



# CEN-GW1 and CENI-GW1

## Universal Wireless Gateway - ER, SG, and infiNET EX® Wireless Networks

Product Manual

Crestron Electronics, Inc.

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# Overview

The CEN-GW1 and CENI-GW1 are universal wireless gateways that communicate with Crestron® SG (Sub GHz), ER (Extended Range), and infiNET EX® wireless devices. A single gateway creates SG, ER, and infiNET EX® wireless networks to facilitate 2-way communication between a Crestron® control system and a network of Crestron wireless remotes, keypads, lighting dimmers, motorized shades, thermostats, door locks, and other wireless devices.

**NOTE:** The CEN-GW1 and CENI-GW1 are functionally similar. For simplicity within this guide, the term “CEN-GW1” is used except where noted.

The CEN-GW1 is powered via PoE (Power over Ethernet) or with an optional power pack ([PW-2407WU](#), sold separately).

This section provides the following information:

- [Features](#)
- [Physical Description](#)

# Features

Key features include:

- Universal wireless gateway adds the SG (Sub GHz) wireless network to the proven performance of the infiNET EX mesh network and Extended Range ER wireless network
- Supports Crestron battery-powered shades
- Dynamic discovery for fast, easy setup
- Wi-Fi® friendly channel selection for trouble-free operation
- Built-in energy scan tool to help select wireless channel
- Extend infiNET EX wireless coverage with infiNET EX expanders<sup>2</sup>
- Extend ER wireless coverage with the built-in ER device roaming capabilities
- Mount the antennas remotely using the ANT-EXT-10 (one required for each antenna, sold separately)
- Power using PoE or 24VDC power pack
- Integrator Friendly Enclosure (IFE) can be mounted to a flat surface, a DIN rail, or stacked on other IFE compliant devices; rack and pole mount options are also available (sold separately)

## Universal Wireless Gateway

The universal wireless gateway features 2-way wireless communication between the gateway and wireless devices. The CEN-GW1 can manage SG wireless, infiNET EX® wireless, and ER (Extended Range RF) devices simultaneously, eliminating the need for separate gateways.<sup>1</sup>

## Easy Setup

The CEN-GW1 makes it easy to set up a network of wireless devices by eliminating the need for separate gateways, antennas, and LAN connections. Additionally, Crestron wireless devices are discovered and acquired in one simple step.

## Power over Ethernet for Simple Installation

Using PoE technology, a single cable run is used for both power and data for the CEN-GW1.

Power an entire network of Crestron PoE devices using a Crestron PoE switch ([CEN-SW-POE-5](#) or [CEN-SWPOE-16](#)) or a single device using a PoE Injector ([PWE-4803RU](#)). All PoE injectors and switches are sold separately.

As an alternative to PoE, use a 24VDC power pack ([PW-2407WU](#), sold separately) to power the CEN-GW1.

# Integrator Friendly Enclosure

Mount the CEN-GW1 almost anywhere using the Integrator Friendly Enclosure (IFE). The IFE can be mounted to any flat surface, snapped onto a standard DIN rail, or stacked on other IFE compliant devices. Rack mount and pole mount kits are also available.

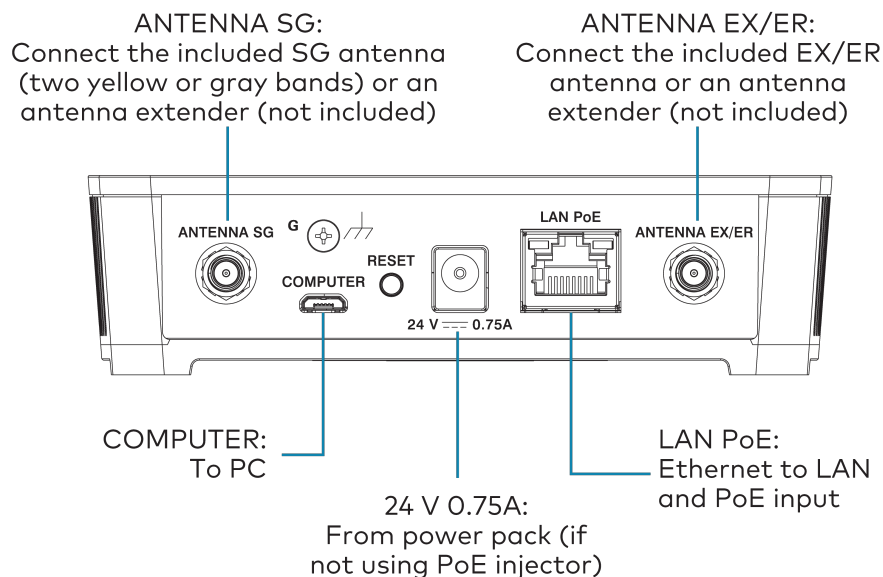
Notes:

1. The CEN-GW1 is not compatible with [MTX-3](#), [TPS-6X](#), or [UFO-WPR-3ER](#) model remotes.
2. Battery-powered infiNET EX devices do not provide expander functionality and may have reduced RF range capabilities. Consult the specifications for each network device to confirm its actual wireless capabilities. Use infiNET EX expanders ([CLW-EXPEX](#), sold separately) to fill gaps in coverage and extend the wireless range of the infiNET EX network. infiNET EX expanders are only for infiNET EX networks and offer no benefit to the performance of ER and SG devices. A maximum of five infiNET EX expanders may be deployed on an infiNET EX network.
3. Up to six MLX-3 remotes can be used.



# Physical Description

The following sections provide information about the connectors, controls, and indicators that are available on the CEN-GW1 and CENI-GW1.



## Controls and Indicators

<b>PWR</b>	(1) Bi-color green/amber LED; Green indicates operating power is being supplied via PoE or 24VDC; Amber indicates that the device is booting
<b>ACT EX/ER</b>	(1) Green LED; Indicates infiNET EX and ER wireless RX and TX data activity
<b>ACT SG</b>	(1) Green LED; Indicates SG wireless RX and TX data activity
<b>ACQUIRE</b>	(1) Recessed pushbutton with red LED: Used to enter <b>Acquire</b> mode to pair wireless devices; Press to enter and exit <b>Acquire</b> mode
<b>SETUP</b>	(1) Recessed pushbutton with red LED Used to set up connection with the control system via Ethernet; To factory reset the gateway, press and hold <b>SETUP</b> until the <b>SETUP</b> LED flashes 6 times.
<b>RESET</b>	(1) Recessed pushbutton; To reboot the gateway, press and hold <b>RESET</b> for 8 seconds.
<b>LAN PoE</b>	(1) Green and (1) Amber LED; Green indicates Ethernet link status; Amber indicates Ethernet activity

## Connectors

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ANTENNA EX/ER	(1) Connection for supplied EX/ER antenna or antenna extender
ANTENNA SG	(1) Connection for supplied SG antenna or antenna extender; <b>CEN-GW1:</b> Yellow bands around the top; <b>CENI-GW1:</b> Gray bands around the top
COMPUTER	(1) Micro-B USB female; Computer console port, installer use only; For setup and firmware upgrades
G	(1) 4-40 screw, chassis ground lug
24VDC 0.75A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; <a href="#">PW-2407WU</a> power pack sold separately
LAN PoE	(1) 8-pin RJ-45, female; 10BASE-T/100BASE-TX Ethernet port; Power over Ethernet compliant

# Specifications

Product specifications for the CEN-GW1 and CENI-GW1.

