



User Guide

SWE2220

Dual Band Indoor Access Point
Ceiling Mount Design

Table of Contents

Chapter 1		Chapter 7 Wireless	
Key Features/Introduction.....	1	Wireless Network.....	23
System Requirements / Package Contents	2	Wireless Security.....	25
Applications	3	Guest Network Settings.....	30
Technical Specifications.....	4	Fast Roaming.....	31
Physical Interface	5	Fast Handover	31
Chapter 2		Wireless MAC Filtering.....	32
Considerations for Wireless Installation	6	Wireless Advanced	33
Computer Settings	7	WPS (Wi-Fi Protected Setup).....	34
Hardware Installation	10	WDS Link Settings.....	35
Mounting the SWE 2220.....	11	Chapter 8	
Chapter 3		Administrarion.....	36
Default Setting	13	Management VLAN Settings.....	37
Chapter 4		Wireless Traffic Shaping.....	38
Access Point Mode.....	14	SNMP Settings.....	39
WDS AP Mode.....	15	Backup/Restore.....	41
WDS Bridge Mode.....	16	Auto Reboot Settings.....	42
Chapter 5		Firmware Upgrade/Time Settings.....	43
Overview.....	17	System Log/Tools.....	45
Connections	19	Ping Test Parameters/Traceroute Parameters.....	46
Chapter 6		SpeedTest Parameters/LED Control.....	47
Operation Modes/Basic.....	20	Device Discovery/Reset.....	48
IP Settings/SpanningTree Settings.....	21	Appendix	
		FCC Interference Statement.....	49

Introduction

Key Features

- Up to 26 dBm transmit power, enabling long range connectivity
- Supports IEEE802.11ac/a/b/g/n wireless standards with up to 300Mbps(2.4GHz) and 867Mbps(5GHz)
- Four internal 5dBi Omni-Directional MIMO antennas
- Can be used with included power adapter or via PoE with PoE 802.3at - capable Switches or Injectors
- Dual Band/Two Stream
- Band Steering shifts dual band clients to 5 GHz for better throughput performance
- Secured Guest Network

Introduction

The SWE 2220 is a high-powered, long-range, Dual-band concurrent Wireless 802.11ac/a/b/g/n Access Point with three major functional modes. It is designed to operate in numerous environments; from large homes, small and medium-sized businesses, multiple-floor offices, hotels, and other venues, to larger enterprise deployments. Its high-powered, long-range characteristics make it a cost-effective



alternative to ordinary Access Points that don't have the range and reach to connect to a growing number of wireless users who wish to connect to a large home or business network.

Maximum data rates are based on IEEE 802.11 standards. Actual throughput and range may vary depending on many factors including environmental conditions, distance between devices, radio interference in the operating environment, and mix of devices in the network. Features and specifications subject to change without notice. Trademarks and registered trademarks are the property of their respective owners. For Taiwan: Copyright © 2015 Siselectron Technology Ltd. All rights reserved.

The SWE 2220 supports the 2.4 GHz frequency band under the 802.11b/g/n mode while at the same time providing a 5 GHz band for communicating or transferring files in a less congested network frequency band.

The SWE 2220 also delivers faster wireless speeds compared to modern 802.11a/b/g/n wireless devices. Even though the SWE 2220 has been designed and engineered for heavy traffic and demanding business environments, in larger housing environments as it can efficiently extend the wireless range of an existing home router. This makes it especially ideal in architecturally-challenging structures, providing whole home connectivity.

To protect sensitive data during wireless transmissions, the SWE 2220 offers different encryption settings for wireless transmissions, including industry standard WPA and WPA2 encryption. The SWE 2220 also includes MAC address filtering to allow network administrators to offer network access only to known computers and other devices based on their MAC addresses.

System Requirements

The following are the Minimum System Requirements in order to configure the device:

- Computer with an Ethernet interface or wireless network capability
- Windows OS (XP, Vista, 7, 8), Mac OS, or Linux-based operating systems
- Web-Browsing Application (i.e. : Internet Explorer, Firefox, Chrome, Safari, or another similar browser application)

Package Contents

The SWE 2220 package contains the following items (all items must be in package to issue a refund):

- SWE 2220 Access Point
- Power Adapter
- RJ-45 Ethernet Cable
- Quick Installation Guide
- Ceiling and Wall Mount Screw kit

Applications

Wireless LAN (WLAN) products are easy to install and highly efficient. The following list describes some of the many applications made possible through the power and flexibility of WLANs:

- **Difficult-to-Wire Environments:** There are many situations where wires cannot be installed, deployed easily, or cannot be hidden from view. Older buildings, sites with multiple buildings, and/or areas that make the installation of a Ethernet-based LAN impossible, impractical or expensive are sites where WLAN can be a network solution.
- **Temporary Workgroups:** Create temporary workgroups/networks in more open areas within a building; auditoriums, amphitheatres classrooms, ballrooms, arenas, exhibition centers, or temporary offices where one wants either a permanent or temporary Wireless LAN established.
- **The Ability to Access Real-Time Information:** Doctors/Nurses, Point-of-Sale Employees, and/or Warehouse Workers can access real-time information while dealing with patients, serving customers, and/or processing information.
- **Frequently Changing Environments:** Set up networks in environments that change frequently (i.e.: Show Rooms, Exhibits, etc.).
- **Small Office and Home Office (SOHO) Networks:** SOHO users require a cost-effective, easy, and quick installation of a small network.
- **Wireless Extensions to Existing Ethernet-based Networks:** Devices like the SWE 2220 enable network administrators, installers, and end-users to extend the range and reach of an existing Ethernet-based network.
- **Training/Educational Facilities:** Training sites at corporations or students at universities use wireless connectivity to exchange information peer and easily access information learning purposes.

Technical Specifications

Standard:

IEEE802.11b/g/n on 2.4 GHz

IEEE 802.11ac/a on 5 GHz

IEEE802.3at

Antenna

Four Internal 5 dBi Omni-Directional Antennas

Physical Interface

1 x 10/100/1000 Gigabit Ethernet Port

1 x Reset Button

1 x Power Connector

LED Indicator

Power

WPS

WLAN (Wireless Connection)

LAN

Power Requirements

External Power Adapter

DC IN, 12V/2A

Operation Modes

Access Point

WDS AP WDS

Bridge

Security

WEP (64/128bit)

WPA/WPA2 (TKIP/AES)

Hidden ESSID

MAC address filtering, up to 50 fields

L2 Isolation

802.1X Authenticator (MD5/TLS/TTLS/PEAP)

Guest Network

QoS (Quality of Service)

WMM (Wireless Multimedia)

Physical/Environment Conditions

Operating:

Temperature: 32°F to 104°F (0°C to 40°C)

Humidity (Non-condensing): 90% or less

Storage:

Temperature: -4°F to 140°F (-20°C to 60 °C)

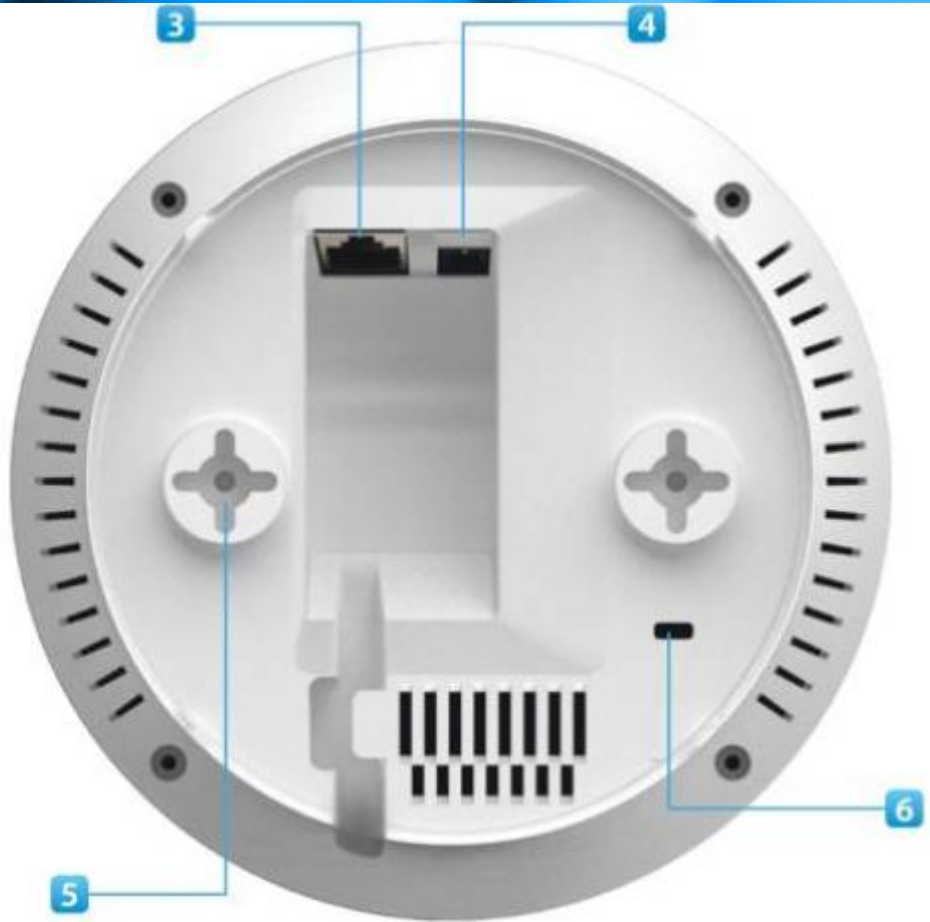
Humidity (Non-condensing): 90% or less

Physical Interface

Dimensions and Weights

Diameter: 6.36"

Height: 2.17"



- 1 Reset Button: Press and hold for over 10 seconds to reset to factory default settings.
- 2 LED Indicators: LED lights for WPS, WLAN 5G, WLAN 2.4G, Ethernet port, and Power
- 3 LAN Port (802.3at PoE): Ethernet port for RJ-45 cable.

- 4 Power Connector: 12V DC IN for Power.
- 5 Ceiling (Wall) Mount Hole: Using the provided hardware, the SWE 2220 can be attached to a ceiling or wall.
- 6 Kensington Security Slot: To protect your SWE 2220, use the Kensington Security Slot to attach a cable lock.

Before You Begin

This section will guide you through the installation process. Placement of the Siselectron SWE 2220 is essential to maximize the Access Point's performance. Avoid placing the SWE 2220 in an enclosed space such as a closet, cabinet, or stairwell.

