N300 Wi-Fi Outdoor Range Extender

User Manual

WLX-2100

Introduction

Congratulations on your purchase of the N300 Wi-Fi Range Extender Outdoor. With this range extemder you can easily extend the signal of a Wi-Fi hotspot and enjoy a stable Internet connection for all your devices. Ideal for camping grounds and harbors, you can use a single code or voucher to login to the Wi-Fi network and share Internet with friends and family. The range extender supports fast Wi-Fi speeds of up to 300 Mbps. Enjoy the things you do at home also while you're on vacation and listen to your Spotify playlists or watch the latest episode of your favorite Netflix show without lag or buffering. With two extra powerful 5dBi antennas, you can enjoy ultimate Wi-Fi coverage anywhere.

Weatherproof design
The N300 Wi-Fi Outdoor Range Extender is rated IP65. This means that it is protected against the ingress of dust and water and can be used in any weather and any climate. Even harsh environments do not impact the performance.

Easy installation
The N300 Wi-Fi Outdoor Range Extender supports Power over Ethernet (PoE) which means that you can use the included 5m network cable and the included PoE-injector to power it. This gives you more freedom to place the range extender further away from a power socket and have it anywhere in and around your boat, tent or vehicle.

Compatibility and security
The N300 Wi-Fi Outdoor Range Extender is compatible with wireless-n extenders and is also backwards compatible with older wireless technologies. The range extender also supports all existing security standards (64/128-bit WEP, WPA, and WPA2).

Extensive 10-year warranty
The N300 Wi-Fi Outdoor Range Extender comes with an extensive 10-year warranty. Simply activate the long-term warranty by registering your product within 3 weeks of purchase.

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Revision 1.0
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Note: All the information contained in this manual was correct at the time of publication.
However, as our engineers are always updating and improving the product, your device's software may have a slightly different appearance or modified functionality than presented in this manual.

Get to know your range extender

Features

- Extend the signal of a Wi-Fi hotspot
- Ideal for camping grounds & harbours
- Use a single login account & share internet access
- Wi-Fi speeds: 300 Mbps (2.4 GHz)*
- Two extra powerful 5 dBI antennas
- IP65-rated weatherproof housing
- Powered by PoE (Power over Ethernet)
- Compatible with 802.11b/g/n wireless networks
- Compatible with 64/128-bit WEP, WPA, and WPA2 wireless data encryption
- Supports DHCP server function
- Easy to use web-based GUI (Graphical User Interface)
- Two Fast Ethernet ports with one PoE (Power over Ethernet) input

* Theoretical wireless signal rate based on IEEE standard of 802.11a, b, g, n chipset used. Actual throughput may vary. Network conditions and environmental factors lower actual throughput rate. All specifications are subject to change without notice.

Technical Specifications

Hardware Specification

Physical Interface:

- 2 x RJ-45 for 10/100 Fast Ethernet; one port is compatible with PoE
- 1 x Reset button
- 2x detachable 5 dBI antennas with SMA connector

Power Requirements:

- Active ethernet (Power over Ethernet)
- Proprietary PoE design
- Power Adapter 24V / 0.6A

Temperature Range:

- Operating -20°C~70°C
- Storage -30°C to 80°C

Humidity (non-condensing):

- 0%~90% typical

Dimensions:

- With antenna: W100 x D37.5 x H205 mm
- Without antenna: W100 x D37.5 x H189 mm

Weight:

- With antenna: 275 g
- Without antenna: 242 g

Software Specification

Operation Mode:

- Client Bridge, Access Point, Client Router, WDS AP, WDS Bridge, WDS Station

Wireless Specifications:

- Wireless standard: 802.11n, backward compatible with 802.11b/g
- Data rate: 300 Mbps
- Frequency Band: 2.4 GHz

Note: The maximum power of the radio frequency band may be different depending on local regulations.

Wireless / Network Features:

- Auto Channel Selection (Setting varies by Regular Domains)
- Obey Regulatory Power
- Distance Control (802.1x ACK (acknowledgement)
- timeout)

- CLI Supported
- 802.1x Supplicant (CB Mode)
- 4 SSIDs
- WDS AP / WDS Bridge / WDS Station
- Multicast Supported
- RADIUS Accounting
- VLAN Tag / VLAN Pass-through
- Auto Reboot
- Wi-Fi Scheduling

Wireless Security:

- WEP Encryption-64/128/152 bit
- WPA/WPA2 Personal (WPA-PSK using TKIP or AES)
- WPA/WPA2 Enterprise (WPA-EAP using TKIP)
- Hide SSID in beacons
- MAC address filtering, up to 50 field
- Wireless STA (Client) connected list

QoS:

- WMM

What you get

Open the package carefully, and make sure that none of the items listed below are missing. Do not discard the packing materials, in case of return; the unit must be shipped back in its original package.

- WLX-2100 N300 Wi-Fi Range Extender Outdoor
- 5m network cable
- PoE Injector (24 V)
- 2x 2.4 GHz 5dBi antenna
- Power adapter 24 V / 0.6 A
- Car charger 12 V
- Wall mounting kit (screw set & adhesive label)
- Pole mounting kit (2x cable tie + 2x hose clamp)
- Installation guide
- Network detail flyer

5 meter network cable

Wi-Fi Range Extender Outdoor

Power adapter

2x Antennas

Car charger

PoE injector

Network detail flyer

What you need

To use this range extender, you will need the following things:

- A Wi-Fi network or a wired Internet connection
- A device with a web browser (Internet Explorer, Safari, Firefox, Opera)

Safety precautions

The range extender is designed and manufactured with your safety in mind. In order to safely and effectively use the range extender, please read the following before usage.

Usage Cautions

- The range extender can operate in temperatures ranging from -20°C to 70°C. It can be stored in temperatures ranging from -30°C to 80°C.
- Do not disassemble, repair or change the range extender; any damage done will not be included in the warranty / repair policy.
- The range extender is IP65 rated. This mean it can remain outdoors where it will be subject to rain. However, do not submerge it into water.
- Make sure to follow the installation guide correctly so that water cannot get into the range extender.
- Do not shake or hit the range extender, do not press the buttons too hard and stay away from magnetic fields.
- If during electrostatic discharge or a strong electromagnetic field the product will malfunction, unplug the power cable. The product will return to normal performance the next time it is powered on.

Power

The range extender's power voltage is DC 24 V 0.6 A. To use the range extender, please connect the supplied AC adapter or car charger to the range extender's PoE connector.

- When placing the cable, make sure it can't get damaged or be subject to pressure.
- To reduce the risk of electric shock, unplug the adapter first before cleaning it.
- Never connect the adapter to the range extender in a humid or dusty area.
- Do not replace the adapter or cable's wire or connector.

Repair

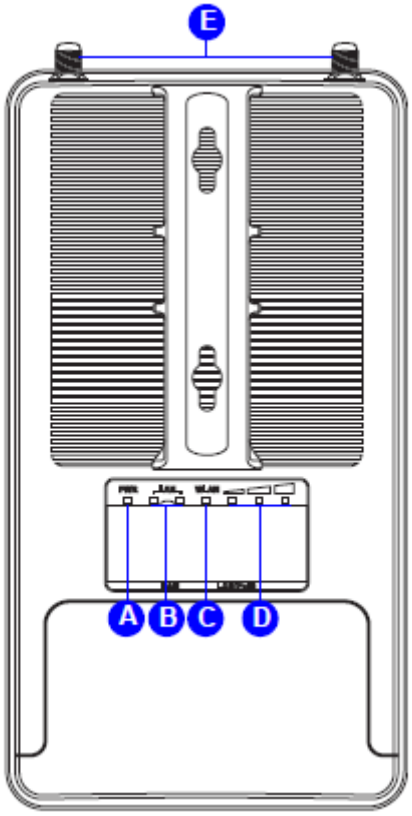
If you experience any problems with your range extender, please take it to the shop where you bought it or a qualified repair centre. Never repair the range extender yourself, you might damage the range extender or endanger yourself.

Disposing of the Wi-Fi Home Cam

When you dispose the range extender, be sure to dispose it appropriately. Some countries may regulate disposal of an electrical device, please consult with your local authority.

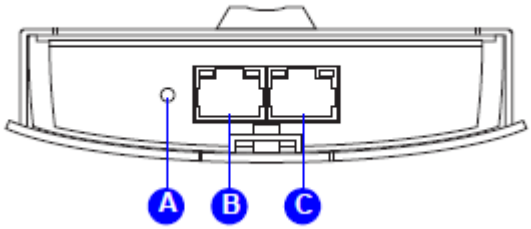
Product layout

Back



Letter	Description
A	Power LED: Shows the device is turned on.
B	LAN LED: Shows that a network cable is connected.
C	WLAN LED: Shows WLAN activity of the extender.
D	Signal LED: This LED shows the quality of the signal it receives from the existing network.
E	Antennas: Screws for the two antennas

Bottom



Letter	Description
A	Reset button: While the device is on, use a pin to press the button for 15 seconds.
B	Network port: Additional network port to connect a wired device (e.g. Notebook).
C	Network PoE (power) port: Use this port to connect the PoE injector to power the device.

Network Detail Flyer

On the Network Detail Flyer, you can find all the information about your network such as network name and Wi-Fi password and how to reach the user interface of the range extender.

Install your range extender

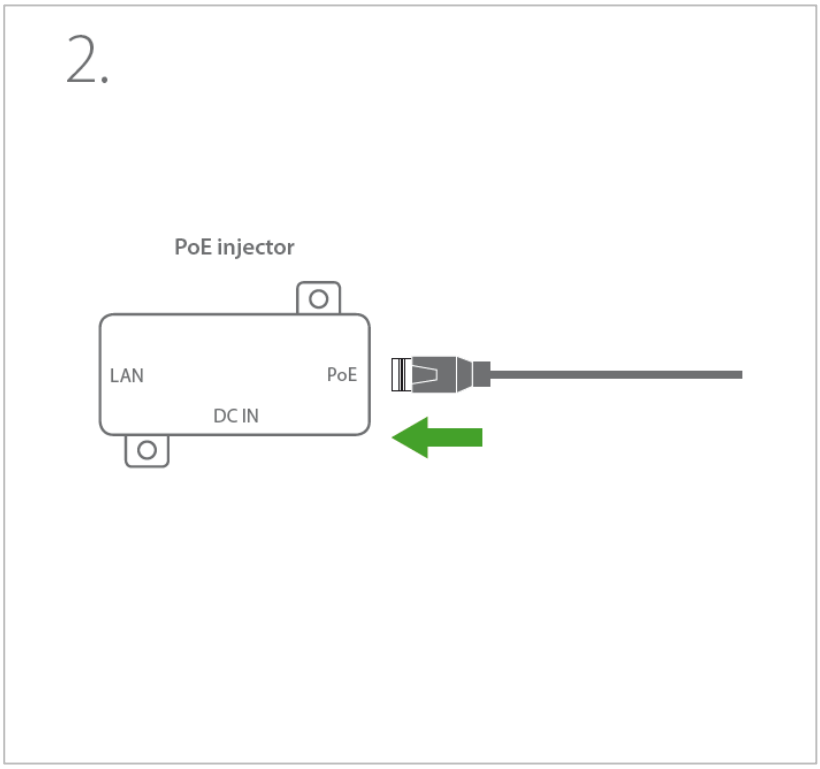
Choose a position for your range extender

For optimal performance, place your Range Extender in a location that is away from any potential source of interference. This location must be within a good signal range from the existing network, preferably above 50% signal strength.