## Product Specifications

### Wireless Communications

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<b>Transceiver</b>	<p><b>infiNET EX Transceiver:</b> 2-way RF, 2.4 GHz ISM; Channels 11-26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant; Mesh network topology; infiNET EX devices act as expanders<sup>2</sup>; Dedicated infiNET EX expanders are also available (<a href="#">CLW-EXPEX</a>, sold separately)</p> <p><b>ER Transceiver:</b> 2-way RF, 2.4 GHz ISM; Channels 11-26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant; Star network topology; ER devices can roam between up to eight gateways; Additional gateways act as range extenders (sold separately)</p> <p><b>SG Transceiver:</b> 2-way RF; <b>CEN-GW1:</b> Channels 0-29 (903 to 926.2 Mhz); <b>CENI-GW1:</b> Channels 0-33 (863.125 to 869.725 Mhz); SG channels are scanned after a factory restore, the best channel is selected; Star network topology</p>
<b>Transmit Power</b>	<p><b>infiNET EX and ER:</b> +19 dBm</p> <p><b>SG:</b> +27 dBm</p>
<b>Range</b>	<p><b>infiNET EX:</b> 150 ft (46 m) indoor (250 ft (76 m) outdoor) to nearest mesh network device(s)</p> <p><b>ER:</b> 100 to 200 ft (31 to 61 m) maximum indoor (1,000 ft (305 m) outdoor) to ER wireless device</p> <p><b>SG:</b> 230 ft (70 m) indoor (656 ft (200 m) outdoor) to SG wireless device</p>

Range is subject to site-specific conditions and individual device capabilities

## Supported Devices

Supports Crestron and third-party infiNET EX devices, Crestron ER wireless devices, Crestron SG devices, and Crestron infiNET EX expanders<sup>1, 2</sup>

## Maximum Devices Allowed<sup>3</sup>

infiNET EX Devices	infiNET EX Expanders	ER Devices	SG Devices
100	5	0	50
90	5	1	50
80	5	2	50
70	5	3	50
60	5	4	50
50	5	5	50
40	5	6	50
30	5	7	50
20	5	8	50
10	5	9	50
0	5	10	50

**NOTE:** To maintain optimal performance, use no more than 50% of the maximum devices allowed per gateway. Use additional gateways to support more devices. Up to 16 gateways can be used in a system (RF conditions allowing).

## Wired Communications

<b>Ethernet</b>	10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, IEEE 802.3at Type 1 compliant
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## Controls and Indicators

<b>PWR</b>	(1) Bi-color green/amber LED; Green indicates operating power is being supplied via PoE or 24VDC; Amber indicates that the device is booting
<b>ACT EX/ER</b>	(1) Green LED; Indicates infiNET EX and ER wireless RX and TX data activity
<b>ACT SG</b>	(1) Green LED; Indicates SG wireless RX and TX data activity
<b>ACQUIRE</b>	(1) Recessed pushbutton with red LED: Used to enter <b>Acquire</b> mode to pair wireless devices; Press to enter and exit <b>Acquire</b> mode

<b>SETUP</b>	(1) Recessed pushbutton with red LED Used to set up connection with the control system via Ethernet; To factory reset the gateway, press and hold <b>SETUP</b> until the <b>SETUP</b> LED flashes 6 times.
<b>RESET</b>	(1) Recessed pushbutton; To reboot the gateway, press and hold <b>RESET</b> for 8 seconds.
<b>LAN PoE</b>	(1) Green and (1) Amber LED; Green indicates Ethernet link status; Amber indicates Ethernet activity

## Connectors

<b>ANTENNA EX/ER</b>	(1) Connection for supplied EX/ER antenna or antenna extender
<b>ANTENNA SG</b>	(1) Connection for supplied SG antenna or antenna extender; <b>CEN-GW1</b> : Yellow bands around the top; <b>CENI-GW1</b> : Gray bands around the top
<b>COMPUTER</b>	(1) Micro-B USB female; Computer console port, installer use only; For setup and firmware upgrades
<b>G</b>	(1) 4-40 screw, chassis ground lug
<b>24VDC 0.75A</b>	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; <a href="#">PW-2407WU</a> power pack sold separately
<b>LAN PoE</b>	(1) 8-pin RJ-45, female; 10BASE-T/100BASE-TX Ethernet port; Power over Ethernet compliant

## Power

<b>Power over Ethernet</b>	IEEE 802.3at Type 1 (802.3af compatible) Class 3 (5.3 W) PoE Powered Device
<b>Power Pack</b>	0.75A (minimum) @ 24VDC (PW-2407WU sold separately)
<b>Power Consumption</b>	5.3 W typical

## Environmental

<b>Temperature</b>	41° to 104 °F (5° to 40 °C)
<b>Humidity</b>	10% to 90% RH (noncondensing)
<b>Heat Dissipation</b>	18.1 BTU/hr

## Construction

<b>Enclosure</b>	IFE small form factor, black and blue plastic with die-cast zinc top cover
<b>Mounting</b>	Freestanding, stackable, surface mount, or 35 mm DIN EN 60715 rail mount; Occupies 8 DIN module spaces (144 mm); Surface/DIN rail mounting bracket included; Rack mount and pole mount kits sold separately

## Dimensions

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(Without antenna)

<b>Height</b>	1.35 in. (35 mm); 1.77 in. (45 mm) with bracket
<b>Width</b>	5.04 in. (128 mm); 5.36 in. (137 mm) with bracket
<b>Depth</b>	5.17 in. (131 mm)

## Weight

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<b>Gateway</b>	13.1 oz (372 g) with antennas
<b>Bracket</b>	1.5 oz (42 g)

## Compliance

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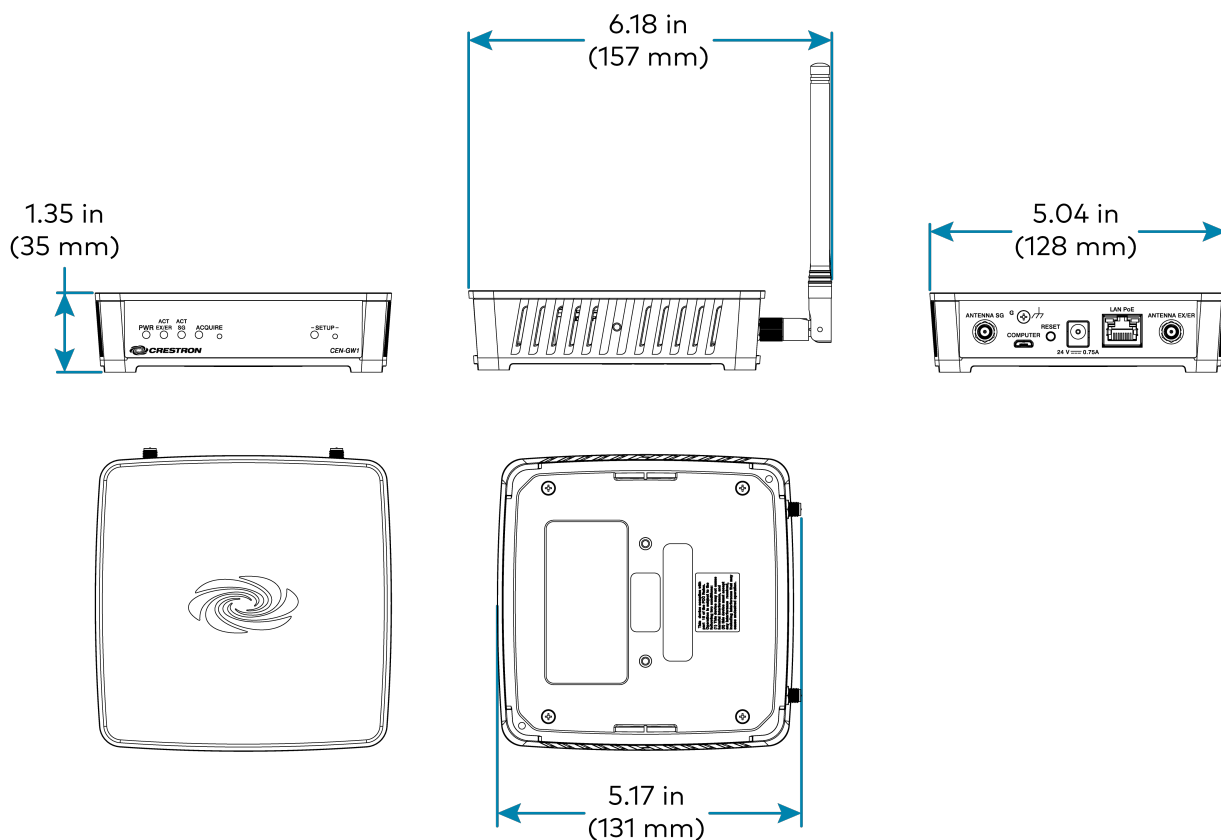
**Regulatory Model: M201913001**

UL, CE, RCM, FCC, IC, WEEE

To search for product certificates, refer to [support.crestron.com/app/certificates](https://support.crestron.com/app/certificates).

# Dimension Drawings

Product dimensions for the CEN-GW1 and CENI-GW1.