Considerations for Wireless Installation

The operating distance of all wireless devices can often not be pre-determined due to a number of unknown obstacles in the environment in which the device is deployed. Obstacles such as the number, thickness, and location of walls, ceilings, or other objects that the SWE 2220's wireless signals must pass through can weaken the signal. Here are some key guidelines for allowing the SWE 2220 to have an optimal wireless range during setup.

- Keep the number of walls and/or ceilings between the SWE 2220 and other network devices to a minimum. Each wall and/or ceiling can reduce the signal strength, resulting in a lower overall signal strength.
- Building materials make a difference. A solid metal door and/or aluminum studs may have a significant negative effect on the signal strength of the SWE 2220. Locate your wireless devices carefully so the signal can pass through drywall and/or open doorways. Materials such as glass, steel, metal, concrete, water (example: fish tanks), mirrors, file cabinets, and/or brick can also diminish wireless signal strength.
- Interference from your other electrical devices and/or appliances that generate RF noise can also diminish the SWE 2220's signal strength. The most common types of devices are microwaves or cordless phones.

Computer Settings

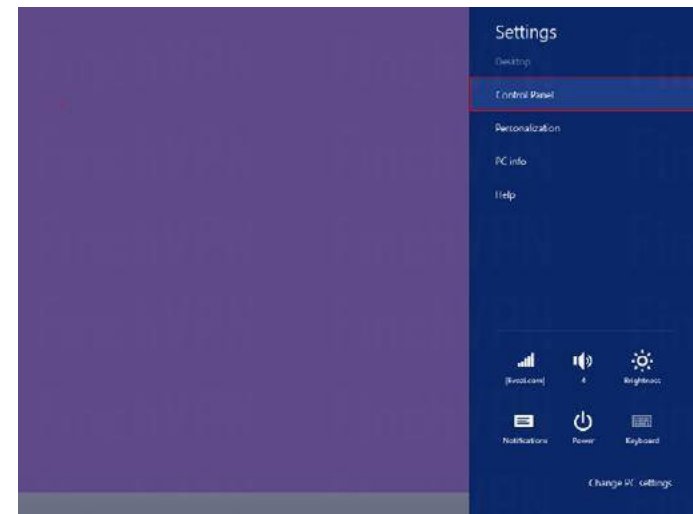
Windows XP/Windows 7/Windows 8

In order to use the SWE 2220, you must first configure the TCP/IPv4 connection of your Windows OS computer system.

- 1a. In Windows XP and Windows 7, click the Start button and open the Control Panel.



- 1b. In Windows 8, move your mouse to the lower right hot corner to display the Charms Bar and select the Control Panel.

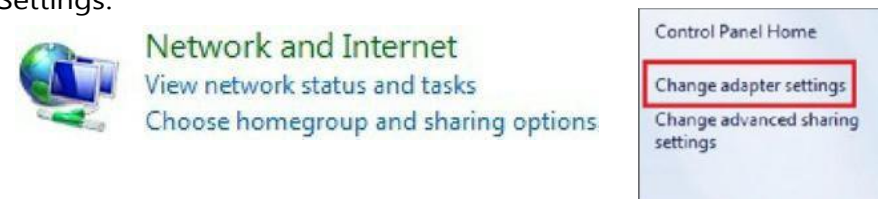


Windows 8

- 2a. In Windows XP, click on Network Connections.



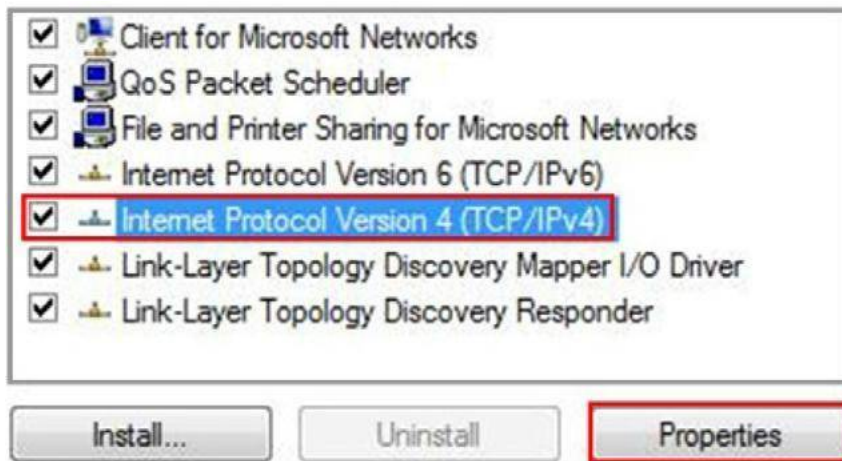
- 2b. In Windows 7 and Windows 8, click View Network Status and Tasks in the Network and Internet section, then select Change Adapter Settings.



- Right click on Local Area Connection and select Properties.



- Select Internet Protocol Version 4 (TCP/IPv4) and then select Properties.



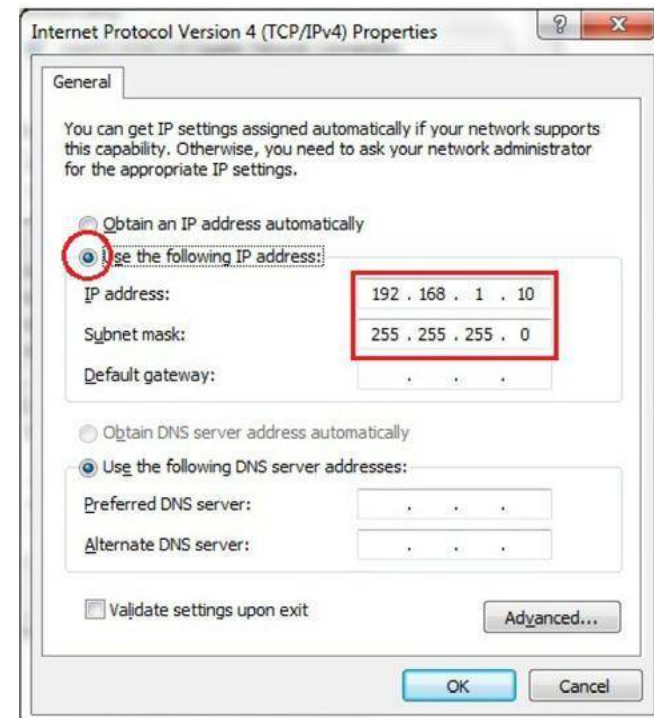
- Select **Use the following IP address** and enter an IP address that is different from the SWE 2220 and Subnet mask, then click **OK**.

Note: Ensure that the IP address and Subnet mask are on the same subnet as the device.

For example: SWE 2220 IP address: 192.168.1.1

PC IP address: 192.168.1.2–192.168.1.255

PC Subnet mask: 255.255.255.0



Apple Mac OSX

1. Go to System Preferences (it can be opened in the Applications folder or by electing it in the Apple Menu).
2. Select Network in the Internet & Network section.



3. Highlight Ethernet.

4. In Configure IPv4, select Manually.

5. Enter an IP address that is different from the SWE 2220 and Subnet mask, then click OK.

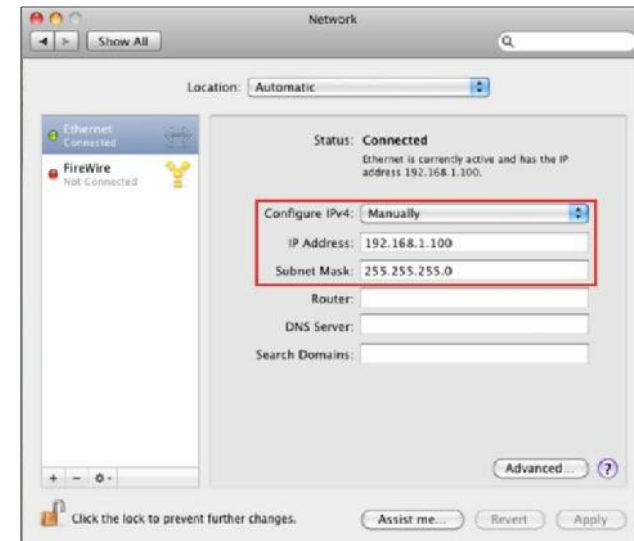
Note: Ensure that the IP address and Subnet mask are on the same subnet as the device.

For example: SWE 2220 IP address: 192.168.1.1

PC IP address: 192.168.1.2–192.168.1.255

PC Subnet mask: 255.255.255.0

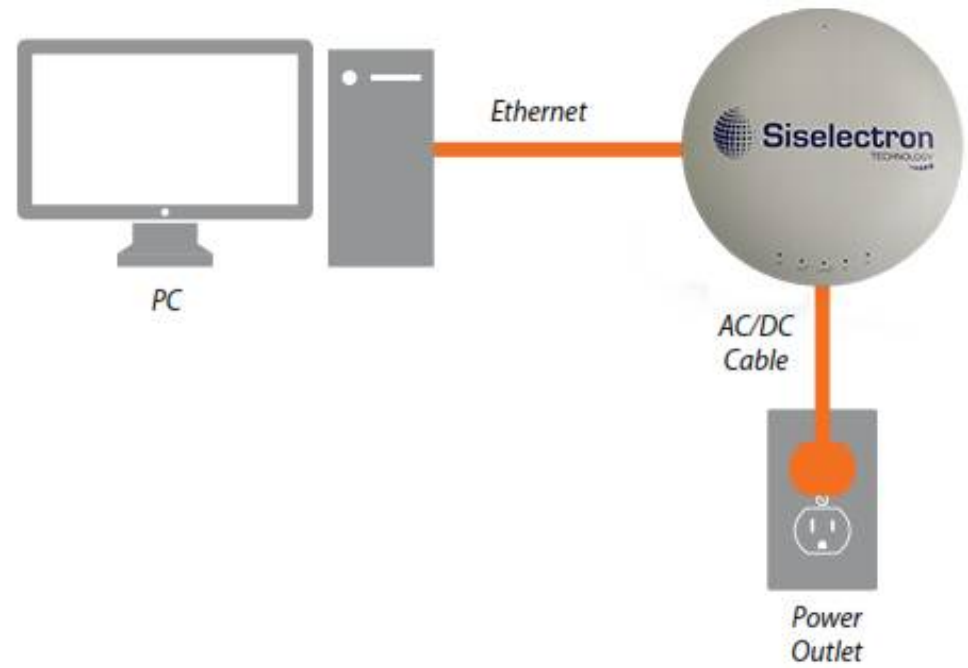
6. Click Apply when finished.



