



# Greyhound



User Manual

# Table of Contents

Introduction .....	3
Technical Specifications .....	4
Package Contents .....	6
Cautions .....	7
Product Layout.....	8
Setup your Router .....	12
Setup your Computer .....	13
Login to your Router .....	16
Configure your Internet connection .....	17
Configure your Router – Basic Mode .....	20
Configure your Router – Advanced Mode .....	29
Wi-Fi Settings .....	30
StreamBoost.....	47
File System Settings.....	52
App Settings.....	57
Firewall Settings.....	58
Task manager.....	65
Administration .....	70
Toolbox Settings.....	75
Addendum A: NetUSB .....	79
Addendum B: Declaration of Conformity .....	90
Addendum C: GNU/GPL Information.....	92



Revision 1.0

© Sitecom Europe BV 2016

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 Sitecom Greyhound AC2600 Wi-Fi Router. With a powerful 1.4 GHz Dual-Core Qualcomm® Internet Processor supporting combined Wi-Fi speeds of up to 2600 Mbps, the Sitecom Greyhound AC2600 Wi-Fi Router delivers smooth Ultra HD video streaming, lag-free online gaming and handles demanding tasks like no other. Thanks to Qualcomm® MU-MIMO, Qualcomm® StreamBoost™ and Beamforming, Greyhound offers faster Wi-Fi, a bigger range and greater stability than any other 802.11ac router.

With four Gigabit Ethernet LAN ports, two USB 3.0 ports, an SD-card slot and analogue and digital audio connectors it is also a NAS, an audio bridge, a VPN server and so much more. Connect speakers to this ac router and play your music wirelessly. Insert your camera's SD card and access your vacation photos from any device in the network. With the Sitecom Greyhound AC2600 Wi-Fi Router you have almost endless possibilities.

AirPlay & DLNA streaming, AirPrint, printer server, FTP server, download client, time machine support. Greyhound has it all. As the first ac router with a fully customized OpenWrt user interface, the Sitecom Greyhound AC2600 Wi-Fi Router offers endless possibilities for experienced users. Less experienced users can use the basic mode of the user interface or the app to access the Wi-Fi router.

# Technical Specifications

Features	Advantages
<b>Standards</b>	IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, , IEEE 802.11ac
<b>Frequency</b>	2.4 GHz & 5 GHz
<b>Signal Rate</b>	5 GHz: up to 1750 Mbps, 2.4 GHz: up to 800 Mbps*
<b>Functions</b>	Enable/Disable Wireless radio, Wireless statistics, Guest networks (1 x 2.4 GHz, 1 x 5 GHz), Auto-Channel-Selection
<b>Security</b>	64/128-bit WEP, WPA / WPA2, WPA-PSK/ WPA2-PSK encryption
<b>Advanced functions</b>	Qualcomm® MU EFX Multi-User MIMO, Beamforming, Band steering
<b>Interfaces</b>	4x 10/100/1000 Mbps LAN Ports, 1x 10/100/1000 Mbps WAN Port, 2x USB 3.0 Port, 1x S/PDIF port, 1x 3.5 mm jack port, 1x SD Card
<b>Buttons</b>	1x Power On/Off, 1x Reset, 2x OPS (1x 2.4 GHz, 1x 5 GHz)
<b>LED Indicators</b>	4x LAN, 1x WAN, 1x OPS, 1x Power, 1x 2.4 GHz, 1x 5 GHz, 1x SD Card, 2x USB 3.0
<b>Antennas</b>	4x adjustable high-gain (5 dBi), high-power (400/800mW) dual-band antennas
<b>CPU</b>	1.4 GHz Dual-Core Qualcomm® Internet Processor
<b>Memory</b>	512 MB DDR3 RAM memory, 128 MB NAND Flash memory, 16 MB SPI Flash memory
<b>Operating System</b>	Customized OpenWrt firmware, Sitecom MyWiFi app for iOS and Android
<b>Audio Playback</b>	AirPlay and DLNA
<b>WAN Type</b>	IPv4: Compatible with Dynamic IP, Static IP, PPPoE, PPTP internet connections IPv6: Compatible with Native, PPPoX (PPPoA and PPPoE), DS-Lite, 6RD internet connections
<b>DHCP</b>	Server/Client/DHCP Client List, Address Reservation
<b>Quality of Service</b>	Qualcomm® StreamBoost for fully automatic QoS
<b>Port Forwarding</b>	Virtual Server, Port Triggering, UPnP, DMZ
<b>Dynamic DNS</b>	More than 15 options including DynDns and NO-IP
<b>VPN Support</b>	IPSec Pass-Through, PPTP Pass-Through, L2TP Pass-Through, VPN Client
<b>Access Control</b>	URL filter, Port filter

<b>Firewall Security</b>	DoS/SPI Firewall, IP Address Filter/MAC Address Filter/Domain Filter, IP & MAC Address Binding
<b>USB Sharing</b>	Support Samba (supports hard drives with up to 4TB) / Printer Server / Virtual USB / FTP
<b>Print Server</b>	Multifunctional printer support (Windows/MacOS), LPR protocol support, AirPrint support
<b>Media Server</b>	Samba, DLNA
<b>Back-up Feature</b>	Supports Apple Time Machine

\* 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.



# 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 3.3A.

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
<b>S/PDIF connector</b>	Connect an optical TOSLINK cable for audio output
<b>3.5mm connector</b>	Connect a 3.5mm audio jack cable for audio output
<b>USB Port</b>	Connect a USB device to this port
<b>LAN (Black)</b>	Connect your PCs or network devices to these ports
<b>WAN (Grey)</b>	Connect your ADSL/Cable modem to this port
<b>Power button</b>	Press to turn the router on or off
<b>Power connector</b>	Connect the 12V DC adapter to this port
<b>Reset button</b>	Press to reset the router

## Backlabel and Network Details Folder

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

*GREYHOUND*

All your network details in one place

**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.*

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

**Login with:** Username: admin

Password:

---

Reset your router with one push of a button:

Press 2 sec. =  
Factory default

Button	Description
OPS button	Press for 2 seconds for WPS/OPS mode
Reset button	Press for 2 seconds or until the Greyhound logo on the front starts flashing.

# LED Definition



As shown from the top to the bottom.

Port	Description
Power	Shows the device is turned on.
WAN	Shows the WAN cable is connected.
LAN	Shows the cable is connected.
LAN	Shows the cable is connected.
LAN	Shows the cable is connected.
LAN	Shows the cable is connected.
WPS	Shows OPS activity.
USB 1	Shows when a USB device is connected.
USB 2	Shows when a USB device is connected.
SD	Shows when a SD card is inserted.
5GHz WiFi	Shows 5GHz WiFi activity.
2.4GHz WiFi	Shows 2.4GHz WiFi activity.

All LEDs are white.

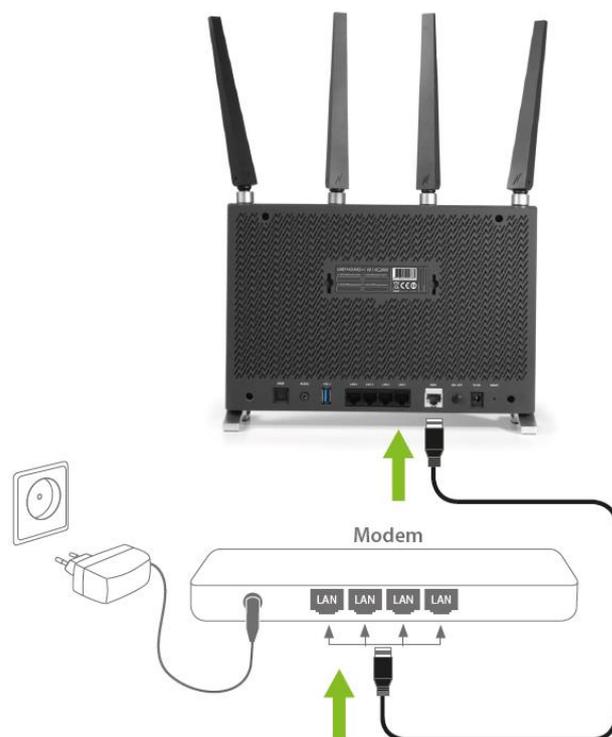
# Network and System Requirements

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 Router

You can place the router on a desk or other flat surface, or you can mount it on a wall. For optimal performance, place your router in the center of your home (or your office) in a location that is away from any potential source of interference, such as a metal wall or microwave oven. This location must be close to a power connection and your ADSL/Cable modem.



Connect the supplied power-adaptor to the power inlet port and connect it to a wall outlet. Switch the router on by pushing the button on the back of the device. The router automatically enters the self-test phase. During self-test phase, the Greyhound logo will be blinking to indicate that this product is starting up.

# 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 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.

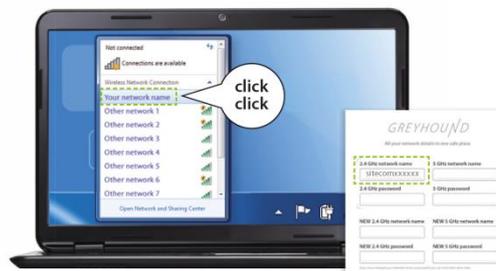


## Windows, OPS Connection

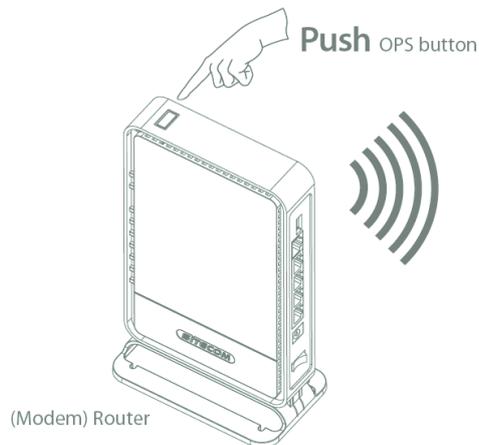
- Click on the icon for wireless connectivity. This is usually located in the System Tray, next to the clock.



- 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 the 2.4GHz button. For 5GHz, press the 5GHz button.

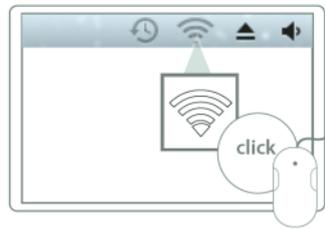


- Wait for the icon to display that it's connected to the network.



## Mac OSX

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



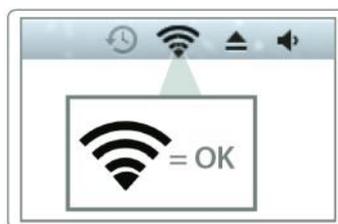
- Select the Sitecom network. The correct network name can be found on the sticker on bottom of the router, or in the Network Details Folder.



- 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.



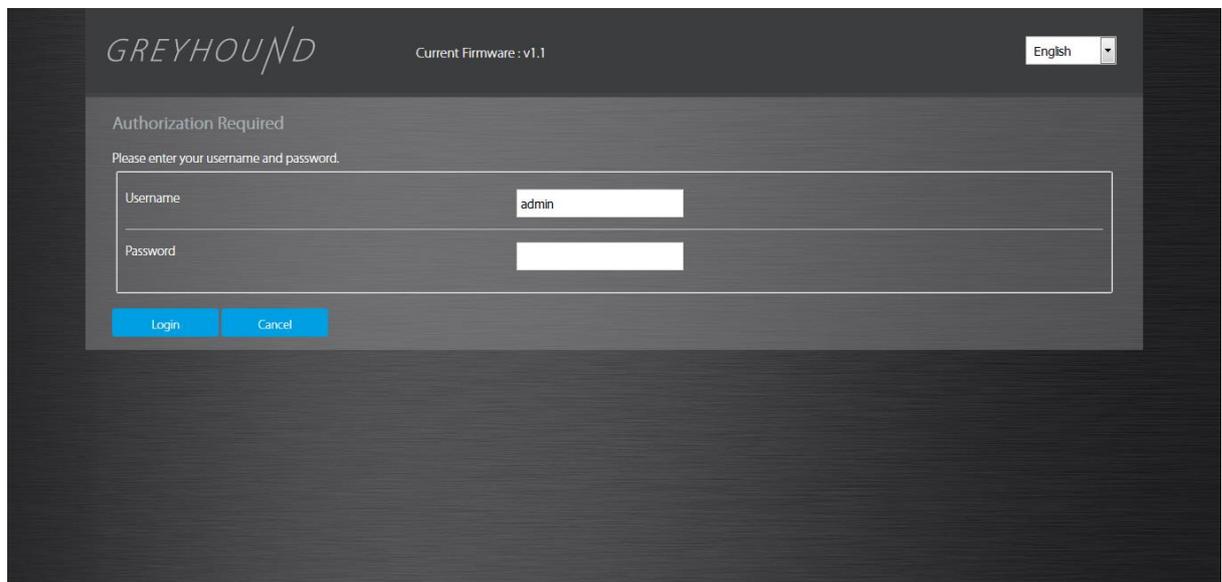
# Login to your Router

## LOGIN procedure

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



- Type `http://sitecom.router` in the address bar and press [Enter]. Alternatively, type <http://192.168.0.1> in the address bar and press [Enter] . You'll see the following screen:

A screenshot of the Greyhound Router login page. The page has a dark background. At the top left is the 'GREYHOUND' logo. To its right, it says 'Current Firmware: v1.1'. On the far right, there is a language dropdown menu set to 'English'. Below this is a grey box titled 'Authorization Required' with the text 'Please enter your username and password.' Inside this box are two input fields: 'Username' with 'admin' entered, and 'Password' which is empty. At the bottom of the box are two buttons: 'Login' and 'Cancel'.