## Notes:

1. The CEN-GW1 is not compatible with [MTX-3](#), [TPS-6X](#), or [UFO-WPR-3ER](#) model remotes.
2. Battery-powered infiNET EX devices do not provide expander functionality and may have reduced RF range capabilities. Consult the specifications for each network device to confirm its actual wireless capabilities. Use infiNET EX expanders ([CLW-EXPEX](#), sold separately) to fill gaps in coverage and extend the wireless range of the infiNET EX network. infiNET EX expanders are only for infiNET EX networks and offer no benefit to the performance of ER and SG devices. A maximum of five infiNET EX expanders may be deployed on an infiNET EX network.
3. Up to six MLX-3 remotes can be used.

# Installation

This section provides the following information:

- [In the Box](#)
- [Determine the Installation Location](#)
- [Mount the Gateway](#)
- [Make Connections](#)
- [Assign the RF Channel](#)



# In the Box

Qty.	Description
1	CEN-GW1 or CENI-GW1, Universal Wireless Gateway
<b>Additional Items</b>	
1	Bracket, Mounting, Integrated DIN Rail Clip (4519035)
1	Antenna, EX/ER, 2.4 GHz, 1/4 Wave, Reverse Polarity, Female (2001016)
1	Cable, Ethernet, CAT5e, 5 ft (1.52 m) (2022311)
2	Screw, 6-32 x 3/8 in., Pan Head, Phillips (2007225)
<b>CEN-GW1 Only</b>	
1	Antenna with Yellow Stripes, SG, 916 MHz, 1/2 wave, Reverse Polarity, Female (2055721)
<b>CENI-GW1 Only</b>	
1	Antenna with Gray Stripes, SG, 868 MHz, 1/2 wave, Reverse Polarity, Female (2055720)

# Determine the Installation Location

Install the CEN-GW1 in a location that will provide optimum performance. Consider the following when determining the installation location:

**NOTE:** For additional information, refer to the [Installation and Setup of Crestron RF Products](#) manual.

- Place the gateway at least 15 ft (4.6 m) from other SG (Sub GHz), infiNET EX gateways, Crestron ER gateways, or Wi-Fi® access points.
- Place multiple gateways on different RF channels.
- Place the gateway at least 6 ft (1.8 m) from the nearest Bluetooth® device.

# Mount the Gateway

Mount the CEN-GW1 on a wall or DIN rail.

## NOTES:

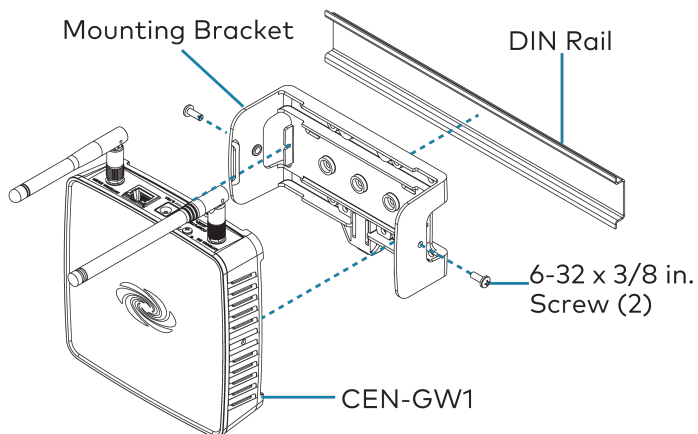
- This product must be installed and used in accordance with appropriate electrical codes and regulations.
- This product must be installed by a qualified electrician.
- To install in a rack, use the [RMK-IFE-1U](#) (sold separately).
- To install on a pole, use the [PLMK-IFE-101](#) (sold separately).

## DIN Rail Mount

To mount to a DIN rail:

1. Hang the mounting bracket on the top of the DIN rail and press the bottom toward the DIN rail until it snaps into place.
2. Insert the CEN-GW1 into the mounting bracket until it snaps into place.
3. Secure the CEN-GW1 to the mounting bracket. Insert a 6-32 x 3/8 in. screw into each side of the mounting bracket and tighten using a Phillips screwdriver.

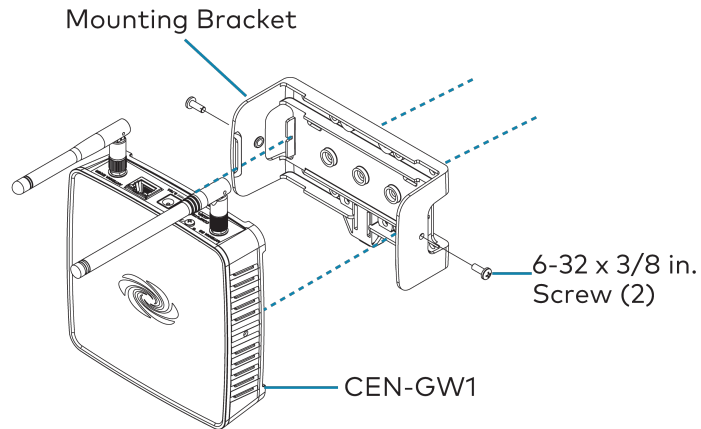
**NOTE:** Do not use the included screws to mount the bracket to the bottom of the CEN-GW1. Doing so will prevent removal of the CEN-GW1 from the DIN rail.



## Wall Mount

To mount to a wall:

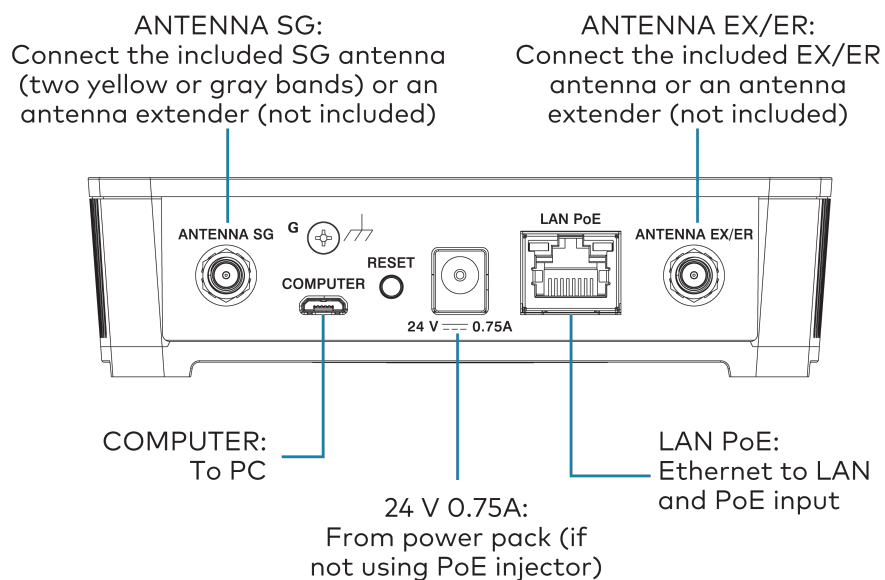
1. Secure the mounting bracket to a vertical, flat wall using screws that are appropriate for the wall material (not included).
2. Insert the CEN-GW1 into the mounting bracket until it snaps into place.
3. Secure the CEN-GW1 to the mounting bracket. Insert a 6-32 x 3/8 in. screw into each side of the mounting bracket and tighten using a Phillips screwdriver.



# Make Connections

Make the Power, Ethernet, and Antenna connections.

Turn on power to the CEN-GW1 after all connections have been made. Use Crestron power supplies for Crestron equipment.



## PoE Connection

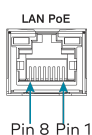
Use a PoE switch ([CEN-SW-POE-5](#) or [CEN-SWPOE-16](#)) or injector ([PWE-4803RU](#)) (all sold separately) to provide power and Ethernet communications.

To connect using a PoE connection:

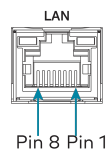
1. On the CEN-GW1, connect the CAT5e cable to the **LAN PoE** port.
2. On the PoE switch or injector, connect the other end of the CAT5e cable to a **PoE** port.

**NOTE:** Arrows denote internal pin assignments of the **LAN PoE** and **LAN** ports.

LAN PoE Pin Assignment



LAN Pin Assignment



Pin	Signal	Pin	Signal
1	Data Pair 1	1	Data Pair 1
2	Data Pair 1	2	Data Pair 1
3	Data Pair 2	3	Data Pair 2
4	+ VDC	4	No Connection
5	+ VDC	5	No Connection
6	Data Pair 2	6	Data Pair 2
7	- VDC	7	No Connection
8	- VDC	8	No Connection

## Separate Power and Ethernet Connections

Use a wall-mount power pack ([PW-2407WU](#), sold separately) to provide power and the CAT5e cable for Ethernet communications.

