



*AC1900* WIFI ROUTER

WLR-9000



User Manual

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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.

# Introduction

Congratulations on your purchase of the AC1900 WiFi Router. This router is compliant with 802.11a/b/g/n/ac and up to 6 times faster than standard 802.11n based routers while still being compatible with 802.11g & 802.11b devices. This router is not only a Wireless Access Point, but also doubles as a 4-port full-duplex Gigabit switch that connects your wired-Ethernet devices together at 10/100/1000 Mbps speeds.

At 600Mbps wireless transmission rate on 2.4GHz and 1300 Mbps wireless transmission rate on 5GHz, the Access Point built into the router uses advanced MIMO (Multi-Input, Multi-Output) technology to transmit multiple streams of data in a single wireless channel, giving you seamless access to multimedia content. The robust RF signal travels farther, eliminates dead spots and extends the network range. For data protection and privacy, the router encodes all wireless transmissions with WEP, WPA, or WPA2 encryption.

With the built-in DHCP Server & powerful SPI firewall, the router protects your computers against intruders and most known Internet attacks and also provides safe VPN pass-through. With the incredible speed and QoS function of 802.11n, the router is ideal for media-centric applications like streaming video, gaming, and VoIP telephony to run multiple media-intense data streams through the network at the same time, with no degradation in performance.

# Key Features

Features	Advantages
Incredible Data Rate up to 1300Mbps*	Heavy data payloads such as MPEG video streaming
IEEE 802.11n Compliant and backwards compatible with 802.11b/g/n	Fully Interoperable with IEEE 802.11b / IEEE802.11g, IEEE 802.11n compliant devices with legacy protection
Four 10/100/1000 Mbps gigabit Switch Ports (Auto-Crossover)	Scalability, extend your network.
Firewall supports Virtual Server Mapping, DMZ, IP Filter, ICMP Blocking, SPI	Avoids the attacks of Hackers or Viruses from Internet
Support 802.1x authenticator, 802.11i (WPA/WPA2, AES), VPN pass-through	Provide mutual authentication (Client and dynamic encryption keys to enhance security
USB Ports	Connect a USB storage device and share it in your network.
Guest Network	Devices connected to the Guest network will have Internet connection but no access to the main network and cannot communicate with each other.
IPv6 support	Support for Static, Native, 6RD and DS-Lite.

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

# Package Contents

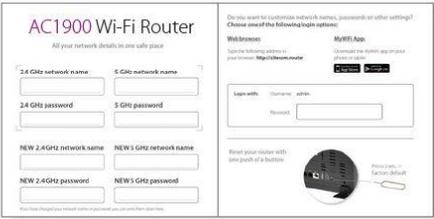
Open the package carefully, and make sure that none of the items listed below are missing. Do not discard the packing materials, in case of return; the unit must be shipped back in its original package.



AC1900 Wi-Fi Router



Network cable



Network detail flyer



Power adapter

# Cautions

This router's design and manufacturer has your safety in mind. In order to safely and effectively use this router, please read the following before usage.

## Usage Cautions

The user should not modify this router. The environmental temperature should be within +5 ~ +35 degrees Celsius.

## Power

The router's power voltage is DC 12V 1.5A.

When using this router, please connect the supplied AC adapter or AC adapter cable to the router's power jack. When placing the adapter 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 router in a humid or dusty area. Do not replace the adapter or cable's wire or connector.

## Repair

If the router has a problem, you should take it to an appointed repair center and let the specialists do the repair. Never repair the router yourself, you might damage the router or endanger yourself.

## Disposing of the Router

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

## Others

When using this router, please do not let it come into contact with water or other liquids. If water is accidentally spilled on the router, please use a dry cloth to absorb the spillage. Electronic products are vulnerable, when using please avoid shaking or hitting the router, and do not press the buttons too hard.

- Do not let the router come into contact with water or other liquid.
- Do not disassemble, repair or change the design of the router; any damage done will not be included in the repair policy.
- Avoid hitting the router with a hard object, avoid shaking the router 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.

# Product Layout



Port	Description
Power connector	Connect the 12V DC adapter to this port
LAN (Black)	Connect your PCs or network devices to these ports
WAN (Grey)	Connect your ADSL/Cable modem to this port
USB Port	Connect a USB device to this port

## Backlabel and Network Details Folder

The Network Details Folder describes the IP address, login details, network name, security code and OPS button functionality.

# AC1900 Wi-Fi Router

All your network details in one place

Do you want to customize network names, passwords or other settings?  
Choose one of the following login options:

**Web browser:**  
Type the following address in your browser: **http://sitecom.router**

**MyWiFi App:**  
Download the MyWiFi app on your phone or tablet  
 

NEW 2.4 GHz network name

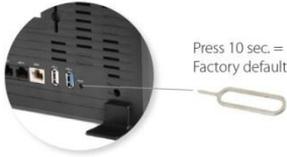
NEW 5 GHz network name

NEW 2.4 GHz password

NEW 5 GHz password

If you have changed your network names or passwords you can write them down here.

Reset your router:



Press 10 sec. = Factory default

Login with: Username: admin  
Password:

Button	Description
OPS Button	Press 2 seconds for WPS/OPS mode
Reset	Push a pin in the reset hole to reset to factory defaults.

### LED Definition



As shown from the top to the bottom.

LED	Description
Power	Shows the device is turned on.
Internet	Shows the device is connected to the internet.
LAN	Shows the cable is connected.
LAN	Shows the cable is connected.
LAN	Shows the cable is connected.
LAN	Shows the cable is connected.
USB1	Shows a device is connected to the USB port.
USB2	Shows a device is connected to the USB port.
2.4GHz WiFi	Shows 2.4GHz WiFi activity.
5GHz WiFi	Shows 5GHz WiFi activity.

# Network + System Requirements

To begin using the router, make sure you meet the following as minimum requirements:

Network Requirements	An Ethernet-based broadband modem
Web-based Configuration	Computer with the following: <ul style="list-style-type: none"><li>- Windows®, Macintosh, or Linux-based operating system</li><li>- An installed Ethernet adapter or wireless adapter</li><li>- Supported Browsers: Internet Explorer 9 or higher Firefox Safari 4 or higher Chrome</li></ul>



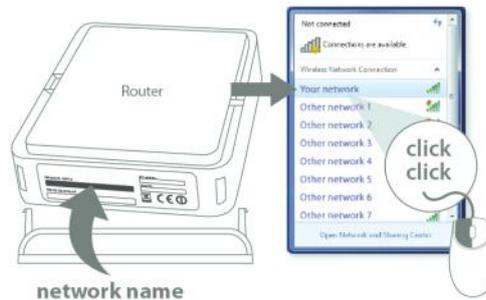
# Setup your Computer

## Windows, Manual Connection

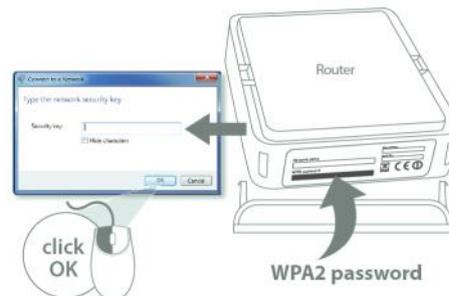
- Click on the icon for wireless connectivity. This is usually located in the System Tray, next to the clock.



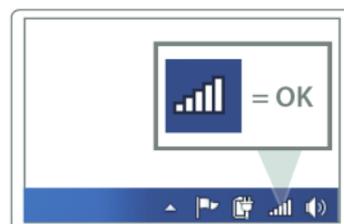
- Select the Sitecom network. The correct network name can be found on the sticker on the bottom of the router, or in the Network Details Folder.



- Fill in the password for the wireless network. The correct password can be found on the sticker on the bottom of the router, or in the Network Details Folder.



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

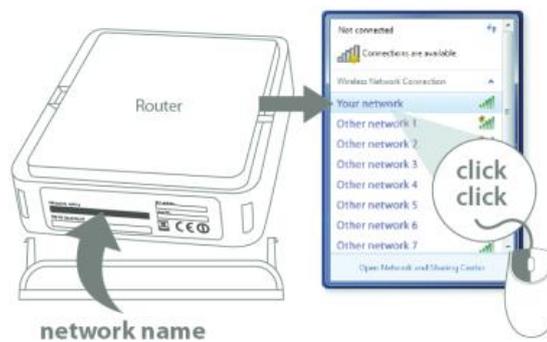


## Windows, OPS Connection

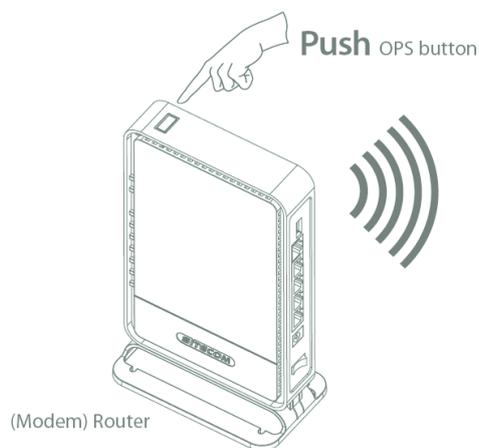
- Click on the icon for wireless connectivity. This is usually located in the System Tray, next to the clock.



