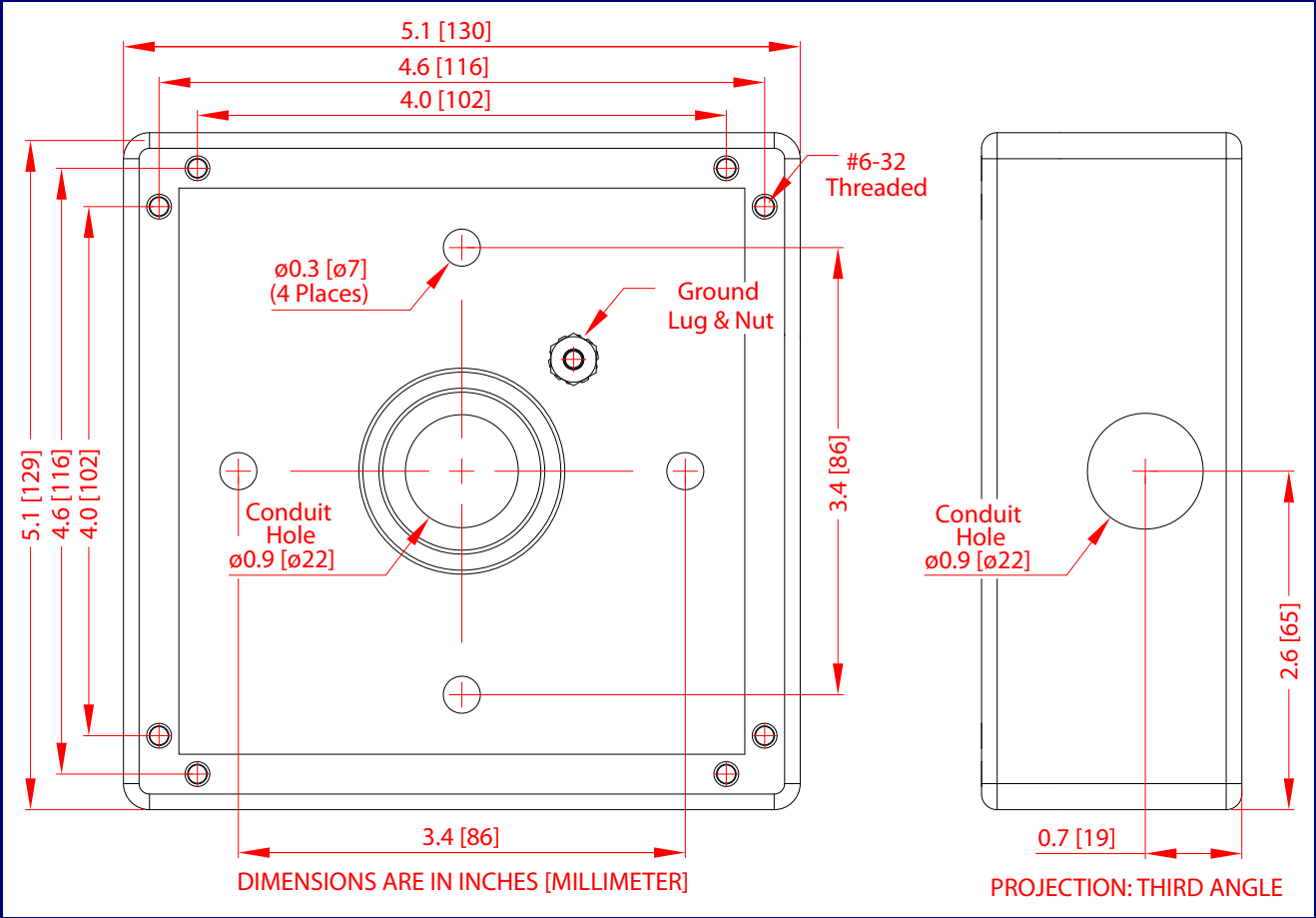