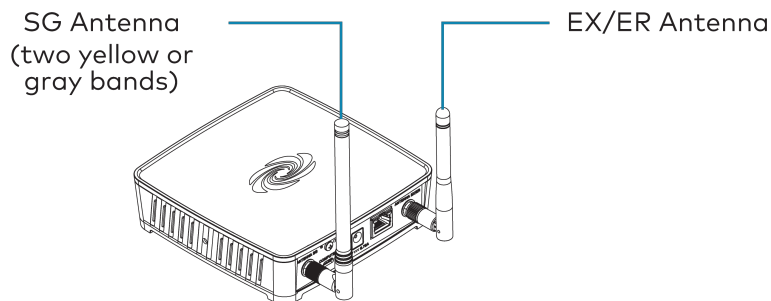
To connect using separate power and Ethernet connections:

1. On the CEN-GW1, connect the power pack to the **24 V 0.75A** port.
2. On the CEN-GW1, connect the CAT5e cable to the **LAN PoE** port.
3. Connect the other end of the CAT5e cable to a LAN port on a network switch.

## Antenna

To connect the antennas:

- Attach the EX/ER antenna to the ANTENNA EX/ER connector. The EX/ER antenna is shorter than the SG antenna.
- Attach the SG antenna to the ANTENNA SG connector. The SG antenna has two yellow (CEN-GW1) or gray (CENI-GW1) bands around the top and is longer than the EX/ER antenna.



To extend an antenna, use [ANT-EXT-10](#) (sold separately).

# Assign the RF Channel

Before use, assign an RF channel for SG wireless communications and an RF channel for infiNET EX and ER wireless communications. To select the best RF channel, perform an energy scan. For details, refer to [Settings on page 32](#) in the product manual.

To assign the RF channel on the gateway, use the Web UI or the EasyConfig tool in Crestron Toolbox™ software. For details, refer to [Radio Setup on page 35](#) or [Crestron Toolbox Help](#).

When selecting an RF channel for SG wireless communications, consider the following:

- Each SG wireless gateway in the space must use a different RF channel.
- SG devices set their RF channel to match the RF channel set on the gateway. If the SG RF channel on the gateway is changed, the SG device automatically updates its RF channel to match the gateway.
- SG devices do not operate within the Wi-Fi® wireless spectrum.

When selecting an RF channel for infiNET EX® and ER wireless communications, consider the following:

- infiNET EX and ER wireless communications use the same RF channel.
- The default and recommended RF channel is 15.
- infiNET EX devices set their RF channel to match the RF channel set on the gateway. If the infiNET EX and ER RF channel on the gateway is changed, the infiNET EX device automatically updates its RF channel to match the gateway.
- ER devices must have their RF channel assigned manually prior to joining the network. If the infiNET EX and ER RF channel on the gateway is changed, the ER device must have its RF channel manually changed to match the gateway.
- infiNET EX and ER operate within the Wi-Fi® wireless spectrum. For best performance, do not select an RF channel that is within a Wi-Fi channel. Refer to the table below for details.

RF Channel(s)	Within Wi-Fi Channel	Adjacent to Wi-Fi Channel
11 - 14	1	-
15 (Default, Recommended)	-	1, 6
16 - 19	6	-
20 (Recommended)	-	6, 11
21 - 24	11	-
25	-	11
26	-	-

# Configuration

Prior to configuration, ensure the device is running the latest firmware. To update the firmware, refer to [Update Firmware on page 27](#).

Configure the gateway using the web user interface.

This section provides the following information:

- [Log In](#)
- [Action Menu](#)
- [Status](#)
- [Settings](#)
- [Security](#)
- [802.1x Configuration](#)
- [Log Out](#)



# Log In

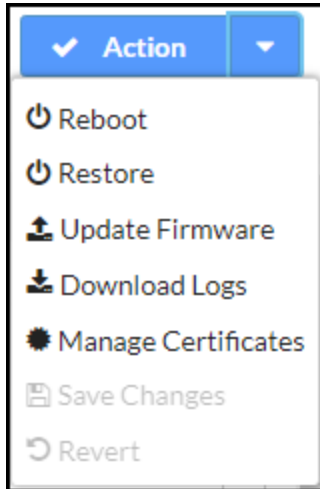
To log in and configure the CEN-GW1:

**NOTE:** To discover the IP address of the device, use the Device Discovery tool in Crestron Toolbox™ software

1. Enter the IP address into a web browser.
2. Enter the **Username** and **Password**.
3. Select **Sign In**.

# Action Menu

The **Action** drop-down menu is displayed at the top right side of the interface and provides quick access to common device functions, such as Reboot, Restore, Update Firmware, Download Logs, Manage Certificates, Save Changes, and Revert.



When changes are made to the configuration, the **Action** button changes to a **Save Changes** button. To save the changes, select **Save Changes**.

If a restart is required after changes have been saved, a dialog box is displayed asking whether the restart should be performed. Select **OK** to restart the device or **Cancel**.

## Reboot

To restart the gateway, select **Reboot** and then **Yes, Reboot Now** to confirm.

## Restore

To restore the factory default settings, select **Restore** and then **Yes** to confirm.

# Update Firmware

To upgrade the device firmware:

## NOTES:

- Do not turn off the device or stop the upgrade process until the device is upgraded. After the upgrade, the device will restart.
- For time-based auto update of the firmware, refer to the [Auto Update on page 33](#).

1. Visit [www.crestron.com/firmware](http://www.crestron.com/firmware) and download the latest firmware.
2. Select **Upload Firmware** and then select **Browse**.
3. Select the firmware file and then select Open.
4. To upload the firmware, select **Load**.

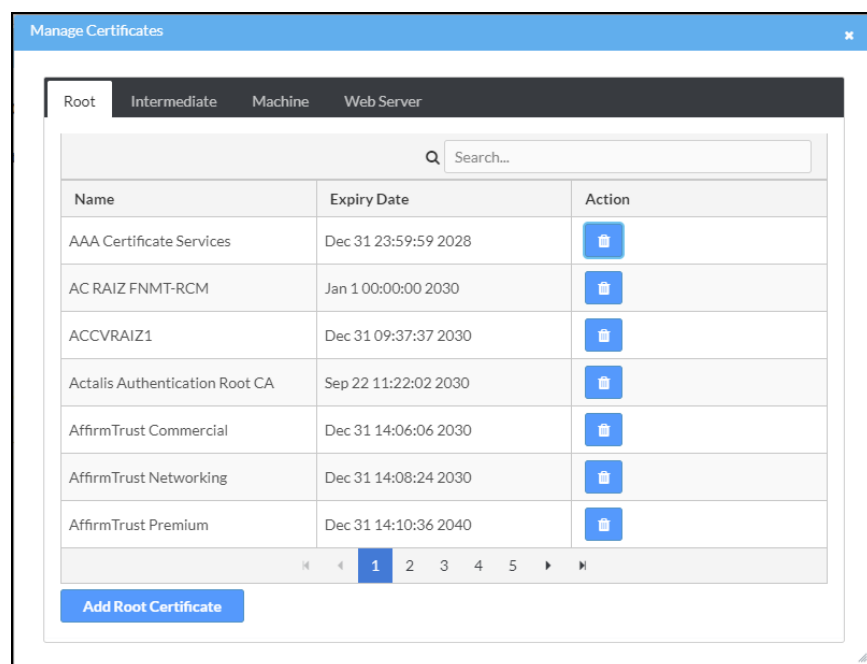
# Download Logs

Download log files for diagnostic purposes. The log files are stored in a compressed .tgz file, extract the log files to view them.

To download logs, select **Download Logs**.

# Manage Certificates

Select **Manage Certificates** in the **Action** drop-down menu to add, remove, and manage certificates used in 802.1X and other protected networks. The following certificate tabs are displayed:



## Root

The Root certificate is used by the device to validate the network's authentication server. The device has a variety of Root certificates, self-signed by trusted CAs (Certificate Authorities), and preloaded into the device. Root certificates must be self-signed.

To add a Root certificate:

1. Select the **Root** tab.
2. Select **Add Root Certificate**.
3. Select the certificate file from the dialog box that is displayed and select **Open**.

## Intermediate

The Intermediate store holds non self-signed certificates that are used to validate the authentication server. These certificates will be provided by the network administrator if the network does not use self-signed Root certificates.

To add an Intermediate certificate:

1. Select the **Intermediate** tab.
2. Select **Add Intermediate Certificate**.
3. Select the certificate file from the dialog box that is displayed and select **Open**.