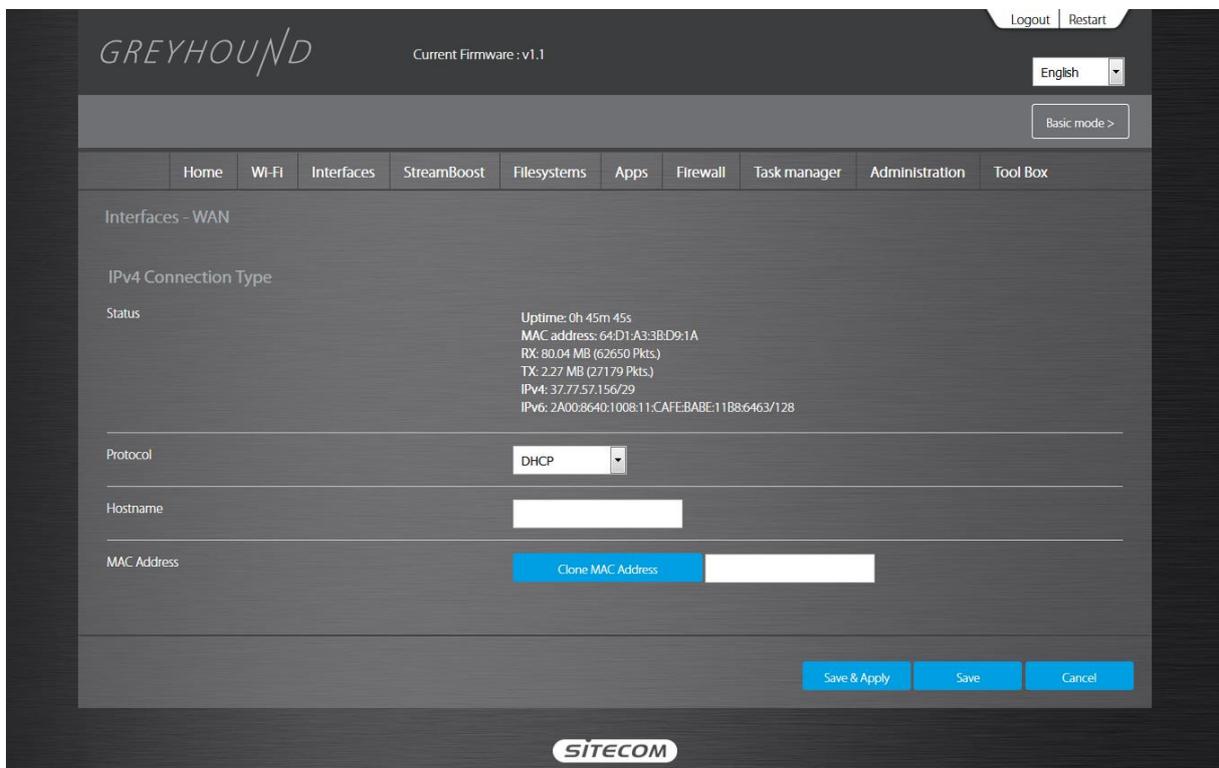
- Type the password. The default username is already filled in; the password can be found on the back label on the bottom of your router or in the Network Details Flyer.
- Click Login.
- You will see the home page of the Greyhound Router.

# Configure your Internet connection

From the menu, select "Advanced Mode".



From the top menu, select "Interfaces" and then "WAN" for configuring IPv4 connections.

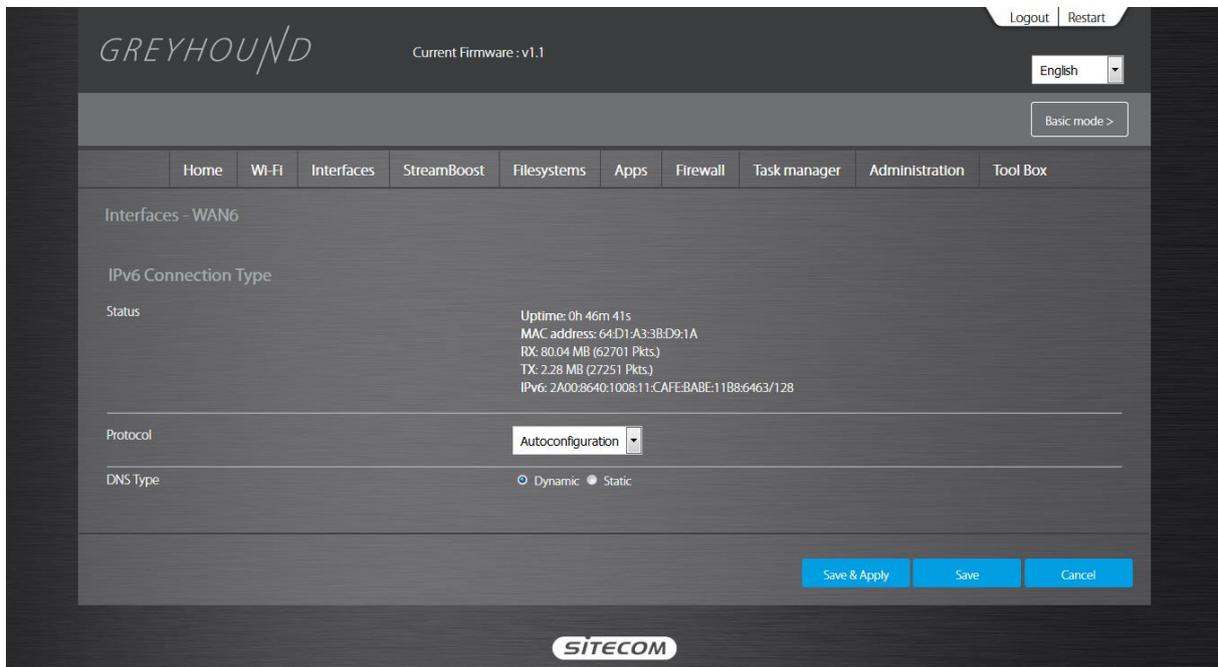


Depending on the chosen setting, you may need to enter your user name and password, MAC address or hostname in the following window. After you have entered the correct information, click **Save & Apply**.

## IPv6 Configuration

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

From the top menu, select "Interfaces" and then "WAN6" for configuring IPv6 connections.



### 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.

#### 6RD Mode

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

#### 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.

# Configure your Router – Basic Mode

This is the page you see when first logging in to the web interface. It contains easily accessible buttons that allow you to look at or modify the most commonly used features, laid out in a simple page.



## Wi-Fi settings

On this page you can see the network name (SSID) and password for both the 2.4GHz and 5GHz. By clicking the 'Edit' button you can enable or disable the Wi-Fi signal and security, change the network name and change the password. Click 'Apply' to save the modifications.

The screenshot displays the GREYHOUND router's web interface. At the top, it shows the brand name 'GREYHOUND', the current firmware version 'v1.1', and a language dropdown set to 'English'. Navigation options include '< Back to overview' and 'Advanced mode >'. The main content is divided into two columns. The left column is titled 'Wi-Fi settings' and contains two sections: '2.4 GHz Wi-fi Settings' and '5GHz Wi-fi Settings'. Each section has a 'Wi-Fi Signal' toggle (set to 'ON'), a 'Wi-Fi Name' field, a 'Wi-Fi Security' toggle (set to 'ON'), and a 'Wi-Fi Password' field. An 'Edit' button is located at the bottom of each section. The right column is titled 'Status' and displays 'Internet Status' as 'Connected', 'IP address' as '37.77.57.156', 'CPU Usage' as '2%' (with a progress bar), and 'RAM Usage' as '32%' (with a progress bar). Below the status panel is the 'Qualcomm® StreamBoost™' logo. The SITECOM logo is at the bottom center.

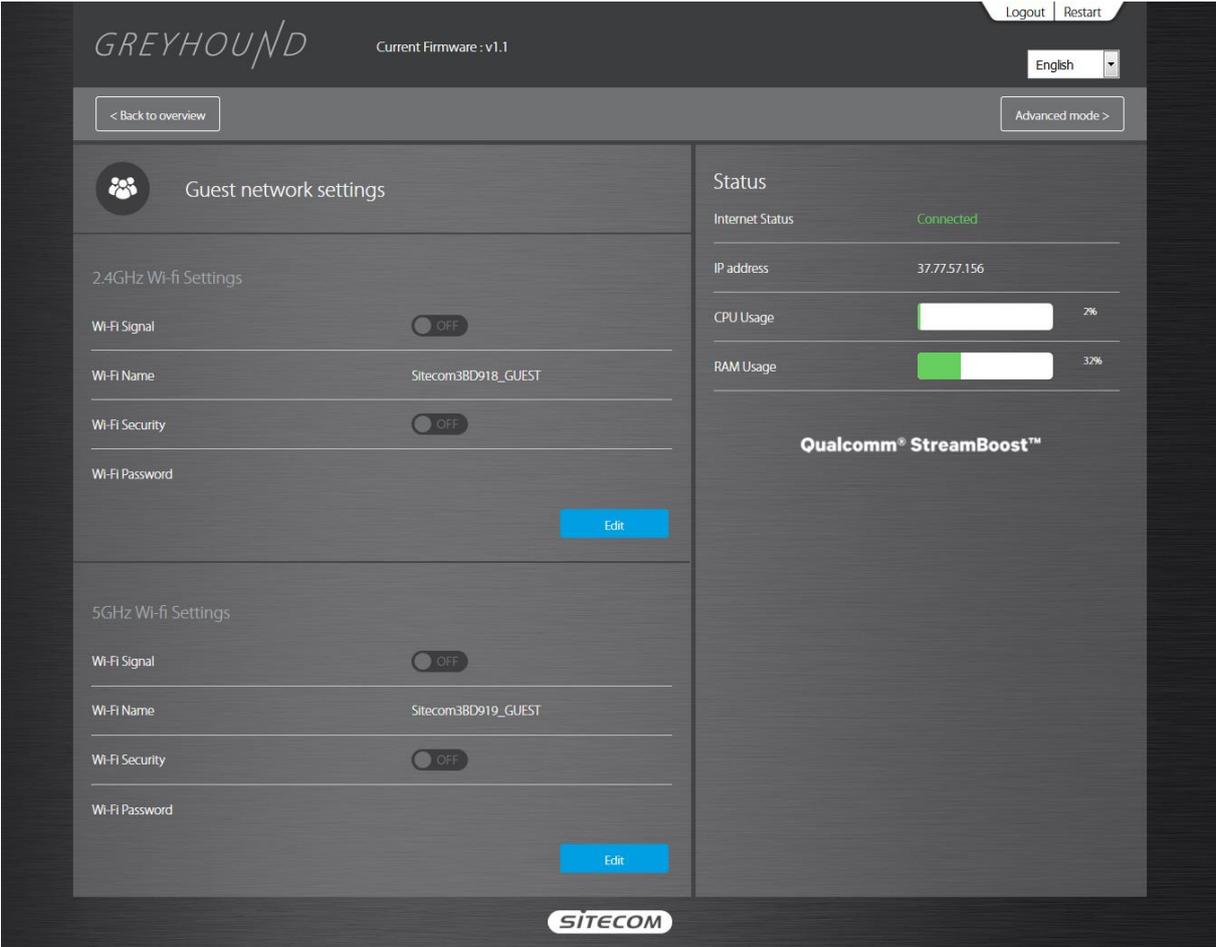
Setting	Value
Wi-Fi Signal (2.4 GHz)	ON
Wi-Fi Name (2.4 GHz)	Sitecom3BD918
Wi-Fi Security (2.4 GHz)	ON
Wi-Fi Password (2.4 GHz)	X3562L3TRC53
Wi-Fi Signal (5GHz)	ON
Wi-Fi Name (5GHz)	Sitecom3BD919
Wi-Fi Security (5GHz)	ON
Wi-Fi Password (5GHz)	38CZ3K7WP5YP

Metric	Value
Internet Status	Connected
IP address	37.77.57.156
CPU Usage	2%
RAM Usage	32%

# Guest Network Settings

The Guest network is a separate network that only allows an internet connection. There is no interaction between devices connected on the Guest network, as well as between the Guest network and the regular Wi-Fi network.

On this page you can see the network name (SSID) and password for both the 2.4GHz and 5GHz Guest network. By clicking the 'Edit' button you can enable or disable the Wi-Fi signal and security, change the network name and change the password. Click 'Apply' to save the modifications.