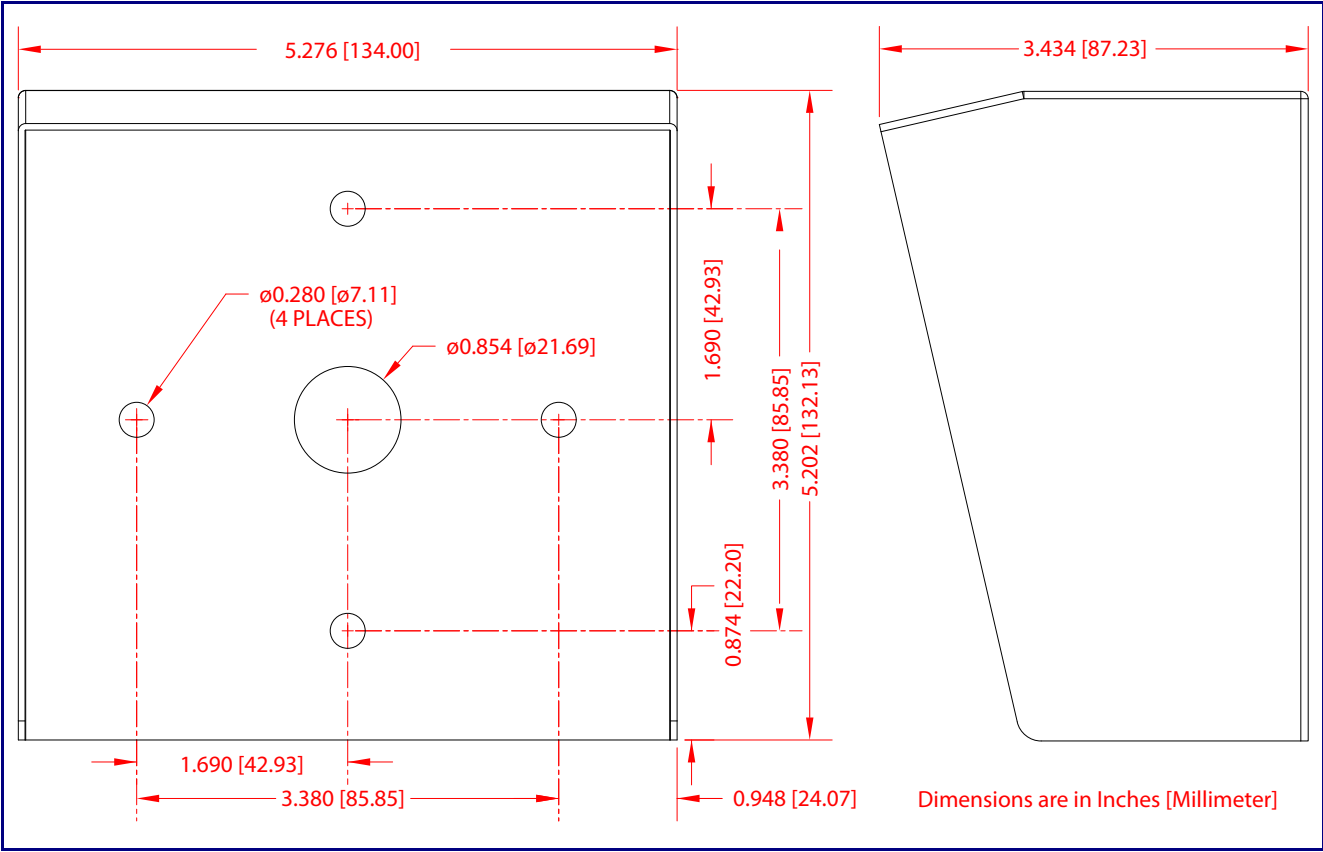