- Select the Sitecom network. The correct network name can be found on the sticker on bottom of the router, or in the Network Details Folder.



- Push the OPS Button on the router. For 2.4GHz, press 0-5 seconds. For 5GHz, press 5-10 seconds.

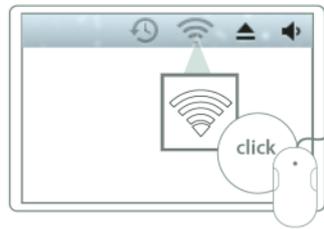


- Wait for the icon to display that it's connected to the network.

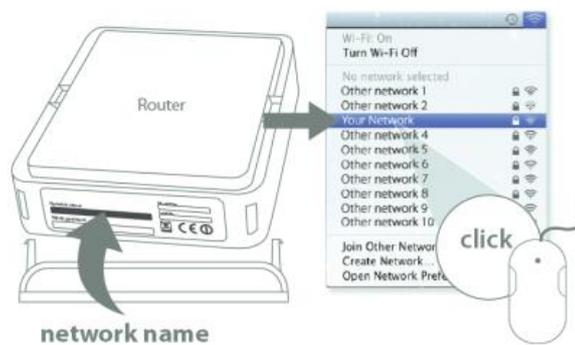


## Mac OSX

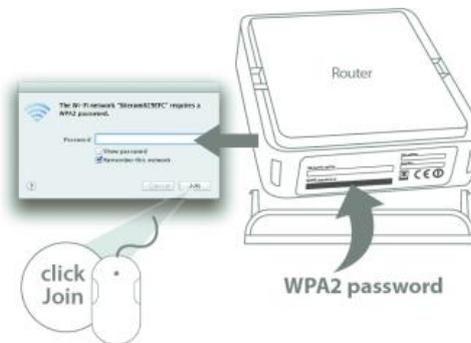
- Click on the icon for wireless connectivity. This is usually located in the System Tray, next to the clock.



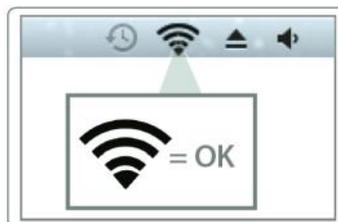
- Select the Sitecom network. The correct network name can be found on the sticker on bottom of the router, or in the Network Details Folder.



- Fill in the password for the wireless network. The correct password can be found on the sticker on the bottom of the router, or in the Network Details Folder.



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



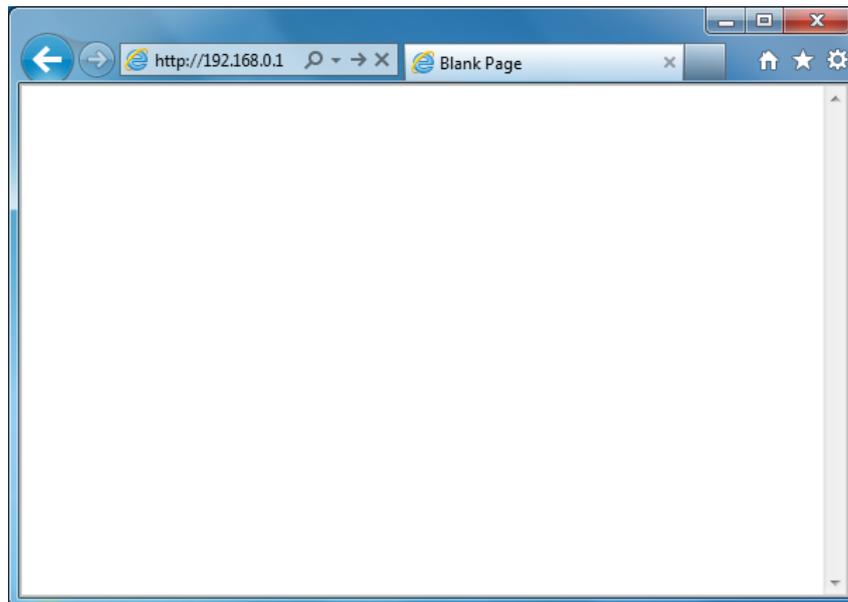
# Login to your Router

## LOGIN procedure

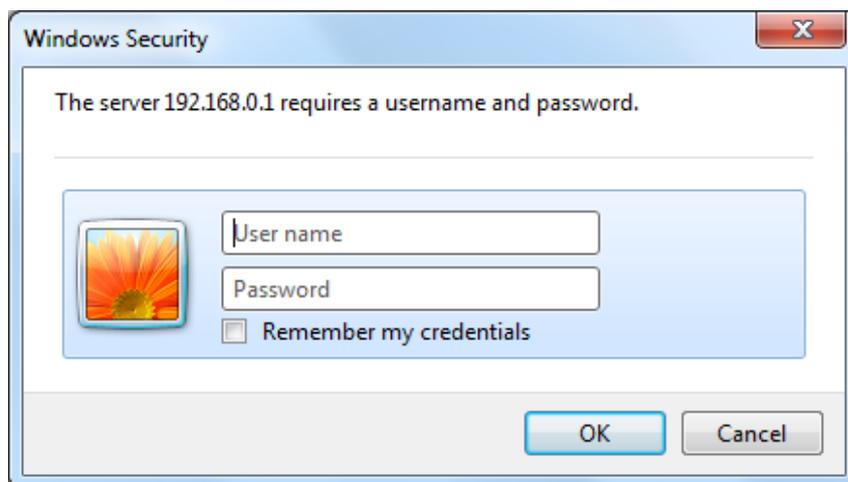
- OPEN your browser (e.g. Internet Explorer).



- Type `http://sitecom.router` in the address bar and press [Enter].



- Type user name and password. The default username is admin, the password can be found on the back label on the bottom of your router.



- Click OK.
- You will see the home page of the AC1900 WiFi Router.

# Configure your Internet connection

From the menu, select "Internet Settings".



Depending on the chosen setting, you may need to enter your user name and password, MAC address or hostname in the following window. After you have entered the correct information, click **Apply**.



## IPv6 Configuration

The IPv6 (Internet Protocol version 6) section is where you configure your IPv6 Connection type.

### IPv6 Connection Type

There are several connection types to choose from: Static IPv6, Autoconfiguration, 6RD and Link-local only. If you are unsure of your connection method, please contact your IPv6 Internet Service Provider.

### Static IPv6 Mode

This mode is used when your ISP provides you with a set IPv6 addresses that does not change. The IPv6 information is manually entered in your IPv6 configuration settings. You must enter the IPv6 address, Subnet Prefix Length, Default Gateway, Primary DNS Server and Secondary DNS Server. Your ISP provides you with all this information.

IPv4 Settings	IPv6 Settings	Status IPv4	Status IPv6
Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.			
IPv6 Connection Type			
Choose the IPv6 mode to be used by the router for the internet connection.			
IPv6 Connection :	Static IPv6		
Use Link-Local Address :	<input checked="" type="checkbox"/>		
IPv6 Address :	FE80::66D1:A3FF:FE42:C0E8		
Subnet Prefix Length :	64		
Default Gateway :			
Primary IPv6 DNS Address :			
Secondary IPv6 DNS Address :			
LAN IPv6 Address :			
LAN IPv6 Link-Local Address :	FE80::66D1:A3FF:FE42:C0E8/64		
IPv6 Auto Address Allocation :	<input checked="" type="checkbox"/> Enable		
Autoconfiguration Type :	SLAAC + RDNSS		
Router Advertisement Lifetime :	1440 (minutes)		
			Apply Cancel

## 6RD Mode

In the 6RD mode, no additional configuration is necessary.

Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

IPv6 Connection Type

Choose the IPv6 mode to be used by the router for the internet connection.

IPv6 Connection :	6RD
6RD Configuration :	<input checked="" type="radio"/> 6RD DHCPv4 Option <input type="radio"/> Manual Configuration
6RD IPv6 Prefix :	<input type="text"/> /62
IPv4 Address :	<input type="text"/> Mask Length <input type="text"/>
IPv6 Prefix Arrange :	
Tunnel Link-Local Address :	FE80::254D:399A /64
6RD BR IPv4 Address :	<input type="text"/>
Primary IPv6 DNS Address :	<input type="text"/>
Secondary IPv6 DNS Address :	<input type="text"/>
LAN IPv6 Address :	<input type="text"/> /64
LAN IPv6 Link-Local Address :	FE80::66D1:A3FF:FE42:C0E8 /64
IPv6 Auto Address Allocation :	<input checked="" type="checkbox"/> Enable
Autoconfiguration Type :	SLAAC + RDNSS
Router Advertisement Lifetime :	<input type="text"/> (minutes)

Apply Cancel

## Link-local Mode

The Link-local address is used by nodes and routers when communicating with neighboring nodes on the same link. This mode enables IPv6-capable devices to communicate with each other on the LAN side.

**AC1900 WIFI ROUTER** **SITECOM**

Status | **Internet Settings** | 2.4GHz WiFi | 5GHz WiFi | Firewall | Advanced Settings | Toolbox | Choose your language

IPv4 Settings | **IPv6 Settings** | Status IPv4 | Status IPv6

Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

IPv6 Connection Type

Choose the IPv6 mode to be used by the router for the internet connection.