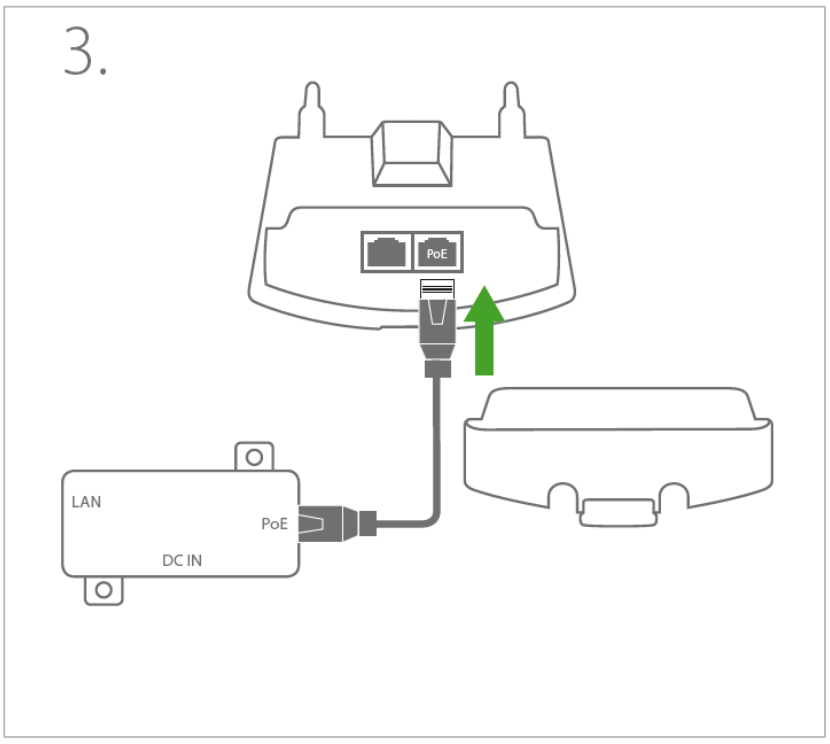
Prepare your range extender

Step 1: Screw the antennas onto the SMA connectors of the range extender

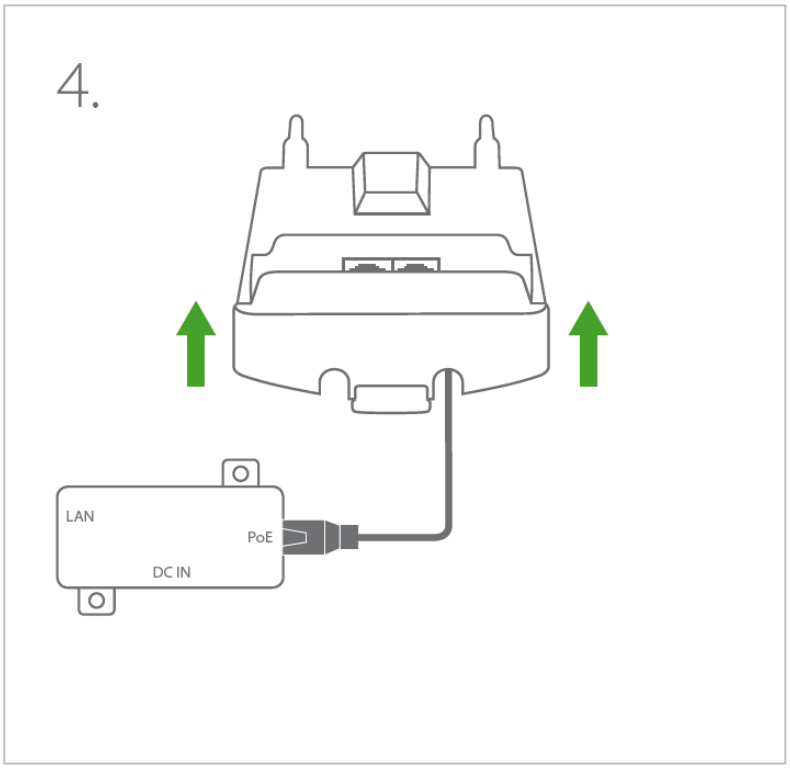
Step 2: Plug the network cable into the PoE injector



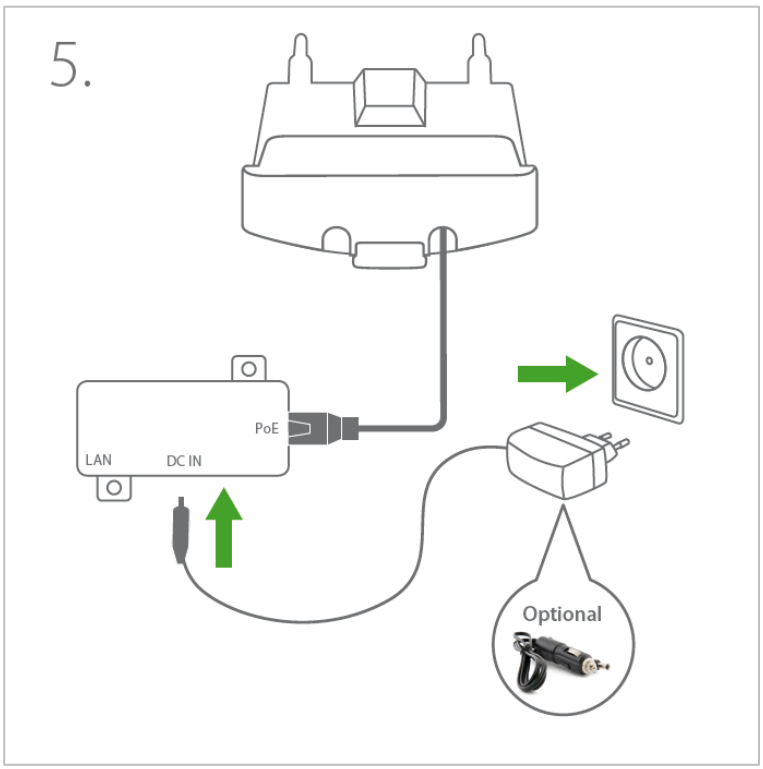
Step 3: Plug the other end of the network cable into the PoE port of the range extender



Step 4: Place the cover back onto the range extender



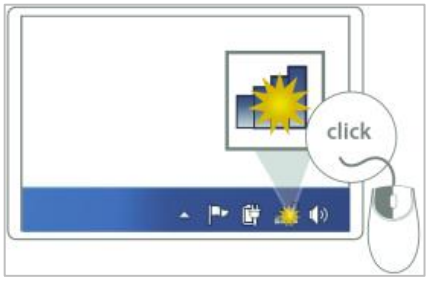
Step 5: Connect the power cable to the PoE injector and a wall socket.



Prepare your computer

Windows

- Click on the icon for wireless connectivity. This is usually located in the System Tray, next to the clock.



- Select the Sitecom network. The correct network name can be found in the Network Detail Flyer.

- Fill in the password for the wireless network. The correct password can be found in the Network Detail Flyer.

- Wait for the icon to display that it's connected to the network.

Mac OSX

- Click on the icon for wireless connectivity. This is usually located in the System Tray, next to the clock.

- Select the Sitecom network. The correct network name can be found in the Network Detail Flyer.

- Fill in the password for the wireless network. The correct password can be found in the Network Detail Flyer.

- Wait for the icon to display that it's connected to the network.

Prepare your Phone / Tablet

- Go to your Wi-Fi settings and turn Wi-Fi on.
- Select the Sitecom network. The correct network name can be found in the Network Detail Flyer.

- Fill in the password for the wireless network. The correct password can be found in the Network Detail Flyer.

- Wait for the icon to display that it's connected to the network.

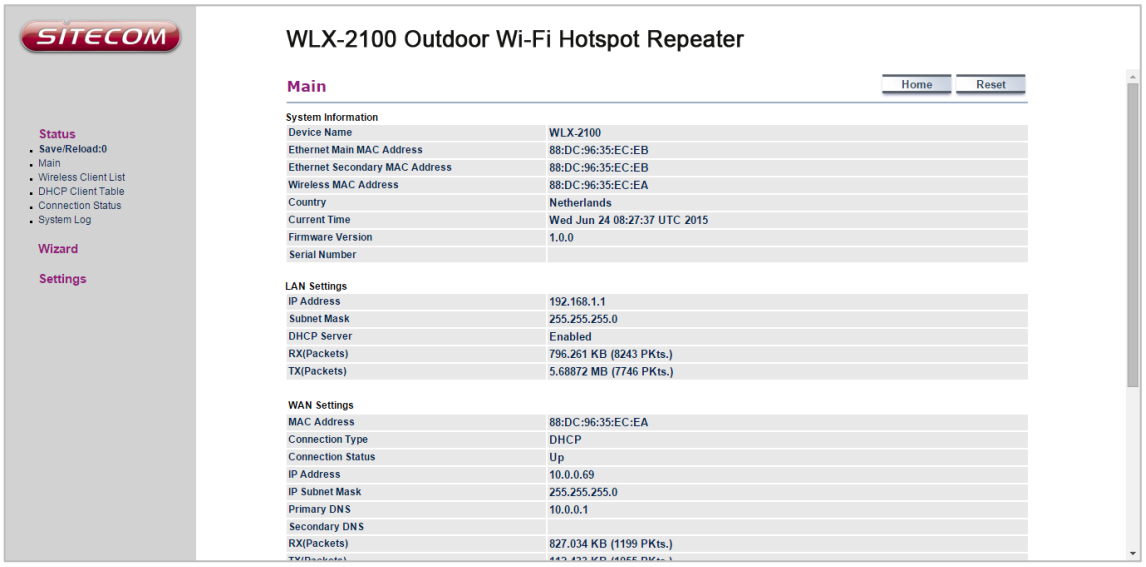
Login to the range extender

- Open your web browser (e.g. Internet Explorer, Safari, Google Chrome or Firefox).
- Type http://sitecom.ext in the address bar and press [Enter].

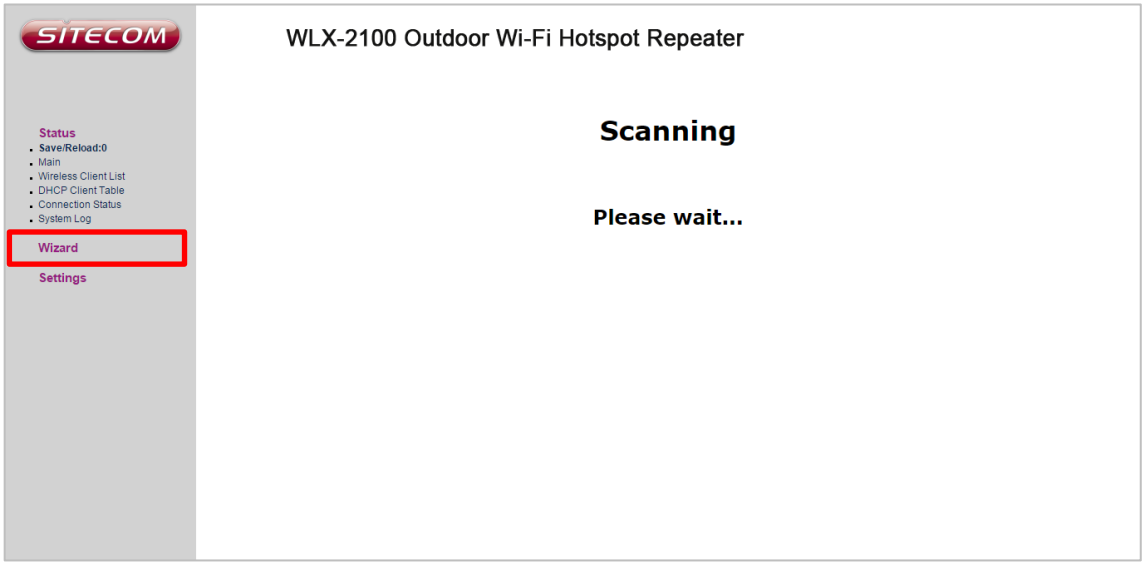
- Type the user name and password. Both are “admin”.
- Click “Login”.

Install the range extender with the wizard

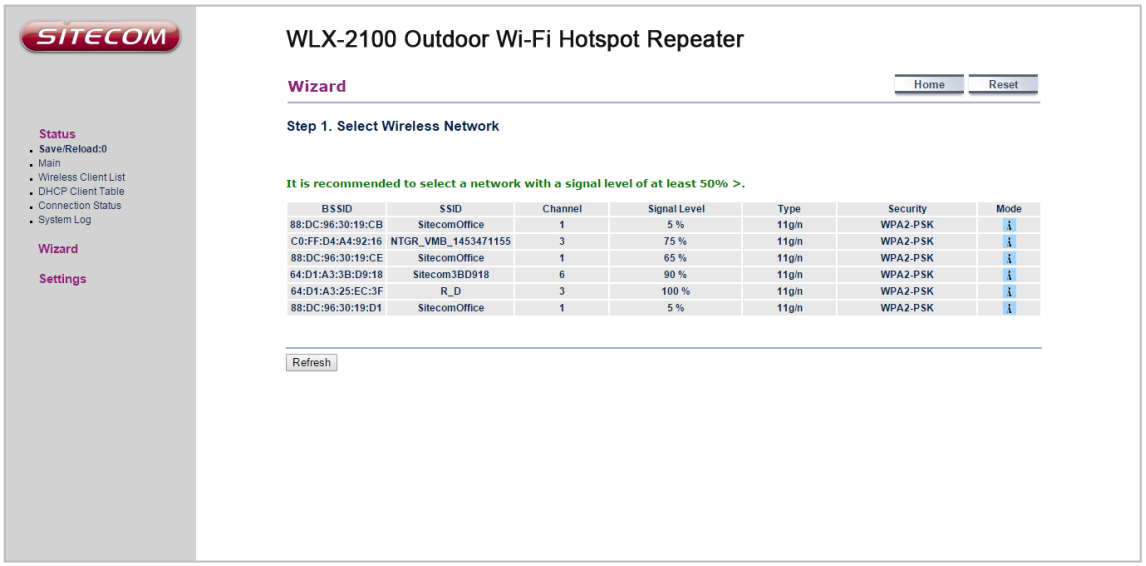
- After login, you will see the user interface of your range extender



- Select “Wizard” in the bottom left corner. Your range extender will start to scan the wireless networks in the area.