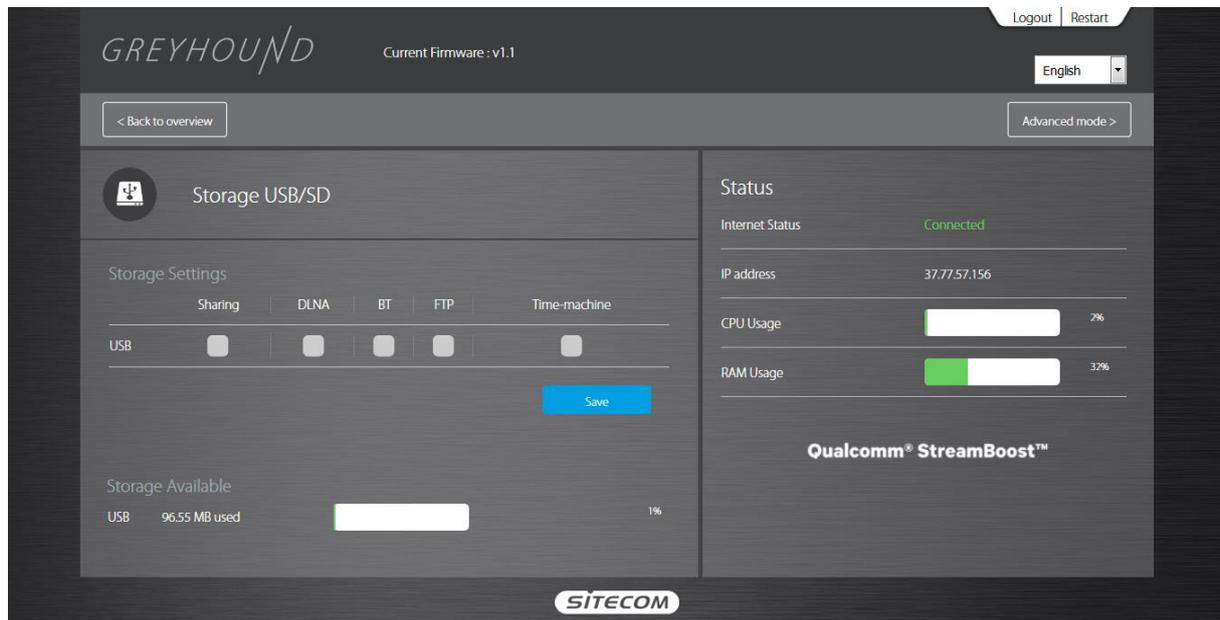
## OPS Activation

On this page you can activate the OPS/WPS function of the router. By pushing either of the buttons, the router starts transmitting the WPS beacon. You can also activate the function by pushing the physical buttons on the router as described a couple of pages back. After clicking the button you can connect your client to the network without entering a password. The time-out is 2 minutes.

The screenshot displays the 'OPS Activation' page of a GREYHOUND router. The interface includes a header with the brand name 'GREYHOUND', the current firmware version 'v1.1', and a language dropdown set to 'English'. Navigation options include '< Back to overview' and 'Advanced mode >'. The main content area is divided into two columns. The left column features a circular refresh icon and the title 'OPS Activation'. Below this, there are two rows for Wi-Fi bands: '2.4Ghz Wi-Fi' and '5Ghz Wi-Fi', each with a blue 'Activate OPS' button. The right column, titled 'Status', provides system information: 'Internet Status' is 'Connected', 'IP address' is '37.77.57.156', 'CPU Usage' is '2%' (represented by a green progress bar), and 'RAM Usage' is '3%' (represented by a green progress bar). At the bottom of the right column is the 'Qualcomm® StreamBoost™' logo. The SITECOM logo is centered at the very bottom of the page.

## Storage USB/SD

On this page you can activate the various functions for the USB and/or SD card connections that are present on the Greyhound router.



'Storage Settings' shows the devices that are connected to the USB and/or SD Card connections. By clicking the various options you can enable or disable the feature.

**Sharing** : By selecting this feature you enable the SMB server. A network share will become visible in your home network and you can copy files from and to this share. Additional configuration can be done in the Advanced mode under Filesystems – Network Share.

**DLNA** : By selecting this feature you enable the DLNA server. The media content (music/photos/videos) will be shared on the network and can be played back on devices that support this feature.

**BT** : By selecting this feature you enable the Bittorrent download client. Additional configuration can be done in the Advanced mode under Filesystems – Transmission.

**FTP** : By selecting this feature you enable the FTP server. This acts as a fileserver in your home network. Additional configuration can be done in the Advanced mode under Filesystems – FTP.

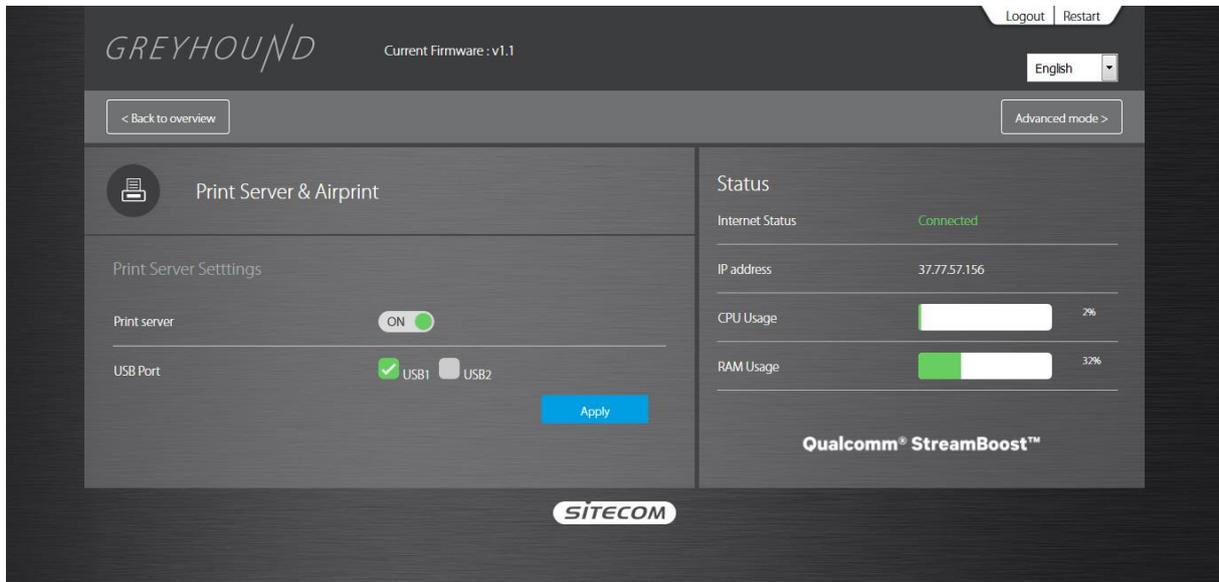
**Time machine** : By selecting this feature you enable the Time machine feature. Time machine is a backup software application that comes with Apple Mac OSX. Please note that this feature cannot co-exist with the Sharing feature.

'Storage Available' shows the available free space on the USB and/or SD Card devices that are connected to the router.

## Print Server & AirPrint

On this page you can enable or disable the Print Server function. You can connect a USB printer to one of the USB ports on the Greyhound router. Doing this results in the printer becoming a network device, so every client device on the network can print to this printer. The Sitecom USB Control Center software is used for this, which is described further down in this manual.

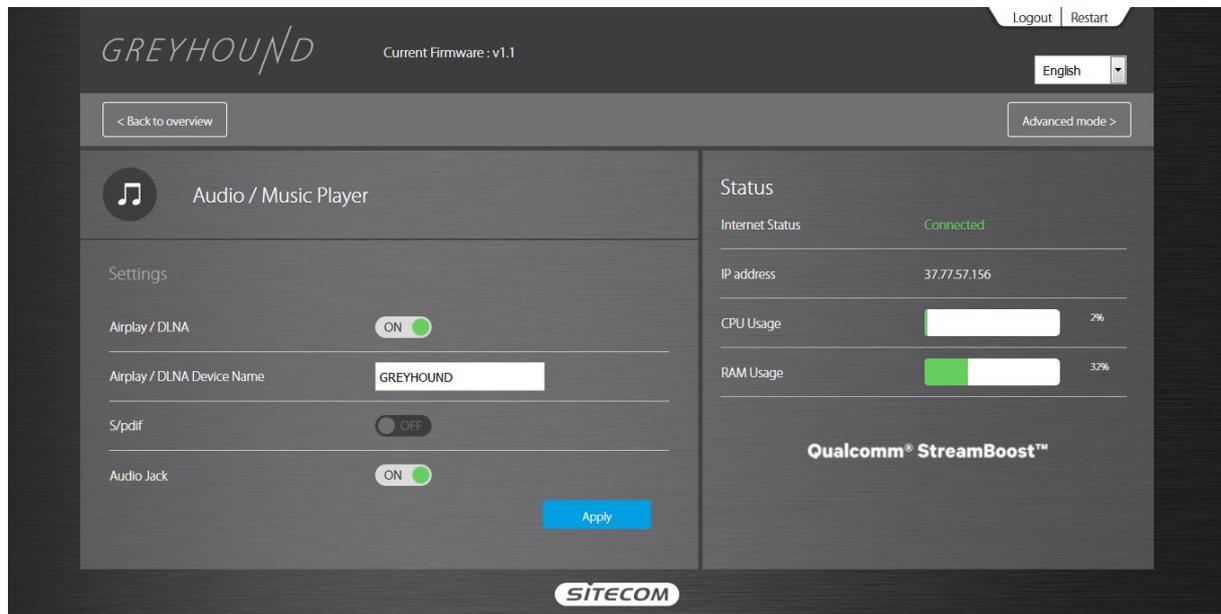
AirPrint is a feature used on Apple Mac OS X and Apple iOS devices. Using this method you can directly print to the printer without installing drivers or configuring anything.



After enabling the Print server you can choose between the two available USB ports. The print server can only be active on a single USB port at a time.

## Audio / Music Player

On this page you can configure the built-in audio stream functionality. The Greyhound supports both Apple AirPlay and DLNA.



The screenshot displays the 'Audio / Music Player' configuration page in the GREYHOUND web interface. The page is divided into two main sections: 'Settings' and 'Status'.

**Settings:**

- Airplay / DLNA:** A toggle switch is set to 'ON' (indicated by a green dot).
- Airplay / DLNA Device Name:** A text input field contains the name 'GREYHOUND'.
- S/pdif:** A toggle switch is set to 'OFF' (indicated by a grey dot).
- Audio Jack:** A toggle switch is set to 'ON' (indicated by a green dot).

An 'Apply' button is located at the bottom right of the settings section.

**Status:**

- Internet Status:** Connected (green text).
- IP address:** 37.77.57.156.
- CPU Usage:** 2% (represented by a progress bar).
- RAM Usage:** 32% (represented by a progress bar).

The Qualcomm® StreamBoost™ logo is displayed at the bottom of the status section.

The top of the interface shows the 'GREYHOUND' logo, 'Current Firmware: v1.1', 'Logout | Restart' links, and a language dropdown menu set to 'English'. Navigation buttons for '< Back to overview' and 'Advanced mode >' are also present.

After enabling the feature, you can assign a device name. This is the name that will be shown in the list of available output devices on an AirPlay/DLNA compatible player. You can also choose between the S/PDIF and 3.5mm jack output on the back of the router. Both outputs cannot be active at the same time. Click 'Apply' to save the settings.

## StreamBoost Technology

On this page you can modify the StreamBoost settings. StreamBoost is automatic network bandwidth management / traffic shaping technology. It intelligently manages network bandwidth and latency, giving each application the bandwidth it needs for the best possible user experience.

The screenshot shows the StreamBoost Technology settings page in the GREYHOUND router interface. The page is titled "StreamBoost Technology" and features a "StreamBoost" section with the following settings:

- Enable StreamBoost:
- Up Limit (Mbps):
- Down Limit (Mbps):

Below the settings is a "Run Bandwidth Test" section with a "Test Bandwidth" button. A "Save & Apply" button is located at the bottom right of the settings section.

The "StreamBoost Graph" section shows a network diagram with a central router icon and several device icons (laptop, smartphone, tablet) connected to it. A blue globe icon is positioned above the router.

On the right side of the page, there is a "Status" section with the following information:

- Internet Status: Connected
- IP address: 37.77.57.156
- CPU Usage:
- RAM Usage:

The Qualcomm StreamBoost logo is displayed below the status section. The SITECOM logo is visible at the bottom center of the page.

When the page is opened for the first time, StreamBoost tries to detect the speed of the internet connection by running a speedtest. You can also manually enter the details of your internet connection, or use the 'Test Bandwidth' button to run the test again.

Below the settings you'll see a graph representing your home network and all devices in it. You can also view the used bandwidth in real time. You can click on the device icon to display more information. Note that devices may not show up until they transmit data.

## Firmware update

On this page you can view the current firmware version that's installed in the router. It will also show the available version on our update server.