IPv6 Connection :	Link-local only
LAN IPv6 Link-Local Address :	FE80::66D1:A3FF:FE42:C0E8/64

Apply Cancel

# Configure your Router

## Status

The System status section allows you to monitor the current status of your router, the UP time, hardware information and serial number as well as firmware version information is displayed here.



**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | Firewall | Advanced Settings | Toolbox | Choose your language ▾

System Status | DHCP Server | Device Status | DHCP Status | Log | Statistics

You can use the Status page to monitor the connection status for the WAN/LAN interfaces, firmware and hardware version numbers, any illegal attempts to access your network and information on all DHCP client PCs currently connected to your network.

System

<b>Model :</b>	WLR-9000 v1001
<b>Uptime :</b>	0 day 00:07:38
<b>Hardware Version :</b>	Rev. A
<b>Serial Number :</b>	12345678901234567890123456789012
<b>Boot Code Version :</b>	1.0.0
<b>Runtime Code Version :</b>	1.01

## DHCP Server

The DHCP Server tab gives you the opportunity to change the IP settings of the router.

The screenshot shows the DHCP Server configuration page in a router's web interface. The page has a dark theme and a navigation bar at the top with tabs for Status, Internet Settings, 2.4GHz WiFi, 5GHz WiFi, Firewall, Advanced Settings, and Toolbox. A language selection dropdown is on the right. Below the navigation bar is a sub-menu with tabs for System Status, DHCP Server (selected), Device Status, DHCP Status, Log, and Statistics. The main content area contains a descriptive paragraph: "You can enable the Broadband routers DHCP server to dynamically allocate IP Addresses to your LAN client PCs. The broadband router must have an IP Address for the Local Area Network." Below this are several configuration fields:

IP Address :	192.168.0.1
IP Subnet Mask :	255.255.255.0
802.1d Spanning Tree :	Disabled ▾
DHCP Server :	Enabled ▾
Lease Time :	One Day ▾

Below these fields is a section titled "DHCP Server" with the following fields:

Start IP :	192.168.0.100
End IP :	192.168.0.200
Hostname :	sitecom.router
DNS :	Dynamic IP ▾
Primary DNS Address :	
Secondary DNS Address :	

At the bottom right of the page are "Apply" and "Cancel" buttons.

Click **Apply** at the bottom of this screen to save any changes.

- **IP address 192.168.0.1:** It is the router's LAN IP address (Your LAN clients default gateway IP address).
- **IP Subnet Mask 255.255.255.0:** Specify a Subnet Mask for your LAN segment.
- **802.1d Spanning Tree:** Disabled by default. If the 802.1d Spanning Tree function is enabled, this router will use the spanning tree protocol to prevent network loops.
- **DHCP Server:** Enabled by default. You can enable or disable the DHCP server. When DHCP is disabled no ip-addresses are assigned to clients and you have to use static ip-addresses. When DHCP server is enabled your computers will be assigned an ip-address automatically until the lease time expires.
- **Lease Time:** One Week. In the Lease Time setting you can specify the time period that the DHCP lends an IP address to your LAN clients. The DHCP will change your LAN client's IP address when this time threshold period is reached.
- **IP Address Pool:** You can select a particular IP address range for your DHCP server to issue IP addresses to your LAN Clients. The default IP range is 192.168.0.100 ~ 192.168.0.200. If you want your PC(s) to have a static/fixed IP address, then you'll have to choose an IP address outside this IP address Pool
- **Domain Name:** You can specify a Domain Name for your LAN or just keep the default (sitecom.router).

## Device Status

View the router's current configuration settings. Device Status displays the configuration settings you've configured in the Internet Settings and WiFi Settings sections.

The screenshot shows the 'Device Status' page of a router's web interface. The page has a dark theme with a navigation bar at the top containing links for 'Status', 'Internet Settings', '2.4GHz WiFi', '5GHz WiFi', 'Firewall', 'Advanced Settings', and 'Toolbox'. A language selection dropdown is on the right. Below the navigation bar is a sub-menu with 'System Status', 'DHCP Server', 'Device Status' (highlighted), 'DHCP Status', 'Log', and 'Statistics'. The main content area displays the current settings for the device, including Mode (AP), 2.4G Wireless Configuration (Channel 11, SSID\_1 with ESSID Sitecom42C0E8, Security WPA Pre-shared Key, BSSID 64:D1:A3:42:C0:E8), and 5G Wireless Configuration (Channel 36, SSID\_1 with ESSID Sitecom42C0E9, Security WPA Pre-shared Key, BSSID 64:D1:A3:42:C0:E9).

Setting	Value
Mode	AP
2.4G Wireless Configuration	
Channel	11
SSID_1	
ESSID	Sitecom42C0E8
Security	WPA Pre-shared Key
BSSID	64:D1:A3:42:C0:E8
5G Wireless Configuration	
Channel	36
SSID_1	
ESSID	Sitecom42C0E9
Security	WPA Pre-shared Key
BSSID	64:D1:A3:42:C0:E9

## DHCP Client Status

This page shows all DHCP clients (LAN PCs) currently connected to your network. The table shows the assigned IP address, MAC address and expiration time for each DHCP leased client. Use the Refresh button to update the available information.

You can check "Enable Static DHCP IP". It is possible to add more static DHCP IPs. They are listed in the table Current Static DHCP Table. IP can be deleted at will from the table.

Click **Apply** to save the changed configuration.

**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | Firewall | Advanced Settings | Toolbox | Choose your language ▾

System Status | DHCP Server | Device Status | **DHCP Status** | Log | Statistics

This table shows the assigned IP address, MAC address and expiration time for each DHCP leased client.

IP Address	Hostname	MAC Address	Expiration Time
192.168.0.100	VOSTRO	5C:F9:DD:52:9D:CA	Expired

Refresh

Enable Static DHCP IP

IP Address	MAC Address
<input type="text"/>	<input type="text"/>

Add Reset

Current Static DHCP Table

NO.	IP Address	MAC Address	Select
-----	------------	-------------	--------

Delete Selected Delete All Reset Apply Cancel

## Log

View the operation log of the router. This page shows the current system log of the router. It displays any event that occurred during or after system start up. At the bottom of the page, the system log can be saved <Save> to a local file for further processing or the system log can be cleared <Clear> or it can be refreshed <Refresh> to get the most updated information. When the system is powered down, the system log will disappear if not saved to a local file.

**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | 2.4GHz WIFI | 5GHz WIFI | Firewall | Advanced Settings | Toolbox | Choose your language ▾

System Status | DHCP Server | Device Status | DHCP Status | **Log** | Statistics

View the system operation information. You can see the system start up time, connection process...etc. here.

```
2016/07/13 13:10:02 [DHCP]: [S3]: [admin]: DHCP Client, Lease obtained: 192.168.0.100; lease time 900
2016/07/13 13:02:48 [SYSTEM]: [S3]: [admin]: AutoFW: No firmware upgrade detected. New check in 569775 seconds
2016/07/13 13:02:42 [SYSTEM]: [S3]: [admin]: WLAN[2.4G], Best channel selection start, switch to channel 11 +
2016/07/13 13:02:37 [SYSTEM]: [S3]: [admin]: NTP, get real time from NTP server.
2013/09/01 00:00:35 [SYSTEM]: [S3]: [admin]: NTP, start NTP Client
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: LAN, Firewall Level = Medium
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: LAN, start Firewall
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: LAN, start NAT
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: LAN, stop Firewall
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: LAN, stop NAT
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: NET, start IPv6 Firewall
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: NET, stop IPv6 Firewall
2013/09/01 00:00:34 [SYSTEM]: [S3]: [admin]: IPv6, DHCPv6 IP obtain: fe80::200:200:11::ca7e:5ab6:1107::c00f
2013/09/01 00:00:32 [SYSTEM]: [S3]: [admin]: UPnP, Stopping
2013/09/01 00:00:32 [SYSTEM]: [S3]: [admin]: DHCP Server, Sending ACK of 192.168.0.100
2013/09/01 00:00:32 [SYSTEM]: [S3]: [admin]: DHCP Server, Sending OFFER of 192.168.0.100
2013/09/01 00:00:32 [SYSTEM]: [S3]: [admin]: DNS, start DNS Proxy
2013/09/01 00:00:31 [SYSTEM]: [S3]: [admin]: NET, Firewall Level = Medium
2013/09/01 00:00:31 [SYSTEM]: [S3]: [admin]: NET, start Firewall
2013/09/01 00:00:31 [SYSTEM]: [S3]: [admin]: NET, start NAT
```

Save Clear Refresh

## Statistics

Shows the counters of packets sent and received on WAN, LAN & WLAN.

The screenshot displays the 'Statistics' page of a Sitecom AC1900 WiFi Router. The page title is 'AC1900 WIFI ROUTER' and the Sitecom logo is in the top right. A navigation bar includes 'Status', 'Internet Settings', '2.4GHz WiFi', '5GHz WiFi', 'Firewall', 'Advanced Settings', and 'Toolbox'. A language selection dropdown is set to 'Choose your language'. Below the navigation bar, a menu highlights 'Statistics' among other options like 'System Status', 'DHCP Server', 'Device Status', 'DHCP Status', and 'Log'. The main content area contains a descriptive sentence: 'This page shows the packet counters for transmission and reception regarding to networks.' Below this is a table with four network categories, each showing 'Sent Packets' and 'Received Packets' counts. A 'Refresh' button is located at the bottom left of the table area.