- Select the Wi-Fi network you wish to extend and make sure the signal strength is at least 50% or more.



Tip: If you are on a camp ground, vacation park or similar, it is possible, that you see several Wi-Fi networks with the same name, this is a so called "Multi-Access Point-Network". Make sure to always select the network with the strongest signal.

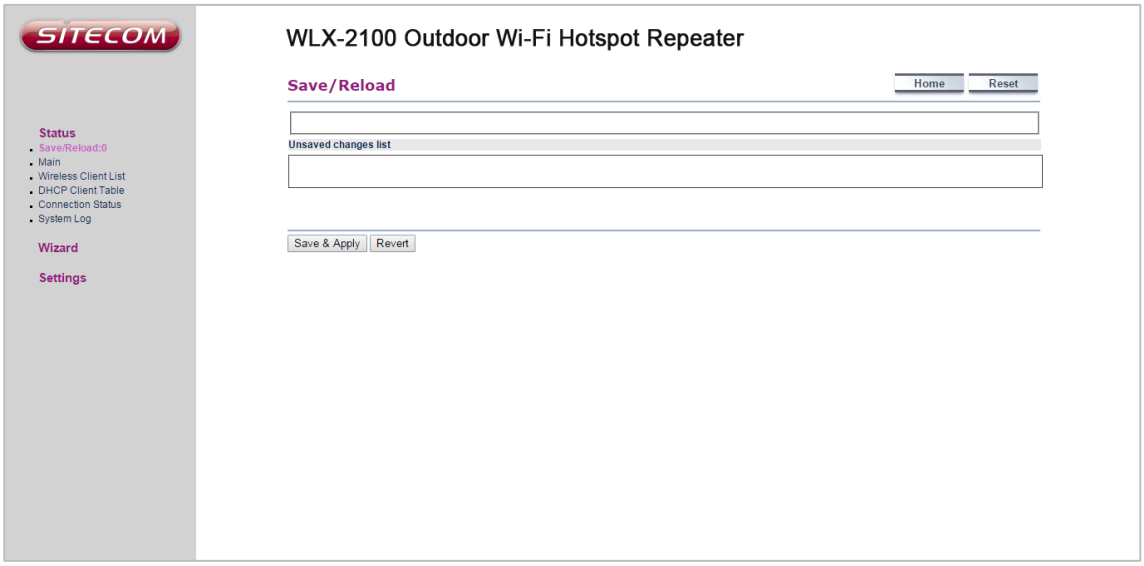
- Fill in the required password of the Wi-Fi network. If you do not have the password yet, please contact the provider of the Wi-Fi network (e.g. campground, vacation park)

Get to know the range extender's user interface

Status

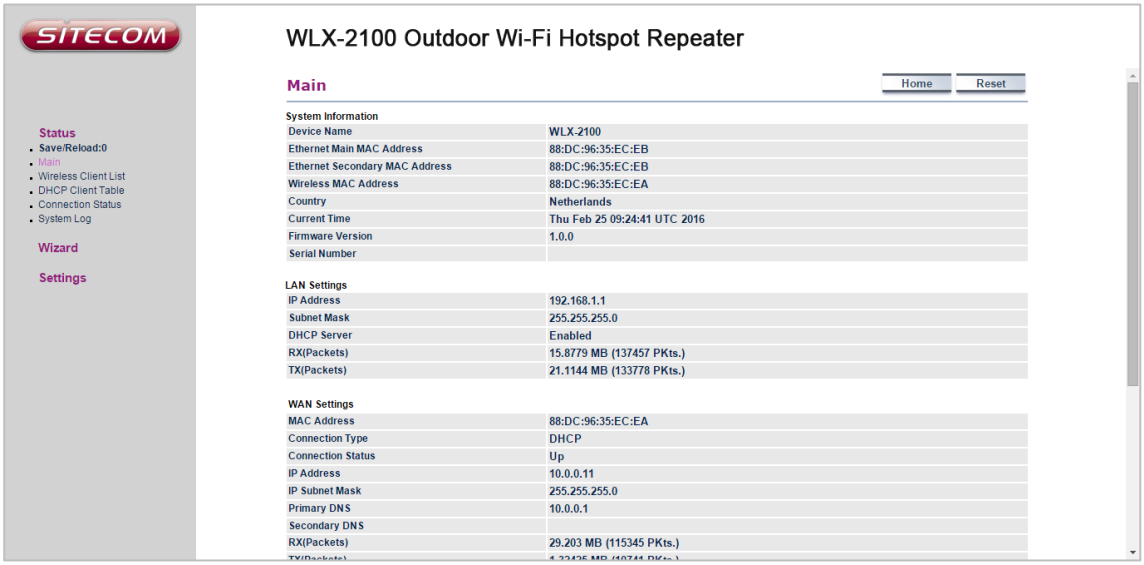
SAVE/RELOAD

On this screen you can save and apply the settings shown in the "Unsaved changes list", or cancel the unsaved changes and revert to the previous settings that were in effect.



MAIN

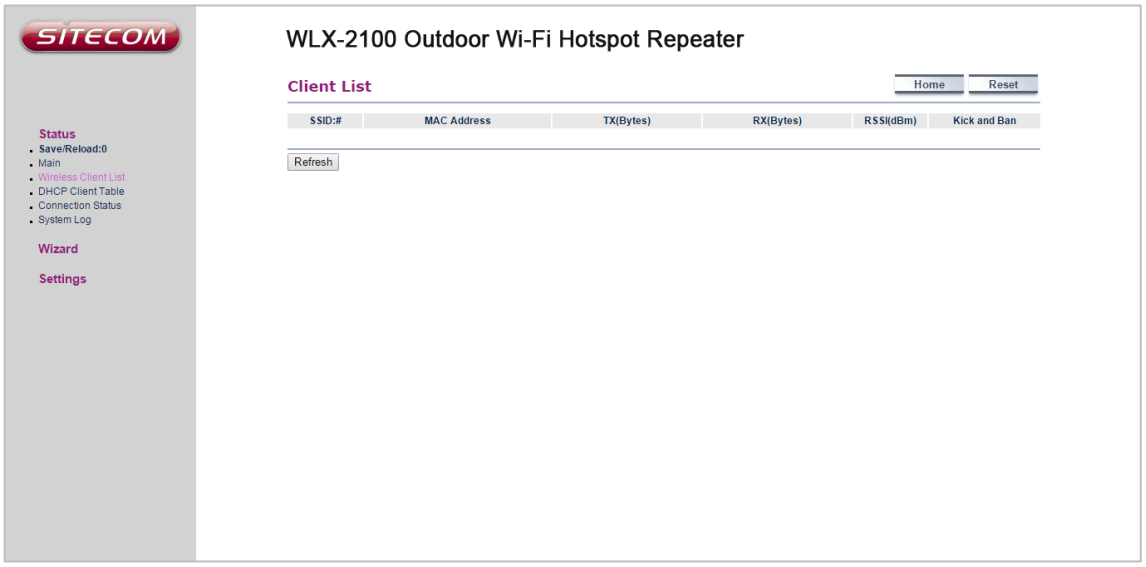
On this screen, you can view the summary of the current system status including system information (hardware/software version, date/time), wired network settings (LAN) and wireless network (WLAN) settings.



WIRELESS CLIENT LIST

On this screen, you can see a list of wireless devices (clients) connected to the range extender along with the MAC addresses and signal strength for each client.

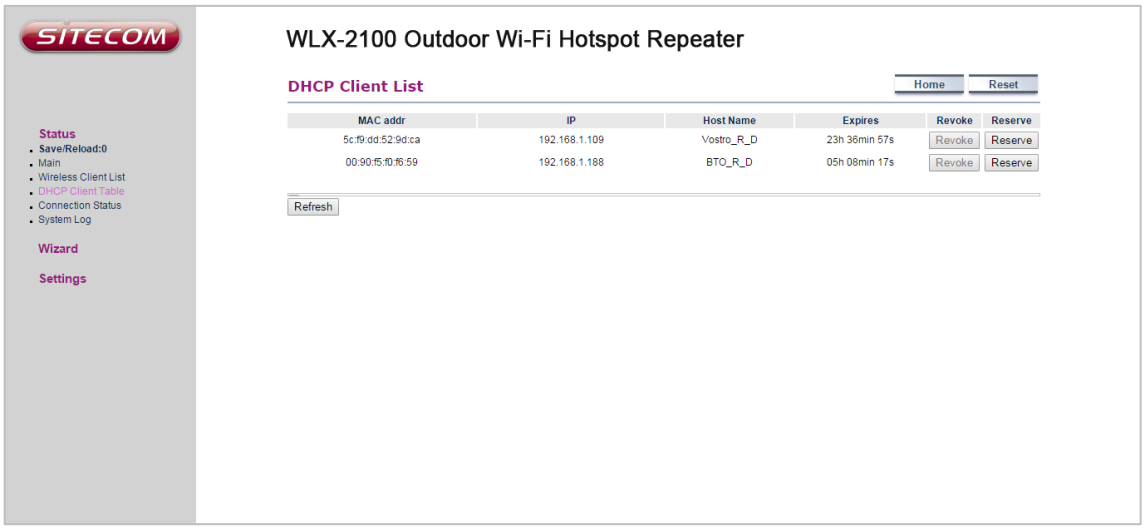
- To remove a wireless device from the list and terminate their connection to the range extender, click the button in the “Kick and Ban” column.
- To refresh the list, click the “Refresh” button below the table.



DHCP CLIENT TABLE

On this screen, you can see a list of wireless devices (clients) that are connected to the range extender through DHCP.

- The MAC addresses, IP addresses and expiry times period for each client are shown in separate rows.
- To refresh the list, click the “Refresh” button below the table.



CONNECTION STATUS

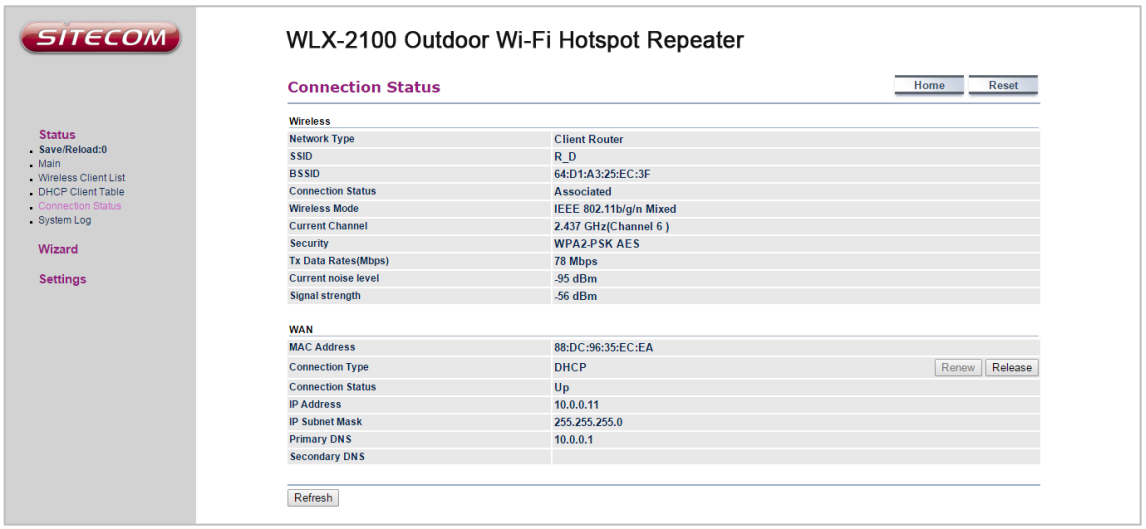
On this screen, you can see the current status of the network.

Wireless:

- The information shown includes network type, Wi-Fi network names (SSID & BSSID), connection status, wireless mode, current channel, security, data-rate, noise level, and signal strength.