The screenshot displays the 'Firmware Update' page of a GREYHOUND router. The page is dark-themed and features the following elements:

- Header:** 'GREYHOUND' logo, 'Current Firmware: v1.1', 'Logout | Restart' links, and a language dropdown set to 'English'.
- Navigation:** '< Back to overview' button and 'Advanced mode >' button.
- Main Content:**
  - Firmware Update:** A circular progress indicator.
  - Firmware Settings:**
    - Current Firmware version: 1.1
    - Available Firmware version: 1.1
    - 'View Changelog' button
    - 'Check for new firmware' button
- Status Panel (Right):**
  - Internet Status: Connected
  - IP address: 37.77.57.156
  - CPU Usage: 2% (represented by a progress bar)
  - RAM Usage: 32% (represented by a progress bar)
  - Qualcomm® StreamBoost™ logo

The SITECOM logo is visible at the bottom center of the page.

The 'View Changelog' button shows the changes that have been made in the firmware version that's available on our update server. The 'Check for new firmware' button allows the router to check on the update server for a new firmware version.

# Configure your Router – Advanced Mode

By clicking the 'Advanced Mode' button you'll enter this mode. The Advanced Mode allows for a more extensive configuration of the various features of the router.

## Home

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.

The screenshot shows the 'System' status page of a GREYHOUND router. The page has a dark theme with a navigation menu at the top. The 'System' section displays various status metrics, including Model Name, Firmware Version, Kernel Version, Local Time, and Uptime. Below this, the 'Memory' section shows four categories: Total Available, Free, Cached, and Buffered, each with a progress bar and percentage.

System	
Model Name	GREYHOUND
Firmware Version	1.1
Kernel Version	3.4.103
Local Time	Mon Feb 8 13:28:29 2016
Uptime	0h 43m 57s

Memory	
Total Available	329400 kB / 478456 kB 68%
Free	277348 kB / 478456 kB 57%
Cached	38764 kB / 478456 kB 8%
Buffered	13288 kB / 478456 kB 2%

# Wi-Fi 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, amongst others.

## Wi-Fi Overview

On this page you can enable or disable the Wireless radios separately, including the Guest network. By clicking the Edit button you enter the settings page.

GREYHOUND Current Firmware: v1.1 Logout Restart English Basic mode >

Home Wi-Fi Interfaces StreamBoost Filesystems Apps Firewall Task manager Administration Tool Box

### Wireless Overview

**802.11B/G/N Wireless Controller** Channel: 8 (2.447 GHz) [Scan](#)

SSID: Sitecom3BD918 | Mode: Master BSSID: 64:D1:A3:3B:D9:18 | Encryption: WPA2/PSK AES [Disabled](#) [Edit](#)

SSID: Sitecom3BD918\_GUEST | Mode: Master [Enabled](#) [Edit](#)  
*Wireless is disabled or not associated*

**802.11AC/N Wireless Controller** Channel: 44 (5.220 GHz) [Scan](#)

SSID: Sitecom3BD919 | Mode: Master BSSID: 64:D1:A3:3B:D9:19 | Encryption: WPA2/PSK AES [Disabled](#) [Edit](#)

SSID: Sitecom3BD919\_GUEST | Mode: Master [Enabled](#) [Edit](#)  
*Wireless is disabled or not associated*

### Associated Stations

SSID	MAC address	IPv4 Address	RSSI
Sitecom3BD918	fc:f8:aee6:ae:24	192.168.0.248	-29 dBm

SITECOM

## Wi-Fi settings – Device Configuration

Device Configuration

Status Mode: Master | SSID: Sitecom3BD918  
BSSID: 64:D1:A3:38:D9:18 | Encryption: psk2+ccmp  
Channel: 8 (2.447 GHz)

Wireless network is enabled  Enabled  Disabled

Green Mode  Enabled  Disabled

Band Steering  Enabled  Disabled

Channel Auto

Transmit Power Auto

Mode 802.11 B/G/N

HT mode 40 MHz

Data Rate Auto

Fragmentation Threshold 2346 ⓘ

RTS Threshold 2346 ⓘ

Beacon Interval 100 ⓘ

DTIM Period 2 ⓘ

Preamble Type  Long Preamble  Short Preamble

CTS Protection  Auto  Always  None

- **Green Mode:** This mode dynamically adjusts the system's Wi-Fi transmit power depending on the distance between the router and the client device.
- **Band Steering:** Band steering is a technology that detects whether or not the wireless client is dual-band capable, and if it is, it will push the client to connect to the less congested 5GHz network. Please note that the 2.4GHz and 5GHz SSID's need to be identical for this feature to work.
- **Channel:** The channel used by the wireless LAN. All devices in the same wireless LAN should use the same channel.
- **Transmit Power:** The transmit power can be set to a bare minimum or maximum power for better performance or power saving.
- **Mode:** 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.
- **HT Mode:** Allows you to specify whether the AP should transmit on 20MHz or 40MHz bandwidth.
- **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.
- **Fragmentation Threshold:** This feature 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.

- **DTIM Period:** DTIM stands for Delivery traffic indication map or message and is an additional message added after the normal beacon broadcast by your router or access point. Depending on the timing set for your router, the router “buffers” broadcast and multicast data and lets clients know when to “wake up” to receive those data.
- **Preamble Type:** The “Long Preamble” can provide better wireless LAN compatibility while the “Short Preamble” can provide better wireless LAN performance.
- **CTS Protection:** Clear to send (CTS) protection mode is a wireless setting that ensures clients on a network can connect to an AP when many communication devices are present.

## Wi-Fi settings – Interface Configuration

The screenshot displays the router's configuration page for Wi-Fi settings. It is organized into three main sections:

- Interface Configuration:**
  - Mode: Access Point
  - ESSID: Sitecom3BD918
  - Hide ESSID:
  - Separate Clients:  Prevents client-to-client communication
- Wireless Security:**
  - Wireless Security:  Enabled  Disabled
  - Security Mode: WPA2-PSK
  - Encryption: AES
  - Passphrase: [masked] [show key](#)
  - Group Key Update Interval: 3600
- MAC filter:**
  - MAC address Filter: disable

- **ESSID:** This is the name of the wireless signal which is broadcasted. All the devices in the same wireless LAN should have the same SSID.
- **Hide ESSID:** Hides the network name (SSID) from being broadcast publicly.
- **Separate Clients:** Prevents client-to-client communication on this network.

## 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.

The screenshot displays the configuration page for a wireless interface. It is divided into three main sections: Interface Configuration, Wireless Security, and MAC filter. In the Interface Configuration section, the Mode is set to 'Access Point' and the ESSID is 'Sitecom3BD918'. The 'Hide ESSID' and 'Separate Clients' options are disabled. The Wireless Security section has 'Wireless Security' turned on, with 'Security Mode' set to 'WPA2-PSK' and 'Encryption' set to 'AES'. A passphrase is entered, and there is a 'show key' button. The 'Group Key Update Interval' is set to 3600. In the MAC filter section, the 'MAC address Filter' is set to 'disable'.

## Disable

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

## WEP

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.

- **Input 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.
- **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.
- **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 **Save & Apply** at the bottom of the screen to save the above configuration.

## WPA-PSK/WPA2-PSK/WPA-PSK Mixed

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.

- **Group Key Update Interval:** Enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
- **Passphrase:** Enter a Wi-Fi password (key/passphrase). The password must be between 8-63 characters.

#### **WPA-/WPA2-/WPA Mixed-Enterprise**

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.

- **Group Key Update Interval:** Enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
- **RADIUS Server:** Enter the IP Address of your RADIUS server.
- **RADIUS Server Port:** Enter the port you are using with your RADIUS server. The default port is 1812.
- **RADIUS Secret:** Enter the security key.

## MAC Filter



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. You can choose between 'Allow listed only' or 'Allow all except listed'.
- **Adding an address into the list:** Select the client to be added from the list and then click "Save & Apply". You can add more clients by pressing the + sign.
- **Remove an address from the list:** If you want to remove a client from the "MAC List ", select the client that you want to remove in the list and then click the - sign. Click "Save & Apply" to save.

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

## Wi-Fi - Guest Network

Guest Network Access provides secure Wi-Fi access for guests to share your home or office network. When you have visitors in your house, apartment, or workplace, you can enable the guest network for them. You can set different access options for Guest Network users, which is very effective to ensure the security and privacy of your main network.

The screenshot shows a configuration interface for a Guest Network. It is organized into five main sections:

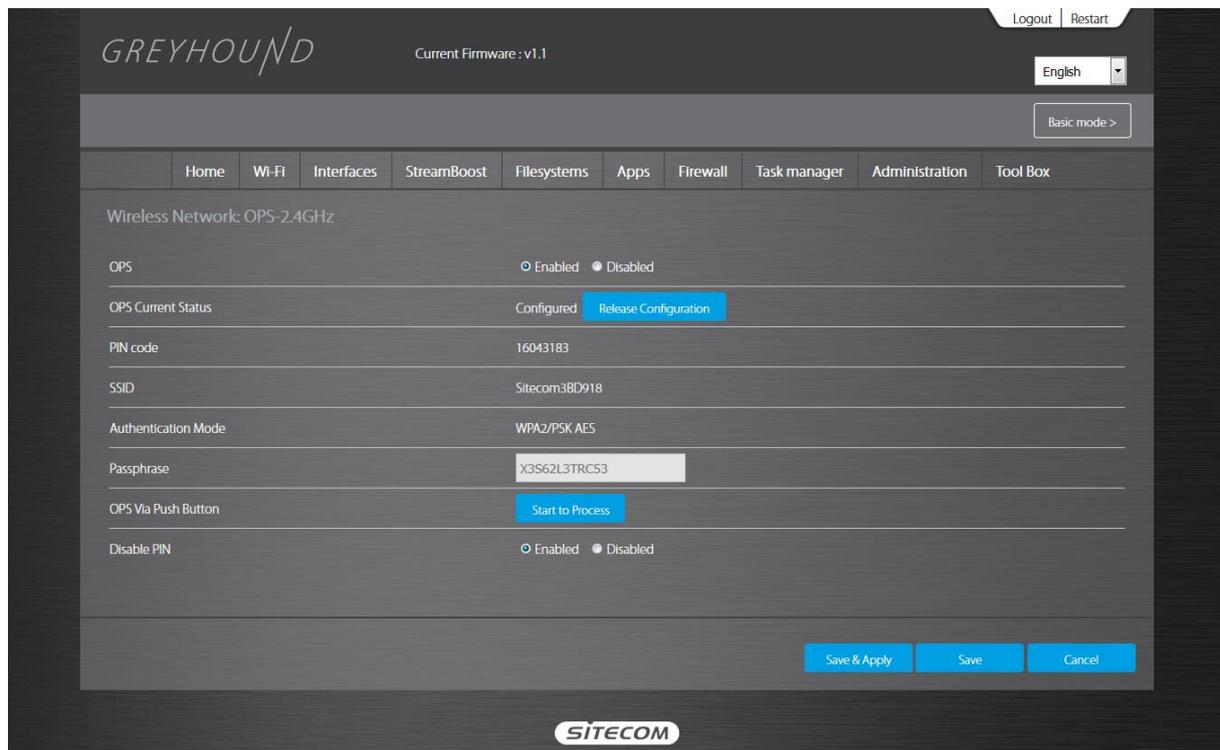
- Device Configuration:** Includes a toggle for 'Guest network' (set to Enabled), an 'ESSID' field with the value 'Sitecom3BD918\_GUEST', a 'Hide ESSID' toggle (disabled), and a 'Separate Clients' checkbox (checked) with the note 'Prevents client-to-client communication'.
- Wireless Security:** Includes a toggle for 'Wireless Security' (set to Disabled).
- MAC filter:** Includes a 'MAC address Filter' dropdown menu set to 'disable'.
- Manual IP Settings:** Includes an 'IP Address' field (192.168.169.1) and a 'Subnet Mask' field (255.255.255.0).
- Automatic DHCP Server Settings:** Includes a 'Starting IP Address' field (192.168.169.100), an 'Ending IP Address' field (192.168.169.149), and a 'WINS Server IP' field (0.0.0.0).

- **ESSID:** 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.
- **Hide ESSID:** Hides the network name (SSID) from being broadcast publicly.
- **Separate Clients:** Prevents client-to-client communication on this network.
- **IP Address:** The gateway address for the Guest Network. This address cannot be the same as the default router's IP Address.
- **Subnet Mask:** The Subnet Mask for the Guest network. This address cannot be the same as the default router's Subnet Mask.
- **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 ~ 192.168.169.149. This address pool cannot be the same as the default router's DHCP Address pool.

## WiFi – OPS

One Push Setup (OPS) 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 OPS will do the rest for you.

The wireless router supports two types of OPS: OPS via Push Button and OPS 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 OPS mode, and switch the wireless router to OPS mode. You can simply push the OPS 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 OPS mode, then fill-in the PIN code of the wireless client through the web configuration interface of the wireless router.



- **OPS:** Check the box to enable OPS function and uncheck it to disable the OPS function.
- **OPS 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'.
- **Pin Code:** This is the OPS PIN code of the wireless router. You may need this information when connecting to other OPS/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.
- **OPS via Push Button:** Press the button to start the OPS process. The router will wait for the OPS/WPS request from the wireless devices within 2 minutes.

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

# Interface Settings

## Interfaces – Overview

On this page you can see the various wired connections of your router. You can also connect and disconnect the WAN port to troubleshoot your internet connection. By clicking 'Edit' you'll enter the settings page.