Figure A-3. Shroud Dimensions—Front and Side View with Mounting Hole Locations

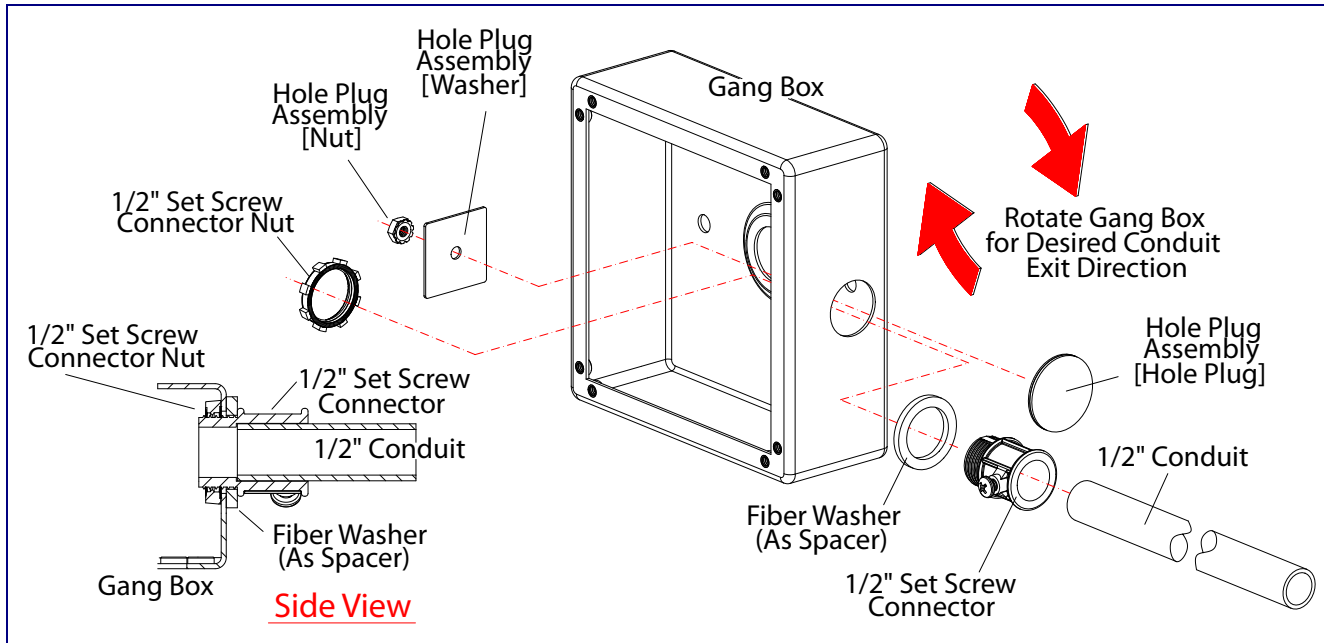


A.3 Network Cable Entry Restrictions

A.3.1 Conduit Mounting Restrictions (Side Entry)

See [Figure A-4](#) for the conduit mounting restrictions (side entry).

Figure A-4. Conduit Mounting Restrictions (Side Entry)



A.4 Service Loop Cable Routing

Figure A-5 and Figure A-6 illustrate a service loop cable routing option for the SIP RFID/Keypad Secure Access Control Endpoint.