## Machine

The machine certificate is an encrypted PFX file that is used by the authentication server to validate the identity of the device. The machine certificate will be provided by the network administrator, along with the certificate password. For 802.1X, only one machine certificate can reside on the device.

To add a Machine certificate:

1. Select the **Machine** tab.
2. Select **Add Machine Certificate**.
3. Select the certificate file from the dialog box that is displayed and select **Open**.

## Web Server

The Web Server certificate is a digital file that contains information about the identity of the web server.

To add a Web Server certificate:

1. Select the **Web Server** tab.
2. Select **Add Web Server Certificate**.
3. Select the certificate file from the dialog box that is displayed and select **Open**.

## Save Changes

The **Action** drop-down menu changes into a **Save Changes** drop-down menu when there are changes that can be saved.

To save configuration setting changes, select **Save Changes**.

## Revert

To discard configuration settings changes, select **Revert**.

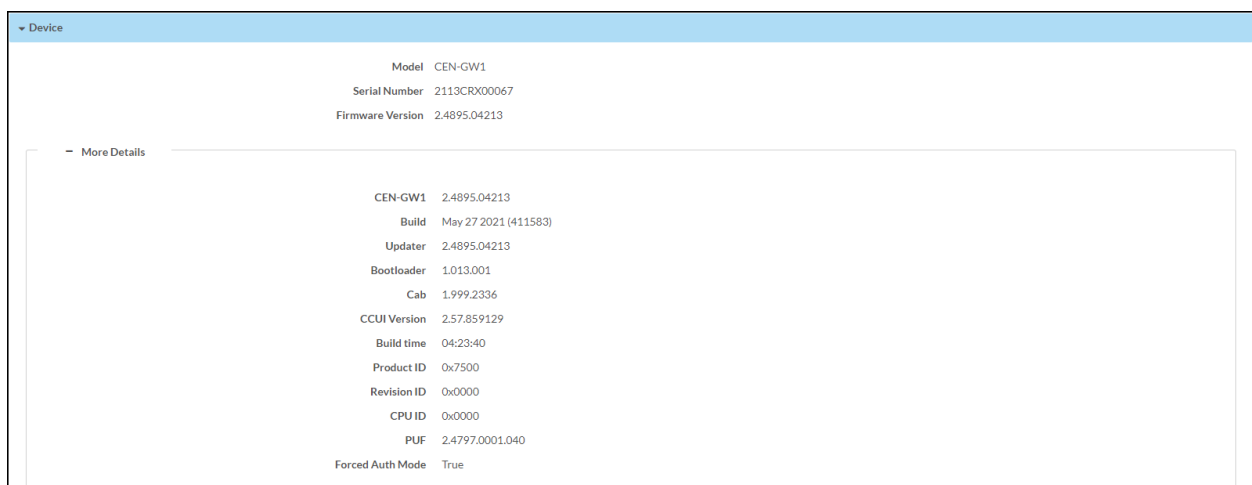
# Status

Use the **Status** tab to view the device information.



## Device

Use the **device** menu to view general device information such as the **Model**, **Serial Number**, and **Firmware Version**. Select More Details to view detailed device information such as the **Build**, **Bootloader**, **Build Time**, and more.



## Network

Use the **Network** menu to view the **Host Name**, **Domain Name**, and **DNS Servers**. Select **Adapter 1** to view detailed network information such as **DHCP**, **IP Address**, and **Subnet Mask** network settings of the device.

Network

Host NameCEN-GW1-00107FF41802

Domain Nameverizon.net

NIC 1 DNS Servers192.168.1.1(DHCP)

Adapter 1

DHCPYes

IP Address192.168.1.60

Subnet Mask255.255.255.0

Default Gateway192.168.1.1

Link Activetrue

MAC Address00.10.7f4.18.02

## Control System

Use the **Control System** menu to view the connection status to a control system.

Control System

Encrypt ConnectionON

IP Table

IP ID	Room ID	IP Address/Hostname	Type	Server Port	Connection	Status
10		CP4-R-WORK	Peer	41796	Gway	ONLINE

## Acquired Devices

Use the **Acquired Devices** menu to view the SG, ER, and infiNET EX wireless devices that are acquired by the gateway.

Acquired Devices

EX/ER Devices

Model	Id	Serial Number	Firmware Version	Online
No records found				

SG Devices

Model	Id	Serial Number	Firmware Version	Online
CSM-QMTDC-163-1-SG	3	2111CRX01351	[v1.001.0091	Yes

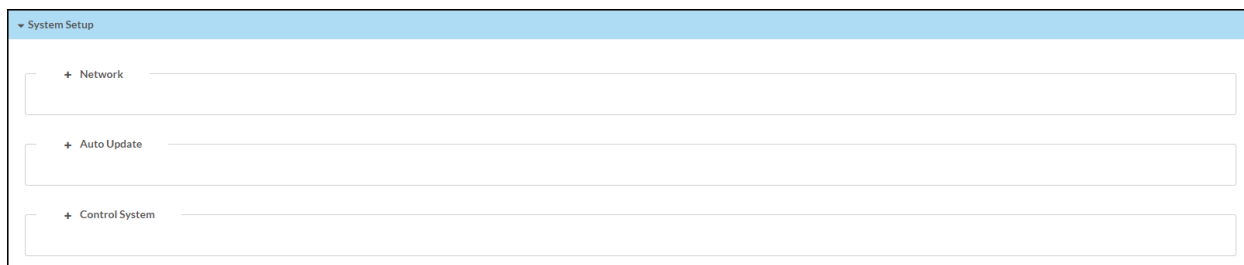
# Settings

Use the **Settings** tab to configure the system and SG, infiNET EX, and ER wireless settings.



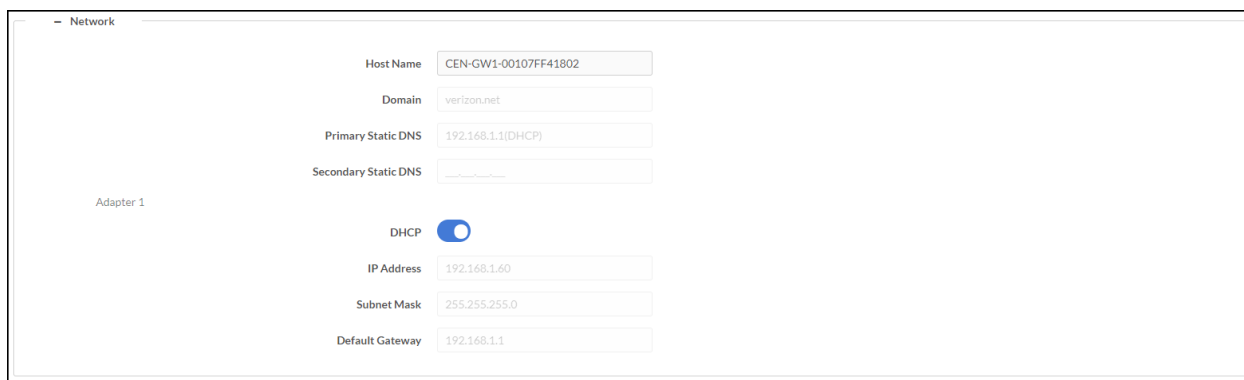
## System Setup

Use the **System Setup** menu to configure the **Network**, **Auto Update**, and **Control System** settings.



## Network

Use the **Network** menu to configure the connection to the Ethernet network. DHCP is turned on by default and the fields are automatically populated.



To set custom Ethernet settings:

1. Deselect **DHCP**.
2. Enter the **Domain**, **Primary Static DNS**, and **Secondary Static DNS** information.



3. Enter the **IP Address**, **Subnet Mask**, and **Default Gateway** information.
4. In the **Actions** menu, select **Save Changes**.

## Auto Update

Use the **Auto Update** menu to configure auto update settings. Auto Update is turned on by default and the fields are automatically populated.

Auto Update

Auto Update ☒

Custom URL ☐

Custom URL Path

Schedule

Day of Week

Time of Day

Poll Interval  Minutes

**Update Now**

To set the auto update time based on day of week and time:

1. Select a day from the Day of Week drop-down menu. To check for updates every day, select **Daily**.
2. Enter a time based on the 24-hour clock in the **Time of Day** box.
3. In the **Actions** menu, select **Save Changes**.

To set the auto update based on poll interval:

**NOTE:** A non-zero value in the **Poll Interval (Minutes)** box overrides the **Day Of Week** and **Time Of Day** configuration.