Hardware Installation

1. Ensure that the computer in use has an Ethernet Controller port (RJ-45 Ethernet Port). For more information, verify with your computer's user manual.
2. Connect one end of the Category 5e Ethernet cable into the RJ-45 port of the SWE 2220 and the other end to the RJ-45 port of the computer. Ensure that the cable is securely connected to both the SWE 2220 and the computer.
3. Connect the Power Adapter DC connector to the DC-IN port of the SWE 2220 and the Power Adapter to an available electrical outlet. Once both connections are secure, verify the following:
 - a) Ensure that the POWER light is on (it will be orange).
 - b) Ensure that the 2.4 GHz/5 GHz WLAN light is on (it will be blue for 2.4G, and green for 5G).
 - c) Ensure that the LAN (Computer/SWE 2220 Connection) light is on (it will be blue).
 - d) Once all three lights are on, proceed to set up the Access Point using the computer.

This diagram depicts the hardware configuration.

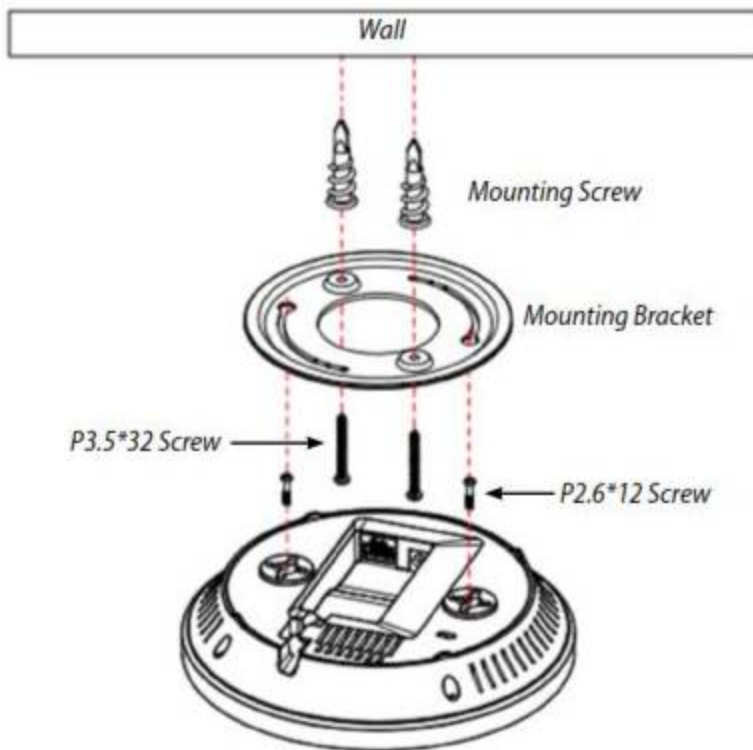


Mounting the SWE 2220

Using the provided hardware, the SWE 2220 can be attached to a ceiling or wall.

To attach the SWE 2220 to a ceiling or wall using the mounting bracket:

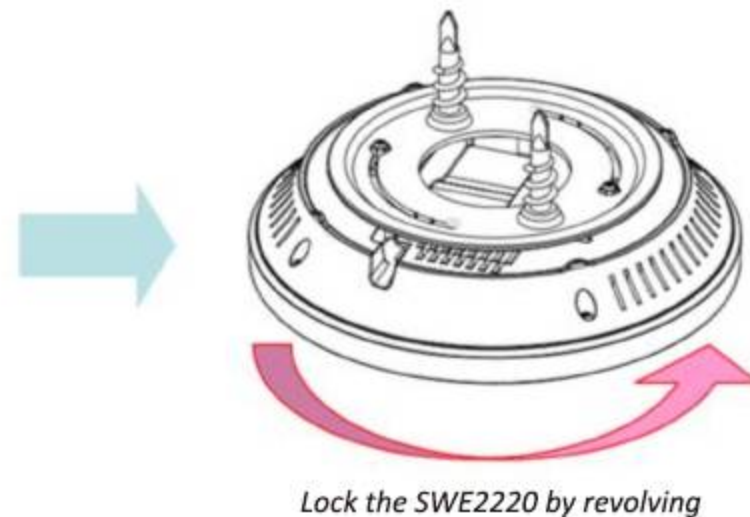
1. Attach the mounting bracket to the wall or ceiling using the provided wall/ceiling mounting hardware kit.
2. Insert the provided short screws into the bottom cover of the SWE 2220.



Leave enough of the screws exposed to ensure that the unit can be attached to the mounting bracket.

If extra space is required, use the provided spacers and long screws from the T-Rail mounting hardware kit to increase the space between the unit and the mounting bracket.

3. Mount the SWE 2220 on the mounting bracket by rotating the unit clockwise about 90 degrees to secure it in place.



Attaching the SWE 2220 to a ceiling using the provided T-Rail connectors:

1. Attach the T-Rail connectors to the bottom cover of the SWE 2220 using the provided short screws.

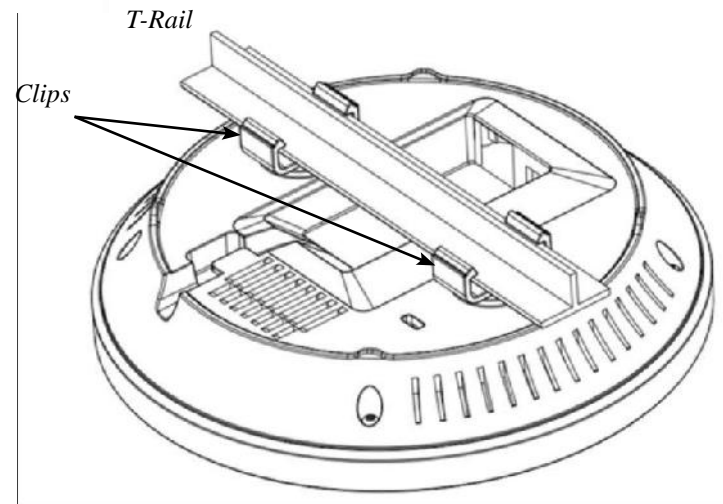
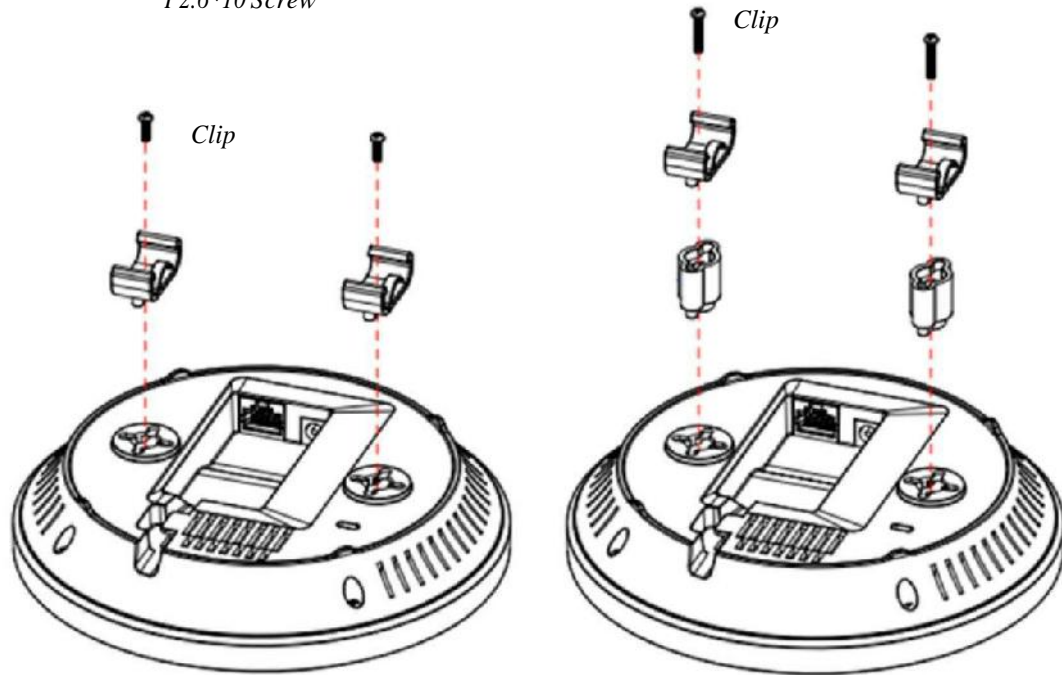
Note: Two sizes of T-Rail connectors are included in the mounting hardware kit: 15/16in (2.38cm) and 9/16in (1.43cm). If extra space is required to accommodate drop ceiling tiles, use the provided spacers and long screws.

2. Line up the connected T-Rail connectors with an appropriately sized rail and press the unit onto the rail until it snaps into place.

Note: To protect your SWE 2220, use the Kensington Security Slot to attach a cable lock (cable lock is not included).

*P2.6*25 Screw*

*P2.6*10 Screw*



Configuring Your Access Point

This section will show you how to configure the device using the web-based configuration interface.

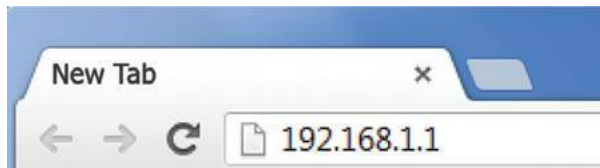
Default Settings

Please use your Ethernet port or wireless network adapter to connect the Access Point.