Network Interface	Sent Packets	Received Packets
<b>2.4G Wireless LAN :</b>	0	15223
<b>5G Wireless LAN :</b>	0	114382
<b>Ethernet :</b>	9363	11347
<b>Ethernet WAN :</b>	7943	6389

# Wireless Settings

You can set parameters that are used for the wireless stations to connect to this router for the 2.4 GHz radio or 5 GHz radio. The parameters include Mode, ESSID, Channel Number and Associated Client.

## Wireless Function

Enable or Disable Wireless function here. Click Apply and wait for module to be ready & loaded.



## Basic Settings



- **Band:** Allows you to set the AP fixed at 802.11b or 802.11g mode. You can also select B+G mode to allow 802.11b and 802.11g clients at the same time. For the 5GHz mode you can set 802.11a, 802.11n, 802.11a/n or 802.11ac mode.
- **Guest Network:** Enable this to activate the Guest Network. Devices connected to the Guest network will have Internet connection but no access to the main network and cannot communicate with each other
- **SSID:** This is the name of the wireless signal which is broadcasted. All the devices in the same wireless LAN should have the same SSID.
- **Channel:** The channel used by the wireless LAN. All devices in the same wireless LAN should use the same channel.

## Guest Network

The screenshot shows a web interface for configuring a Guest Network. At the top, there are navigation tabs: Status, Internet Settings, 2.4GHz WiFi (selected), 5GHz WiFi, Firewall, Advanced Settings, and Toolbox. A language selection dropdown is on the right. Below the tabs are sub-tabs: Enable, Basic (selected), Advanced, Security, ACL, and WPS. The main content area has a heading: "This page allows you to define ESSID, and Channel for the wireless connection. These parameters are used for the wireless stations to connect to the Access Point .". Below this is a form with the following fields:

Mode :	AP
Band :	2.4 GHz (802.11b/g/n)
Guest Network :	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Guest IP Address :	192.168.170.1
Guest Subnet Mask :	255.255.255.0
Guest Lease time :	One week
Guest Start IP :	192.168.170.100
Guest End IP :	192.168.170.200
SSID :	Sitecom42C0E8
Guest SSID :	Sitecom42C0E8_GUEST
Channel :	Auto

At the bottom right of the form are two buttons: "Apply" and "Cancel".

- **Guest IP address:** The gateway address for the Guest Network. This address cannot be the same as the default router's IP Address.
- **Guest Subnet Mask:** The Subnet Mask for the Guest network. This address cannot be the same as the default router's Subnet Mask.
- **Guest Lease Time:** One Week. In the Lease Time setting you can specify the time period that the DHCP lends an IP address to your LAN clients. The DHCP will change your LAN client's IP address when this time threshold period is reached.
- **Guest Start IP + End IP:** You can select a particular IP address range for your DHCP server to issue IP addresses to your LAN Clients. The default IP range is 192.168.169.100 ~ 192.168.169.200. This address pool cannot be the same as the default router's DHCP Address pool.
- **Guest SSID:** This is the name of the wireless signal which is broadcasted as the Guest Network. This name cannot be the same as the default SSID.

## Advanced Settings

This tab allows you to set the advanced wireless options. The options included are, Fragment Threshold, RTS Threshold, Beacon Interval, and Preamble Type. You should not change these parameters unless you know what effect the changes will have on the router.

AC1900 WIFI ROUTER SITECOM

Status | Internet Settings | **2.4GHz WiFi** | 5GHz WiFi | Firewall | Advanced Settings | Toolbox | Choose your language ▾

Enable | Basic | **Advanced** | Security | ACL | WPS

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Broadband router .

Fragment Threshold :	2346	(256-2346)
RTS Threshold :	2347	(1-2347)
Beacon Interval :	100	(20-1000 ms)
DTIM Period :	1	(1-255)
Data Rate :	Auto ▾	
N Data Rate :	Auto ▾	
Channel Bandwidth :	<input type="radio"/> Auto 20/40 MHz <input checked="" type="radio"/> 20 MHz	
Preamble Type :	<input checked="" type="radio"/> Long Preamble <input type="radio"/> Short Preamble	
CTS Protection :	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Tx Power :	100 % ▾	

Apply Cancel

- **Fragment Threshold:** "Fragment Threshold" specifies the maximum size of a packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in bad performance.
- **RTS Threshold:** When the packet size is smaller than the RTS threshold, the wireless router will not use the RTS/CTS mechanism to send this packet.
- **Beacon Interval:** This is the interval of time that this wireless router broadcasts a beacon. A Beacon is used to synchronize the wireless network.
- **Data Rate:** The "Data Rate" is the rate that this access point uses to transmit data packets. The access point will use the highest possible selected transmission rate to transmit the data packets.
- **N Data Rate:** The "Data Rate" is the rate that this access point uses to transmit data packets for N compliant wireless nodes. Highest to lowest data rate can be fixed.
- **Channel Bandwidth:** This is the range of frequencies that will be used.
- **Preamble Type:** The "Long Preamble" can provide better wireless LAN compatibility while the "Short Preamble" can provide better wireless LAN performance.
- **TX Power:** The transmit power can be set to a bare minimum or maximum power for better performance or power saving.

## Security

This router provides complete wireless LAN security functions, included are WEP, IEEE 802.11x, IEEE 802.11x with WEP, WPA with pre-shared key and WPA with RADIUS. With these security functions, you can prevent your wireless LAN from illegal access. Please make sure your wireless stations use the same security function, and are setup with the same security key.

AC1900 WIFI ROUTER SITECOM

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | Firewall | Advanced Settings | Toolbox | Choose your language ▾

Enable | Basic | Advanced | **Security** | ACL | WPS

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network .

SSID Selection :	Sitecom42C0E8 ▾
Broadcast ESSID :	Enable ▾
WMM :	Enable ▾
Encryption :	WPA Pre-shared Key ▾
WPA Type :	<input checked="" type="radio"/> WPA(TKIP) <input type="radio"/> WPA2(AES) <input type="radio"/> WPA2 Mixed
Pre-shared Key Type :	Passphrase ▾
Pre-shared Key :	12345678

Apply Cancel

## Disable

When you choose to disable encryption, it is very insecure to use the router.

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network .

SSID Selection :	Sitecom42C0E8 ▾
Broadcast ESSID :	Enable ▾
WMM :	Enable ▾
Encryption :	Disable ▾

Enable 802.1x Authentication

Apply Cancel

## Enable 802.1x Authentication

Enable 802.1x Authentication

RADIUS Server IP Address :	0.0.0.0
RADIUS Server Port :	1812
RADIUS Server Password :	

Apply Cancel

IEEE 802.1x is an authentication protocol. Every user must use a valid account to login to this Access Point before accessing the wireless LAN. The authentication is processed by a RADIUS server. This mode only authenticates users by IEEE 802.1x, but it does not encrypt the data during communication

## WEP

Status | Internet Settings | **2.4GHz WiFi** | 5GHz WiFi | Firewall | Advanced Settings | Toolbox Choose your language ▾

Enable | Basic | Advanced | **Security** | ACL | WPS

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network .

SSID Selection :	Sitcom42C0E8 ▾
Broadcast ESSID :	Enable ▾
WMM :	Enable ▾
Encryption :	WEP ▾
Authentication Type :	<input type="radio"/> Open System <input type="radio"/> Shared Key <input checked="" type="radio"/> Auto
Key Length :	64bit ▾
Key Type :	ASCII (5 characters) ▾
Default Key :	Key 1 ▾
Encryption Key 1 :	<input type="text"/>
Encryption Key 2 :	<input type="text"/>
Encryption Key 3 :	<input type="text"/>
Encryption Key 4 :	<input type="text"/>

Enable 802.1x Authentication

When you select 64-bit or 128-bit WEP key, you have to enter WEP keys to encrypt data. You can generate the key by yourself and enter it. You can enter four WEP keys and select one of them as a default key. Then the router can receive any packets encrypted by one of the four keys.

- **Key Length:** You can select the WEP key length for encryption, 64-bit or 128-bit. The larger the key will be the higher level of security is used, but the throughput will be lower.
- **Key Type:** You may select ASCII Characters (alphanumeric format) or Hexadecimal Digits (in the "A-F", "a-f" and "0-9" range) to be the WEP Key.
- **Key1 - Key4:** The WEP keys are used to encrypt data transmitted in the wireless network. Use the following rules to setup a WEP key on the device. 64-bit WEP: input 10-digits Hex values (in the "A-F", "a-f" and "0-9" range) or 5-digit ASCII character as the encryption keys. 128-bit WEP: input 26-digit Hex values (in the "A-F", "a-f" and "0-9" range) or 13-digit ASCII characters as the encryption keys.

Click **Apply** at the bottom of the screen to save the above configuration.

### WPA Pre-shared Key

**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | **2.4GHz WiFi** | 5GHz WiFi | Firewall | Advanced Settings | Toolbox Choose your language ▾

Enable | Basic | Advanced | **Security** | ACL | WPS

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network .