1. Enter a time, in minutes, into the **Poll Interval** box. The range is 1 minute to 65535 minutes.
2. In the **Actions** menu, select **Save Changes**.

To use a custom auto update URL:

**NOTE:** Do not change the default URL unless advised by a Crestron Tech Support Specialist.

1. Select **Custom URL**.
2. Enter a URL to a firmware server in the **Custom URL Path** box.  
The device will connect to the firmware server provided in the **Custom URL Path** at the scheduled time.

To update the firmware, select **Update Now**.

To turn off auto update, deselect **Auto Update**.

## Control System

Use the **Control System** menu to turn encryption on or off and to modify the IP table.

Control System

Encrypt Connection ☒

Control System Username

Control System Password

IP Table

<input type="checkbox"/>	IP ID	IP Address/Hostname	Room ID
<input type="checkbox"/>	10	CP4-R-WORK	Room ID

+ Add - Remove

## Encryption

To turn encryption on:

1. Select **Encrypt Connection**.
2. Enter the username and password for the control system in **Control System Username** and **Control System Password**.

## IP Table

To add an item to the IP Table:

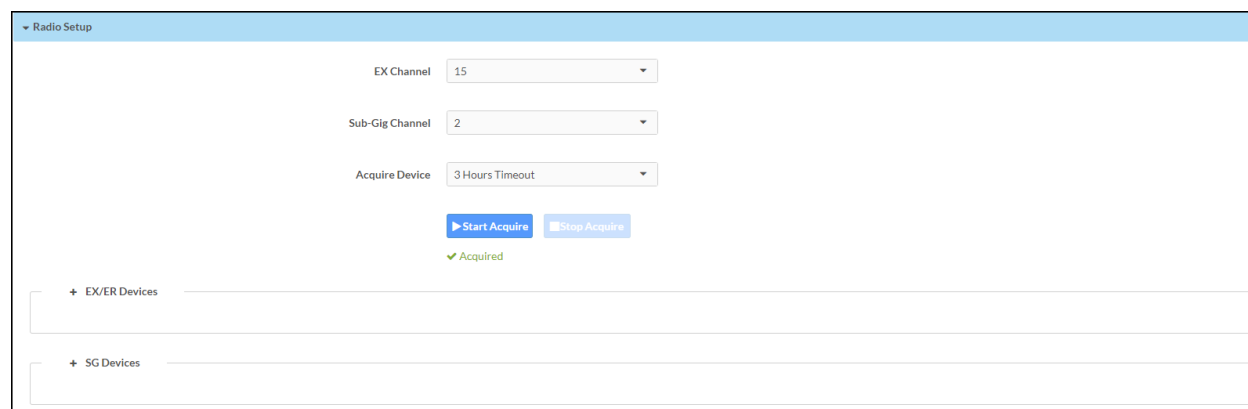
1. Select **Add**.
2. Enter the IP ID, IP Address/Hostname, and Room ID.
3. In the **Actions** menu, select **Save Changes**.

To delete an item from the IP Table:

1. Select an IP Table entry.
2. Select **Remove**.
3. In the **Actions** menu, select **Save Changes**.

# Radio Setup

Use the **Radio Setup** menu to configure the SG, ER, and infiNET EX wireless radios and to acquire devices.



The screenshot shows the 'Radio Setup' web interface. At the top, there's a header 'Radio Setup'. Below it, there are three dropdown menus: 'EX Channel' set to '15', 'Sub-Gig Channel' set to '2', and 'Acquire Device' set to '3 Hours Timeout'. Below these are two buttons: 'Start Acquire' (blue) and 'Stop Acquire' (grey). A green checkmark and the word 'Acquired' are displayed below the buttons. At the bottom, there are two expandable sections: '+ EX/ER Devices' and '+ SG Devices', both currently collapsed.

## Select RF Channel

Set the RF channels for the EX/ER radio and the SG radio:

**NOTE:** Scan the wireless network to determine the best RF channel for the EX/ER and SG radios. For details, refer to [EX/ER Devices on page 36](#) and [SG Devices on page 37](#).

- Select an EX and ER channel from the **EX Channel** drop-down menu.
- Select an SG channel from the **SG Channel** drop-down menu.

## Acquire Devices

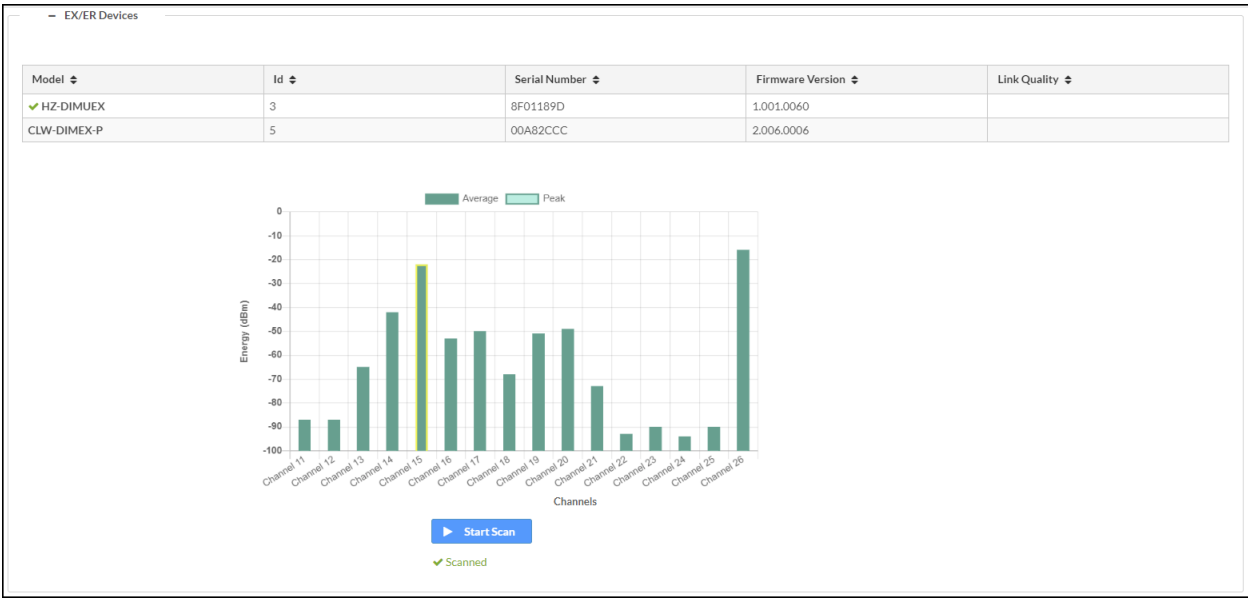
To acquire devices to the gateway:

### NOTES:

- Place the gateway into acquire mode prior to entering **Acquire** mode on a wireless device.
  - Only one gateway can be in **Acquire** mode at a time.
1. Select **Start Acquire** to enter **Acquire** mode.
  2. On an SG, ER, or infiNET EX wireless device, enter **Acquire** mode. For details, refer to the wireless device's instructions.
  3. After all wireless devices are acquired, select **Stop Acquire** to exit **Acquire** mode.

# EX/ER Devices

Use the **EX/ER Devices** menu to view the devices that are acquired to the EX and ER radio and the energy scan chart.