WAN:

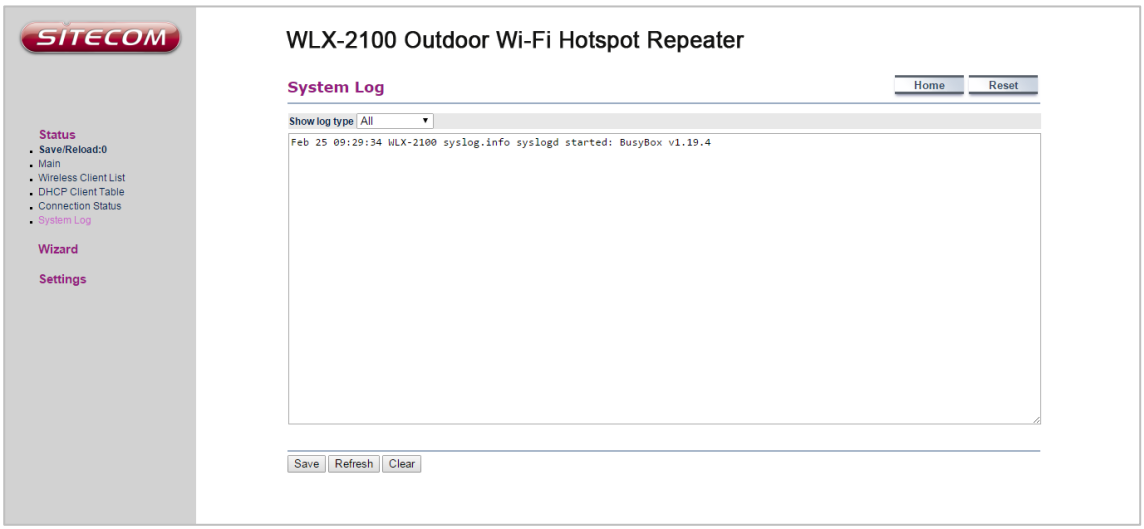
- The information shown includes the MAC address, connection type, connection status, IP address, IP subnet mask, primary DNS and secondary DNS.



- Click the Refresh button to update connections status.

SYSTEM LOG

On this screen, you can see the events that the range extender logged to the internal memory.
Note: The oldest events are deleted from the log when memory is full.

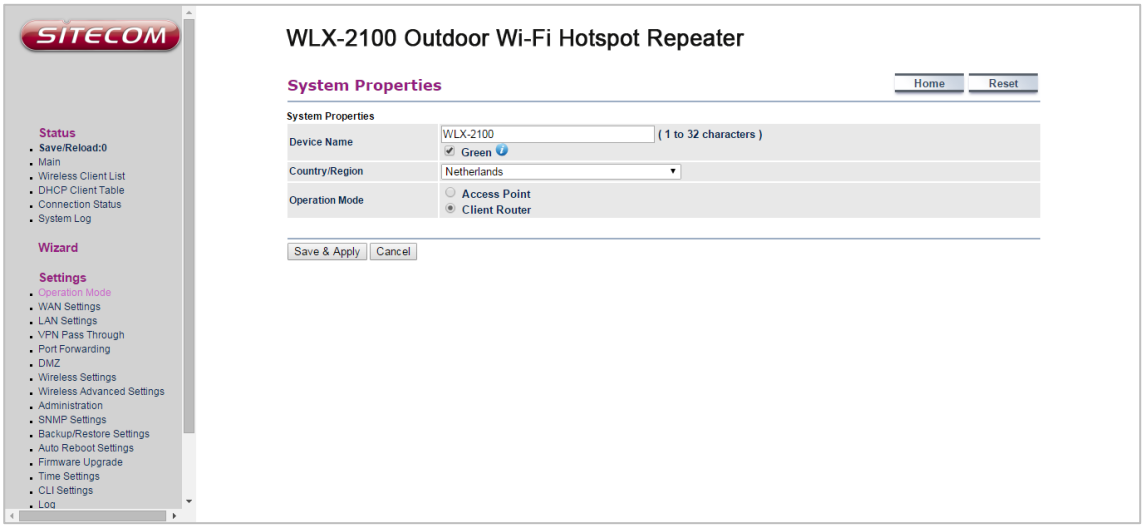


Click the “Save” button to save the log information to a text file, click the “Refresh” button to update the client list or the “Clear” button to remove all events.

Settings

OPERATION MODE (SYSTEM PROPERTIES)

On this screen, you can set the primary function of the device. The function that is selected affects which items are available in the main menu.



Device Name

- Enter a name for the range extender. This name appears in SNMP management, it is not the Wi-Fi network name (SSID) and is not broadcasted to other devices.

Green

- Uncheck the green mode to enable the TX power function in “Wireless Advanced Settings”.

Country/Region

- Select a Country/Region to conform to local regulations.

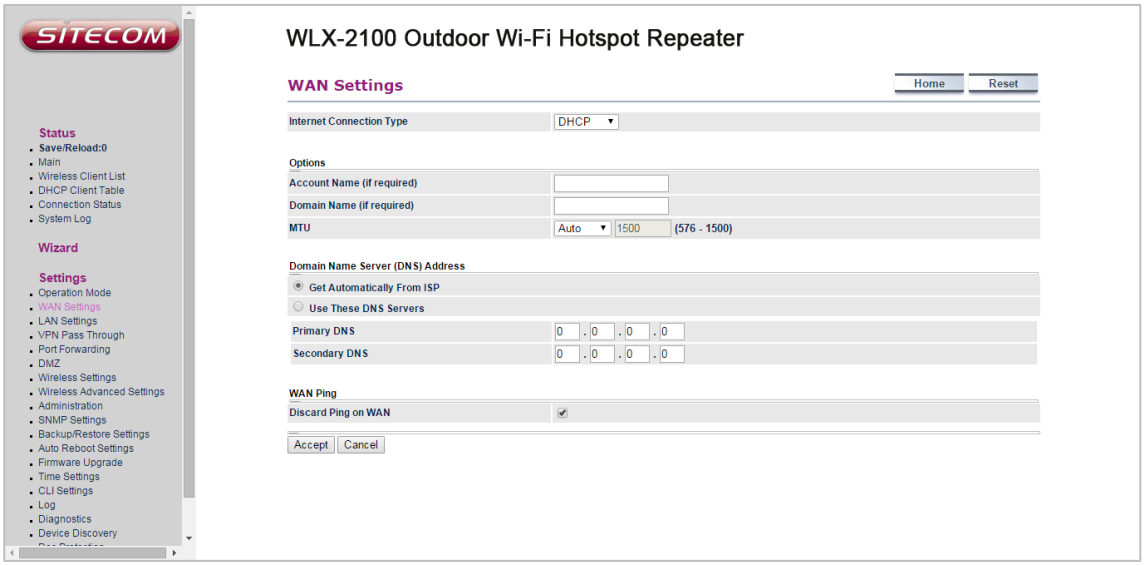
Operation Mode

- Use the radio button to select an operating-mode. You can switch between “Access point” and “Client router”.

Click Save & Apply to save changes or Cancel to terminate.

WAN SETTINGS

On this screen, you can configure the WAN settings for the range extender. Click on the drop down menu under “Internet Connection Type” and select dynamic IP (DHCP), static IP, PPPoE or PPTP.



Configuring Dynamic IP (DHCP)

Dynamic IP addressing assigns a different IP address each time a device connects to an ISP service provider. The service is most commonly used by cable Internet providers.

Account Name

- Enter the account name provided by your Internet Service Provider (ISP).

Domain Name

- Enter the domain name provided by your Internet Service Provider (ISP).

MTU

- The maximum transmission unit (MTU) specifies the largest packet size permitted for an internet transmission. The factory default MTU size for static IP is 1500. The MTU size can be set between 512 and 1500.

Get Automatically From ISP

- Click the radio button to obtain the DNS automatically from the DHCP server.

Use These DNS Servers

- Click the radio button to set up the Primary DNS and Secondary DNS servers manually.

Discard Ping on WAN

- Keep it checked to recognize pings on the WLX-2100 WAN interface
- Disable to block pings on the WLX-2100 WAN interface
  Tip: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.

- Click Accept to save the settings or Cancel to discard the changes.

Configuring Static IP

Setting a static IP address allows an administrator to set a specific IP address for the range extender.

Options:

Account Name

- Enter the account name provided by your Internet Service Provider (ISP).

Domain Name

- Enter the domain name provided by your Internet Service Provider (ISP).

MTU

- The maximum transmission unit (MTU) specifies the largest packet size permitted for an internet transmission. The factory default MTU size for static IP is 1500. The MTU size can be set between 512 and 1500.

IP Address

- Enter the range extender's WAN IP address.

Subnet Mask

- Enter the range extender's WAN subnet mask.

Default Gateway

- Enter the WAN gateway address.

Primary DNS

- Enter the primary DNS server address.

Secondary DNS

- Enter the secondary DNS server address.

Discard Ping on WAN

- Keep it checked to recognize pings on the WLX-2100 WAN interface
- Disable to block pings on the WLX-2100 WAN interface
  Tip: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.
- Click Accept to save the settings or Cancel to discard the changes.

Configuring Point-to-Point Protocol over Ethernet (PPPoE)

- Point-to-Point Protocol over Ethernet (PPPoE) is used mainly by ISPs that provide DSL modems to connect to the Internet.

MTU

- Enter the maximum transmission unit (MTU).The MTU specifies the largest packet size permitted for an internet transmission (PPPoE default: 1492). The MTU size can be set between 512 and 1492.

Login

- Enter the username assigned by your Internet Service Provider (ISP).

Password

- Enter the password assigned by your Internet Service Provider (ISP).

Service Name

- Enter the service name of an ISP (optional).

Connect on Demand

- Select the radio button to specify the maximum idle time. Internet connection will disconnect when it reaches the maximum idle time, but it will automatically connect when user tries to access the network.

Keep Alive

- Select whether to keep the Internet connection always on, or enter a redial period once the internet loses connection.

Get Automatically From ISP

- Click the radio button to obtain the DNS automatically from the DHCP server.

Use These DNS Servers

- Click the radio button to set up the Primary DNS and Secondary DNS servers manually.

Discard Ping on WAN

- Keep it checked to recognize pings on the WLX-2100 WAN interface
- Disable to block pings on the WLX-2100 WAN interface
  Tip: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.

Click Accept to save the settings or Cancel to discard the changes.

Configuring Point-to-Point Tunneling Protocol (PPTP)

The point-to-point tunneling protocol (PPTP) is used in association with virtual private networks (VPNs). There a two parts to a PPTP connection: the WAN interface settings and the PPTP settings.

MTU

- Enter the maximum transmission unit (MTU). The MTU specifies the largest packet size permitted for an internet transmission (PPPoE default: 1492). The MTU size can be set between 512 and 1492.

IP Address

- Enter the router's WAN IP address.

Subnet Mask

- Enter the router's WAN subnet IP address.

Default Gateway

- Enter the router's WAN gateway IP address.

PPTP Server

- Enter the IP address of the PPTP server.

Username

- Enter the username provided by your ISP.

Password

- Enter the password provided by your ISP.

Connect on Demand

- If you want the WLX-2100 to end the Internet connection after it has been inactive for a period of time, select this option and enter the number of minutes you want that period of inactivity to last.

Keep Alive

- If you want the WLX-2100 to periodically check your Internet connection, select this option. Then specify how often you want the WLX-2100 to check the Internet connection. If the connection is down, the WLX-2100 automatically re-establishes your connection.

Get Automatically From ISP

- Obtains the DNS automatically from the DHCP server.

Use These DNS Servers

- Click the radio button to set up the Primary DNS and Secondary DNS servers manually.

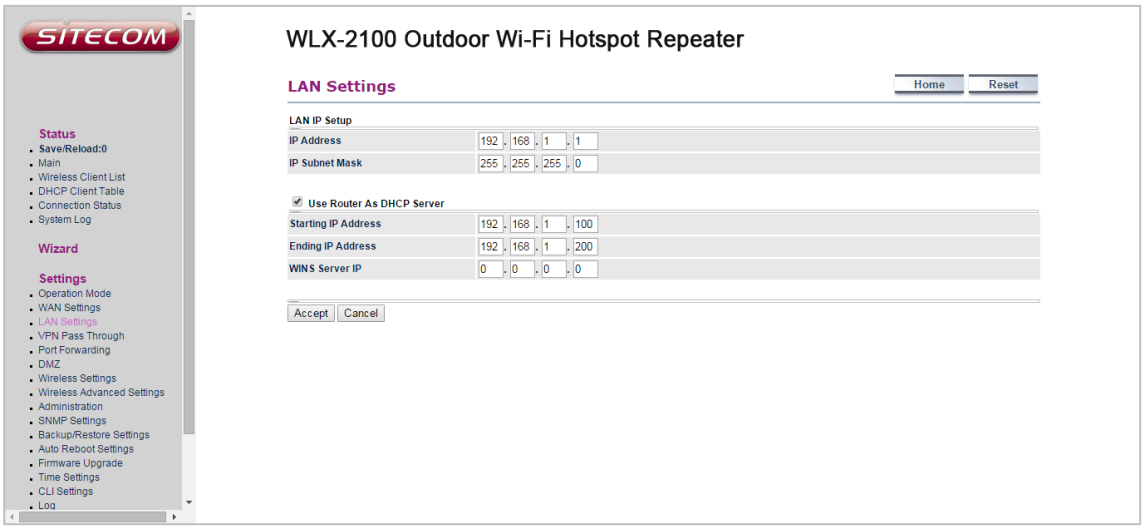
Discard Ping on WAN

- Keep it checked to recognize pings on the WLX-2100 WAN interface
- Disable to block pings on the WLX-2100 WAN interface

Tip: Pinging IP addresses is a common method used by hackers to test whether the IP address is valid. Blocking pings provides some extra security from hackers.

Click Accept to save the settings or Cancel to discard the changes.