Figure A-5. Ground Cable Service Loop Routing

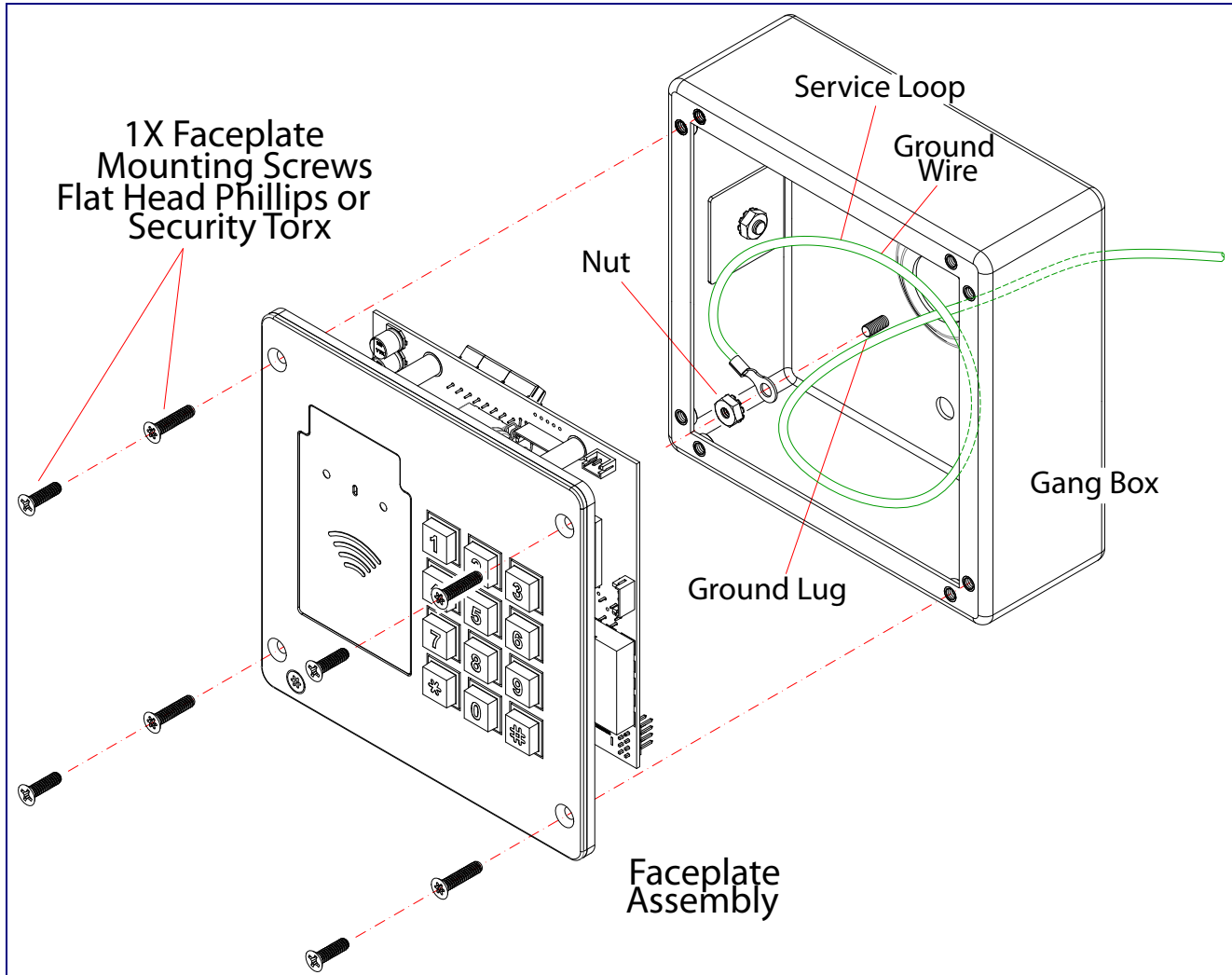
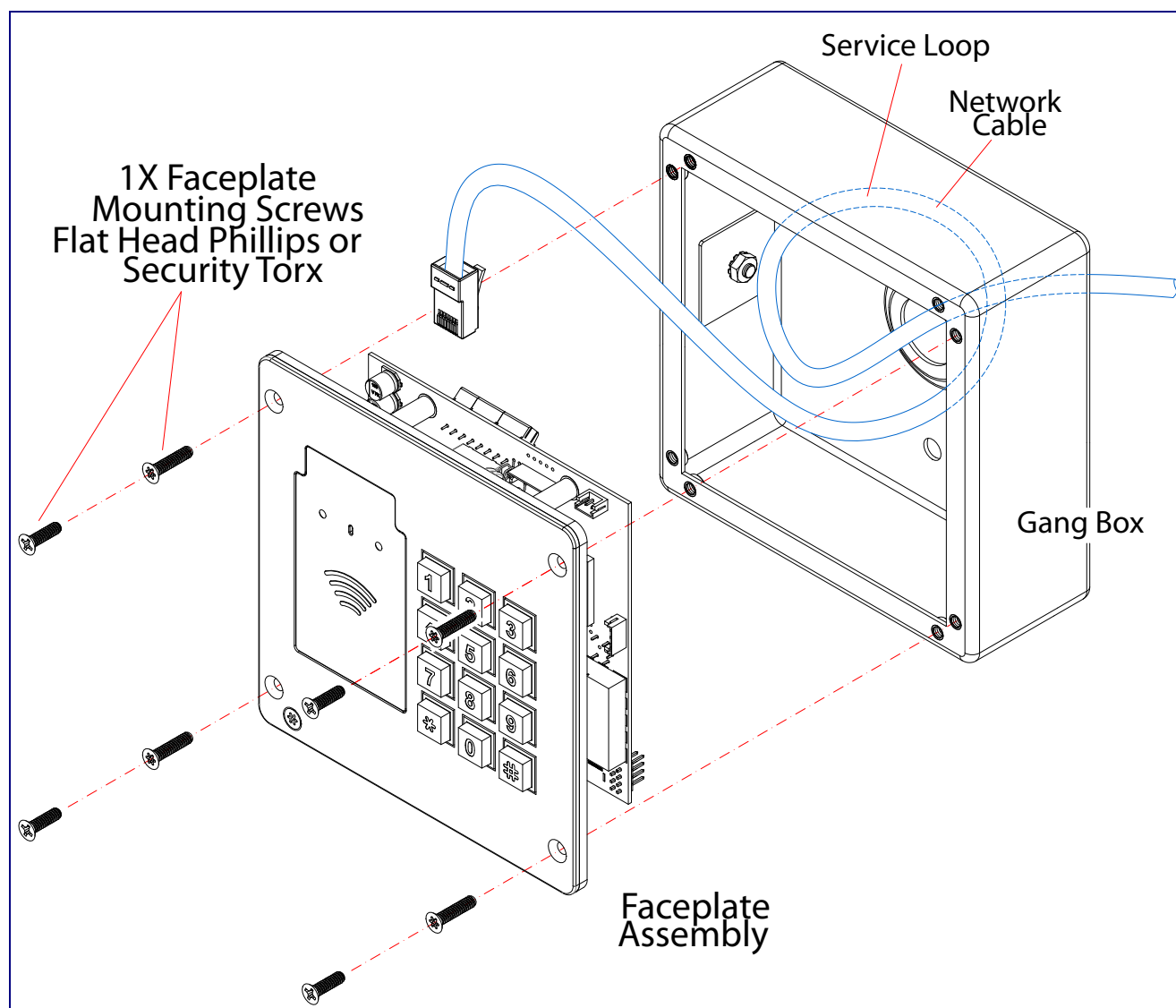