SSID Selection :	Sitcom42C0E8 ▾
Broadcast ESSID :	Enable ▾
WMM :	Enable ▾
Encryption :	WPA Pre-shared Key ▾
WPA Type :	<input checked="" type="radio"/> WPA(TKIP) <input type="radio"/> WPA2(AES) <input type="radio"/> WPA2 Mixed
Pre-shared Key Type :	Passphrase ▾
Pre-shared Key :	12345678

Wi-Fi Protected Access (WPA) is an advanced security standard. You can use a pre-shared key to authenticate wireless stations and encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently, so the encryption key is not easy to be cracked by hackers. This is the best security available.

### WPA-Radius

**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | **2.4GHz WiFi** | 5GHz WiFi | Firewall | Advanced Settings | Toolbox Choose your language ▾

Enable | Basic | Advanced | **Security** | ACL | WPS

This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network .

SSID Selection :	Sitcom42C0E8 ▾
Broadcast ESSID :	Enable ▾
WMM :	Enable ▾
Encryption :	WPA RADIUS ▾
WPA Type :	<input type="radio"/> WPA(TKIP) <input checked="" type="radio"/> WPA2(AES) <input type="radio"/> WPA2 Mixed
RADIUS Server IP Address :	0.0.0.0
RADIUS Server Port :	1812
RADIUS Server Password :	

Wi-Fi Protected Access (WPA) is an advanced security standard. You can use an external RADIUS server to authenticate wireless stations and provide the session key to encrypt data during communication. It uses TKIP or CCMP (AES) to change the encryption key frequently. Press **Apply** when you are done.

## ACL

The screenshot shows the web interface of a Sitecom AC1900 WiFi Router. The top navigation bar includes 'Status', 'Internet Settings', '2.4GHz WiFi', '5GHz WiFi', 'Firewall', 'Advanced Settings', and 'Toolbox'. A language selection dropdown is set to 'Choose your language'. Below this, a menu bar contains 'Enable', 'Basic', 'Advanced', 'Security', 'ACL', and 'WPS'. The main content area has a warning: 'For security reasons, the Access Point features MAC Address Filtering which only allows authorized MAC Addresses to associate with the Access Point.' Below the warning is the 'MAC Address Filtering Table' with the following structure:

NO.	MAC Address	Comment	Select
-----	-------------	---------	--------

Below the table are three buttons: 'Delete Selected', 'Delete All', and 'Reset'. A checkbox labeled 'Enable Wireless Access Control' is checked. Below the checkbox is a 'New:' section with two input fields: 'MAC Address :' and 'Comment :'. To the right of these fields are 'Add' and 'Reset' buttons. At the bottom right of the page are 'Apply' and 'Cancel' buttons.

This wireless router supports MAC Address Control, which prevents unauthorized clients from accessing your wireless network.

- **Enable wireless access control:** Enables the wireless access control function
- **Adding an address into the list:** Enter the "MAC Address" and "Comment" of the wireless station to be added and then click "Add". The wireless station will now be added into the "Current Access Control List" below. If you are having any difficulties filling in the fields, just click "Clear" and both "MAC Address" and "Comment" fields will be cleared.
- **Remove an address from the list:** If you want to remove a MAC address from the "Current Access Control List", select the MAC address that you want to remove in the list and then click "Delete Selected". If you want to remove all the MAC addresses from the list, just click the "Delete All" button. Click "Reset" will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configurations. You can now configure other sections by choosing Continue, or choose Apply to apply the settings and reboot the device.

## WPS

Wi-Fi Protected Setup (WPS) is the simplest way to establish a connection between the wireless clients and the wireless router. You don't have to select the encryption mode and fill in a long encryption passphrase every time when you try to setup a wireless connection. You only need to press a button on both wireless client and wireless router, and WPS will do the rest for you.

The wireless router supports two types of WPS: WPS via Push Button and WPS via PIN code. If you want to use the Push Button, you have to push a specific button on the wireless client or in the utility of the wireless client to start the WPS mode, and switch the wireless router to WPS mode. You can simply push the WPS button of the wireless router, or click the 'Start to Process' button in the web configuration interface. If you want to use the PIN code, you have to know the PIN code of the wireless client and switch it to WPS mode, then fill-in the PIN code of the wireless client through the web configuration interface of the wireless router.

The screenshot shows the web configuration interface for a SITEMCOM AC1900 WIFI ROUTER. The page is titled "AC1900 WIFI ROUTER" and features the SITEMCOM logo. The navigation menu includes Status, Internet Settings, 2.4GHz WiFi, 5GHz WiFi, Firewall, Advanced Settings, and Toolbox. A language selection dropdown is set to "Choose your language". The main content area is divided into tabs: Enable, Basic, Advanced, Security, ACL, and WPS. The WPS tab is active, showing the following settings:

WPS :	<input checked="" type="checkbox"/> Enable
PIN Function :	<input type="checkbox"/> Enable

Below the settings is the "Wi-Fi Protected Setup Information" section, which displays the following details:

WPS Current Status :	Configured	Release Configuration
Self Pin Code :	43747603	
SSID :	Sitecom42C0E8	
Authentication Mode :	WPA2 Pre-Shared Key	
Passphrase Key :	12345678	
WPS via Push Button :		Start to Process
WPS via PIN :	<input type="text"/>	Start to Process

- **WPS:** Check the box to enable WPS function and uncheck it to disable the WPS function.
- **WPS Current Status:** If the wireless security (encryption) function of this wireless router is properly set, you'll see a 'Configured' message here. Otherwise, you'll see 'UnConfigured'.
- **Self-Pin Code:** This is the WPS PIN code of the wireless router. You may need this information when connecting to other WPS-enabled wireless devices.
- **SSID:** This is the network broadcast name (SSID) of the router.
- **Authentication Mode:** It shows the active authentication mode for the wireless connection.
- **Passphrase Key:** It shows the passphrase key that is randomly generated by the wireless router during the WPS process. You may need this information when using a device which doesn't support WPS.
- **WPS via Push Button:** Press the button to start the WPS process. The router will wait for the WPS request from the wireless devices within 2 minutes.

- **WPS via PIN:** You can fill-in the PIN code of the wireless device and press the button to start the WPS process. The router will wait for the WPS request from the wireless device within 2 minutes.

# Firewall Settings

The router provides extensive firewall protection by restricting connection parameters, thus limiting the risk of hacker attacks, and defending against a wide array of common Internet attacks. However, for applications that require unrestricted access to the Internet, you can configure a specific client/server as a Demilitarized Zone (DMZ).

**Note:** To enable the Firewall settings select Enable and click **Apply**



## DMZ

If you have a client PC that cannot run an Internet application (e.g. Games) properly from behind the NAT firewall, then you can open up the firewall restrictions to unrestricted two-way Internet access by defining a DMZ Host. The DMZ function allows you to re-direct all packets going to your WAN port IP address to a particular IP address in your LAN. The difference between the virtual server and the DMZ function is that the virtual server re-directs a particular service/Internet application (e.g. FTP, websites) to a particular LAN client/server, whereas DMZ re-directs all packets (regardless of services) going to your WAN IP address to a particular LAN client/server.

**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | **Firewall** | Advanced Settings | Toolbox | Choose your language ▾

Enable | **DMZ** | DoS | Access | URL Block

If you have a local client PC that cannot run an Internet application properly from behind the NAT firewall, you can open unrestricted two-way Internet access for this client by defining a Virtual DMZ Host .

Enable DMZ

Public IP Address	Client PC IP Address
<input type="radio"/> Dynamic IP <span>Session1 ▾</span>	<input type="text"/>
<input type="radio"/> Static IP <input type="text"/>	<input type="text"/>

DMZ Table

NO.	Public IP Address	Client PC IP Address	Select
-----	-------------------	----------------------	--------

- **Enable DMZ:** Enable/disable DMZ
- **Public IP Address:** The IP address of the WAN port or any other Public IP addresses given to you by your ISP
- **Client PC IP Address:** Fill-in the IP address of a particular host in your LAN that will receive all the packets originally going to the WAN port/Public IP address above.

Click **Apply** at the bottom of the screen to save the above configurations.

## Denial of Service (DoS)

The Broadband router's firewall can block common hacker attacks, including Denial of Service, Ping of Death, Port Scan and Sync Flood. If Internet attacks occur the router can log the events.



- **Ping of Death:** Protection from Ping of Death attacks
- **Discard Ping From WAN:** The router's WAN port will not respond to any Ping requests
- **Port Scan:** Protects the router from Port Scans.
- **Sync Flood:** Protects the router from Sync Flood attack.

Click **Apply** at the bottom of the screen to save the above configuration.

## Access

You can restrict users from accessing certain Internet applications/services (e.g. Internet websites, email, FTP etc.), Access Control allows users to define the traffic type permitted in your LAN. You can control which PC client can have access to these services.

Enable DMZ DoS **Access** URL Block

Access Control allows users to define the traffic type permitted or not permitted in your LAN. You can control which PC uses what services or has access to .  
If both MAC filtering and IP filtering are enabled, the MAC filtering table will be checked first .