The screenshot displays the GREYHOUND router's web interface. At the top, the logo 'GREYHOUND' is on the left, 'Current Firmware : v1.1' is in the center, and 'Logout | Restart' is on the right. A language dropdown menu is set to 'English', and a 'Basic mode >' button is visible. A navigation menu includes 'Home', 'Wi-Fi', 'Interfaces', 'StreamBoost', 'Filesystems', 'Apps', 'Firewall', 'Task manager', 'Administration', and 'Tool Box'. The 'Interfaces' section is active, showing a table with three rows: LAN, WAN, and WAN6. Each row lists network details and provides 'Connect', 'Disconnect', and 'Edit' buttons.

Network	Status	Actions
LAN	Uptime: 0h 45m 17s MAC address: 64:D1:A3:3B:D9:18 RX: 2.16 MB (31669 Pkts) TX: 88.47 MB (76836 Pkts) IPv4: 192.168.0.1/24 IPv6: 2A00:8640:1008:8500:0:0:0:1/64	<a href="#">Connect</a> <a href="#">Edit</a>
WAN	Uptime: 0h 45m 11s MAC address: 64:D1:A3:3B:D9:1A RX: 80.04 MB (62624 Pkts) TX: 2.27 MB (27145 Pkts) IPv4: 37.77.57.156/29 IPv6: 2A00:8640:1008:11:CAFE:BABE:11B8:6463/128	<a href="#">Connect</a> <a href="#">Disconnect</a> <a href="#">Edit</a>
WAN6	Uptime: 0h 45m 12s MAC address: 64:D1:A3:3B:D9:1A RX: 80.04 MB (62624 Pkts) TX: 2.27 MB (27145 Pkts) IPv6: 2A00:8640:1008:11:CAFE:BABE:11B8:6463/128	<a href="#">Connect</a> <a href="#">Disconnect</a> <a href="#">Edit</a>

SITECOM

## Interfaces - LAN

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

The screenshot displays the LAN configuration interface, divided into three main sections:

- General Setup:** This section shows the router's status (Uptime: 0h 45m 29s, MAC address: 64D1:A3:3B:D9:18, RX: 2.17 MB (31770 Pkts), TX: 88.60 MB (77008 Pkts.), IPv4: 192.168.0.1/24, IPv6: 2A00:8640:1008:8500::0:0:1/64). Below this, the IPv4 address is set to 192.168.0.1, the IPv4 netmask is 255.255.255.0, and the DNS Type is set to Static.
- Physical Settings:** This section includes the 'Enable STP' checkbox, which is currently unchecked. A tooltip indicates that enabling STP 'Enables the Spanning Tree Protocol on this bridge'.
- DHCP Server:** This section allows for configuring the DHCP server. The DHCP server is currently disabled. The IP address pool is set from 100 to 249, and the lease time is set to Half day. The domain name is set to sitecom.router.

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

- **IPv4 address 192.168.0.1:** It is the router's LAN IP address (Your LAN clients default gateway IP address).
- **IPv4 netmask 255.255.255.0:** Specify a Subnet Mask for your LAN segment.
- **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.
- **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
- **Lease Time:** Half day. 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.
- **Domain Name:** You can specify a Domain Name for your LAN or just keep the default (sitecom.router).

## Static DHCP IP

If you want a client to always have the same IP address assigned, you can create a DHCP reservation. The router will assign the IP address only to that client. This IP address must be within the DHCP IP Address Range specified above, under DHCP Server.



Static DHCP IP

IP address	MAC address
<i>This section contains no values yet</i>	

Click the + sign to add a client to the list.

- **IP Address:** Enter the IP Address you want to assign to the client. This IP Address must be within the DHCP IP Address Range.
- **MAC address:** Enter the MAC Address of the client.

Click 'Save & Apply' to save your selections.

## Interfaces – WAN

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 **Save & Apply**.

The screenshot shows the WAN configuration page in the GREYHOUND web interface. The page title is "Interfaces - WAN". It displays the current IPv4 connection type as DHCP. The status section shows system uptime and network statistics. Configuration fields for Protocol, Hostname, and MAC Address are visible, with a "Clone MAC Address" button next to the MAC field. The interface includes a navigation menu, a language dropdown, and a "Basic mode" toggle.

GREYHOUND Current Firmware: v1.1 Logout Restart English Basic mode >

Home Wi-Fi Interfaces StreamBoost Filesystems Apps Firewall Task manager Administration Tool Box

Interfaces - WAN

IPv4 Connection Type

Status Uptime: 0h 45m 45s  
MAC address: 64D1:A3:BD9:1A  
RX: 80.04 MB (62650 Pkts.)  
TX: 2.27 MB (27179 Pkts.)  
IPv4: 37.77.57.156/29  
IPv6: 2A00:8640:1008:11:CAFE:BABE:11B8:6463/128

Protocol DHCP

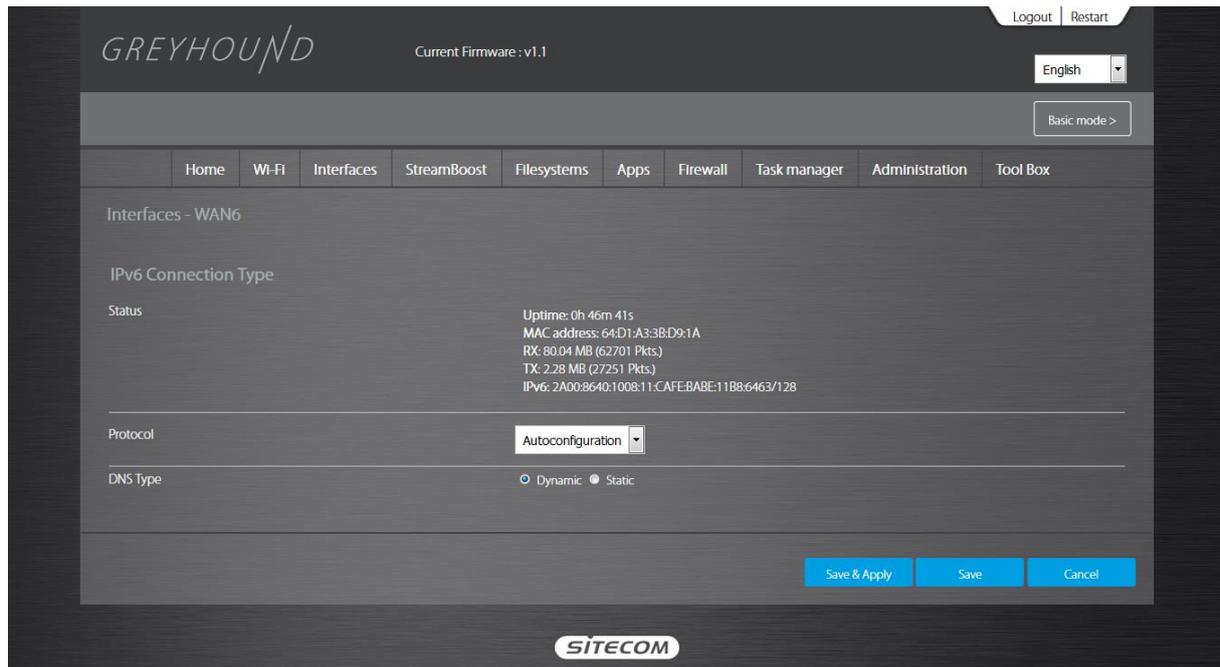
Hostname

MAC Address Clone MAC Address

Save & Apply Save Cancel

SITECOM

## Interfaces – WAN6



### 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.

#### 6RD Mode

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

#### 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.

## Interfaces – Switch

A VLAN is a switched network that is logically segmented by function, project team, or application, without regard to the physical locations of the users. VLANs have the same attributes as physical LANs, but you can group end stations even if they are not physically located on the same LAN segment. Any switch module port can belong to a VLAN, and unicast, broadcast, and multicast packets are forwarded and flooded only to end stations in the VLAN.

GREYHOUND Current Firmware: v1.1 Logout Restart English Basic mode >

Home WI-FI Interfaces StreamBoost Filesystems Apps Firewall Task manager Administration Tool Box

Switch

Enable VLAN functionality

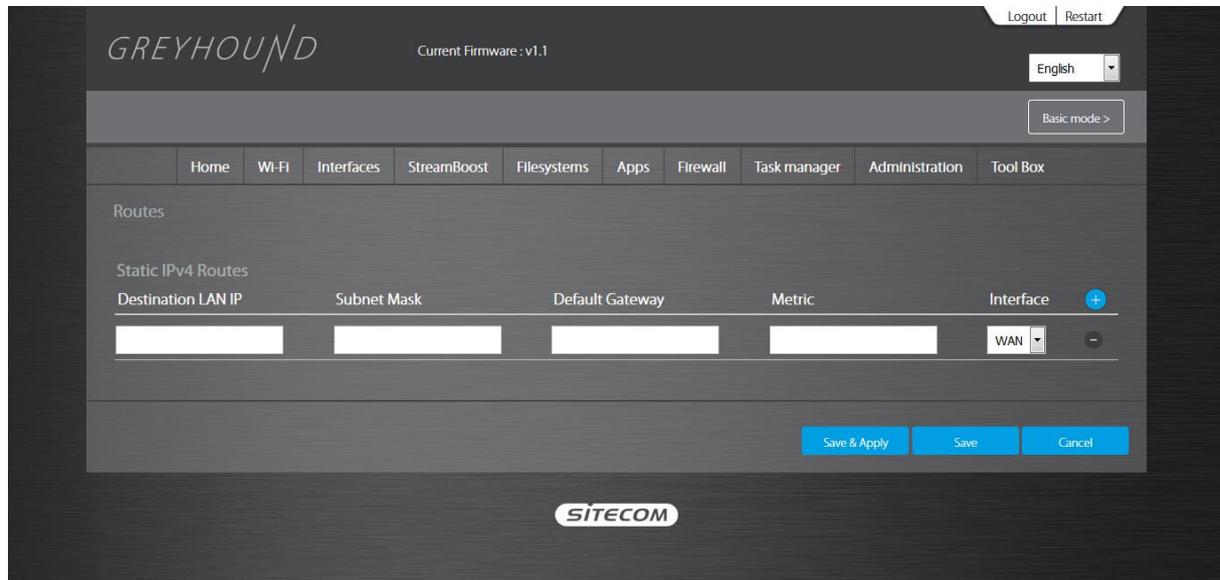
VLAN ID	CPU	LAN 4	LAN 3	LAN 2	LAN 1	WAN	RGMI	
1	1000baseT full-duplex off	no link untagged	no link untagged	no link untagged	no link untagged	100baseT full-duplex off	1000baseT full-duplex untagged	-
2	untagged	off	off	off	off	untagged	off	-

Save & Apply Save Cancel

SITECOM

## Interfaces – Routes

Static routing is a form of routing that occurs when a router uses a manually-configured routing entry, rather than information from a dynamic routing traffic. Unlike dynamic routing, static routes are fixed and do not change if the network is changed or reconfigured.



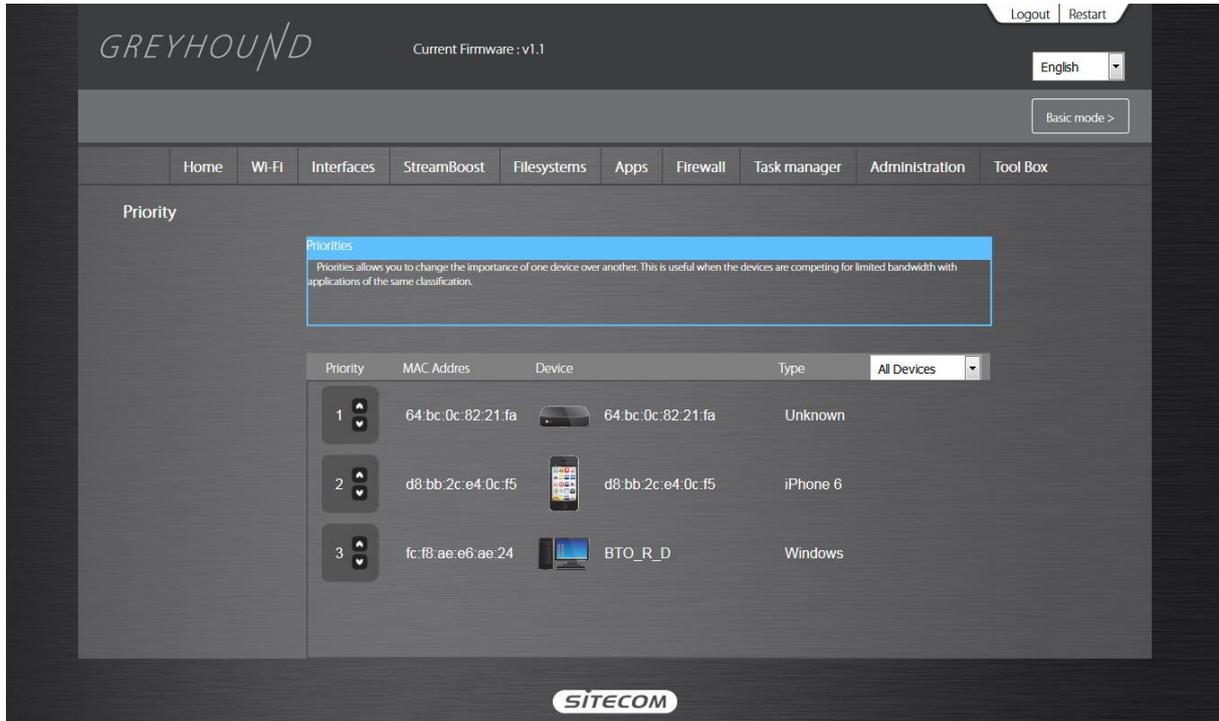
- **Destination LAN IP:** The IP address of the network to include in the routing table.
- **Subnet Mask:** The subnet mask for this destination. If the destination is a single host, type 255.255.255.255
- **Default Gateway:** This must be a router on the same LAN segment as the router.
- **Metric:** Represents the number of routers between your network and the destination.
- **Interface:** Select WAN or LAN, depending on which side you want the route to be active.