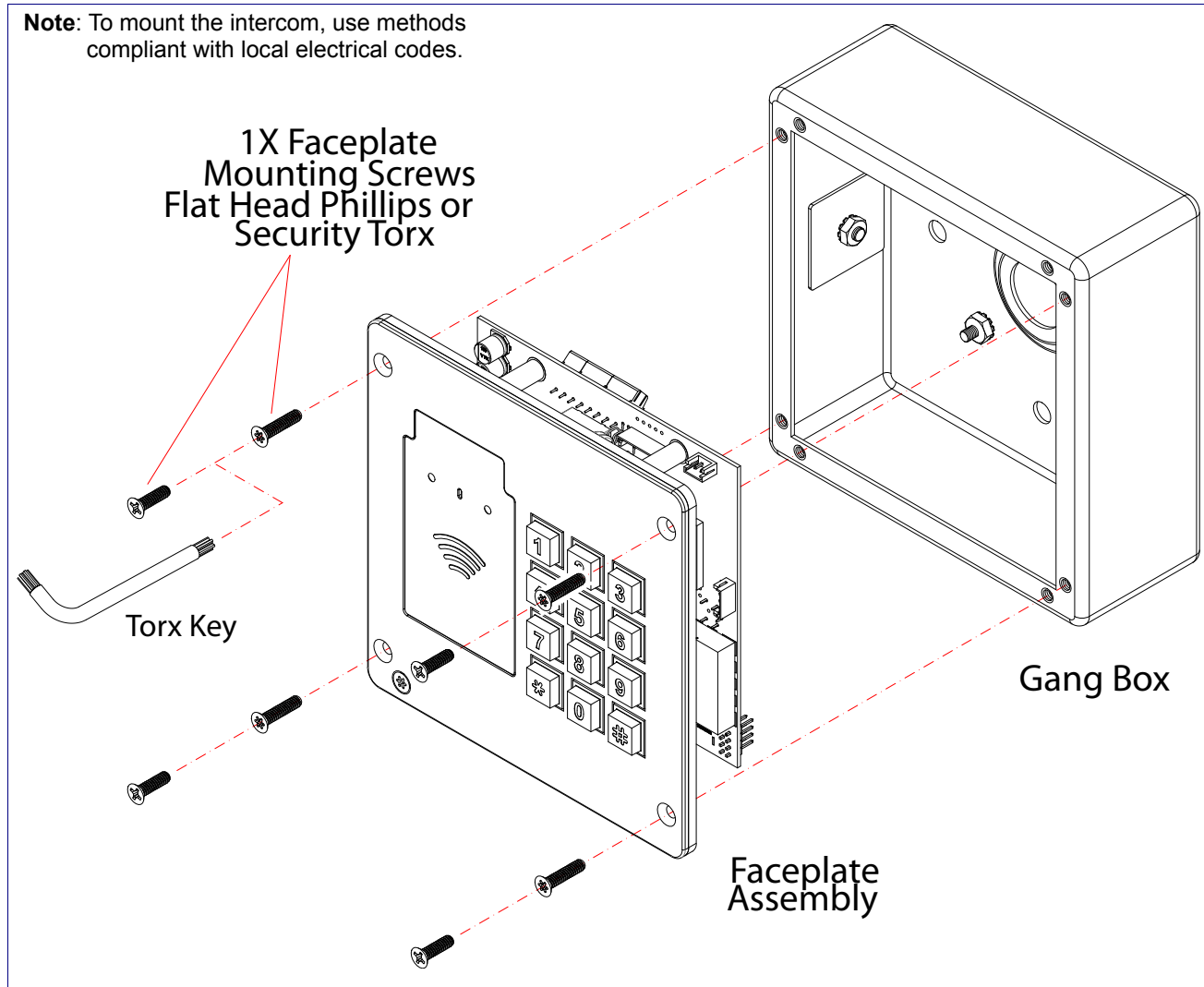
Figure A-6. Network Cable Service Loop Routing