Enable MAC Filtering  Deny  Allow

Client PC MAC Address	Comment
<input type="text"/>	<input type="text"/>

Add Reset

MAC Filtering table

NO.	Client PC MAC Address	Comment	Select
-----	-----------------------	---------	--------

Delete Selected Delete All Reset

Enable IP Filtering Table  Deny  Allow

NO.	PC Description	PC IP Address	Client Service	Protocol	Port Range	Select
-----	----------------	---------------	----------------	----------	------------	--------

Add Delete Selected Delete All Reset

Apply Cancel

- **Deny:** If you select "Deny" then all clients will be allowed to access Internet except for the clients in the list below.
- **Allow:** If you select "Allow" then all clients will be denied to access Internet except for the PCs in the list below.
- **Filter client PCs by IP:** Fill in "IP Filtering Table" to filter PC clients by IP.
- **Add PC:** You can click Add PC to add an access control rule for users by IP addresses.
- **Remove PC:** If you want to remove some PCs from the "IP Filtering Table", select the PC you want to remove in the table and then click "Delete Selected". If you want to remove all PCs from the table, just click the "Delete All" button.
- **Filter client PC by MAC:** Check "Enable MAC Filtering" to enable MAC Filtering.
- **Add PC:** Fill in "Client PC MAC Address" and "Comment" of the PC that is allowed to access the Internet, and then click "Add". If you find any typo before adding it and want to retype again, just click "Reset" and the fields will be cleared.
- **Remove PC:** If you want to remove some PC from the "MAC Filtering Table", select the PC you want to remove in the table and then click "Delete Selected". If you want to remove all PCs from the table, just click the "Delete All" button. If you want to clear the selection and re-select again, just click "Reset".

Click **Apply** at the bottom of the screen to save the above configuration.

## URL block

You can block access to some Web sites from particular PCs by entering a full URL address or just keywords of the Web site.



AC1900 WIFI ROUTER

SITECOM

Status | Internet Settings | 2.4GHz WIFI | 5GHz WIFI | **Firewall** | Advanced Settings | Toolbox

Choose your language ▼

Enable | DMZ | DoS | Access | **URL Block**

You can block access to certain Web sites for a particular PC by entering either a full URL address or just a keyword of the Web site.

Enable URL Blocking

URL/Keyword :

Add Reset

Current URL Blocking Table

NO.	URL/Keyword	Select
-----	-------------	--------

Delete Selected Delete All Reset

Apply Cancel

- **Enable:** URL Blocking Enable/disable URL Blocking
- **Add URL/keyword:** Fill in "URL/Keyword" and then click "Add". You can enter the full URL address or the keyword of the web site you want to block.
- **Remove URL/keyword:** If you want to remove some URL keywords from the "Current URL Blocking Table", select the URL keyword you want to remove in the table and then click "Delete Selected". If you want remove all URL keywords from the table, just click "Delete All" button. If you want to clear the selection and re-select again, just click "Reset".

Click **Apply** at the bottom of the screen to save the above configuration.

# Advanced Settings

Network Address Translation (NAT) allows multiple users at your local site to access the Internet through a single Public IP Address or multiple Public IP Addresses. NAT provides Firewall protection from hacker attacks and has the flexibility to allow you to map Private IP Addresses to Public IP Addresses for key services such as Websites and FTP.



- **NAT:** Select **Disable** to disable the NAT function.
- **Hardware Accelerator:** Select **Enable** to use hardware acceleration for routing. This gives a speed increase in WAN->LAN performance. Please note that this disables the QoS service.

## Port Forwarding

Port Forwarding allows you to re-direct a particular range of service port numbers (from the Internet/WAN Port) to a particular LAN IP address. It helps you to host servers behind the router NAT firewall.

AC1900 WIFI ROUTER SITECOM

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | Firewall | **Advanced Settings** | Toolbox | Choose your language ▾

NAT | **Port Forwarding** | Virtual Server | Special Applications | ALG | UPnP | Quality of Service | USB Port

Entries in this table allow you to automatically redirect common network services to a specific PC behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the local network .

Enable Port Forwarding

Local IP	Type	Port Range	Comment
<input type="text"/>	Both ▾	<input type="text"/> - <input type="text"/>	<input type="text"/>

Add Reset

Current Port Forwarding Table

NO.	Local IP	Type	Port Range	Comment	Select
-----	----------	------	------------	---------	--------

Delete Selected Delete All Reset

Apply Cancel

- **Enable Port Forwarding:** Enable Port Forwarding
- **Local IP:** This is the private IP of the server behind the NAT firewall.
- **Type:** This is the protocol type to be forwarded. You can choose to forward "TCP" or "UDP" packets only, or select "both" to forward both "TCP" and "UDP" packets.
- **Port Range:** The range of ports to be forward to the private IP.
- **Comment:** description of this setting.
- **Add:** Fill in the "Private IP", "Type", "Port Range" and "Comment" of the setting to be added and then click "Add". Then this Port Forwarding setting will be added into the "Current Port Forwarding Table" below.
- **Remove:** If you want to remove a Port Forwarding setting from the "Current Port Forwarding Table", select the Port Forwarding setting that you want to remove in the table and then click "Delete Selected". If you want to remove all Port Forwarding settings from the table, just click "Delete All" button. Click "Reset" will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configuration.

## Virtual Server

Use the Virtual Server function when you want different servers/clients in your LAN to handle different service/Internet application type (e.g. Email, FTP, Web server etc.) from the Internet. Computers use numbers called port numbers to recognize a particular service/Internet application type. The Virtual Server allows you to re-direct a particular service port number (from the Internet/WAN Port) to a particular LAN private IP address and its service port number.

AC1900 WIFI ROUTER **SITECOM**

Status | Internet Settings | 2.4GHz WIFI | 5GHz WIFI | Firewall | **Advanced Settings** | Toolbox | Choose your language ▾

NAT | Port Forwarding | **Virtual Server** | Special Applications | ALG | UPnP | Quality of Service | USB Port

You can configure the router as a Virtual Server allowing remote users to access services such as Web or FTP at your local PC. Depending on the requested service (TCP/UDP) port number, the router will redirect the external service request to the appropriate internal server (located at one of your local PCs) .

Enable Virtual Server

Local IP	Local Port	Type	Public Port	Comment
<input type="text"/>	<input type="text"/>	Both ▾	<input type="text"/>	<input type="text"/>

Current Virtual Server Table

NO.	Local IP	Local Port	Type	Public Port	Comment	Select
-----	----------	------------	------	-------------	---------	--------

- **Enable Virtual Server:** Enable Virtual Server.
- **Local IP:** This is the LAN client/host IP address that the Public Port number packet will be sent to.
- **Local Port:** This is the port number (of the above Private IP host) that the below Public Port number will be changed to when the packet enters your LAN (to the LAN Server/Client IP).
- **Type:** Select the port number protocol type (TCP, UDP or both). If you are unsure, then leave it to the default "both" setting. Public Port Enter the service (service/Internet application) port number from the Internet that will be re-directed to the above Private IP address host in your LAN
- **Comment:** The description of this setting.
- **Add:** Fill in the "Private IP", "Private Port", "Type", "Public Port" and "Comment" of the setting to be added and then click "Add". Then this Virtual Server setting will be added into the "Current Virtual Server Table" below.
- **Reset:** If you want to remove Virtual Server settings from the "Current Virtual Server Table", select the Virtual Server settings you want to remove in the table and then click "Delete Selected". If you want to remove all Virtual Server settings from the table, just click the "Delete All" button. Click "Reset" will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configuration.

## Special Applications

Some applications require multiple connections, such as Internet games, video Conferencing, Internet telephony and others. In this section you can configure the router to support multiple connections for these types of applications.

The screenshot shows the 'Special Applications' configuration page. At the top, there are navigation tabs: Status, Internet Settings, 2.4GHz WiFi, 5GHz WiFi, Firewall, **Advanced Settings**, and Toolbox. Below these are sub-tabs: NAT, Port Forwarding, Virtual Server, **Special Applications**, ALG, UPnP, Quality of Service, and USB Port. A language selector is in the top right.

The main content area has a dark background. It starts with a paragraph explaining that some applications require multiple connections and that NAT must be disabled. Below this is a checkbox labeled 'Enable Trigger Port'. Underneath is a form with five columns: 'Trigger Port', 'Trigger Type', 'Public Port', 'Public Type', and 'Comment'. The 'Trigger Port' field has two input boxes separated by a hyphen. The 'Trigger Type' and 'Public Type' fields are dropdown menus with 'Both' selected. There are 'Add' and 'Reset' buttons below the form.

Below the form is a section titled 'Popular Applications' with a dropdown menu 'Select an application' and an 'Add' button. Below that are 'Add' and 'Reset' buttons.

The next section is 'Current Trigger-Port Table', which contains a table with columns: NO., Trigger Port, Trigger Type, Public Port, Public Type, Comment, and Select. Below the table are 'Delete Selected', 'Delete All', and 'Reset' buttons. At the bottom right are 'Apply' and 'Cancel' buttons.