IP Address	192.168.1.1
Username/Password	admin/admin

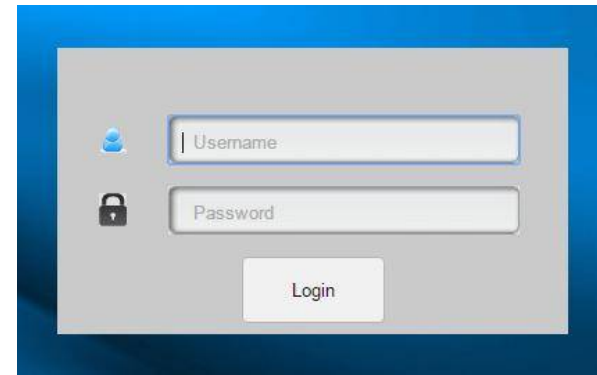
Web Configuration

1. Open a web browser (Internet Explorer/Firefox/Safari) and enter the IP Address `http://192.168.1.1`.

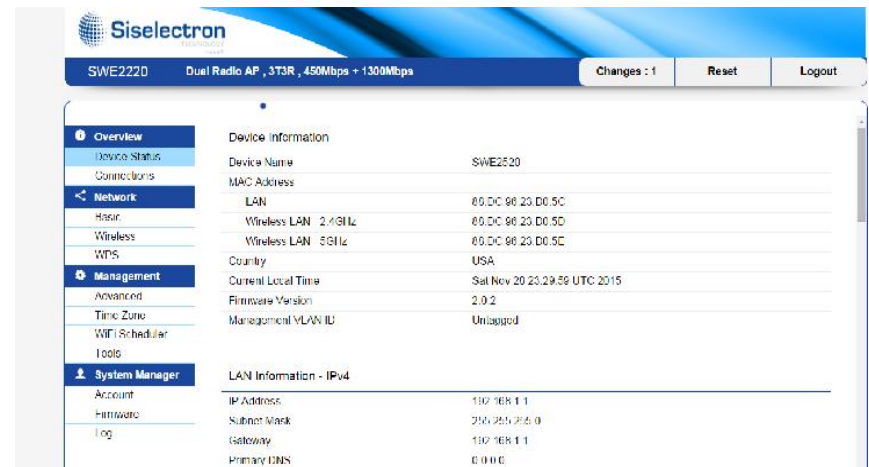


Note: If you have changed the default LAN IP Address of the Access Point, ensure you enter the correct IP Address.

2. The default username and password are: admin. Once you have entered the correct username and password, click the **Login** button to open the web-based configuration page.



3. If successful, you will be logged in and see the SWE 2220 User Menu.



The SWE 2220 has the ability to operate in various modes. This chapter describes the operating modes of the SWE 2220.

Access Point Mode

In Access Point Mode, the SWE 2220 behaves like a central connection for stations or clients that support IEEE 802.11ac/a/b/g/n networks. The stations and clients must be configured to use the same SSID (Service Set Identifier) and security password to associate with the SWE 2220. The SWE 2220 supports up to eight (8) SSIDs per band (16 total) at the same time for secure access.



WDS AP Mode

The SWE 2220 also supports WDS AP mode. This operating mode allows wireless connections to the SWE 2220 using WDS technology. In this mode, configure the MAC addresses in both Access Points to enlarge the wireless area by enabling WDS Link settings. WDS supports up to four (4) AP MAC addresses.



WDS Bridge Mode

In WDS Bridge Mode, the SWE 2220 can wirelessly connect different LANs by configuring the MAC address and security settings of each SWE 2220 device. Use this mode when two wired LANs located a small distance apart want to communicate with each other. The best solution is to use the SWE 2220 to wirelessly connect two wired LANs, as shown in the following figure.

WDS Bridge Mode can establish up to four (4) WDS links, creating a star-like network.

Note: WDS Bridge Mode does not act as an Access Point because Access Points linked by WDS use the same frequency channel. More Access Points connected together may lower throughput. This configuration can also be susceptible to generate endless network loops in your network, so it is recommended to enable the Spanning Tree function to prevent this from happening. You can find information about the Spanning Tree Function on page 31.

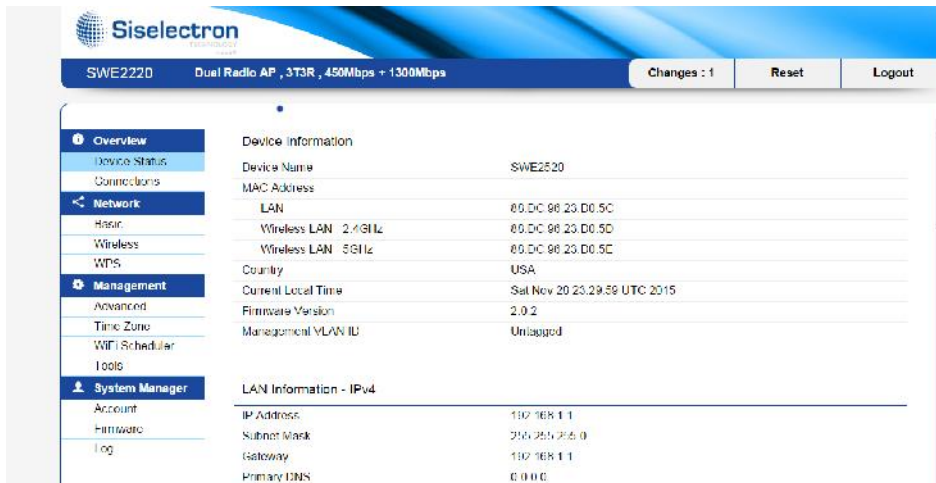


Overview

The Overview section contains the following options:

- Device Status
- Connections

The following sections describe these options:

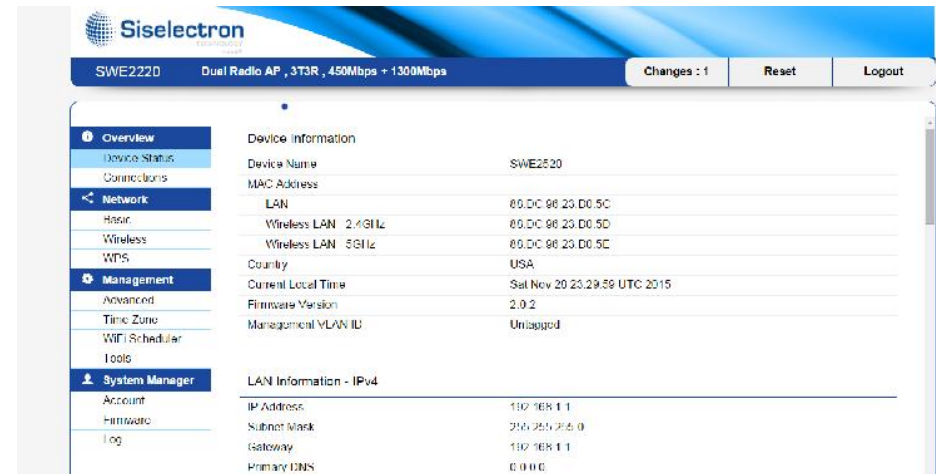


Device Information	
Device Name	SWE2520
MAC Address	
LAN	80.DC.98.23.D0.5C
Wireless LAN - 2.4GHz	80.DC.98.23.D0.5D
Wireless LAN - 5GHz	80.DC.98.23.D0.5C
Country	USA
Current Local Time	Sat Nov 20 23:29:59 UTC 2015
Firmware Version	2.0.2
Management VLAN ID	Untagged

LAN Information - IPv4	
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
Primary DNS	0.0.0.0

Device Status

Clicking the Device Status link under the Overview menu shows the status information about the current operating mode.



LAN Information - IPv4	
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
Primary DNS	0.0.0.0

- The LAN Information section under the Connections link shows the Local Area Network settings such as the LAN IP Address, Subnet mask, Gateway, DNS Address, DHCP Client, and STP status.

LAN information - IPv4	
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
Primary DNS	0.0.0.0
Secondary DNS	0.0.0.0
DHCP Client	Disable
Spanning Tree Protocol (STP)	Disable

The Device Status section shows general system information such as Device Name, MAC address, Current Time, Firmware Version, and Management VLAN ID

Note: VLAN ID is only applicable in Access Point or WDS

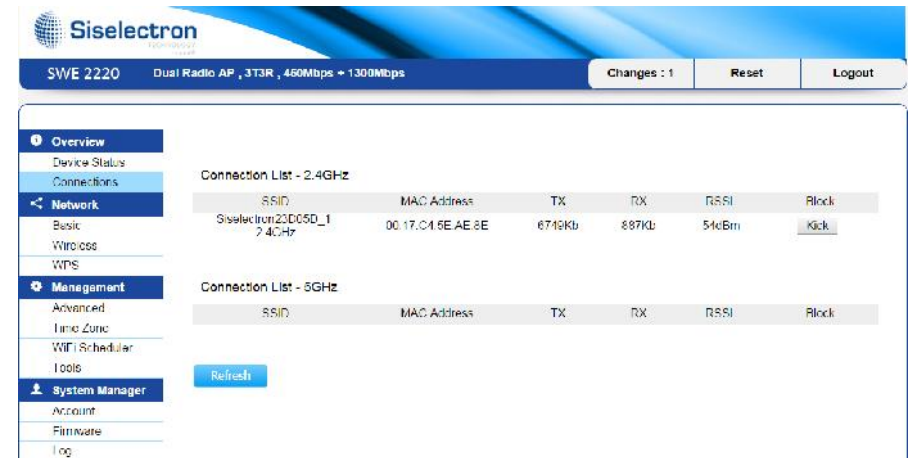
- The Current 2.4 GHz/5 GHz Wireless Settings section under the Basic link shows wireless information such as Operating Mode, Frequency, and Channel. Since the SWE 2220 supports multiple-SSIDs, information about each SSID and security settings are displayed.

Note: Profile Settings is only applicable in Access Point or WDS AP mode.

Connections

The SWE 2220 automatically logs (records) events of possible interest in its internal memory. To view the logged information, click the Connections link under the Device Status menu. If there is not enough internal memory to log all events, older events are deleted from the log. When powered down or rebooted, the log will be cleared.