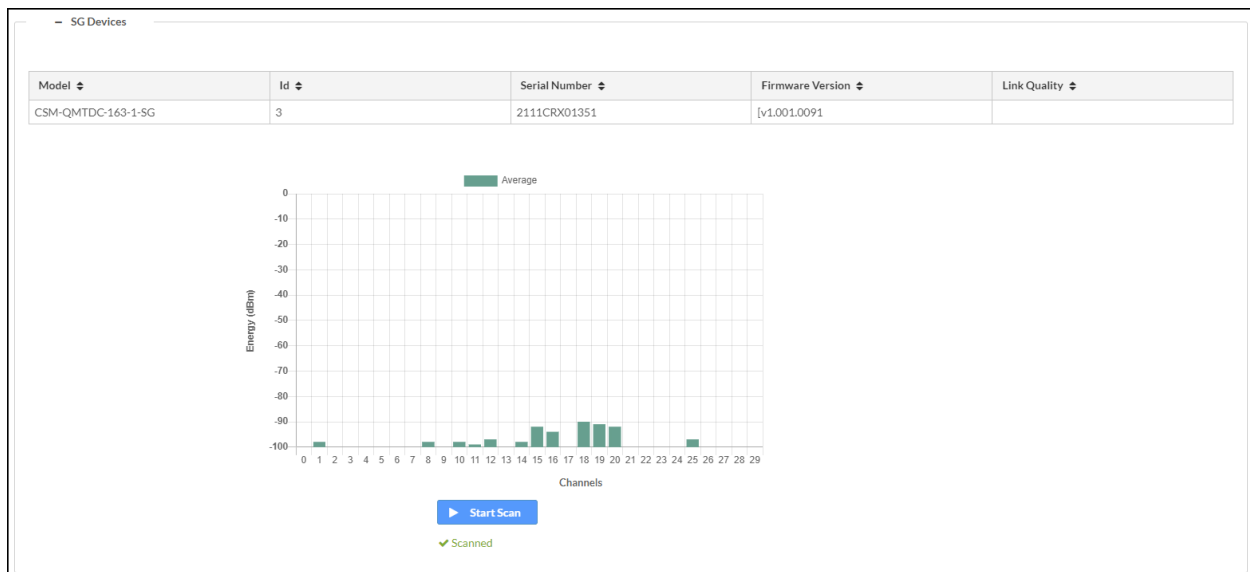


To scan the wireless network:

1. In the **EX/ER Devices** menu, select **Start Scan**.
2. The wireless network is scanned and displays the **Energy (dBm)** for the **Channels**. Select the channel with the lowest (closest to -100 dBm) energy level. Avoid selecting a channel that is adjacent to a channel with a high energy level. To assign a channel, refer to [Select RF Channel on page 35](#).

## SG Devices

Use the **SG Devices** menu to view the devices that are acquired to the SG radio and the energy scan chart.

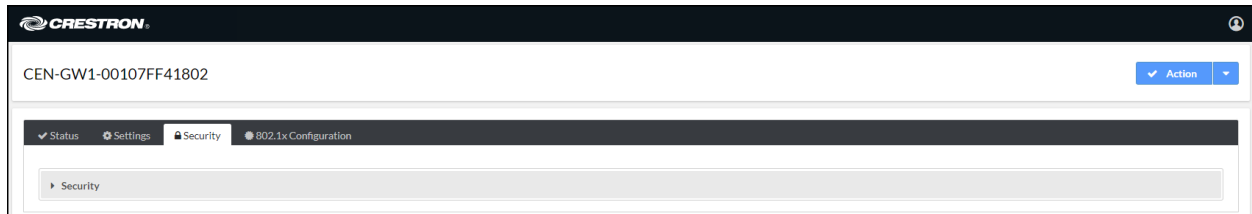


To scan the wireless network:

1. In the **SG Devices** menu, select **Start Scan**.
2. The wireless network is scanned and displays the **Energy (dBm)** for the **Channels**. Select the channel with the lowest (closest to -100 dBm) energy level. Avoid selecting a channel that is adjacent to a channel with a high energy level. To assign a channel, refer to [Select RF Channel on page 35](#).

# Security

Select the **Security** tab to configure security for users and groups and to allow different levels of access to the functions of the device.



## SSL

Use the **SSL Mode** and **SSL Authentication** settings to configure the SSL (Secure Sockets Layout) connection settings.

A screenshot of the 'Security' configuration page. At the top, there is a blue header bar with a dropdown arrow and the text 'Security'. Below this, the 'SSL Mode' is set to 'Encrypt' in a dropdown menu. Below that is a section titled 'SSL Authentication' which contains three input fields: 'Username' with the value 'chdevice', 'Password' with masked characters '\*\*\*\*', and 'Confirm Password' with masked characters '\*\*\*\*'.

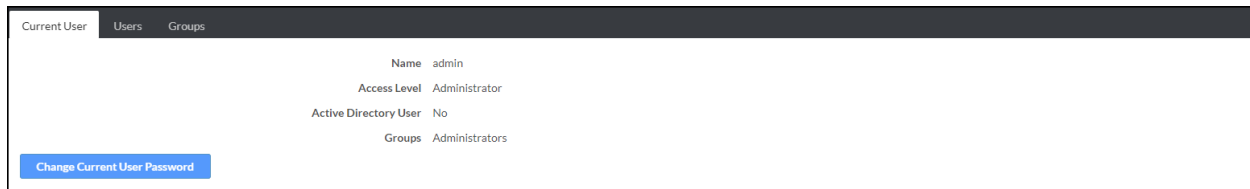
Select a mode from the **SSL Mode** drop-down menu.

- **Encrypt and Validation:** The gateway will require a username and password to validate an encrypted SSL connection.
- **Encrypt:** The gateway will use an encrypted SSL connection
- **OFF:** The gateway will not use an SSL connection.

To set the **SSL Authentication**, enter the **Username**, **Password**, and **Confirm Password**.

## Current User

Use the **Current User** tab to view the current user's Name, Access Level, Active Directory User status, and Groups. The password for the current user can also be changed.



The screenshot shows the 'Current User' tab selected. It displays the following information:

Name	admin
Access Level	Administrator
Active Directory User	No
Groups	Administrators

Below the table is a button labeled 'Change Current User Password'.

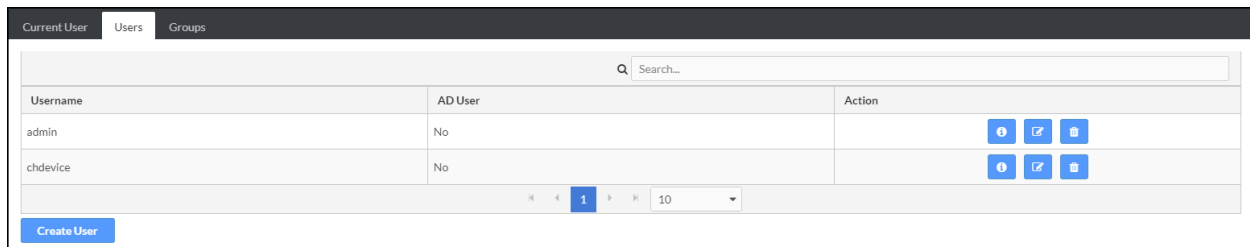
To change the current user's password:

1. Select **Change Current User Password**.
2. Enter the current user's password in the **Current Password** box.
3. Enter a new password in the **Password** and **Confirm Password** boxes.
4. Select **OK**.







## Users

Use the **Users** tab to manage authorized users. A list of authorized users is displayed.

Select  **Information** to view details about a user.




The screenshot shows the 'Users' tab selected. It displays a table of authorized users:

Username	AD User	Action
admin	No	  
chdevice	No	  


Below the table is a 'Create User' button. The table has a search bar at the top and a pagination bar at the bottom showing '1' of 10 items.

## Edit a User

1. Select  **Edit**.
2. If the user is a member of the Active Directory® credential management group, select **Active Directory User**.
3. Enter a password in the **Password** and **Confirm Password** boxes.
4. Select a group from the **Group** drop-down menu.
5. Select **OK**.

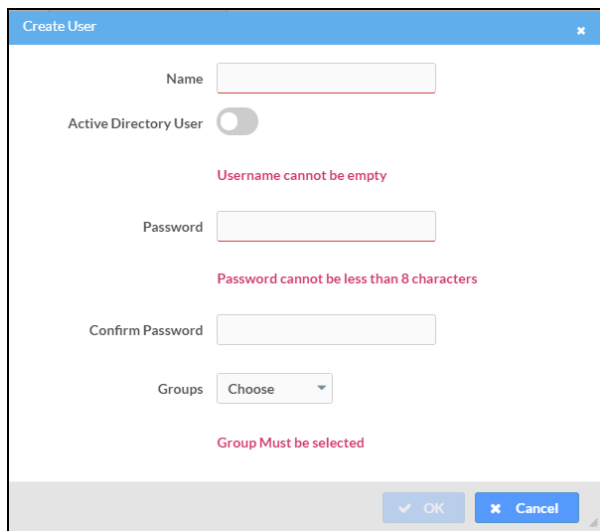
## Delete a User

**NOTE:** The Admin user cannot be deleted.

1. Select  **Delete**.
2. In the confirmation dialog, select **Yes**.

## Create a User

1. Select **Create User**.
2. Enter a **Username** in the **Name** box.
3. If the user is a member of the Active Directory® credential management group, select **Active Directory User**.