- **Enable Trigger Port:** Enable the Special Application function.
- **Trigger Port:** This is the outgoing (Outbound) range of port numbers for this particular application.
- **Trigger Type:** Select whether the outbound port protocol is "TCP", "UDP" or both.
- **Public Port:** Enter the In-coming (Inbound) port or port range for this type of application (e.g. 2300-2400, 47624).
- **Public Type:** Select the Inbound port protocol type: "TCP", "UDP" or both.
- **Comment:** The description of this setting.
- **Popular applications:** This section lists the more popular applications that require multiple connections. Select an application from the Popular Applications selection. Once you have selected an application, select a location (1-10) in the Copy to selection box and then click the Copy to button. This will automatically list the Public Ports required for this popular application in the location (1-10) you specified.
- **Add:** Fill in the "Trigger Port", "Trigger Type", "Public Port", "Public Type", "Public Port" and "Comment" of the setting to be added and then click "Add". The Special Application setting will be added into the "Current Trigger-Port Table" below. If you happen to make a mistake, just click "Clear" and the fields will be cleared.
- **Reset:** If you want to remove Special Application settings from the "Current Trigger-Port Table", select the Special Application settings you want to remove in the table and then click "Delete Selected". If you want remove all Special Application settings from the table, just click the "Delete All" button. Click "Reset" will clear your current selections.

Click **Apply** at the bottom of the screen to save the above configuration.

## UPnP

With UPnP, all PCs in your Intranet will discover this router automatically, so you don't have to configure your PC and it can easily access the Internet through this router.

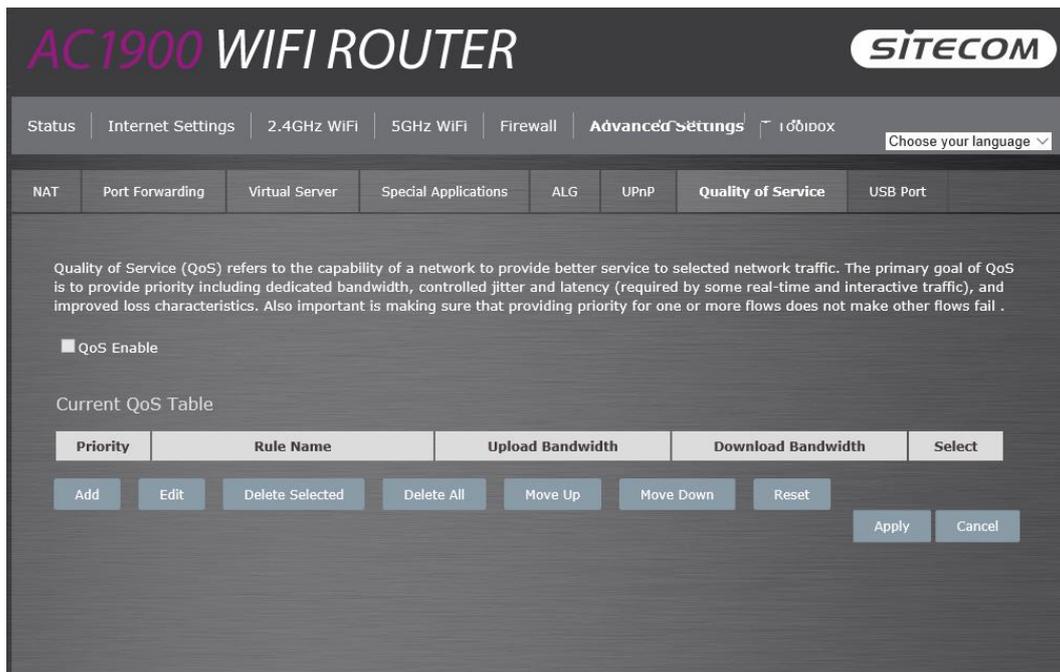


**UPnP Feature:** You can enable or Disable the UPnP feature here. After you enable the UPnP feature, all client systems that support UPnP, like Windows XP and newer, can discover this router automatically and access the Internet through this router without having to configure anything. The NAT Traversal function provided by UPnP can let applications that support UPnP connect to the internet without having to configure the virtual server sections.

Click **Apply** at the bottom of the screen to save the above configuration.

## QoS

QoS can let you classify Internet application traffic by source/destination IP address and port number. You can assign priority for each type of application and reserve bandwidth for it. The packets of applications with higher priority will always go first. Lower priority applications will get bandwidth after higher priority applications get enough bandwidth. This can let you have a better experience in using critical real time services like Internet phone, video conference ...etc. All the applications not specified by you are classified as rule name "Others". The rule with a smaller priority number has a higher priority; the rule with a larger priority number has a lower priority. You can adjust the priority of the rules by moving them up or down.



- **Enable/Disable QoS:** You can check "Enable QoS" to enable QoS functionality for the WAN port.
- **Add a QoS rule into the table:** Click "Add" then enter a form of the QoS rule. Click "Apply" after filling out the form the rule will be added into the table.
- **Remove QoS rules from the table:** If you want to remove QoS rules from the table, select the QoS rules you want to remove in the table and then click "Delete Selected". If you want remove all QoS rules from the table, just click the "Delete All" button. Clicking "Reset" will clear your current selections.
- **Edit a QoS rule:** Select the rule you want to edit and click "Edit", then enter the detail form of the QoS rule. Click "Apply" after editing the form and the rule will be saved.
- **Adjust QoS rule priority:** You can select the rule and click "Move Up" to make its priority higher. You also can select the rule and click "Move Down" to make its priority lower.

Click **Apply** at the bottom of the screen to save the above configuration.

## USB port

You can use the USB port in a Samba server for filesharing in your home network.

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | Firewall | **Advanced Settings** | Toolbox | Choose your language ▾

NAT | Port Forwarding | Virtual Server | Special Applications | ALG | UPnP | Quality of Service | **USB Port**

You can use the USB port in Server mode as a Samba server for filesharing in your home network.

Samba server:  Enable  Disable

Server Information

Server Name :	SMBSERVER
Workgroup :	WORKGROUP
Description (optional) :	
Administrator :	admin
New Password :	
Confirm Password :	

DLNA server:  Enable  Disable

Apply Cancel

- **Server name:** Enter a name for the network share.
- **Workgroup:** If you wish to add the share to your workgroup enter the workgroup name here.
- **Description:** Enter a desired description for the share.
- **Administrator:** Enter a desired username for access to the share.
- **New Password:** Enter the password for access to the share and confirm this password by re-entering it in the Confirm password field

Click **Apply** at the bottom of the screen to save the above configuration.

# Toolbox Settings

## Password

You can change the password required to log into the router's system web-based management. Passwords can contain 0 to 12 alphanumeric characters, and are case sensitive.



The screenshot shows the web interface for the AC1900 WiFi Router. The header includes the model name 'AC1900 WIFI ROUTER' and the 'SITECOM' logo. A navigation menu contains 'Status', 'Internet Settings', '2.4GHz WiFi', '5GHz WiFi', 'Firewall', 'Advanced Settings', and 'Toolbox'. A language selection dropdown is set to 'Choose your language'. The 'Password' tab is selected in the sub-menu, which also includes 'Timezone', 'Remote', 'Firmware', 'Back-up', 'Reset', 'DDNS', and 'LED Control'. The main content area contains the following text: 'You can change the password which is required to log on to the router. Passwords can contain 0 to 30 alphanumeric characters, and are case sensitive .'. Below this text are three input fields: 'Current Password :', 'New Password :', and 'Confirm Password :'. At the bottom right, there are 'Apply' and 'Cancel' buttons.

- **Current Password:** Fill in the current password to allow changing to a new password.
- **New Password:** Enter your new password.
- **Confirmed Password:** Enter your new password again for verification purposes.

Click **Apply** at the bottom of the screen to save the above configuration.

## Time Zone

The Time Zone allows your router to base its time on the settings configured here, which will affect functions such as Log entries and Firewall settings.



The screenshot shows the configuration page for the AC1900 WiFi Router, specifically the Time Zone settings. The page title is "AC1900 WIFI ROUTER" and the brand "SITECOM" is visible in the top right. The navigation menu includes Status, Internet Settings, 2.4GHz WIFI, 5GHz WIFI, Firewall, Advanced Settings, and Toolbox. The "Timezone" tab is selected. The configuration area contains the following fields:

- Set Time Zone:** A dropdown menu showing "(GMT+01:00)Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna".
- Time Server Address:** A text input field containing "europe.pool.ntp.org".
- Daylight Saving:** A checkbox labeled "Enable" which is currently unchecked. To its right are two sets of dropdown menus for "From" and "To" times, both set to "January" and "1".

At the bottom right of the configuration area, there are two buttons: "Apply" and "Cancel".

- **Set Time Zone:** Select the time zone of the country you are currently in. The router will set its time based on your selection.
- **Time Server Address:** You can set an NTP server address.
- **Enable Daylight Savings:** The router can also take Daylight savings into account. If you wish to use this function, you must check/tick the enable box to enable your daylight saving configuration (below).
- **Start Daylight Savings Time:** Select the period in which you wish to start daylight Savings Time.
- **End Daylight Savings Time:** Select the period in which you wish to end daylight Savings Time.

Click **Apply** at the bottom of the screen to save the above configuration.

## Remote Management

The remote management function allows you to designate a host in the Internet the ability to configure the Broadband router from a remote site. Enter the designated host IP Address in the Host IP Address field.