Click Refresh to refresh the Connections List



Siselectron
SWE 2220 Dual Radio AP, 3T3R, 460Mbps + 1300Mbps

Changes: 1 Reset Logout

- Overview
- Device Status
- Connections
- Network
 - Basic
 - Wireless
 - WPS
- Management
 - Advanced
 - Time Zone
 - WiFi Scheduler
 - Tools
- System Manager
 - Account
 - Firmware
 - Log

Connection List - 2.4GHz

SSID	MAC Address	TX	RX	RSSI	Block
Siselectron23DC5D_1 2.4GHz	00:17:C4:5E:AE:8E	6719Kb	887Kb	54dBm	Kick

Connection List - 5GHz

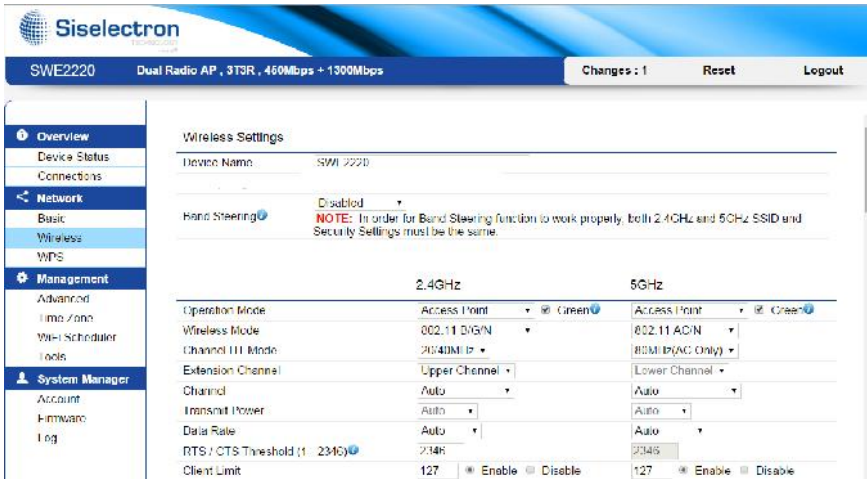
SSID	MAC Address	TX	RX	RSSI	Block
------	-------------	----	----	------	-------

[Refresh](#)

Operation Modes

The SWE 2220 supports three operating modes: Access Point, WDS AP, and WDS Bridge.

Device Settings



	2.4GHz	5GHz
Operation Mode	Access Point <input checked="" type="radio"/> Green	Access Point <input checked="" type="radio"/> Green
Wireless Mode	802.11 D/G/N	802.11 AC/N
Channel (11 Mode)	20/40MHz	80MHz (NAC Only)
Extension Channel	Upper Channel	Lower Channel
Channel	Auto	Auto
Transmit Power	Auto	Auto
Data Rate	Auto	Auto
RTS / CTS Threshold (1)	2346	2346
Client Limit	127 <input checked="" type="checkbox"/> Enable <input type="checkbox"/> Disable	127 <input checked="" type="checkbox"/> Enable <input type="checkbox"/> Disable

To access operation mode, click the Wireless section under Network in the sidebar. You will see wireless settings customizable options for both the 2.4 GHz and 5 GHz modes. Under Wireless settings, you will see:

Device Name: Enter a name for the device. The name you type appears in SNMP management. This name is not the SSID and is not broadcast to other devices.

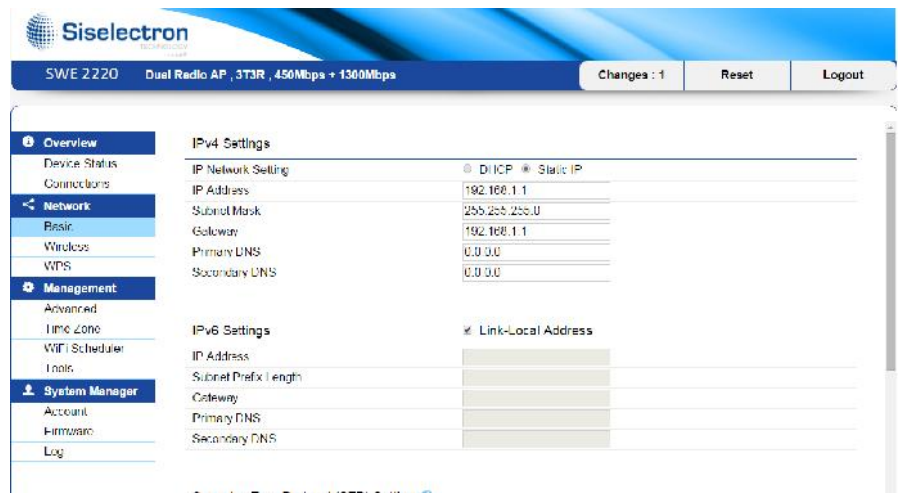
Operation Mode: Use the radio button to select an operating mode.

Band Steering: Enable Band Steering to send 802.11n clients to the 5 GHz band, where 802.11b/g clients cannot go, and leaves the 802.11b/g clients in 2.4 GHz to operate at their slower rates. Band Steering works within the Access Point by directing 5 GHz-capable clients to that band.

*Note: In order for the Band Steering function to work properly, both the 2.4 GHz and the 5 GHz SSID and security settings must be under the same selection settings.

Basic

This page allows you to modify the device's IP settings.



Setting	Value
IP Network Setting	<input checked="" type="radio"/> DHCP <input type="radio"/> Static IP
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
Primary DNS	0.0.0.0
Secondary DNS	0.0.0.0
IPv6 Network Setting	<input checked="" type="checkbox"/> Link-Local Address
IP Address	
Subnet Prefix Length	
Gateway	
Primary DNS	
Secondary DNS	

IP Network Settings

Select whether the device IP address will use the static IP address specified in the IP Address field or be obtained automatically when the device connects to a DHCP server.

IP Address: The IP Address of this device.

IP Subnet Mask: The IP Subnet mask of this device. **Gateway:**

The Default Gateway of this device. Leave it blank if you are unsure of this setting.

Primary/Secondary DNS: The primary/secondary DNS address for this device.

Click Save to confirm the changes.

Spanning Tree Settings

This page allows you to modify the Spanning Tree settings. Enabling Spanning Tree protocol will prevent network loops in your LAN network.

Spanning Tree Protocol (STP) Settings		
Status	Disable	
Hello Time	2	seconds (1-10)
Max Age	20	seconds (6-40)
Forward Delay	4	seconds (4-30)
Priority	32768	(0-65535)

Save Save current setting(s)

Spanning Tree Status: Enables or disables the Spanning Tree function.

Hello Time: Specify Bridge Hello Time, in seconds. This value determines how often the device sends handshake packets to communicate information about the topology throughout the entire Bridged Local Area Network.

Max Age: Specify Bridge Max Age, in seconds. If another bridge in the spanning tree does not send a hello packet for a long period of time, it is assumed to be inactive.

Forward Delay: Specifies Bridge Forward Delay, in seconds. Forwarding Delay Time is the time spent in each of the Listening and Learning states before the Forwarding state is entered. This delay is provided so that when a new bridge

comes onto a busy network, it analyzes data traffic before participating.

Priority: Specify the Priority Number. A smaller number has greater priority.

Save: Click Save to confirm the changes.

Wireless Network

This page displays the current status of the Wireless settings of the SWE 2220.

Access Point/WDS AP mode:

	2.4GHz	5GHz
Operation Mode	Access Point <input type="checkbox"/> Green	Access Point <input type="checkbox"/> Green
Wireless Mode	802 11 B/G/N	802 11 A/N
Channel HT Mode	20/40 MHz	40 MHz
Extension Channel	Upper Channel	Lower Channel
Channel	Auto	Auto
Transmit Power	Auto	Auto
Data Rate	Auto	Auto
RTS / CTS Threshold (1 - 2346)	2346	2346
Client Limits	127 <input type="checkbox"/> Enable	127 <input type="checkbox"/> Enable
Aggregation	32 Frames	32 Frames
AP Detection	50000 Bytes(Max) <input type="button" value="Scan"/>	50000 Bytes(Max) <input type="button" value="Scan"/>

Wireless Mode: Supports 802.11b/g/n mixed mode in 2.4GHz and 802.11ac/a/n mixed mode in 5GHz.

Channel HT Mode: The default channel bandwidth is 20/40/80MHz. The larger the channel, the better the transmission quality and speed.

Extension Channel: Select Upper or Lower channel. Your selection may affect the Auto Channel function.

Channel/Frequency: Select the channel and frequency appropriate for your country's regulation.

Note: Operations in the 5.15GHz-5.35GHz band are restricted to indoor usage only in Hong Kong

Auto: Check this option to enable the Auto-Channel feature.

RTS/CTS Threshold: Specifies the threshold package size for RTS/CTS. A small number causes RTS/CTS packets to be sent more often and consumes more bandwidth.

Client Limits: Limits the total number of clients.

Aggregation: Merges data packets into one packet. This option reduces the number of packets, but also increases packet sizes.

AP Detection: AP Detection can select the best channel to use by scanning nearby areas for Access Points.

Current Profile: You can configure up to eight different SSIDs (4 in WDS AP mode). If multiple client devices will be accessing the network, you can arrange the devices into SSID groups. Click Edit to configure the profile and check whether you wish to enable extra SSIDs.

Save: Click Save to confirm the changes.

2.4GHz/5 GHz SSID Profile

Under Wireless Settings, you can edit the SSID profile to fit your needs. Click Edit under the SSID you would like to make changes to.

Wireless Settings - 2.4GHz

No.	Enable	SSID	Edit	Security	Hidden SSID	Client Isolation	VLAN Isolation	L2 Isolation	VLAN ID
1	<input checked="" type="checkbox"/>	Siselectron22D20D_1-2.4GHz	Edit	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
2	<input type="checkbox"/>	Siselectron22D20D_2-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
3	<input type="checkbox"/>	Siselectron22D20D_3-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
4	<input type="checkbox"/>	Siselectron22D20D_4-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
5	<input type="checkbox"/>	Siselectron22D20D_5-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
6	<input type="checkbox"/>	Siselectron22D20D_6-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
7	<input type="checkbox"/>	Siselectron22D20D_7-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7
8	<input type="checkbox"/>	Siselectron22D20D_8-2.4GHz	Edit	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8

Wireless Security: See the Wireless Security section on page 36.

Isolation: Check the box to Enable or Disable the Isolation feature.

Save: Click Save to accept the changes.

SSID: Specifies the SSID for the current profile.

Suppressed SSID: Check this option to hide the SSID from clients. If checked, the SSID will not appear in the site survey.

Station Separation: Click the appropriate button to allow or prevent communication between client devices.

Wireless Security

The Wireless Security section lets you configure the SWE 2220's security modes: WEP

WPA-PSK

WPA2-PSK

WPA-PSK Mixed

WPA-Enterprise

WPA2-Enterprise

WPA Mixed Enterprise.

It is strongly recommended that you use WPA2-PSK. Click on the Edit button under Wireless Settings next to the SSID to change the security settings.

WEP Encryption:

Wireless Security - 2.4G	
Security Mode	WEP
Auth Type	Open System
Input Type	Hex
Key Length	40/64-bit (10 hex digits or 5 ASCII char)
Default Key	1
Key1	
Key2	
Key3	
Key4	

Auth Type: Select Open System or Shared Key. Input

Type: ASCII: Regular Text (Recommended) HEX: Hexadecimal

Numbers (For advanced users)

Key Length: Select the desired option and ensure the wireless clients use the same setting. Your choices are: 64, 128, and 152-bit password lengths.