The 'Create User' dialog box contains the following fields and controls:

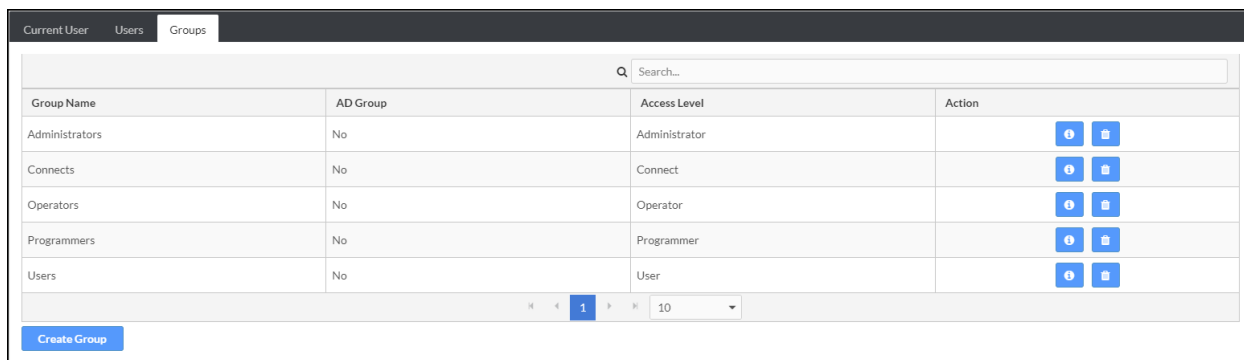
- Name**: A text input field.
- Active Directory User**: A toggle switch, currently turned off.
- Username cannot be empty**: A red error message below the Name field.
- Password**: A text input field.
- Password cannot be less than 8 characters**: A red error message below the Password field.
- Confirm Password**: A text input field.
- Groups**: A dropdown menu with 'Choose' selected.
- Group Must be selected**: A red error message below the Groups dropdown.
- OK** and **Cancel** buttons at the bottom right.

4. Select **OK**.











## Groups

Select the **Groups** tab to configure user groups. A list of user groups is displayed.

Select **Information** to view details about a group.



The 'Groups' tab interface includes a search bar and a table of user groups.

Group Name	AD Group	Access Level	Action
Administrators	No	Administrator	 
Connects	No	Connect	 
Operators	No	Operator	 
Programmers	No	Programmer	 
Users	No	User	 

At the bottom, there is a 'Create Group' button and a pagination control showing '1' of '10' items.

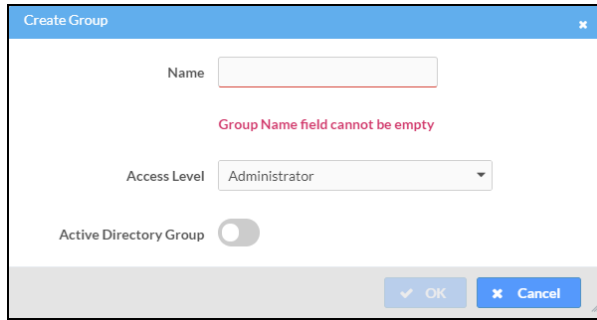
## Delete a Group

1. Select **Delete**.
2. In the confirmation dialog, select **Yes**.



## Create a Group

1. Select **Create Group**.
2. Enter a **Group Name** in the **Name** box.
3. Select an access level from the **Access Level** drop-down menu.
4. If the user is a member of the Active Directory® credential management group, select **Active Directory User**.



The screenshot shows a 'Create Group' dialog box. It has a title bar with the text 'Create Group' and a close button. The main area contains a 'Name' text box, a red error message 'Group Name field cannot be empty' below it, an 'Access Level' dropdown menu showing 'Administrator', and an 'Active Directory Group' toggle switch which is currently off. At the bottom right are 'OK' and 'Cancel' buttons.

5. Select **OK**.

# 802.1x Configuration

The 802.1X standard is an IEEE network standard designed to enhance the security of wireless and Ethernet LANs. The standard relies on the exchange of messages between the device and the network's host, or authentication server.

The device has built-in support for the 802.1X standard to allow communication with the authentication server and access to protected corporate networks.



Enable **IEEE 802.1x Configuration** and select the desired method of authentication.

## Turn On IEEE 802.1x Authentication

To turn on authentication, select **IEEE 802.1x Authentication**.

## Select an Authentication Method

To select an authentication method, select **EAP-TLS Certificate** or **EAP MSCHAP V2- password** from the **Authentication Method** drop-down menu.

If **EAP MSCHAP V2- password** is selected, enter the **Domain**, **Username**, and **Password**.


## Server Validation

To turn on server validation:

1. Select **Enable Authentication Server Validation**.
2. Select certificates from the **Selected Trusted Certificate Authorities** list.

**NOTE:** To load a custom certificate, go to **Actions > Manage Certificates**. For details, refer to [Manage Certificates on page 27](#).

# Log Out

To log out from the web configuration and return to the welcome screen, select  > **Sign Out**.

# Operation

Use the **ACQUIRE**, **RESET**, and **SETUP** buttons to perform the following functions:

## Acquire Devices

Crestron SG, infiNET EX, and ER devices communicate with a CEN-GW1 after they are acquired by the gateway. A device can be acquired by only one gateway.

### NOTES:

- Prior to acquiring devices, assign the RF channel on the gateway using the Web UI or the EasyConfig tool in Crestron Toolbox™ software. For details, refer to [Radio Setup on page 35](#) or [Crestron Toolbox Help](#).
- Before adding ER devices, set the RF channel on the device to match the channel assigned to the gateway.
- After turning on the CEN-GW1, wait 15 seconds before entering **Acquire** mode.
- In an environment with multiple gateways, only one gateway should be in Acquire mode at a time.
- Enter **Acquire** mode on the gateway before entering **Acquire** mode on the device.

To acquire an SG, infiNET EX, or ER device:

#### NOTES:

- If the gateway is part of a Crestron Home® OS system, consider the following:
  - Crestron Home® OS version 3.14 or earlier: The Crestron Home Setup app must be used to enter and exit **Acquire** mode. For details, refer to [Pair Crestron Wireless Device with a Gateway](#) in the [Crestron Home OS](#) product manual.
  - Crestron Home® OS version 3.15 or later: The **Acquire** button on the gateway or the Crestron Home Setup app can be used to enter and exit **Acquire** mode.
- SG wireless devices enter **Acquire** mode on first power up and subsequent power ups if they are not Acquired by a gateway. Do not power on the device until the gateway is in **Acquire** mode.

1. On the CEN-GW1, press **ACQUIRE** to enter **Acquire** mode. The **ACQUIRE** LED turns on to indicate that the gateway is in **Acquire** mode and that it is ready to acquire devices. While in **Acquire** mode, the gateway will discover and acquire SG, infiNET EX, and ER devices.

#### NOTES:

- Alternatively, use the Web UI or Crestron Toolbox™ software to enter and exit **Acquire** mode.
- The gateway exits **Acquire** mode after 3 hours. To change the timeout period, use the Web UI or Crestron Toolbox™ software.

2. For SG wireless devices that are not Acquired by a gateway, power on the device.
3. On the SG, infiNET EX, or ER device, enter **Acquire** mode. The device exits Acquire mode when it is acquired by the gateway. For additional details, refer to the device's manual.
4. On the CEN-GW1, press **ACQUIRE** to exit **Acquire** mode. The **ACQUIRE** LED turns off.

## Reboot

To reboot the gateway, press and hold **RESET** for 8 seconds.

## Factory Reset

To factory reset the gateway, press and hold **SETUP** until the **SETUP** LED flashes 6 times. The gateway will reboot.

New admin credentials will need to be created after the factory reset process.

# Resources

The following resources are provided for the CEN-GW1 and CENI-GW1.

**NOTE:** You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

## Crestron Support and Training

- [Crestron True Blue Support](#)
- [Crestron Resource Library](#)
- [Crestron Online Help \(OLH\)](#)
- [Crestron Training Institute \(CTI\) Portal](#)

## Programmer and Developer Resources

- [help.crestron.com](http://help.crestron.com): Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- [developer.crestron.com](http://developer.crestron.com): Provides developer documentation for Crestron APIs, SDKs, and other development tools

## Product Certificates

To search for product certificates, refer to [support.crestron.com/app/certificates](http://support.crestron.com/app/certificates).

## Related Documentation

- [ANT-EXT-10](#)
- [CEN-SW-POE-5](#)
- [CEN-SWPOE-15](#)
- [Installation and Setup of Crestron RF Products](#)
- [PLMK-IFE-101](#)
- [PW-2407WU](#)
- [PWE-4803RU](#)
- [RMK-1FE-1U](#)