Click the + sign to add more routes. Click 'Save & Apply' to save the settings.

# StreamBoost

StreamBoost is automatic network bandwidth management / traffic shaping technology. It intelligently manages network bandwidth and latency, giving each application the bandwidth it needs for the best possible user experience.

## StreamBoost – Priorities



The screenshot shows the StreamBoost web interface. At the top, there is a header with the 'GREYHOUND' logo, 'Current Firmware: v1.1', and a language dropdown set to 'English'. A 'Basic mode >' button is also present. Below the header is a navigation menu with options: Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The main content area is titled 'Priority' and contains a blue box with the following text: 'Priorities allows you to change the importance of one device over another. This is useful when the devices are competing for limited bandwidth with applications of the same classification.' Below this is a table with columns for Priority, MAC Address, Device, and Type. The table lists three devices: an Unknown device at priority 1, an iPhone 6 at priority 2, and a Windows device (BTO\_R\_D) at priority 3. Each device entry has a small box with up and down arrows to adjust its priority.

Priority	MAC Address	Device	Type
1	64:bc:0c:82:21:fa	64:bc:0c:82:21:fa	Unknown
2	d8:bb:2c:e4:0c:f5	d8:bb:2c:e4:0c:f5	iPhone 6
3	fc:f8:ae:e6:ae:24	BTO_R_D	Windows

You can select the priority of each device on your local network. The priority control buttons are the arrows within the boxes to the left of each icon representing a device. Click the up arrow to move the device higher in the priority list, or click the down arrow to lower the priority.

# StreamBoost – Up Time



Here you can view the Active Time (in minutes) and see what applications are being used. You can select the time frame from the drop-down menu. Choose from last month, last week, or last day.

## StreamBoost – Downloads



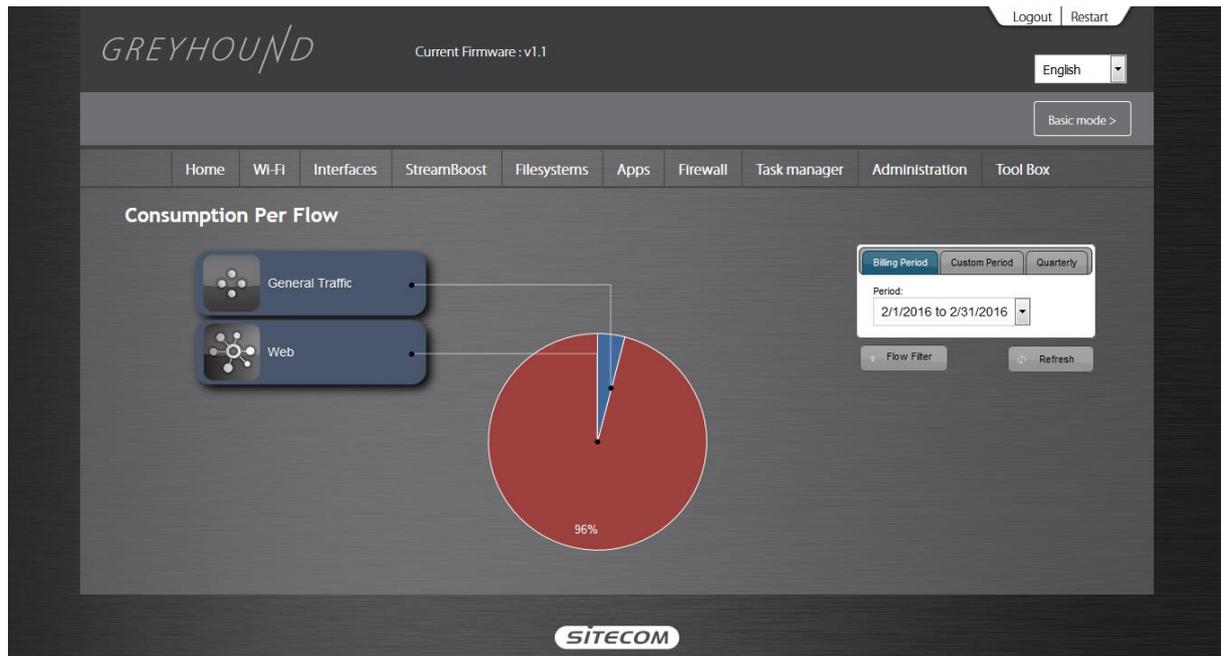
Here you can view the type of traffic that is mostly used on your network, including the consumed bandwidth.

## StreamBoost – Consumption Per Device



Here you can view the bandwidth consumption per device. You can click on the device to highlight it. You can select the time frame from the drop-down menu.

## StreamBoost – Consumption per Flow



Here you can view the bandwidth consumption per traffic type. You can click on traffic type to highlight it. You can select the time frame from the drop-down menu.

# File System Settings

## File Systems – Mount Points

The screenshot displays the 'File Systems' configuration page in the GREYHOUND firmware. The interface includes a navigation menu with options like Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The 'Filesystems' section is active, showing a table of mounted file systems.

Filesystem	Mount Points	Available	Used
rootfs	/	4.76 MB / 5.13 MB	7% (372.00 KB)
mtdata.rootfs	/rom	0.00 B / 21.75 MB	100% (21.75 MB)
tmpfs	/tmp	232.52 MB / 233.62 MB	0% (1.10 MB)
tmpfs	/dev	512.00 KB / 512.00 KB	0% (0.00 B)
/dev/mtdatablock14	/overlay	4.76 MB / 5.13 MB	7% (372.00 KB)
overlayfs/overlay	/	4.76 MB / 5.13 MB	7% (372.00 KB)
/dev/sda1	/mnt/sda1	14.34 GB / 14.44 GB	1% (96.55 MB)

Below the table, there is a section for 'Mount Points' with a table to define where a memory device will be attached to the filesystem. The table has columns for Enabled, Device, Mount Points, Filesystem, Options, Root, and Check. A plus sign icon is visible in the Check column.

*This section contains no values yet*

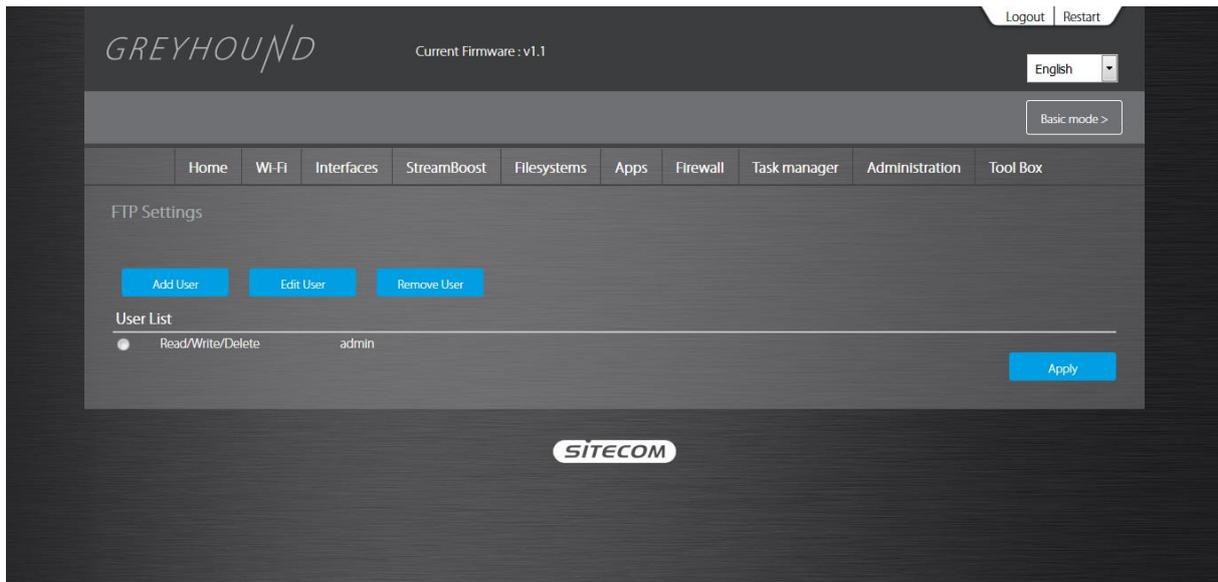
The 'SWAP' section is also visible, with a description: 'If your physical memory is insufficient unused data can be temporarily swapped to a swap-device resulting in a higher amount of usable RAM. Be aware that swapping data is a very slow process as the swap-device cannot be accessed with the high datarates of the RAM.' It includes a table with columns for Enabled and Device, and a plus sign icon in the Device column.

*This section contains no values yet*

At the bottom of the page, there are three buttons: 'Save & Apply', 'Save', and 'Cancel'. The SITECOM logo is located at the very bottom center.

On this page you will find all the storage points that the OpenWRT operating system uses. Under the 'Mount Points' section you'll find the attached USB storage devices.

## File Systems – FTP



On this page you can configure the users that have access to the FTP server. The default admin user already has access.

- **Add User:** Click here to add a new user. You can enter a username and a password and choose to assign 'Read', 'Read/Write', 'Read/Delete' or 'All' rights to the files and folders on the storage device attached to the router.
- **Edit User:** Click on the radio button in front of the user you want to edit and click the button. Now you can modify the same settings as in the 'Add User' section.
- **Remove User:** Click on the radio button in front of the user you want to edit and click the button. The user will be removed.

## File Systems – Network Shares

The screenshot shows the GREYHOUND network management interface. At the top, the logo 'GREYHOUND' is on the left, 'Current Firmware: v1.1' is in the center, and 'Logout | Restart' is on the right. Below the logo is a language dropdown set to 'English' and a 'Basic mode >' button. A navigation menu includes 'Home', 'Wi-Fi', 'Interfaces', 'StreamBoost', 'Filesystems', 'Apps', 'Firewall', 'Task manager', 'Administration', and 'Tool Box'. The 'Filesystems' menu item is selected, leading to the 'Network Shares' section. Under 'Samba', there are six input fields: 'Server Name' (containing 'SMBSERVER'), 'Workgroup' (containing 'WORKGROUP'), 'Description (optional)' (empty), 'Administrator Username' (containing 'admin'), 'New Password' (empty), and 'Confirm Password' (empty). At the bottom right of the form are three buttons: 'Save & Apply', 'Save', and 'Cancel'. The 'SITECOM' logo is at the very bottom center.

On this page you can edit the settings for the SMB server.

- **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

## File Systems – Transmission

The screenshot shows the Transmission settings page in the Greyhound web interface. The page is titled "Transmission" and is part of the "Filesystems" section. It features a navigation menu at the top with options like Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The settings are organized into three sections: Global settings, Bandwidth settings, and RPC settings. Each setting has a corresponding input field or checkbox.

**Global settings**

preallocation	Fast
Automatically start added torrents	<input checked="" type="checkbox"/>
DHT enabled	<input checked="" type="checkbox"/>
Encryption	Preferred
uTP enabled	<input checked="" type="checkbox"/>
Binding address IPv4	0.0.0.0
Binding address IPv6	::
Peer port	51413
Port forwarding enabled	<input checked="" type="checkbox"/>

**Bandwidth settings**

Alternative speed enabled	<input type="checkbox"/>
Speed limit down enabled	<input type="checkbox"/>
Speed limit up enabled	<input type="checkbox"/>

**RPC settings**

RPC authentication required	<input type="checkbox"/>
-----------------------------	--------------------------

At the bottom right, there are three buttons: "Save & Apply", "Save", and "Cancel". The SITECOM logo is visible at the bottom center.

On this page you can edit the settings for the Bittorrent client Transmission. Transmission has its own web interface that can be opened via the 'Open Web Interface' button.

- **Preallocation:** Whether to fill the space for chunks not yet downloaded with "0" (helps avoiding fragmentation).
- **DHT enabled:** Whether to enable dht (distributed hash tables).
- **Encryption:** Whether to use encrypted connections only.
- **uTP enabled:** Whether or not to enable the Micro Transport Protocol. This function is intended to mitigate poor latency and other congestion control issues found in conventional BitTorrent.
- **Binding address:** Where to listen for peer connections.

- **Peer port:** The fixed port transmission listens to incoming connections.
- **Alternative speed enabled:** Whether transmission should use two speed limit settings.
- **RPC authentication required:** Whether transmission-daemon should be remote controlled by a GUI on a host machine.