Default Key: Select the key you wish to be default. Transmitted data is ALWAYS encrypted using the Default Key; the other Keys are for decryption only. You must enter a Key Value for the Default Key.

Encryption Key: Enter the Key Value or values you wish to use. The default is none.

WPA-PSK (WPA Pre-Shared Key) Encryption:

Wireless Security - 2.4G	
Security Mode	WPA-PSK
Encryption	Both(TKIP+AES)
Passphrase	
Group Key Update Interval	3600

Encryption: Select the WPA encryption type you would like to use. Please ensure that your wireless clients use the same settings.

Passphrase: Wireless clients must use the same Key to associate the device. If using ASCII format, the Key must be from 8 to 63 characters in length. If using HEXformat, the Key must be 64 HEX characters in length.

Group Key Update Interval: Specify how often, in seconds, the Group Key changes.

WPA2-PSK Encryption:

Wireless Security - 2.4G	
Security Mode	WPA2-PSK
Encryption	Both(TKIP+AES)
Passphrase	
Group Key Update Interval	3600

Encryption: Select the WPA encryption type you would like to use. Please ensure that your wireless clients use the same settings.

Passphrase: Wireless clients must use the same Key to associate the device. If using ASCII format, the Key must be from 8 to 63 characters in length. If using HEXformat, the Key must be 64 HEX characters in length.

Group Key Update Interval: Specify how often, in seconds, the Group Key changes.

WPA-PSK Mixed Encryption:

Wireless Security - 2.4G	
Security Mode	WPA-PSK Mixed
Encryption	Both(TKIP+AES)
Passphrase	
Group Key Update Interval	3600

Encryption: Select the WPA encryption type you would like to use. Please ensure that your wireless clients use the same settings.

Passphrase: Wireless clients must use the same Key to associate the device. If using ASCII format, the Key must be from 8 to 63 characters in length. If using HEXformat, the Key must be 64 HEX characters in length.

Group Key Update Interval: Specify how often, in seconds, the group key changes.

WPA-Enterprise Encryption:

Wireless Security - 2.4G	
Security Mode	WPA Enterprise
Encryption	Both(TKIP+AES)
Group Key Update Interval	3600
Radius Server	
Radius Port	1812
Radius Secret	
Radius Accounting	Disable
Radius Accounting Server	
Radius Accounting Port	1813
Radius Accounting Secret	
Interim Accounting Interval	600

Encryption: Select the WPA encryption type you would like. Please ensure that your wireless clients use the same settings.

Group Key Update Interval: Specify how often, in seconds, the group key changes.

Radius Server: Enter the IP address of the Radius server.

Radius Port: Enter the port number used for connections to the Radius server.

Radius Secret: Enter the secret required to connect to the Radius server.

Radius Accounting: Enables or disables the accounting feature.

Radius Accounting Server: Enter the IP address of the Radius accounting server.

Radius Accounting Port: Enter the port number used for connections to the Radius accounting server.

Radius Accounting Secret: Enter the secret required to connect to the Radius accounting server.

Interim Accounting Interval: Specify how often, in seconds, the accounting data sends.

Note: 802.11n does not allow WEP/WPA-PSK TKIP/ WPA2-PSK TKIP security mode. The connection mode will automatically change from 802.11n to 802.11g.

WPA2Enterprise Encryption:

Wireless Security - 2.4G	
Security Mode	WPA2-Enterprise
Encryption	Both(TKIP+AES)
Group Key Update Interval	3600
Radius Server	
Radius Port	1812
Radius Secret	
Radius Accounting	Disable
Radius Accounting Server	
Radius Accounting Port	1813
Radius Accounting Secret	
Interim Accounting Interval	600

Encryption: Select the WPA encryption type you would like. Please ensure that your wireless clients use the same settings.

Group Key Update Interval: Specify how often, in seconds, the group key changes.

Radius Server: Enter the IP address of the Radius server.

Radius Port: Enter the port number used for connections to the Radius server.

Radius Secret: Enter the secret required to connect to the Radius server.

Radius Accounting: Enables or disables the Radius accounting feature.

Radius Accounting Server: Enter the IP address of the Radius accounting server.

Radius Accounting Port: Enter the port number used for connections to the Radius accounting server.

Radius Accounting Secret: Enter the secret required to connect to the Radius accounting server.

Interim Accounting Interval: Specify how often, in seconds, the accounting data sends.

Note: 802.11n does not allow WEP/WPA-PSK TKIP/ WPA2-PSK TKIP security mode. The connection mode will automatically change from 802.11n to 802.11g.

WPA Mixed Enterprise Encryption:

Wireless Security - 2.4G

Security Mode	WPA Mixed Enterprise ▾
Encryption	Both(TKIP+AES) ▾
Group Key Update Interval	3600
Radius Server	
Radius Port	1812
Radius Secret	
Radius Accounting	Disable ▾
Radius Accounting Server	
Radius Accounting Port	1813
Radius Accounting Secret	
Interim Accounting Interval	600

Encryption: Select the WPA encryption type you would like. Please ensure that your wireless clients use the same settings.

Group Key Update Interval: Specify how often, in seconds, the group key changes.

Radius Server: Enter the IP address of the Radius server.

Radius Port: Enter the port number used for connections to the Radius server.

Radius Secret: Enter the secret required to connect to the Radius server.

Radius Accounting: Enables or disables the Radius accounting feature.

Radius Accounting Server: Enter the IP address of the Radius accounting server.

Radius Accounting Port: Enter the port number used for connections to the Radius accounting server.

Radius Accounting Secret: Enter the secret required to connect to the Radius accounting server.

Interim Accounting Interval: Specify how often, in seconds, the accounting data sends.

Note: 802.11n does not allow WEP/WPA-PSK TKIP/ WPA2-PSK TKIP security mode. The connection mode will automatically change from 802.11n to 802.11g.

Guest Network Settings

Adding a guest network to allow visitors to use the internet without giving out your office or company wireless security. You can add a guest network to each wireless network in the 2.4GHz frequencies and 5GHz frequencies.

SSID: Specified the SSID for the current profile.

Hidden SSID: Check this option to hide SSID from clients, If checked, this SSID will not appear in the AP detect.

Client Isolation: Click the appropriate radio button to allow or prevent communication between client devices.

IP address: The IP Address of this device. Subnet Mask:
The IP Subnet mask of this device.

Starting IP Address: The first IP Address in the range of the addresses by the DHCP server.

Ending IP Address: The last IP Address in the range of addresses assigned by the DHCP server.

Fast Handover

Enable the Fast Handover feature by ensuring that each client is served by at least one Access Point at any time. Access Points continuously monitor the connectivity quality of any client in their range and efficiently share this information with other Access Points in the vicinity of that client to coordinate which of them should serve the client best.

Fast Handover ⓘ	
Status	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
RSSI	<input type="text" value="-85"/> dBm (Range: -60dBm ~ -100dBm)

RSSI: Enter the RSSI (Received Signal Strength Index) in order to determine the handover procedure which the current wireless link will terminate. RSSI is an indication of the power level being received by the antenna. Therefore, the higher the RSSI number, the stronger the signal.

Fast Roaming

Enable the function to serve mobile client devices that roam from access point to access point. Some applications roam on client devices require fast re-association when they roam to a different access point.

Please enter the settings of the SSID and initialize the Security mode to WPA-Mixed, WPA2 enterprise, WPA2-PSK, WPA-Mixed Enterprise as well as to set the RADIUS server firstly. User can enable Fast Roaming.

Please also set the same encryption under the same SSID on other access point and enable Fast Roaming. When the configuration is activated on different access point, the mobile client devices can run the voice service and require seamless roaming to prevent delay in conversation from access point to access point.

Wireless Security - 5GHz	
Security Mode	WPA2-PSK ▼
Encryption	Both(TKIP+AES) ▼
Passphrase	<input type="text"/>
Group Key Update Interval	<input type="text" value="3600"/>
Fast Roaming ⓘ	
Enable Fast Roaming	<input type="radio"/> Enable <input checked="" type="radio"/> Disable

Wireless MAC Filtering

Wireless MAC Filtering is used to allow or deny network access to wireless clients (computers, tablet PCs, NAS, smartphones, etc.) according to their MAC addresses. You can manually add a MAC address to restrict permission to access SWE 2220. The default setting is: Disable Wireless MAC Filter.

Note: Only applicable in Access Point and WDS AP mode.

Wireless MAC Filter	
ACL Mode	Disabled
No.	MAC Address

ACL (Access Control List) Mode: Determines whether network access is granted or denied to clients whose MAC addresses appear in the MAC address table on this page. Choices given are: Disabled, Deny MAC in the list, or Allow MAC in the list.

MAC Address: Enter the MAC address of the wireless client.

Add: Click Add to add the MAC address to the MAC Address table.

Delete: Deletes the selected entries. Save:

Click Save to apply the changes.

Wireless Advanced

This page allows you to configure wireless advanced settings. It is recommended that the default settings are used unless the user has experience with more advanced networking features.

2.4 GHz/5 GHz Wireless Advanced

	2.4GHz	5GHz
Operation Mode	Access Point <input type="checkbox"/> Green <input checked="" type="checkbox"/>	Access Point <input type="checkbox"/> Green <input checked="" type="checkbox"/>
Wireless Mode	802.11 B/G/N	802.11 A/N
Channel HT Mode	20/40 MHz	40 MHz
Extension Channel	Upper Channel	Lower Channel
Channel	Auto	Auto
Transmit Power	Auto	Auto
Data Rate	Auto	Auto
RTS / CTS Threshold (1 - 2346)	2346	2346
Client Limits	127 <input type="checkbox"/> Enable <input checked="" type="checkbox"/>	127 <input type="checkbox"/> Enable <input checked="" type="checkbox"/>
Aggregation	Enable <input checked="" type="checkbox"/> 32 Frames 50000 Bytes(Max)	Enable <input checked="" type="checkbox"/> 32 Frames 50000 Bytes(Max)
AP Detection	Scan	Scan

Data Rate: Select a data rate from the drop-down list. The data rate affects throughput of data in the SWE 2220. The lower the data rate, the lower the throughput, though transmission distance will be lowered as well.

Transmit Power: Set the power output of the wireless signal.