LAN SETTINGS



IP Address

- Enter the LAN IP address.

IP Subnet Mask

- Enter the LAN IP subnet mask.

Use Router as DHCP Server

- Check this option to enable the WLX-2100 internal DHCP server.

Starting IP Address

- Specify the starting IP address range for the pool of allocated for private IP addresses. The starting IP address must be on the same subnet as the ending IP address; that is the first three octets specified here must be the same as the first three octets in End IP Address.

Ending IP Address

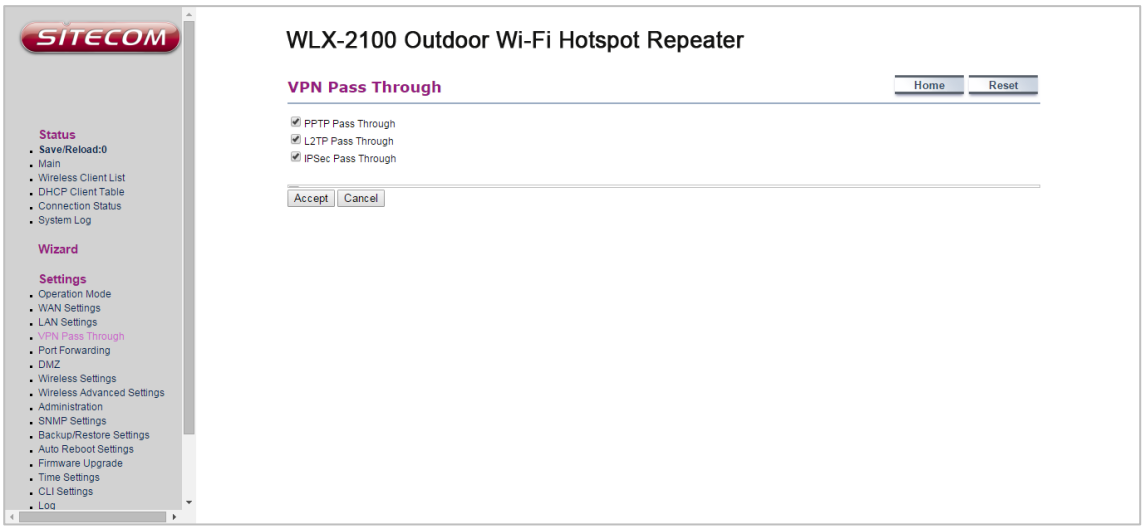
- Specify the ending IP address range for the pool of allocated for private IP addresses. The ending IP address must be on the same subnet as the starting IP address; that is the first three octets specified here must be the same as the first three octets in Start IP Address.

WINS Server IP

- Enter the IP address of the WINS server. Click Accept to confirm the changes or Cancel to cancel and return previous settings.

VPN PASS-THROUGH

VPN Pass-through allows a secure virtual private network (VPN) connection between two computers. Enabling the options on this page opens a VPN port and enables connections to pass through the WLX-2100 without interruption.



PPTP Pass-through

- Check this option to enable PPTP pass-through mode.

L2TP Pass-through

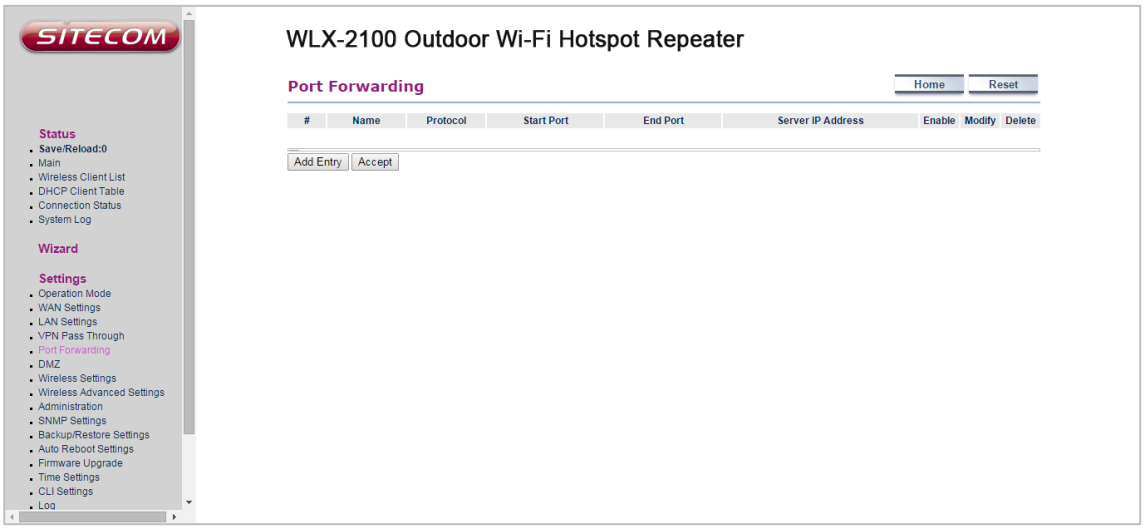
- Check this option to enable L2TP pass-through mode.

IPsec Pass-through

- Check this option to enable IPsec pass-through mode. Click Accept to confirm the changes or Cancel to cancel and return previous settings.

PORT FORWARDING

On this screen, you can configure port forwarding. Port forwarding enables multiple server applications on a LAN to serve clients on a WAN over a single WAN IP address. The router accepts incoming client packets, filters them based on the destination WAN, or public, port and protocol and forwards the packets to the appropriate LAN, or local, port. Unlike the DMZ feature, port forwarding protects LAN devices behind the firewall.



Overview of port forwarding rules

NO.

- Displays the sequence number of the forwarded port.

Name

- Displays the name of the forwarded port.

Protocol

- Displays the protocol to use for mapping from the following: TCP, UDP or Both.

Start Port

- Displays the LAN port number that WAN client packets will be forward to.

End Port

- Displays the port number that the WAN client packets are received.

Server IP

- Displays the IP address of the server for the forwarded port.

Enable

- Click to enable or disable the forwarded port profile.

Modify

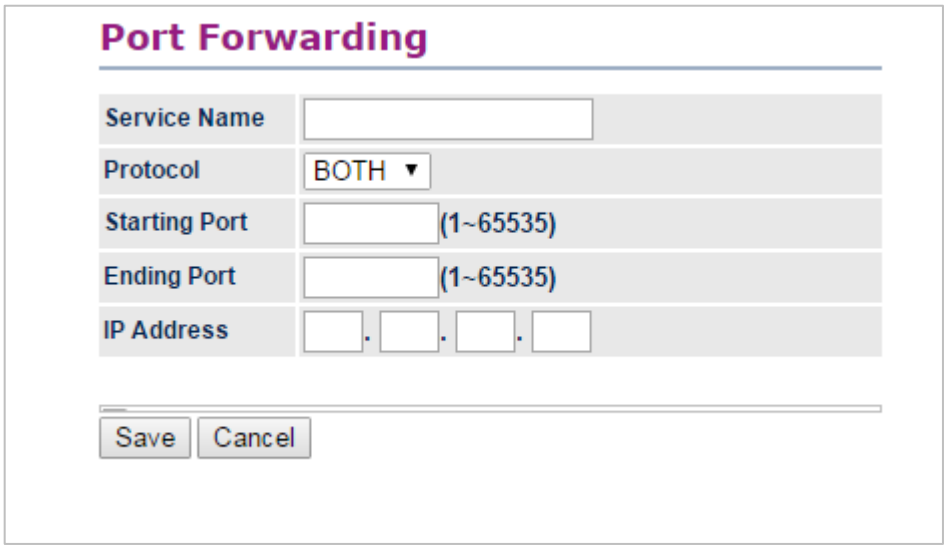
- Click to modify the forwarded port profile.

Delete

- Click to delete the forwarded port profile.

Adding port-forwarding rules

- Click Add Entry to add port forwarding rules.
- Click Accept to confirm the changes.



Service Name

- Enter a name for the port forwarding rule.

Protocol

- Select a protocol for the application: Choices are Both, TCP, and UDP.

Starting Port

- Enter a starting port number.

Ending Port

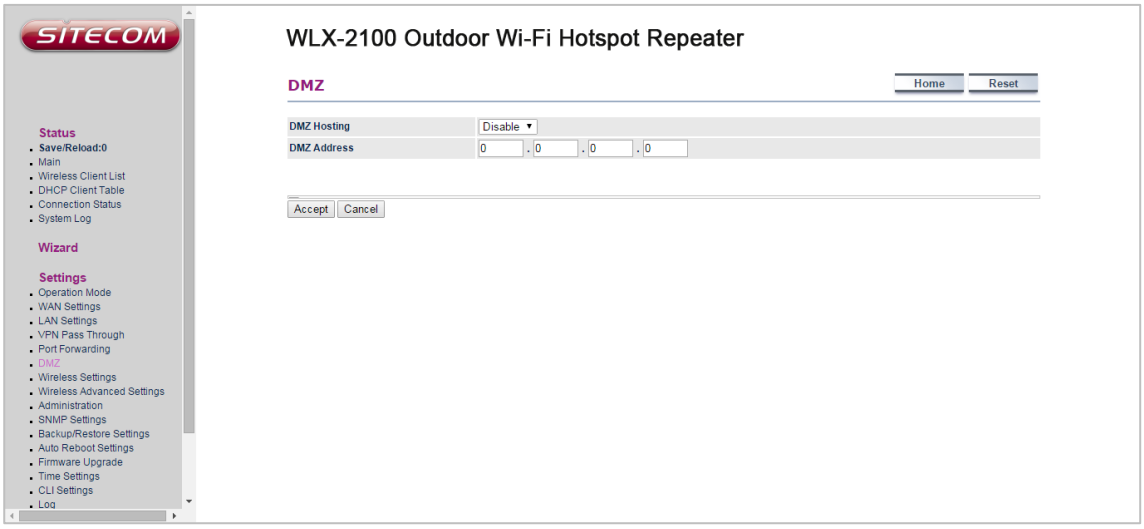
- Enter an ending port number. All ports numbers between the starting and ending ports will forward users to the IP address specified in the IP Address field.

IP Address

- Enter the IP address of the server computer on the LAN network where users will be redirected. Click Save to apply the changes or Cancel to return previous settings.

DMZ

On this screen, you can configure a DMZ. Configuring a device on the LAN as a demilitarized zone (DMZ) host allows unrestricted two-way Internet access for Internet applications, such as online video games, to run from behind the NAT firewall. The DMZ function allows the router to redirect all packets going to the WAN port IP address to a particular IP address on the LAN. The difference between the virtual server and the DMZ function is that a virtual server redirects a particular service or Internet application, such as FTP, to a particular LAN client or server, whereas a DMZ redirects all packets, regardless of the service, going to the WAN IP address to a particular LAN client or server.



DMZ Hosting

- Select Enable DMZ to activate DMZ functionality.

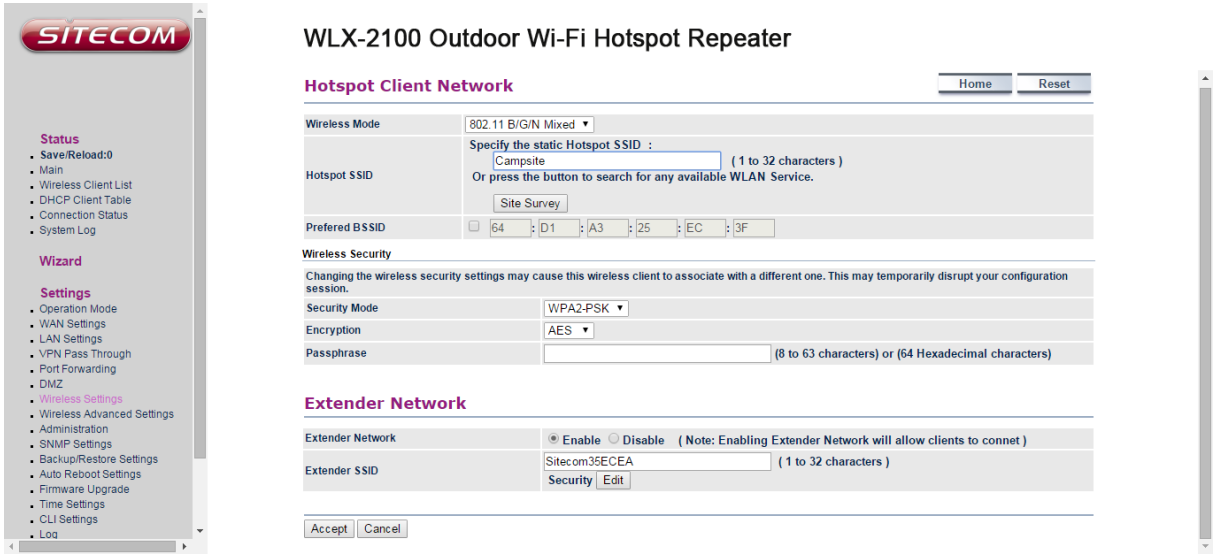
DMZ Address

- Enter an IP address of a device on the LAN. Click Accept to confirm the changes or Cancel to cancel and return previous settings.