# App Settings

This page allows you to install OpenWRT packages. With this unique feature you can easily add or remove functionality to your router, just like installing and uninstalling applications on your computer. For more information on this, please go to <https://wiki.openwrt.org/doc/packages>.

The screenshot displays the GREYHOUND router's App Settings interface. At the top, it shows the current firmware version as v1.1 and a language dropdown set to English. A navigation menu includes Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The main content area is divided into three sections:

- Software:** Features a 'No package lists available' message with an 'Update lists' button. Below this is a 'Free space' indicator showing 93% (4.75 MB) with a green progress bar. There is a 'Download and install package' field with an 'OK' button, and a 'Filter' field with a 'Find package' button.
- Installed Packages:** A table listing installed packages with their names and versions. Each row has a minus button for removal.
- Available Packages:** A section with a letter navigation bar (A-Z) and a table with columns for Package name, Version, and Description. The table currently shows 'none' in all three columns.

The SITECOM logo is visible at the bottom of the interface.

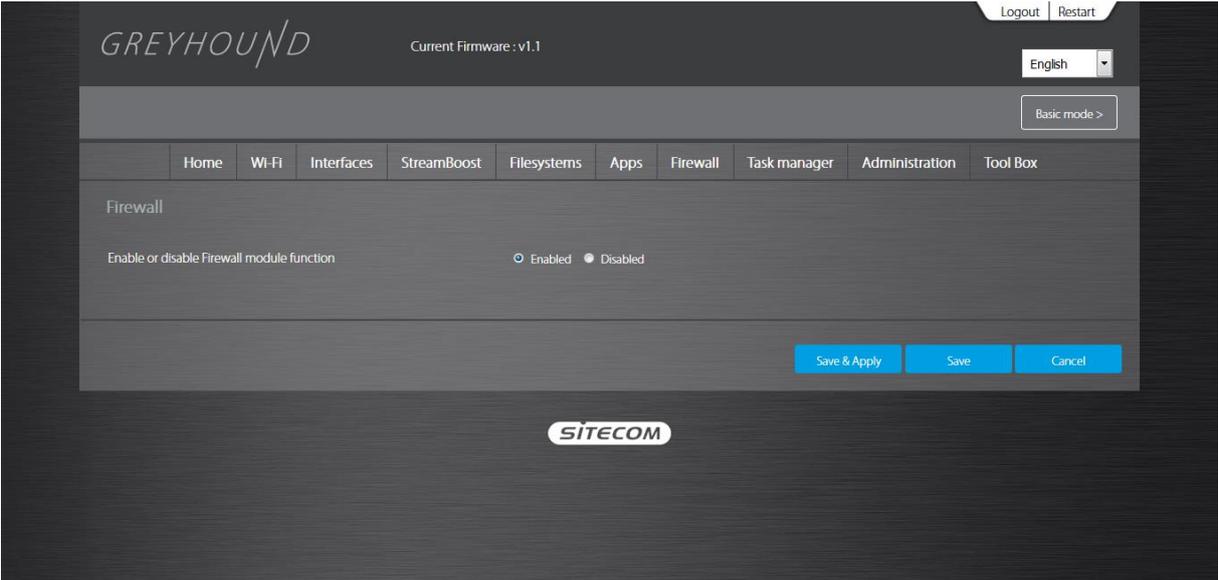
You can add packages by typing in the URL into the 'Download and install package' field. You can remove packages by selecting it from the list of 'Installed Packages' and clicking the – button.

# Firewall Settings

## Firewall – Enable

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 **Save & Apply**.



## Firewall – 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.

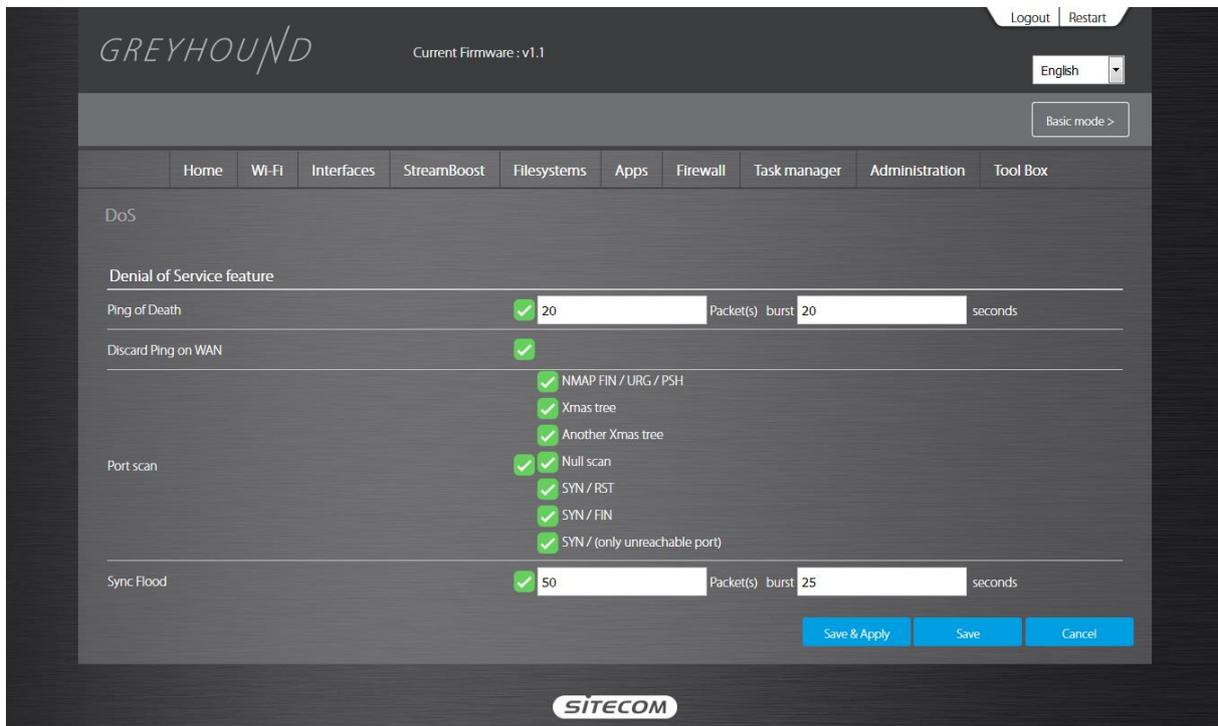
The screenshot shows the GREYHOUND firewall configuration interface. At the top, it displays 'GREYHOUND' and 'Current Firmware: v1.1'. There are links for 'Logout' and 'Restart', and a language dropdown set to 'English'. A 'Basic mode >' button is also present. The navigation menu includes: Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The 'DMZ' section is active, showing an 'Enable DMZ' checkbox. Below this, there are two options for 'Public IP Address': 'Dynamic IP' (selected) with a 'Session 1' dropdown, and 'Static IP' with an empty input field. The 'Client PC IP Address' field is also empty. A table below is titled 'DMZ table:' and has columns for 'NO.', 'Public PC IP Address', 'Client PC IP Address', and 'Select'. At the bottom, there are buttons for 'Delete Selected', 'Delete All', 'Save & Apply', 'Save', and 'Cancel'. The SITECOM logo is at the bottom center.

- **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 **Save & Apply** at the bottom of the screen to save the above configurations.

## Firewall – 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.

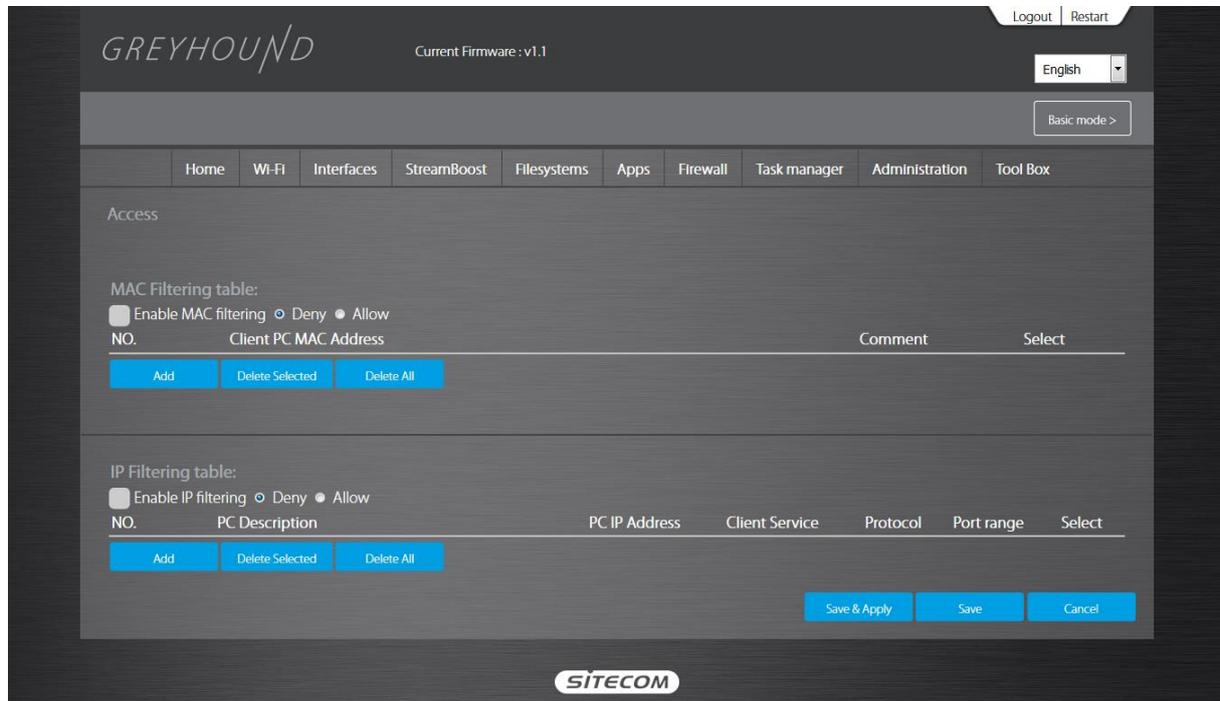


- **Ping of Death:** Protection from Ping of Death attacks
- **Discard Ping From WAN:** The router's WAN port will not respond to any Ping requests
- **Port Scan:** Protects the router from Port Scans.
- **Sync Flood:** Protects the router from Sync Flood attack.

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

## Firewall – 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.

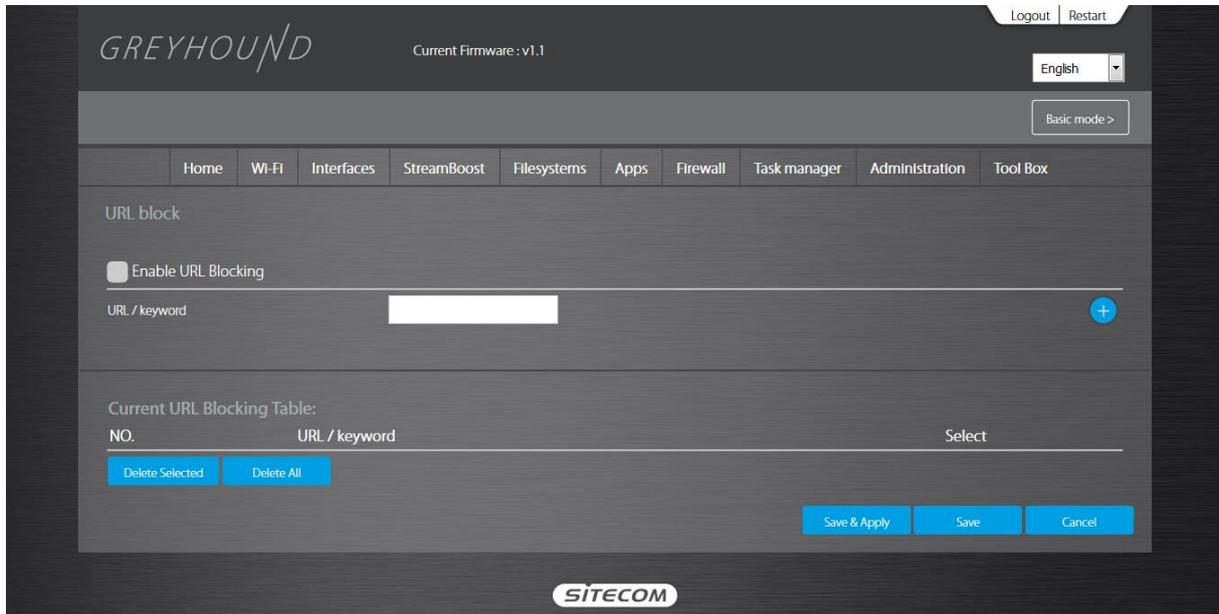


- **Deny:** If you select “Deny” then all clients will be allowed to access Internet except for the clients in the list below.
- **Allow:** If you select “Allow” then all clients will be denied to access Internet except for the PCs in the list below.
- **Filter client PC by MAC:** Check “Enable MAC Filtering” 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”.
- **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.