RTS/CTS Threshold: Specify the threshold package size for RTS/CTS. A smaller number causes RTS/CTS packets to be sent more often and in turn consumes more bandwidth.

Distance: Specify the distance between Access Points and clients. Longer distances may drop high-speed connections.

Aggregation: Merges data packets into one packet. This option reduces the number of packets, but increases packet sizes.

Save: Click Save to confirm the changes.

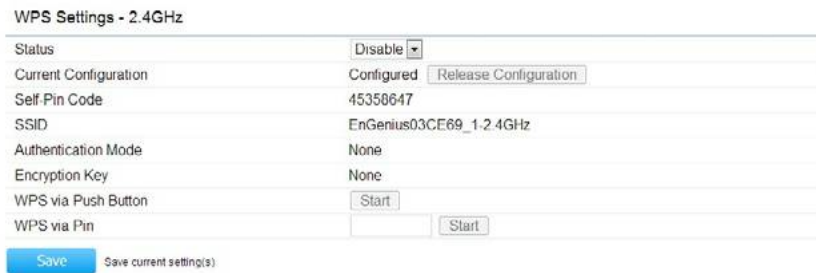
WPS (Wi-Fi Protected Setup)

The Wi-Fi Protected Setup (WPS) feature complies with the Wi-Fi Alliance WPS standard and makes it easier to quickly add client devices to an established, security-enabled Wi-Fi network.

WPS reduces the user steps required to configure a network and supports two methods that are familiar to most consumers to configure a network and enable security.

Note: Only applicable in Access Point and WDS AP mode.

WPS (Wi-Fi Protected Setup)



The screenshot shows the WPS Settings interface for a 2.4GHz network. The settings are as follows:

WPS Settings - 2.4GHz	
Status	Disable <input type="button" value="v"/>
Current Configuration	Configured <input type="button" value="Release Configuration"/>
Self Pin Code	45358647
SSID	EnGenius03CE69_1.2.4GHz
Authentication Mode	None
Encryption Key	None
WPS via Push Button	<input type="button" value="Start"/>
WPS via Pin	<input type="text"/> <input type="button" value="Start"/>
<input type="button" value="Save"/> Save current setting(s)	

WPS: Select to Enable or Disable the WPS feature.

WPS Current Status: Shows whether the WPS function is

Configured or Unconfigured. When it is configured, the WPS has been used to authorize a connection between the device and wireless clients.

Self Pin Code: The PIN code of this device.

SSID: The SSID (wireless network name) used when connecting using WPS.

Authentication Mode: Shows the encryption method used by the WPS process.

Passphrase Key: This is the passphrase key that is randomly generated during the WPS process. It is required if wireless clients that do not support WPS attempt to connect to the wireless network.

WPS via Push Button: Click this button to initialize the WPS feature using the Push Button method.

WPS via PIN: Enter the PIN code of the wireless device and click this button to initialize WPS feature using the PIN method.

Save: Click Save to confirm the changes.

WDS Link Settings

Using WDS (Wireless Distribution System) will allow a network administrator or installer to connect to Access Points wirelessly. Doing so will extend the wired infrastructure to locations where cabling is not possible or inefficient to implement.

Note: Compatibility between different brands and models of Access Points is not guaranteed. It is recommended that the WDS network be created using the same models for maximum compatibility.

Also Note: All Access Points in the WDS network must use the same Channel and Security settings.

To create a WDS network, please enter the MAC addresses of the Access Points that you want included in the WDS. There can be a maximum of four Access Points.

Note: Only applicable in WDS AP and WDS Bridge modes.

2.4 GHz/5 GHz WDS Link Settings

WDS Link Settings - 2.4GHz

Security:

AES Passphrase:
(8-63 ASCII characters or 64 hexadecimal digits)

ID	MAC Address	Mode
1	<input type="text"/>	<input type="text" value="Disable"/>
2	<input type="text"/>	<input type="text" value="Disable"/>
3	<input type="text"/>	<input type="text" value="Disable"/>
4	<input type="text"/>	<input type="text" value="Disable"/>

Security: Select None or AES from the drop-down list.

AES Passphrase: Enter the Key Values you wish to use. Other AP(s) must use the same key to establish WDS link.

MAC Address: Enter the Access Point's MAC address to which you want to extend the wireless area.

Mode: Select Disable or Enable from the drop-down list. Save:

Click Save to confirm the change.

Administration

This page allows you to change the SWE 2220 username and password. By default, the username is admin and the password is admin. The password can contain from 0 to 12 alphanumeric characters and is case sensitive.

Username: admin

Password: admin

Account Setting

Account Settings	
Administrator Username	admin
Current Password	
New Password	
Verify Password	

Apply saved settings to take effect

New Name: Enter a new username for logging in to the New Name entry box.

Old Password: Enter the old password for logging in to the Old Password entry box.

New Password: Enter the new password for logging in to the New Password entry box.

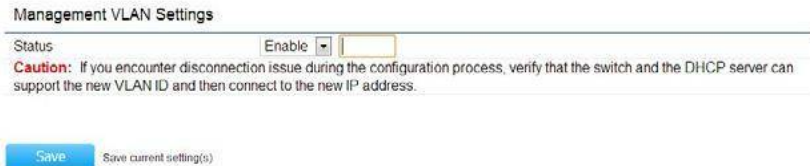
Confirm Password: Re-enter the new password in the Confirm Password entry box for confirmation. Apply:

Click Apply to save the changes.

Note: it is highly recommended that you change your password to something more unique for greater security.

Management VLAN Settings

This page allows you to assign a VLAN tag to the packets. A VLAN is a group of computers on a network whose software has been configured so that they behave as if they were on a separate Local Area Network (LAN). Computers on VLAN do not have to be physically located next to one another on the LAN.



Management VLAN Settings

Status: Enable

Caution: If you encounter disconnection issue during the configuration process, verify that the switch and the DHCP server can support the new VLAN ID and then connect to the new IP address.

Save current setting(s)

To configure VLAN tags, you must first Isolate and enter a VID before enabling VLAN under Management VLAN ID.

Note: Only applicable in Access Point and WDS AP mode.

Profile Isolation: Restrict clients from communicating with different VLANs by checking the Isolation box for the SSID you wish to select under the Wireless Settings function.

Wireless Settings - 2.4GHz

No.	Enable	SSID	Edit	Security	Hidden SSID	Client Isolation	VLAN Isolation	L2 Isolation	VLAN ID
1	<input checked="" type="checkbox"/>	Siselectron22D20D_1_2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
2	<input type="checkbox"/>	Siselectron22D20D_2-2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
3	<input type="checkbox"/>	Siselectron22D20D_3_2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
4	<input type="checkbox"/>	Siselectron22D20D_4-2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
5	<input type="checkbox"/>	Siselectron22D20D_5_2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
6	<input type="checkbox"/>	Siselectron22D20D_6-2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
7	<input type="checkbox"/>	Siselectron22D20D_7-2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7
8	<input type="checkbox"/>	Siselectron22D20D_8-2.4GHz	<input type="button" value="Edit"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8

VLAN ID (VID): Specifies the VLAN tag for each profile. Management

VLAN ID: If your network includes VLANs, you can specify a VLAN ID for packets pass through the Access Point with a tag. Otherwise, select no VLAN tag. Save: Click Save to confirm.

Note:

1. If you reconfigure the Management VLAN ID, you may lose your connection to the SWE 2220. Verify that the DHCP server supports the reconfigured VLAN ID, then reconnect to the SWE 2220 using the new IP address.

Wireless Traffic Shaping

Traffic Shaping regulates the flow of packets leaving an interface to deliver improved Quality of Service. To edit Wireless Traffic Shaping, click Edit for the SSID you would like to configure under Wireless Settings.

Wireless Traffic Shaping

Enable Traffic Shaping	Disable ▾	
Download Limit	100	Mbps (1-999)
Upload Limit	100	Mbps (1-999)

Save current setting(s)

Enable Traffic Shaping: select this option from the drop-down box to enable Wireless Traffic Shaping.

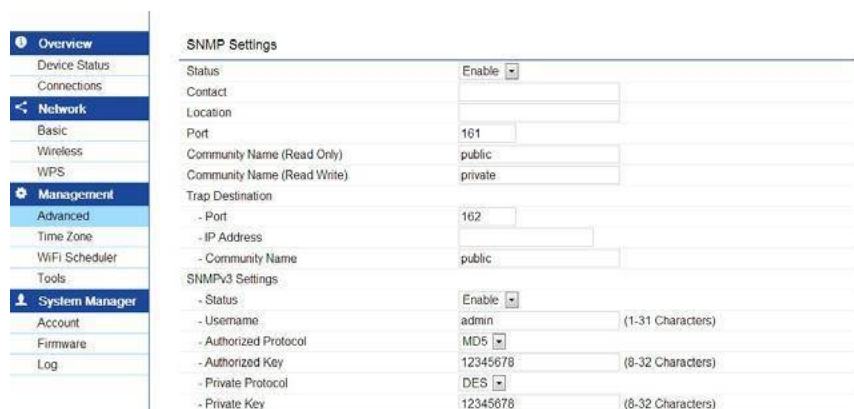
Download Limit: Specifies the wireless transmission speed used for downloading.

Upload Limit: Specifies the wireless transmission speed used for uploading.

Save: Click Save to confirm the changes.

SNMP Settings

This page allows you to assign the Contact Details, Location, Community Name, and Trap Settings for Simple Network Management Protocol (SNMP). This is a networking management protocol used to monitor network attached devices. SNMP allows messages (called protocol data units) to be sent to various parts of the network. Upon receiving these messages, SNMP compatible devices (called agents) returns the data stored in their Management Information Bases. To configure SNMP Settings, click under the Advanced tab on the side bar under Management.



Status: Enables or Disables the SNMP feature. Contact:

Specifies the contact details of the device. Location:

Specifies the location of the device.

Port: Displays the port number.

Community Name (Read Only): Specifies the password for the SNMP community for read only access.

Community Name (Read/Write): Specifies the password for the SNMP community with read/write access.

Trap Destination Address: Specifies the port and IP address of the computer that will receive the SNMP traps.

Trap Destination Community Name: Specifies the password for the SNMP trap community.

SNMPv3 Status: Enables or Disables the SNMPv3 feature.

User Name: Specifies the username for the SNMPv3 feature.

Auth Protocol: Select the Authentication Protocol type: MD5 or SHA.

AuthKey: Specify the Authentication Key for authentication.