WARNING!
The PC defined as a DMZ host is not protected by the firewall and is vulnerable to malicious network attacks. Do not store or manage sensitive information on the DMZ host.

WIRELESS SETTINGS

On this screen, you can configure the wireless and security settings for the range extender.



Hotspot Client Network

Wireless Mode

- Wireless mode supports 802.11b/g/n mixed modes.

Hotspot SSID

- Specify the SSID (network-name) of the network you are connecting the range extender with.

Site Survey

- Initiates a network scan of the surrounding access points where the device is able to connect with, select the network you wish to connect the range extender with.

Preferred BSSID

- Enter the MAC address if known. If you select an Access Point in the Site Survey, this field is completed automatically.

Wireless Security Settings

The Wireless Security Settings section lets you configure the range extender's security modes: WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA, WPA2, and WPA Mixed. We strongly recommend you use WPA2-PSK.

Wired Equivalent Privacy (WEP)

Security Mode

- Select WEP from the drop-down list to begin the configuration.

Auth Type

- Select Open System or Shared.

Input Type
- Select an input type of Hex or ASCII.

Key Length
- Level of WEP encryption applied to all WEP keys. Select a 64/128/152-bit password lengths.

Default Key
- Specify which of the four WEP keys the RANGE EXTENDER uses as its default.

Key1 - Key4
- Specify a password for the security key index. For security, each typed character is masked by a dot. Click Save to save the changes or Cancel to cancel and return previous settings.

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

Wi-Fi Protected Access Pre-Shared Key (WPA-PSK)

Security Mode
- Select WPA-PSK from the drop-down list to begin the configuration.

Encryption
- Select TKIP or AES as the encryption type.
  - TKIP = automatic encryption with WPA-PSK; requires passphrase.
  - AES = automatic encryption with WPA-PSK; requires passphrase.

Passphrase
- Specify the security password. For security, each typed character is masked by a dot.

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

Wi-Fi Protected Access 2 Pre-Shared Key (WPA2-PSK)

Security Mode
- Select WPA2-PSK from the drop-down list to begin the configuration.

Encryption
- Select TKIP, AES as the encryption type.
  - TKIP = automatic encryption with WPA-PSK; requires passphrase.
  - AES = automatic encryption with WPA2-PSK; requires passphrase.

Passphrase

- Specify the security password. For security, each typed character is masked by a dot.

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

Extender Network

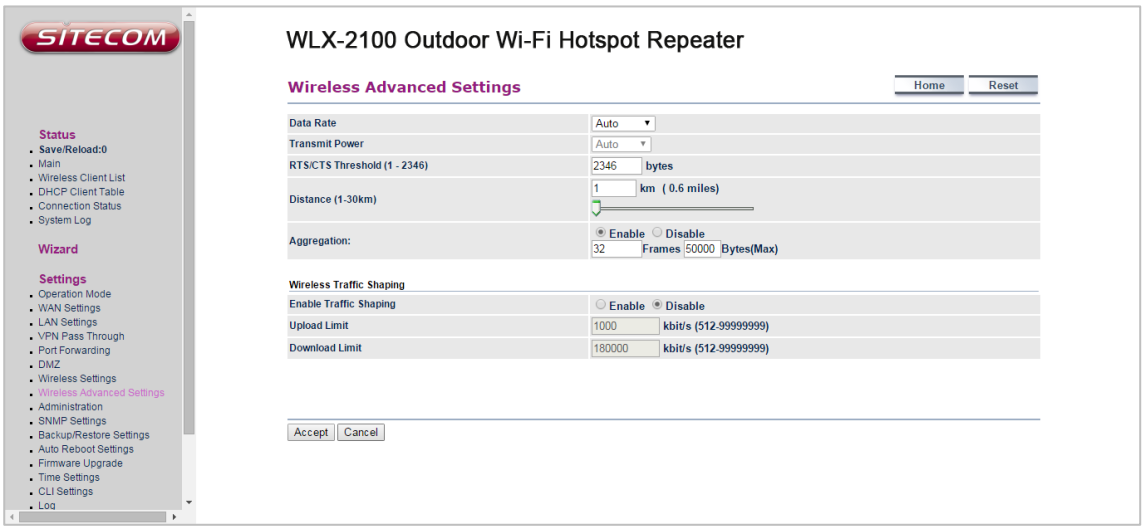
Enable / Disable the extender network, if you disable this feature you will not be able to connect wirelessly with the device.

Security

- Select Edit to configure the appropriate wireless security settings for the device, this menu works the same as the security option described above.

WIRELESS ADVANCED SETTINGS

On this screen, you can configure the advanced wireless settings for your access point using the screens in this section. Leave these settings to their default values if you are not sure what values to enter.



Data Rate

- Select a data rate from the drop-down list. The data rate affects throughput.
- If you select a low data rate value, for example, the throughput is reduced but the transmission distance increases.

Transmit Power

- Let's you increase or decrease transmit power.
- Higher transmit power may prevent connections to the network while the lower transmit power can prevent clients from connecting to the device.

RTS/CTS Threshold

- Specify the threshold package size for RTC/CTS.
- A small number causes RTS/CTS packets to be sent more often and 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.

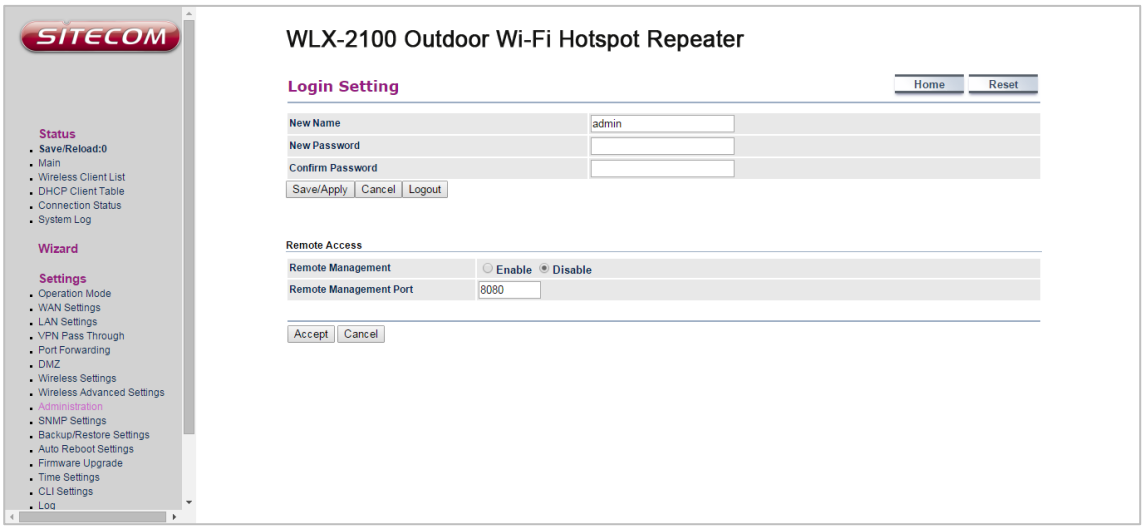
Traffic Shaping

- Check this option to enable wireless traffic shaping.
- It regulates the flow of packets leaving an interface to deliver improved Quality of Service.

Client Limit

- Defines the maximum number of devices which are able to connect (default value 64)

ADMINISTRATION



Login Settings

New Name

- Enter a new username for logging in to this User Interface.

New Password

- Enter a new password for logging in to this User Interface.

Confirm Password

- Re-enter the new password for confirmation.
- Click Save/Apply to apply the changes or Cancel to return previous settings.

Remote Access

Remote Management

- Enable or disable remote management.

Remote Management Port

- If remote management is enabled, enter the port number to be used for remote management.
- For example: If you specify the port number 8080, enter http://<IPaddress>:8080 to access the WLX-2100 Web Configurator.
- Click Accept to apply the changes or Cancel to return previous settings.

Configuring Management VLAN

- Click the Management VLAN link under the Management menu 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.

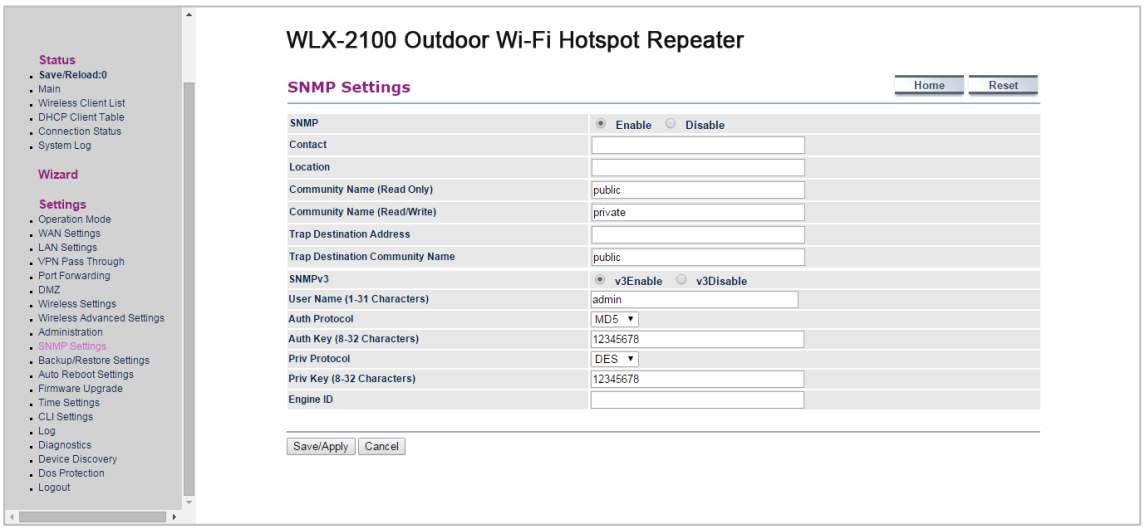
Management VLAN ID

- If your network includes VLANs and if tagged packets need to pass through the Access Point, enter the VLAN ID. Otherwise, click No VLAN tag.
- Click Accept to confirm the changes or Cancel to cancel and return previous settings.

Note: If you reconfigure the Management VLAN ID, you may lose your connection to the WLX-2100. Verify that the DHCP server supports the reconfigured VLAN ID and then reconnect to the WLX-2100 using the new IP address.

SNMP

SNMP is used in network management systems to monitor network-attached devices for conditions that warrant administrative attention.



SNMP

- Enable or disable the WLX-2100 SNMP function.

Contact

- Enter the contact details of the device.

Location

- Enter the location of the device.

Community Name (Read Only)

- Enter the password for accessing the SNMP community for read-only access.

Community Name (Read/Write)

- Enter the password for accessing the SNMP community for read and write access.

Trap Destination Address

- Enter the IP address where SNMP traps are to be sent.

Trap Destination Community Name

- Enter the password of the SNMP trap community.

SNMPv3

- Enable or Disable the SNMPv3 feature.

User Name

- Specify the username for SNMPv3.

Auth Protocol

- Select the authentication protocol type: MD5 or SHA.

Auth Key (8-32 Characters)

- Specify the authentication key for authentication.

Priv Protocol

- Select the privacy protocol type: DES.

Priv Key (8-32 Characters)

- Specify the privacy key for privacy.

Engine ID

- Specify the engine ID for SNMPv3.

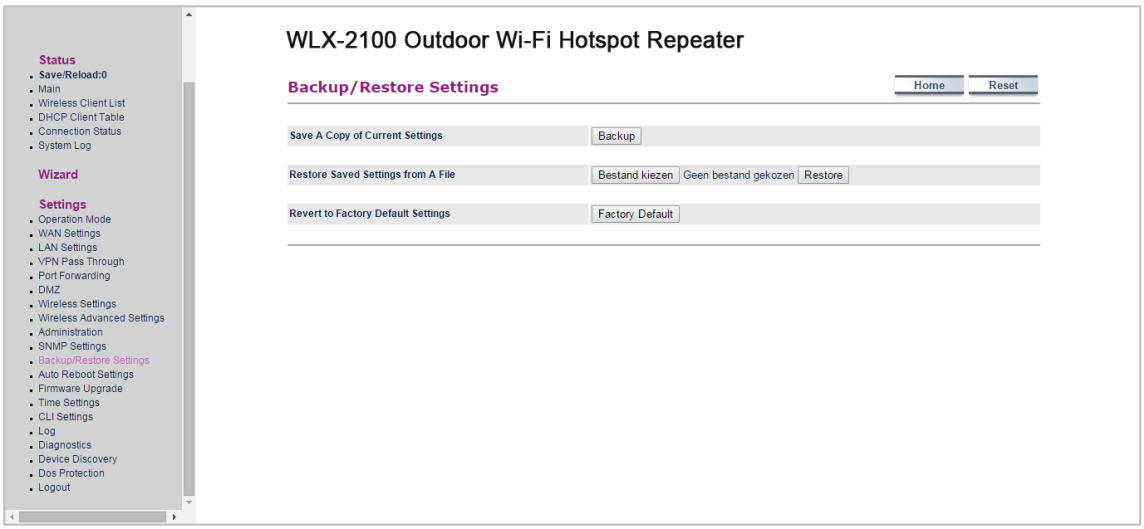
Click “Save/Apply” to apply the changes or “Cancel” to return to previous settings.