A.5 Securing the Intercom

Figure A-7 illustrates how to secure the SIP RFID/Keypad Secure Access Control Endpoint with Torx screws.

Figure A-7. Securing the Intercom



GENERAL ALERT

Caution

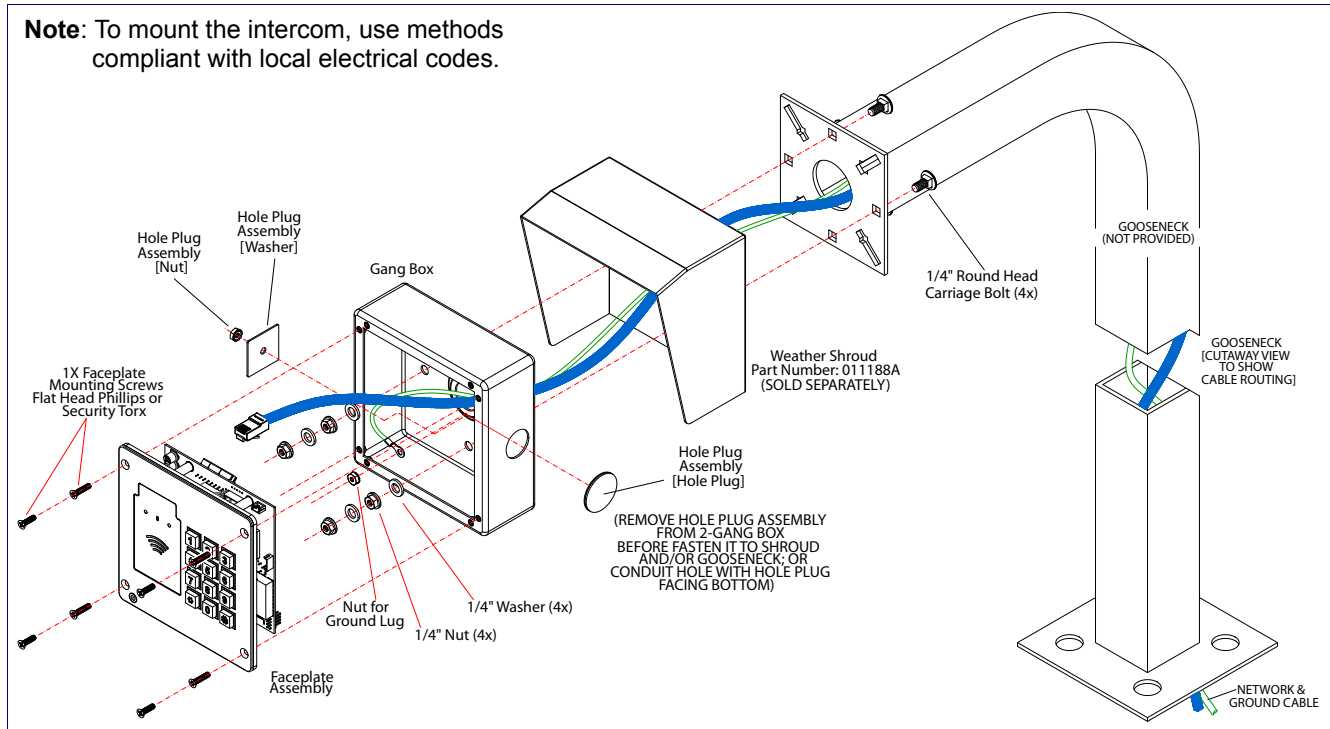
Equipment Hazard: Do not use an electric or power screwdriver to fasten the face plate and PCB assembly to the gang box. To prevent over-torque damage to the gasket, do not apply more than 10 inch-pounds force. Over-torquing will cause the gasket to tear, risk moisture intrusion, and effectively void the manufacturer's warranty.

A.6 Additional Mounting Options

A.6.1 Goose Neck Mounting Option (Not Provided)

Figure A-8 illustrates a gooseneck mounting option for the SIP RFID/Keypad Secure Access Control Endpoint.

Figure A-8. Optional Goose Neck Mounting



Appendix B: Setting up a TFTP Server

B.1 Set up a TFTP Server

Autoprovisioning requires a TFTP server for hosting the configuration file.

B.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
```

B.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:

<https://www.cyberdata.net/pages/solarwinds>

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 C: Troubleshooting/Technical Support

C.1 Frequently Asked Questions (FAQ)

To see a list of frequently asked questions for your product, click on the **FAQs** tab at the following webpage:

<https://www.cyberdata.net/products/011426>

C.2 Documentation

The documentation for this product is released in an English language version only.

To download PDF copies of CyberData product documentation, click on the **Downloads** tab at the following webpage:

<https://www.cyberdata.net/products/011426>

C.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, Extension 333</p>

C.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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