Priv Protocol: Select the Privacy Protocol type: DES. Priv Key:

Specifies the privacy key for privacy. Engine ID: Specifies the

Engine ID for SNMPv3.

Save: Click Save to apply the changes.

Backup/Restore

This page allows you to save the current device configurations.

When you save the configurations, you can also reload the saved configurations into the device through the Restore Saved Settings from a file folder.

If extreme problems occur, or if you have set the SWE 2220 incorrectly, you can use the Factory Default button in the Revert to Factory Default Settings section to restore all the configurations of the SWE 2220 to the original default settings.

To Configure the Backup/ Restore Settings, click Firmware under the Systems Manager tab.

Factory Settings

Backup Settings: To restore settings that have been previously backed up, click Export, select the file, and click Restore.

Restore New Setting: Choose the file you wish restore for settings and click Import.

Reset to Default: Click the Reset button to restore the SWE 2220 to its factory default settings.

User Settings

Back Up Setting as Default: Click Backup to backup the user settings you would like to use as the default settings.

Restore to User Default: Click Restore to restore user settings to the factory standard settings.

Backup/Restore Settings

Factory Setting

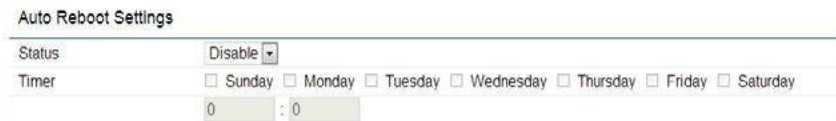
- Backup Setting	<input type="button" value="Export"/>
- Restore New Setting	<input type="button" value="Choose File"/> No file chosen <input type="button" value="Import"/>
- Reset to Default	<input type="button" value="Reset"/>

User Setting

- Back Up Setting as Default	<input type="button" value="Backup"/>
- Restore to User Default	<input type="button" value="Restore"/>

Auto Reboot Settings

You can specify how often you would like to reboot the SWE 2220. To configure the Auto Reboot settings, click the Wi-Fi Scheduler tab on the side bar under Management.

A screenshot of a web-based configuration interface for "Auto Reboot Settings". The interface is contained within a light gray border. At the top left, the title "Auto Reboot Settings" is displayed. Below the title, there are three rows of settings. The first row is labeled "Status" and has a dropdown menu currently set to "Disable". The second row is labeled "Timer" and contains seven checkboxes for the days of the week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. All checkboxes are currently unchecked. The third row shows two input fields for time, both containing the number "0", separated by a colon, indicating a 0:00 interval.

Auto Reboot Setting: Enables or disables the Auto Reboot function.

Frequency of Auto Reboot: Specifies the time and frequency in rebooting the SWE 2220 by Min, Hour, Day and/or Week.

Click Save to apply the changes.

Firmware Upgrade

This page allows you to upgrade the Firmware of the SWE 2220.



The screenshot shows the 'Firmware Upgrade' section. It displays the current firmware version as 2.0.7 and prompts the user to select a new firmware file from their hard disk. There is a 'Choose File' button next to the text 'No file chosen' and an 'Upload' button below it.

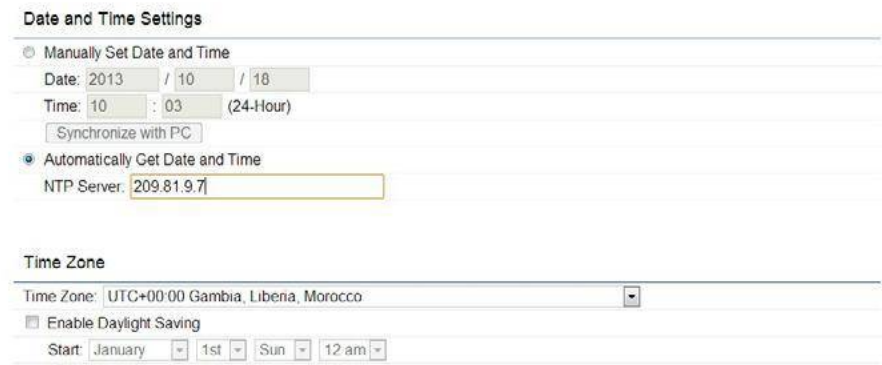
To Perform the Firmware Upgrade:

1. Click the Choose File button and navigate the OS File System to the location of the Firmware upgrade file.
2. Select the upgrade file. The name of the file will appear in the Upgrade File field.
3. Click the Upload button to commence the Firmware upgrade.

Note: The device is unavailable during the upgrade process and must restart when the upgrade is completed. Any connections to or through the device will be lost.

Date and Time Settings

This page allows you to set the internal clock of the SWE 2220. To access the Date and Time settings, click Time Zone under the Management tab on the side bar.



The screenshot shows the 'Date and Time Settings' section. It has two radio buttons: 'Manually Set Date and Time' (selected) and 'Automatically Get Date and Time'. Under 'Manually Set Date and Time', there are input fields for Date (2013 / 10 / 18) and Time (10 : 03 (24-Hour)), along with a 'Synchronize with PC' button. Under 'Automatically Get Date and Time', there is an 'NTP Server' field with the value 209.81.9.7. Below this is the 'Time Zone' section, which includes a dropdown menu set to 'UTC+00:00 Gambia, Liberia, Morocco', a checkbox for 'Enable Daylight Saving', and a 'Start' section with dropdowns for month (January), day (1st), and time (12 am).

Manually Set Date and Time: Manually specify the date and time.

Synchronize with PC: Click to Synchronize the SWE 2220 with the computer's internal clock.

Automatically Get Date and Time: Enter the IP address of an NTP server or use the default NTP server to have the internal clock set automatically.

Time Zone: Choose the time zone you would like to use from the drop-down list.

Enable Daylight Savings: Check the box to enable or

disable daylight savings time for ther SWE 2220. Next, enter the dates that correspond to the present year's daylight savings time.

Click Apply to save the changes.

would like to remote to.

Log Server IP Address: Enter the IP address of the log server.

Apply: Click **Apply** to save the changes.

System Log

This page allows you to setup the System Log and local log functions of the SWE 2220. Click Log under the Systems Manager tab to open up the System Log page.

System Log

Status Enable Disable

Log type

```
Nov 29 01:38:10 SWE2220 user.warn kernel: Node deleted (NC = 0)
Nov 29 01:38:10 SWE2220 user.warn kernel: Node Added (NC = 1)
Nov 29 01:38:01 SWE2220 cron.info crond[2653]: crond: USER root pid 1893 cmd . /etc/hotp
Nov 29 01:37:01 SWE2220 cron.info crond[2653]: crond: USER root pid 1885 cmd . /etc/hotp
Nov 29 01:36:01 SWE2220 cron.info crond[2653]: crond: USER root pid 1877 cmd . /etc/hotp
Nov 29 01:35:18 SWE2220 user.warn kernel: Node deleted (NC = 1)
Nov 29 01:35:18 SWE2220 user.warn kernel: Node Added (NC = 2)
Nov 29 01:35:01 SWE2220 cron.info crond[2653]: crond: USER root pid 1856 cmd . /etc/hotp
Nov 29 01:34:45 SWE2220 user.info kernel: ABORT LOOP finsihsed for Q: 9, num_pending: 1
Nov 29 01:34:08 SWE2220 user.warn kernel: Node deleted (NC = 0)
```

Status: Enables or disables the System Log function.

Log Type: Select the Log Type mode you would like to use.

Remote Log: Enables or disables the Remote Log feature.

If enabled, enter the IP address of the Log you

Tools

This page allows you to analyze the connection quality of the SWE 2220 and trace the routing table to a target in the network.

Ping Test Parameters

Target IP/Domain Name: Enter the IP address you would like to search.

Ping Packet Size: Enter the packet size of each ping.

Number of Pings: Enter the number of times you wish to ping.

Start Ping: Click Start Ping to begin pinging target device (via IP).

Ping Test Parameters

Target IP / Domain Name		
Ping Packet Size	64	Bytes
Number of Pings	4	
<input type="button" value="Start"/>		

Traceroute Parameters

Target IP/Domain Name: Enter an IP address or domain name you wish to trace.

Start: Click Start to begin the trace route operation. Stop:

Halts the traceroute test.

Traceroute Test Parameters

Target IP / Domain Name	192.168.1.88
<input type="button" value="Start"/>	<input type="button" value="Stop"/>
<pre> traceroute to 192.168.1.88 (192.168.1.88), 30 hops max, 38 byte packets 1 192.168.1.88 (192.168.1.88) 0.205 ms </pre>	

Speed Test Parameters

Target IP/Domain Name: Enter an IP address or domain name you wish to run a Speed Test for.

Time Period/Check Interval: Enter the time in seconds that you would like the test to run for and in how many intervals.

Start: Starts the Speed Test.

Speed Test Parameters		
Target IP / Domain Name	<input type="text"/>	
Time Period	20	sec
Check Interval	5	sec
<input type="button" value="Start"/>		
IPv4 Port	5001	
IPv6 Port	5002	

LED Control

This page allows you to control the LED control functions: Power status, LAN interface, 2.4G/5G WLAN interface and WPS.

Click Apply to save the settings after selecting your choices from the drop-down boxes.

LED Control	
Power	Enable ▾
LAN	Enable ▾
WLAN-2.4GHz	Enable ▾
WLAN-5GHz	Enable ▾
WPS	Enable ▾
<input type="button" value="Apply"/> Apply saved settings to take effect.	

Device Discovery

Under Device Discovery, you can choose for the SWE 2220 to Automatically scan for local devices to connect to. Click Scan to begin the process.

Device Discovery

Device Name	Operation Mode	IP Address	System MAC Address	Firmware Version
<input type="button" value="Scan"/>				

Reset

In some circumstances, you may be required to force the device to reboot. Click on Reboot the Device to reboot the SWE 2220.



The screenshot shows a management interface for a SWE 2220 device. The header bar is blue and contains the text "SWE 2220 Dual Radio AP , 3T3R , 450Mbps + 1300Mbps". To the right of the header are three buttons: "Changes : 1", "Reset", and "Logout". A red arrow points to the "Reset" button.

FCC Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For operation within 5.15 ~ 5.25GHz frequency range, it is restricted to indoor environment.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 25cm between the radiator & your body.

C€0560

English	Hereby, Siselectron Technology Ltd. declares that the SWE 2220 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente, Siselectron Technology Ltd. declara que el SWE 2220 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la directiva 1999/5/CE.