BACKUP/RESTORE SETTINGS

On this page, you can backup and restore settings. Click the Backup/Restore Setting link under the Management menu to save the WLX-2100's current settings in a file on your local disk or load settings onto the device from a local disk.

This feature is particularly convenient administrators who have several WLX-2100 devices that need to be configured with the same settings.

This page also lets you return the WLX-2100 to its factory default settings. If you perform this procedure, any changes made to the WLX-2100 settings will be lost.



Save a Copy of Current Settings

- Click Backup to save the current configured settings.

Restore Saved Settings from A File

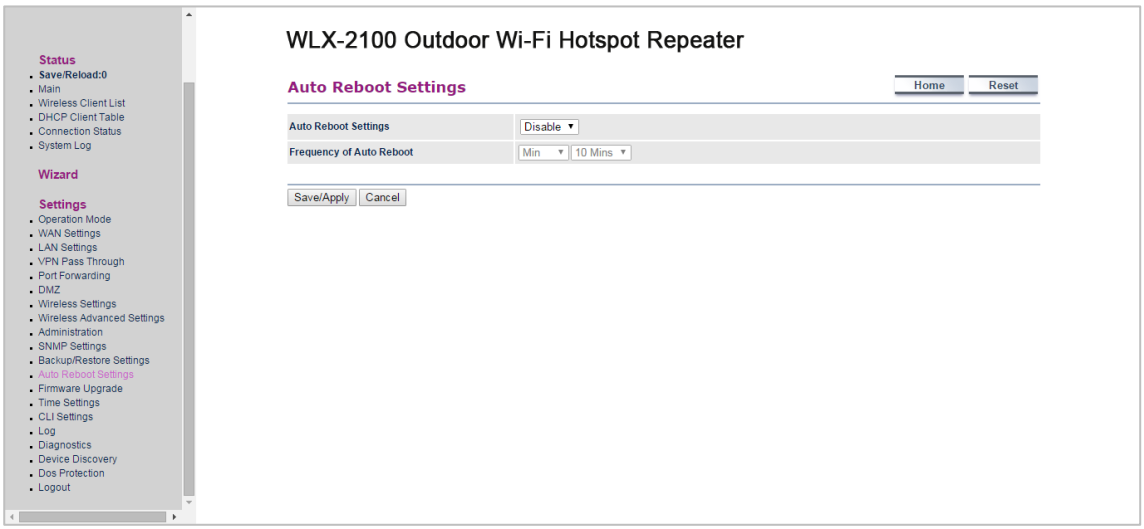
- To restore settings that have been previously backed up, click Browse, select the file, and click Restore.

Revert to Factory Default Settings

- Click Factory Default to restore the WLX-2100 to its factory default settings.

AUTO REBOOT SETTINGS

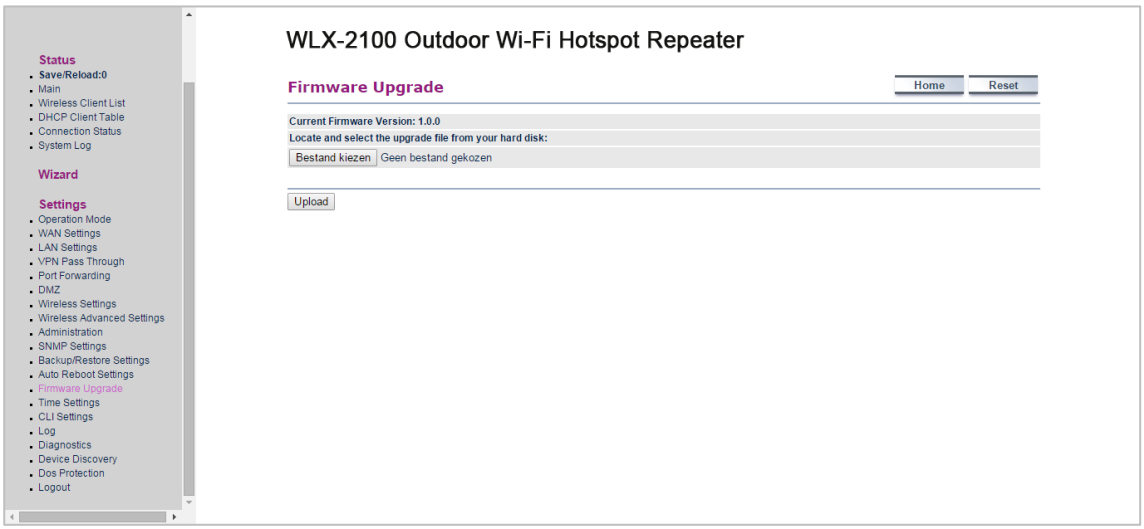
On this page, you can configure the auto reboot function. It allows you to reboot the device automatically based on a specific time setting.



Click “Save/Apply” to apply the changes or “Cancel” to return to previous settings.

FIRMWARE UPGRADE

On this page, you can upgrade the firmware of the range extender. Firmware is system software that operates and allows the administrator to interact with the range extender.



To update the firmware version, follow these steps:

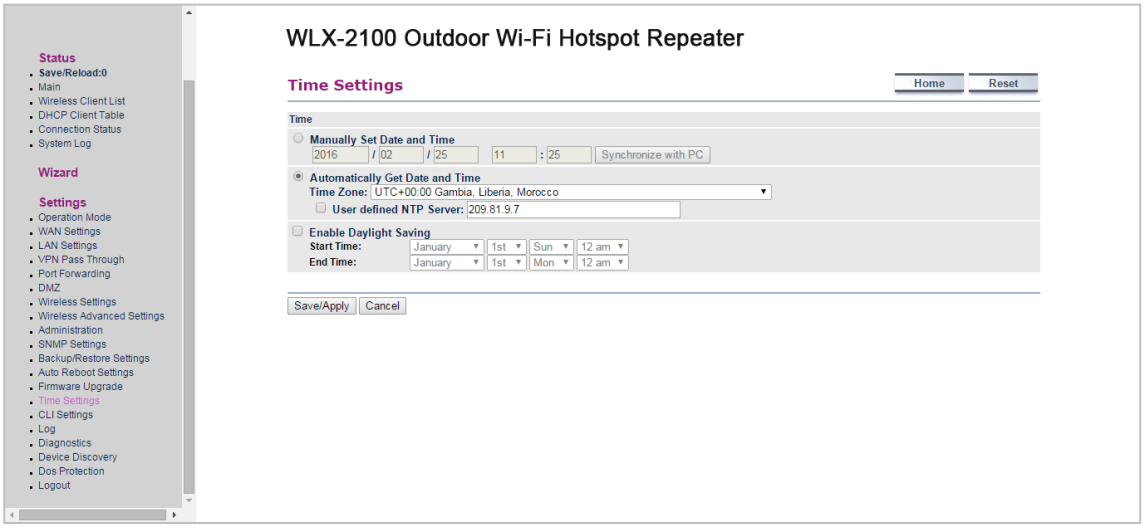
1. Download the firmware from www.sitecom.com and save it to your local hard drive.
2. Click “Choose File”.
3. Browse the file system and select the firmware file.
4. Click “Upload”.
5. The WLX-2100 restarts automatically after the upgrade completes.

WARNING!

Upgrading firmware through a wireless connection is not recommended. Firmware upgrading must be performed while connected to an Ethernet (LAN port) with all other clients disconnected. The firmware upgrade procedure can take several minutes. Do not power off the WLX-2100 during the firmware upgrade, as it can cause the device to crash or become unusable.

TIME SETTINGS

On this page, you can change the system time of the WLX-2100 by manually entering the information, synchronizing the device with a PC, or setup automatic updates through a network time (NTP) protocol server.



Manually Set Date and Time

- Enter the date and time values in the date and time fields or click the Synchronize with PC button to get the date and time values from the administrator's PC.

Automatically Get Date and Time

- Select a time zone from the drop-down list and check whether you want to enter the IP address of an NTP server or use the default NTP server.

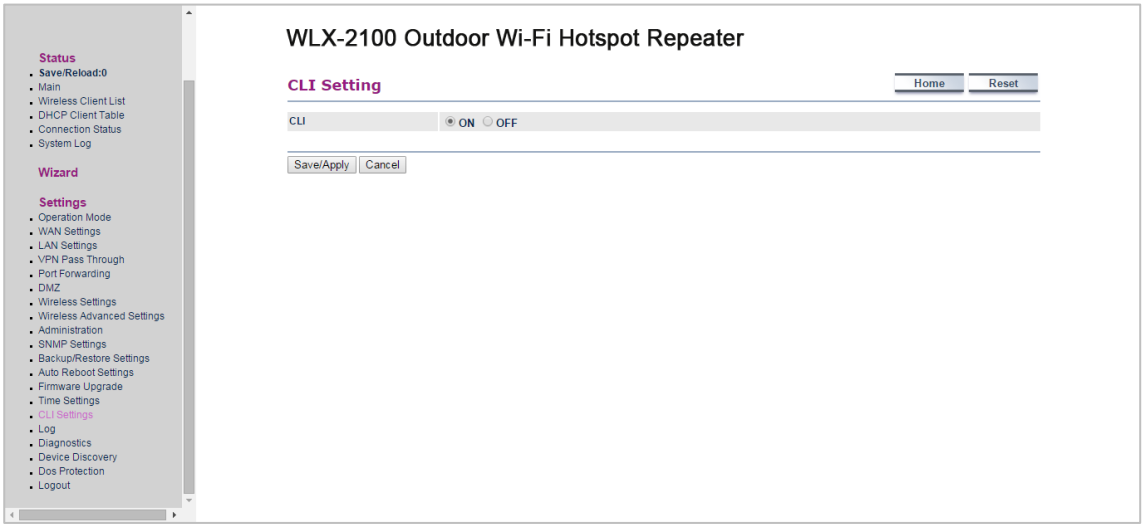
Enable Daylight Saving

- Click to enable or disable daylight savings time.
- Select the start and stop times from the Start Time and Stop Time dropdown lists.

Click "Save/Apply" to apply the changes or "Cancel" to return to previous settings.

CLI SETTINGS

On this page, you can configure the WLX-2100 through the command line interface (CLI). The CLI can be access through a command console, modem or Telnet connection.



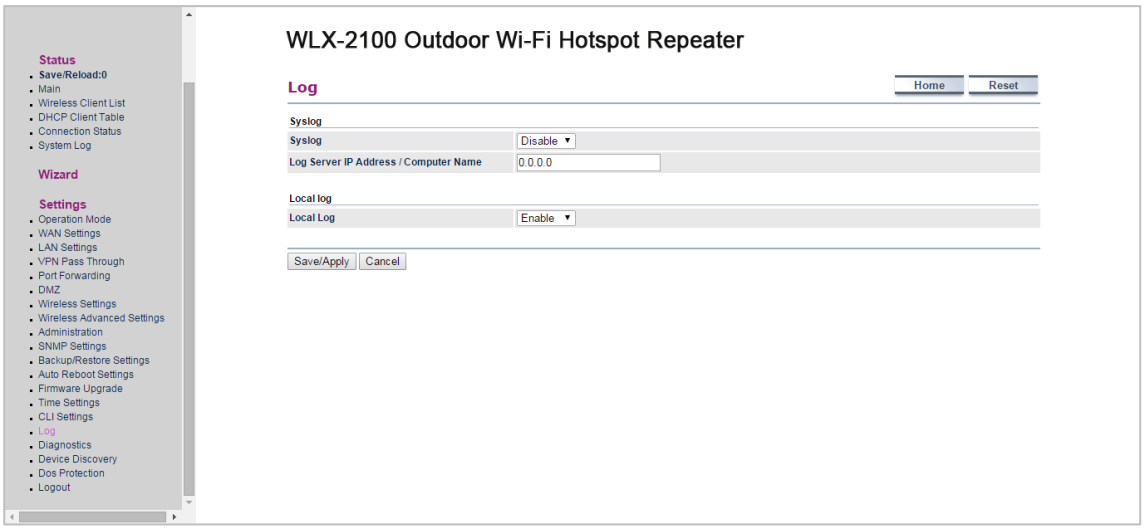
CLI

- Select to enable or disable the ability to modify the WLX-2100 via a command line interface (CLI).

Click “Save/Apply” to apply the changes or “Cancel” to return to previous settings.