**AC1900 WIFI ROUTER** **SITECOM**

Status | Internet Settings | 2.4GHz WiFi | 5GHz WiFi | Firewall | Advanced Settings | **Toolbox** | Choose your language ▾

Password | Timezone | **Remote** | Firmware | Back-up | Reset | DDNS | LED Control

The remote management function allows you to designate a host from the Internet to have management/configuration access to the router from a remote site. Enter the designated host IP Address in the Host IP Address field .

Host Address	Port	Enable
0.0.0.0	80	<input checked="" type="checkbox"/>

Apply Cancel

- **Host Address:** This is the IP address of the host in the Internet that will have management/configuration access to the Broadband router from a remote site. If the Host Address is left 0.0.0.0 this means anyone can access the router's web-based configuration from a remote location, providing they know the password.
- **Port:** The port number of the remote management web interface.
- **Enabled:** Select "Enabled" to enable the remote management function.

Click **Apply** at the bottom of the screen to save the above configuration.

## Firmware Upgrade



The screenshot shows the 'Firmware' section of the Sitecom AC1900 WiFi Router's web interface. The page title is 'AC1900 WIFI ROUTER' and the Sitecom logo is in the top right. The navigation menu includes Status, Internet Settings, 2.4GHz WiFi, 5GHz WiFi, Firewall, Advanced Settings, and Toolbox. A language selection dropdown is set to 'Choose your language'. The 'Firmware' tab is active in the sub-menu, which also includes Password, Timezone, Remote, Back-up, Reset, DDNS, and LED Control. The main content area contains the following text: 'This tool allows you to upgrade the Routers firmware. Browse to and select the upgrade file and click APPLY. You will be prompted to confirm the upgrade .'. Below this is a radio button group for 'Enable automatic firmware update' with 'Enable' selected. A 'Check for updates' button is present. A file input field is followed by a 'Browse...' button. At the bottom right, there are 'Apply' and 'Cancel' buttons.

**Enable automatic firmware update:** When enabled the router will periodically check if a new firmware is available. If a new firmware is detected the router will give a notification.

**Firmware Upgrade:** This tool allows you to upgrade the Broadband router's system firmware. To upgrade the firmware of your Broadband router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to find the firmware file on your PC.

Once you've selected the new firmware file, click **Apply** at the bottom of the screen to start the upgrade process.

## Backup Settings

The Backup screen allows you to save (Backup) the current configuration settings. When you save the configuration setting (Backup) you can re-load the saved configuration into the router through the Restore selection. If extreme problems occur you can use the Restore to Factory Defaults selection, this will set all configurations to its original default settings (e.g. when you first purchased the router).



Use the "Backup" tool to save the current configuration to a file named "config.bin" on your PC. You can then use the "Restore" tool to restore the saved configuration to the router. Alternatively, you can use the "Restore to Factory Defaults" tool to force the router to perform a power reset and restore the original factory settings.

# Reset

You can reset the router's system should any problem exist. The reset function essentially re-boots your router's system.



## DDNS

DDNS allows you to map the static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service providers. This router supports DynDNS, TZO and other common DDNS service providers.



The screenshot shows the DDNS configuration page for the AC1900 WiFi Router. The page has a dark grey background with white text. At the top, it says "AC1900 WIFI ROUTER" and "SITECOM". Below that, there are navigation tabs: Status, Internet Settings, 2.4GHz WiFi, 5GHz WiFi, Firewall, Advanced Settings, and Toolbox. A language selection dropdown is on the right. Below the navigation tabs, there are more specific settings tabs: Password, Timezone, Remote, Firmware, Back-up, Reset, DDNS (selected), and LED Control. The main content area contains a paragraph explaining DDNS: "DDNS allows users to map a static domain name to a dynamic IP address. You must get an account, password and your static domain name from the DDNS service provider." Below this is a form with the following fields: "Dynamic DNS" with radio buttons for "Enable" (selected) and "Disable"; "Provider" with a dropdown menu showing "DHS"; "Domain Name" with a text input field; "Account/E-mail" with a text input field; and "Password/Key" with a text input field. At the bottom right, there are "Apply" and "Cancel" buttons.

- **Enable/Disable:** Enable or disable the DDNS function of this router
- **Provider:** Select a DDNS service provider
- **Domain name:** Fill in your static domain name that uses DDNS
- **Account/E-mail:** The account that your DDNS service provider assigned to you
- **Password/Key:** The password you set for the DDNS service account above

Click **Apply** at the bottom of the screen to save the above configuration.

# 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: WLR-9000 v1 001  
Product description: AC1900 Wi-Fi Router

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

EU Community Legislation  
Harmonised standards

Radio Equipment Directive (R&TTE) 1999/5/EC  
EN 300 328 V1.7.1  
EN 301 893 V1.5.1 + EN 301 893 V1.6.1 + EN 301 893 V1.7.1  
EN 300 328 V1.8.1 + EN 300 328 V1.9.1  
EN 301 489-1 V1.8.1 + EN 301 489-1 V1.9.2  
EN 301 489-17 V1.3.2 + EN 301 489-17 V2.1.1 + EN 301 489-17 V2.2.1  
EN 50385:2002  
EN 60950-1:2006 (RTTE) + A11:2009 (RTTE) + A1:2010 (RTTE) + AC:2011 (RTTE) + A12:2011 (RTTE) + A2:2013 (RTTE)  
EN 62368-1:2014 (RTTE) + AC:2015-02 (RTTE) + AC:2015-05 (RTTE)  
EN 62479:2010 (RTTE)

Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU  
EN 50581:2012

Energy-related Products Directive (ERP) 2009/125/EC  
Commission Regulation (EC) 1275/2008 - ecodesign requirements standby and off mode electrical power consumption



Sjors Hendriks - CPO  
Sitecom Europe B.V.  
Rotterdam, 1 June 2016

**UK CE COMPLIANCE**

Hereby Sitecom Europe BV declares that this product is in accordance with essential requirements and other relevant terms of the European regulation 1999/5/EC.

**FR CONFORMITE CE**

Par la présente Sitecom Europe BV, déclare que l'appareil est conforme aux exigences essentielles et aux dispositions pertinentes de la Directive Européenne 1999/5/EC.

**DE CE-CONFORMITÄT**

Hiermit erklärt Sitecom Europe BV, dass dieses Produkt die erforderlichen Voraussetzungen und andere relevante Konditionen der europäischen Richtlinie 1999/5/EC erfüllt.

**IT CONFORMITA ALLE NORME CE**

Con la presente Sitecom Europe BV dichiara che questo prodotto è conforme ai requisiti essenziali e agli altri termini rilevanti della Direttiva Europea 1999/5/EC.

**NL CE GOEDKEURING**

Hierbij verklaart Sitecom Europe BV dat dit product in overeenstemming is met de essentiële eisen en andere relevante bepalingen van Europese Richtlijn 1999/5/EC.

**ES CONFORMIDAD CON LA CE**

Por la presente Sitecom Europe BV declara que este producto cumple con los requisitos esenciales y las otras provisiones relevantes de la Directiva Europea 1999/5/EC.

**PT CONFORMIDADE CE**

Pela presente a Sitecom Europe BV declara que este produto está em conformidade com os requisitos essenciais e outras condições relevantes da regulamentação Europeia 1999/5/EC.

**SE CE-FÖRSÄKRAN**

Härmed försäkras Sitecom Europe BV att denna produkt uppfyller de nödvändiga kraven och andra relevanta villkor EU-direktivet 1999/5/EC.

**DK OVERENSSTEMMELSESERKLÆRING**

Sitecom Europe BV bekræfter hermed, at dette produkt er i overensstemmelse med væsentlige krav og andre betingelser i henhold til Rådets direktiv 1999/5/EC.

**NO CE-OVERENSSTEMMELSE**

Sitecom Europe BV erklærer herved at dette produktet er i overensstemmelse med de avgjørende kravene og andre relevante vilkår i den europeiske forskriften 1999/5/EC.

**FI CE-HYVÄKSYNTÄ**

Täten Sitecom Europe BV ilmoittaa, että tämä tuote on yhdenmukainen direktiivin 1999/5/EC olennaisten vaatimusten ja muiden asiaankuuluvien sopimusehtojen kanssa.

**RU СООТВЕТСТВИЕ ТРЕБОВАНИЯМ CE**

Настоящим компания Sitecom Europe BV заявляет, что ее продукция соответствует основным требованиям и условиям Европейской Директивы 1999/5/EC.

**PL CERTYFIKAT ZGODNOŚCI CE**

Sitecom Europe BV niniejszym oświadczam, że ten produkt spełnia wszelkie niezbędne wymagania, a także inne istotne warunki dyrektywy europejskiej 1999/5/WE.

**GR ΣΥΜΜΟΡΦΩΣΗ ΜΕ CE**

Η Sitecom Europe BV δηλώνει διά του παρόντος, ότι αυτό το προϊόν συμμορφώνεται με τις ουσιαστικές απαιτήσεις και τους λοιπούς όρους του ευρωπαϊκού κανονισμού 1999/5/EC.



This product may be used in the following countries:

AT	BE	HU	CZ	IT	RO	EE	ES
FI	FR	IS	NL	GR	CY	BE	DE
LT	LU	LV	MT	GB	SI	TR	PT
SE	SK	PL	DK	CH	BG	NO	U

For non EU countries please check with the local authorities for restrictions of using wireless products