LOG

On this page, you can display a list of events that are triggered on the WLX-2100 Ethernet and wireless interfaces. You can consult this log if an unknown error occurs on the system or when a report needs to be sent to the technical support department for debugging purposes.



Syslog

- Enable or disable the WLX-2100 syslog function.

Log Server IP Address

- Enter the IP address of the log server.

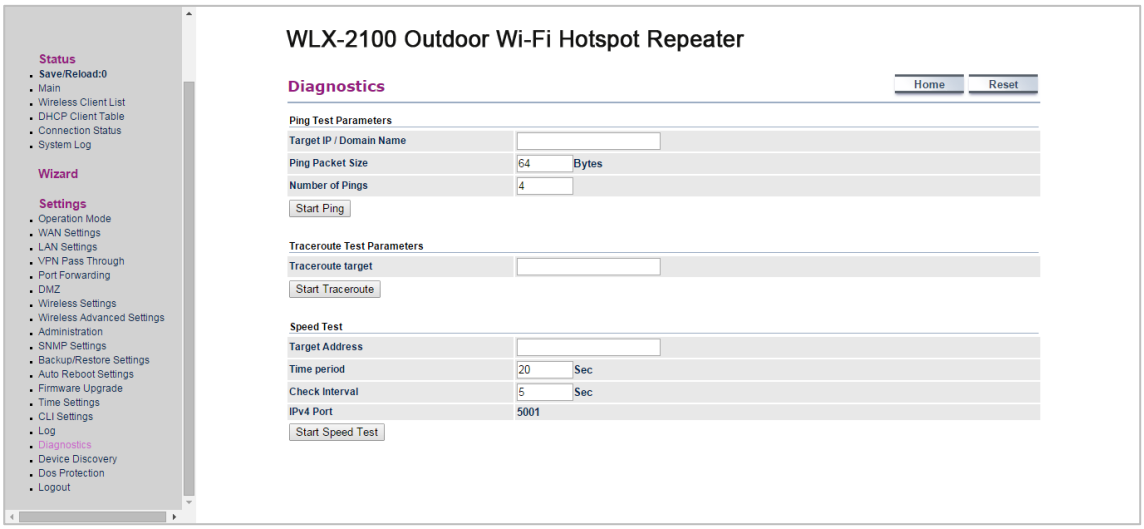
Local Log

- Enable or disable the local log service.

Click “Save/Apply” to apply the changes or “Cancel” to return to previous settings.

DIAGNOSTICS

On this page, you can access the diagnostics feature. It allows the administrator to verify that another device is available on the network and is accepting request packets. If the ping result returns alive, it means a device is on line. This feature does not work if the target device is behind a firewall or has security software installed.



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 want to ping.

Start Ping

- Click Start Ping to begin pinging.

Trace route target

- Enter an IP address or domain name you want to trace.

Start Traceroute

- Click Start Traceroute to begin the traceroute operation.

Target Address

- Enter the IP address of the target PC.

Time period

- Enter time period for the speed test.

Check Interval

- Enter the interval for the speed test.

Start Speed Test

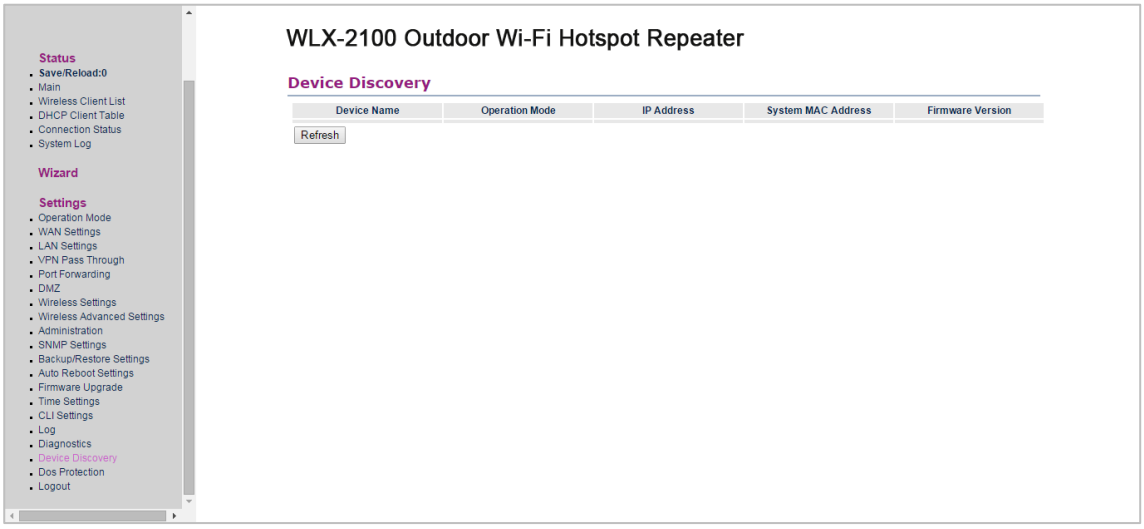
- Click Start Speed Test to begin the speed test operation.

IPv4 Port

- Displays the IPv4 port number of the WLX-2100.

DEVICE DISCOVERY

On this page, you can view other devices connected to the network.



Device Name

- Displays the name of the devices connected to the network.

Operation Mode

- Displays the operation mode of other WLX-2100's connected to the network.

IP Address

- Displays the IP address of other WLX-2100's connected to the network.

System MAC Address

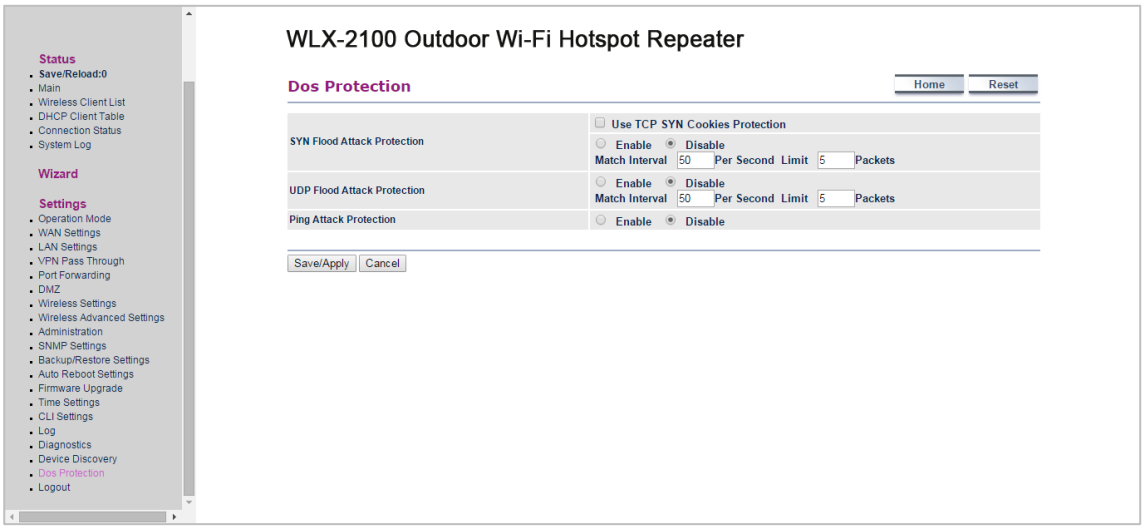
- Displays the system MAC address of the devices connected to the network.

Firmware Version

- Displays the firmware version of the devices connected to the network.

DENIAL OF SERVICE PROTECTION

On this page, you can configure the DOS protection. A denial-of-service (DoS) attack is an attempt to make a machine or network resource unavailable to its intended users, such as to temporarily or indefinitely interrupt or suspend services of a host connected to the internet.



Use TCP SYN Cookies Protection

- Click to enable TCP SYN cookies protection.

SYN Flood Attack Protection

- Click to enable or disable SYN Flood Attack Protection.

Match Interval per Second

- Enter the allowed number of packets per second.

Limit Packets

- Enter the maximum number of packets allowed per request.

UDP Flood Attack Protection

- Click to enable or disable UDP Flood Attack Protection.

Match Interval per Second

- Enter the allowed number of packets per second.

Limit Packets

- Enter the maximum number of packets allowed per request.

Ping Attack Protection

- Click to enable or disable ping attack protection.

Click “Save/Apply” to apply the changes or “Cancel” to return previous settings.

Addendum A: GNU GPL

Parts of the firmware of the WLX-2100 v1-001 are subject to the GNU general public license.

Licensing Information

This product includes third-party software licensed under the terms of the GNU General Public License. You can modify or redistribute this free software under the terms of the GNU General Public License. Please see Appendix B for the exact terms and conditions of this license.

Specifically, the following part of this product is subject to the GNU GPL:

#	Package name	Source	version	GPL version
1	busybox	http://www.busybox.net/	1.19.4	GPLv2
2	uboot	http://www.denx.de/wiki/U-Boot	1.1.4	GPL V2
3	gcc	http://gcc.gnu.org/	4.3.3	GPL V2
4	dnsmasq	ftp://ftp.suse.com/pub/people/ug/	2.52	GPL V2
5	iptables	http://www.netfilter.org/projects/iptables/index.html	1.4.0	GPL V2
6	ethtool	http://sourceforge.net/projects/gkernel/	2.6.34	GPL V2
7	hotplug2	http://code.google.com/p/hotplug2/	1.0	GPL V2
8	ntpclient	http://doolittle.icarus.com/ntpclient/	2007_365	GPL V2
9	ppp	http://ppp.samba.org	2.4.4	GPL V2
10	iproute2	ftp://ftp.inr.ac.ru/ip-routing/	2.6.29	GPL V2
11	libdaemon	http://0pointer.de/lennart/projects/libdaemon	0.14	GPL V2.1
12	linuxigd	http://www.sourceforge.net/projects/upnp	1.0	GPL V2
13	libupnp	http://pupnp.sourceforge.net/	1.6.6	GPL V2
14	libuClibc	http://www.uclibc.org	0.9.30.1	GPL V2.1
15				

Addendum B: Declaration of Conformity

Sitecom Europe BV

EC Declaration of Conformity

We
Sitecom Europe BV
Blaak 6
3011 TA Rotterdam
The Netherlands

Hereby declare under our sole responsibility that the Sitecom product:
Product number: WLX-2100 v1 001
Product description: WI-FI Range Extender Outdoor

To which this declaration relates is in conformity with the requirements of the following standards:

Low Voltage Directive (LVD) 2006/95/EC, recast 2014/35/EU
- EN 60950-1:2006
  - EN 60950-1:2006/AC:2011
  - EN 60950-1:2006/A11:2009
  - EN 60950-1:2006/A12:2011
  - EN 60950-1:2006/A1:2010
  - EN 60950-1:2006/A2:2013
- EN 60950-22:2006
  - EN 60950-22:2006/AC:2008
  - EN 60950-22:2006/A11:2008
- EN 62368-1:2014 (LVD)
- EN 62479:2010 (LVD)

Electro-Magnetic Compatibility (EMC) Directive 2004/108/EC, recast 2014/30/EU
- EN 55022:2010
  - EN 55022:2010/AC:2011
- EN 55024:2010
- EN 55032:2012
  - EN 55032:2012/AC:2013
- EN 61000-3-2:2006
  - EN 61000-3-2:2006/A1:2009
  - EN 61000-3-2:2006/A2:2009
- EN 61000-3-2:2014
- EN 61000-3-3:2008
- EN 61000-3-3:2013

Radio Equipment Directive (R&TTE) 1999/5/EC, (RED) 2014/53/EU recast
- EN 300 328 V1.8.1
- EN 300 328 V1.9.1
- EN 301 893 V1.7.1
- EN 301 489-1 V1.9.2
- EN 301 489-17 V2.2.1
- EN 60950-1:2006 (RTTE)
  - EN 60950-1:2006/AC:2011 (RTTE)
  - EN 60950-1:2006/A11:2009 (RTTE)
  - EN 60950-1:2006/A12:2011 (RTTE)
  - EN 60950-1:2006/A1:2010 (RTTE)
  - EN 60950-1:2006/A2:2013 (RTTE)
- EN 62368-1:2014 (RTTE)
- EN 62479:2010 (RTTE)

Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU
- RoHS - 2011/65/EU

EcoDesign Energy-related Products Directive (EuP / ErP) 2009/125/EC
- Regulation (EC) 278/2009 ecodesign of external power supplies
- Commission Regulation (EC) 1275/2008 - ecodesign requirements standby and off mode electrical power consumption

Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU
- EN 50419:2006

This certifies that the following designated Sitecom product:
Product number: WLX-2100 v1 001
Product description: WI-FI Range Extender Outdoor

Complies with the requirements of the following directives and carries the CE marking accordingly:
R&TTE Directive 1999/5/EC, EMC directive 2004/108/EC and Low Voltage Directive 2006/95/EC.

This declaration is the responsibility of the manufacturer / importer:

Sjors Hendriks,

Sitecom Europe B.V.
19 February 2015