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

## Firewall – 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.

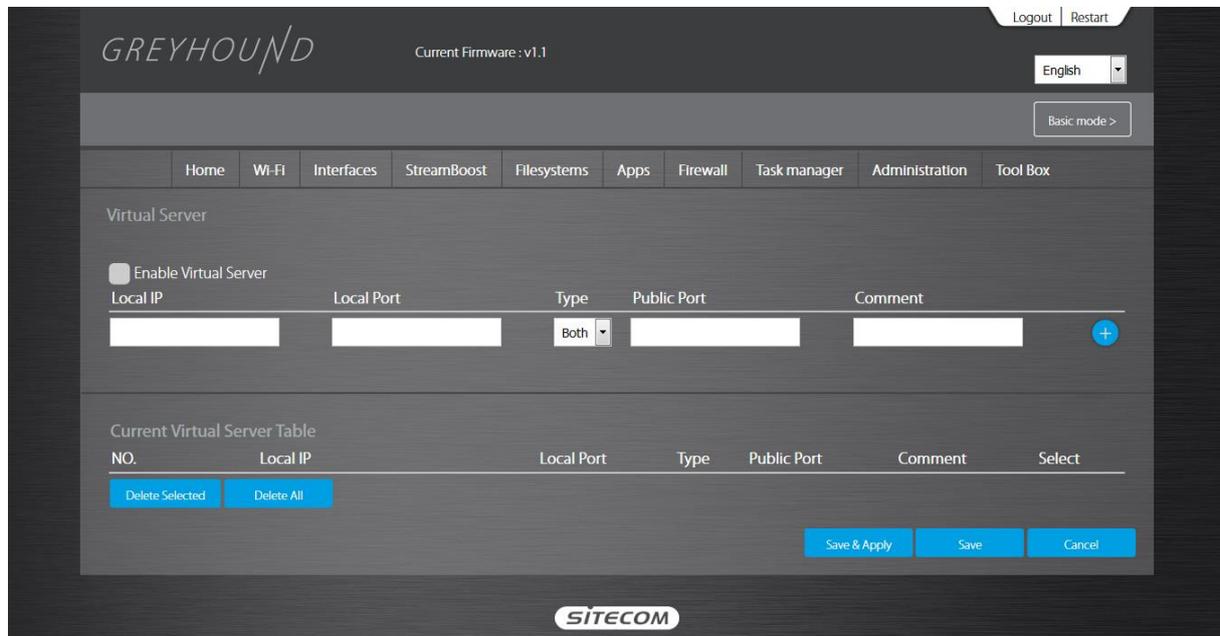


- **Enable:** URL Blocking Enable/disable URL Blocking
- **Add URL/keyword:** Fill in "URL/Keyword" and then click "Add". You can enter the full URL address or the keyword of the web site you want to block.
- **Remove URL/keyword:** If you want to remove some URL keywords from the "Current URL Blocking 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 **Save & Apply** at the bottom of the screen to save the above configuration.

## Firewall – 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.



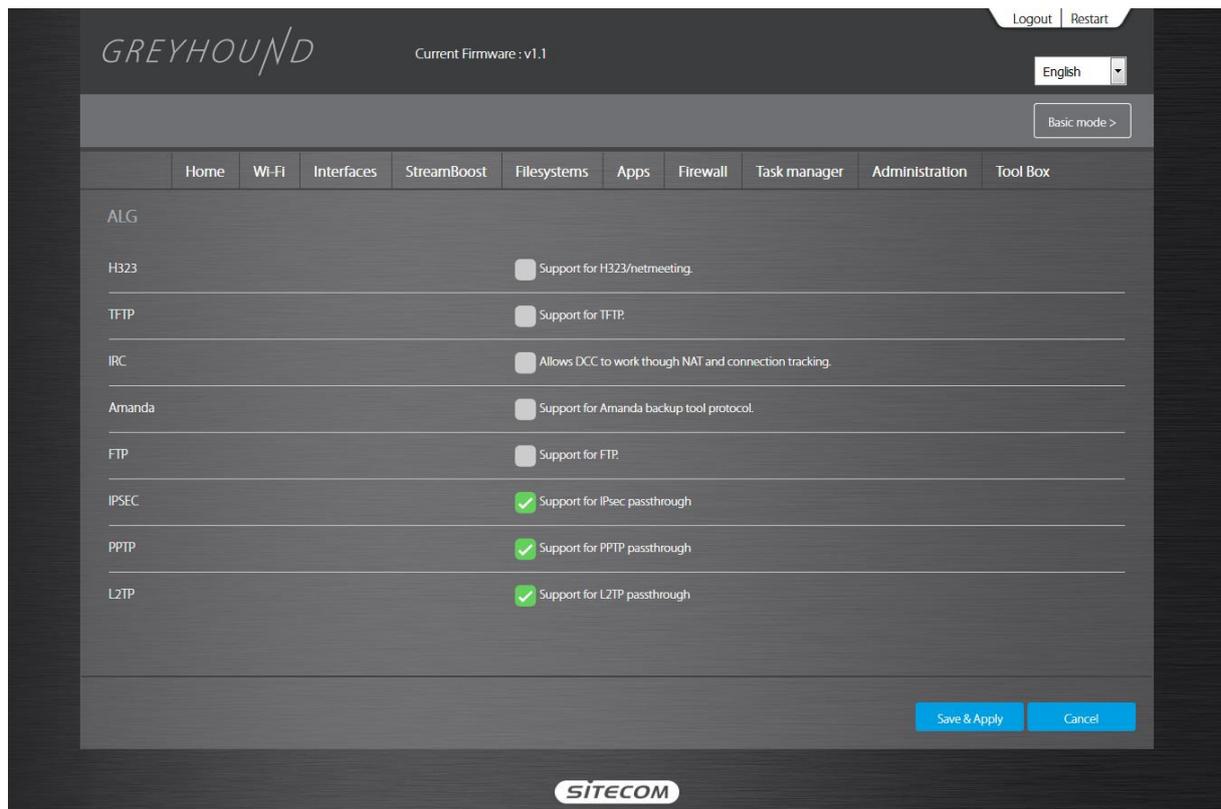
- **Enable Virtual Server:** Enable Virtual Server.
- **Local IP:** This is the LAN client/host IP address that the Public Port number packet will be sent to.
- **Local Port:** This is the port number (of the above Private IP host) that the below Public Port number will be changed to when the packet 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 the + sign. 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 **Save & Apply** at the bottom of the screen to save the above configuration.

## Firewall – ALG

An application gateway is an application program that runs on the router. When a client program establishes a connection to a destination service, it connects to an application gateway, or proxy. The client then negotiates with the proxy server in order to communicate with the destination service. In effect, the proxy establishes the connection with the destination behind the firewall and acts on behalf of the client, hiding and protecting individual computers on the network behind the firewall.

This creates two connections: one between the client and the proxy server and one between the proxy server and the destination. Once connected, the proxy makes all packet-forwarding decisions. Since all communication is conducted through the proxy server, computers behind the firewall are protected.



You can select the pre-programmed ALG's on this page.

# Task manager

## System Logs

GREYHOUND Current Firmware: v1.1 English Basic mode >

Home Wi-Fi Interfaces StreamBoost Filesystems Apps Firewall Task manager Administration Tool Box

System logs

Status  Enabled  Disabled

Log type ALL

Refresh Clear

```
Feb 8 13:49:34 GREYHOUND kern.warn kernel: [ 3901.770009] [wifi0] FWLOG: [3980765] WAL_DBGID_TX_BA_SETUP ( 0x43:
Feb 8 13:49:32 GREYHOUND kern.warn kernel: [ 3899.761574] [wifi0] FWLOG: [3978183] WAL_DBGID_TX_BA_SETUP ( 0x43:
Feb 8 13:49:31 GREYHOUND kern.warn kernel: [ 3898.757325] [wifi0] FWLOG: [3977495] WAL_DBGID_TX_BA_SETUP ( 0x43:
Feb 8 13:49:23 GREYHOUND user.warn igmpmproxy[4517]: The source address 192.168.0.1 for group 239.255.255.250, 1:
Feb 8 13:49:21 GREYHOUND user.warn igmpmproxy[4517]: No interfaces found for source 37.77.57.138
Feb 8 13:49:08 GREYHOUND kern.warn kernel: [ 3875.659637] [wifi0] FWLOG: [3953744] WAL_DBGID_TX_BA_SETUP ( 0x43:
Feb 8 13:49:07 GREYHOUND kern.warn kernel: [ 3874.655389] [wifi0] FWLOG: [3953022] WAL_DBGID_TX_BA_SETUP ( 0x43:
Feb 8 13:49:01 GREYHOUND cron.info crond[4507]: crond: USER root pid 5018 cmd /usr/sbin/check_mem.sh
Feb 8 13:49:01 GREYHOUND cron.info crond[4507]: crond: USER root pid 5016 cmd /usr/sbin/check_mem.sh
Feb 8 13:49:01 GREYHOUND cron.info crond[4507]: crond: USER root pid 5015 cmd /usr/sbin/check_mem.sh
Feb 8 13:48:53 GREYHOUND user.warn igmpmproxy[4517]: The source address 192.168.0.1 for group 239.255.255.250, 1:
Feb 8 13:48:49 GREYHOUND kern.warn kernel: [ 3856.578912] [wifi0] FWLOG: [3934676] WAL_DBGID_TX_BA_SETUP ( 0x43:
Feb 8 13:48:31 GREYHOUND local0.notice drflocs[3984]: (NOTICE): using channel nodes.ipaddr.drflocs for mac-to-
Feb 8 13:48:31 GREYHOUND local0.notice drflocs[3984]: (NOTICE): using channel drflocs.features for feature disc
Feb 8 13:48:31 GREYHOUND local0.notice drflocs[3984]: (NOTICE): using channel connection.events for connection
Feb 8 13:48:31 GREYHOUND local0.notice drflocs[3984]: (NOTICE): using channel classifications for classification
Feb 8 13:48:31 GREYHOUND local0.notice drflocs[3984]: (NOTICE): offload disabled
Feb 8 13:48:31 GREYHOUND local0.err drflocs[3984]: (ERROR): unable to resolve sfe family FC: -12
Feb 8 13:48:31 GREYHOUND local0.err drflocs[3984]: (ERROR): unable to resolve nss family ECMCLNL: -12
Feb 8 13:48:31 GREYHOUND daemon.err sead[3692]: connection event is not a close
```

Remote Log  Enabled  Disabled

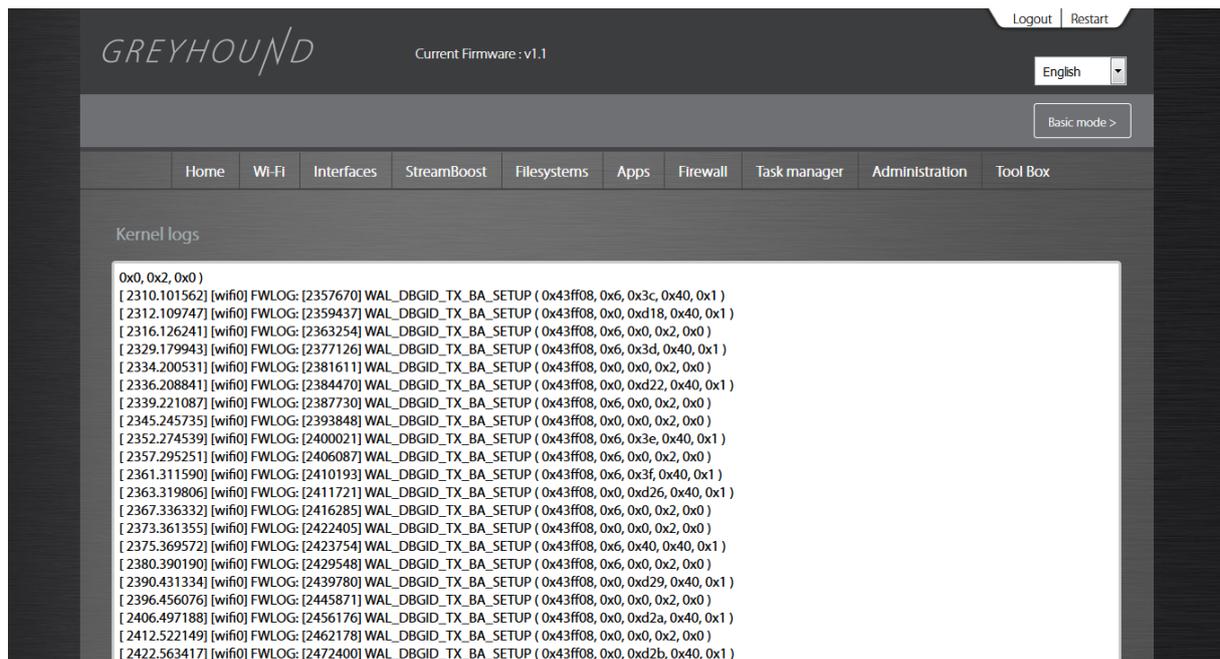
Log Server IP Address

Apply

SITECOM

On this page you can find the system log. If you're using an external logging server you can enable the 'Remote Log' functionality and enter the IP Address of the server in the appropriate field.

## Kernel log



GREYHOUND Current Firmware: v1.1 English Basic mode >

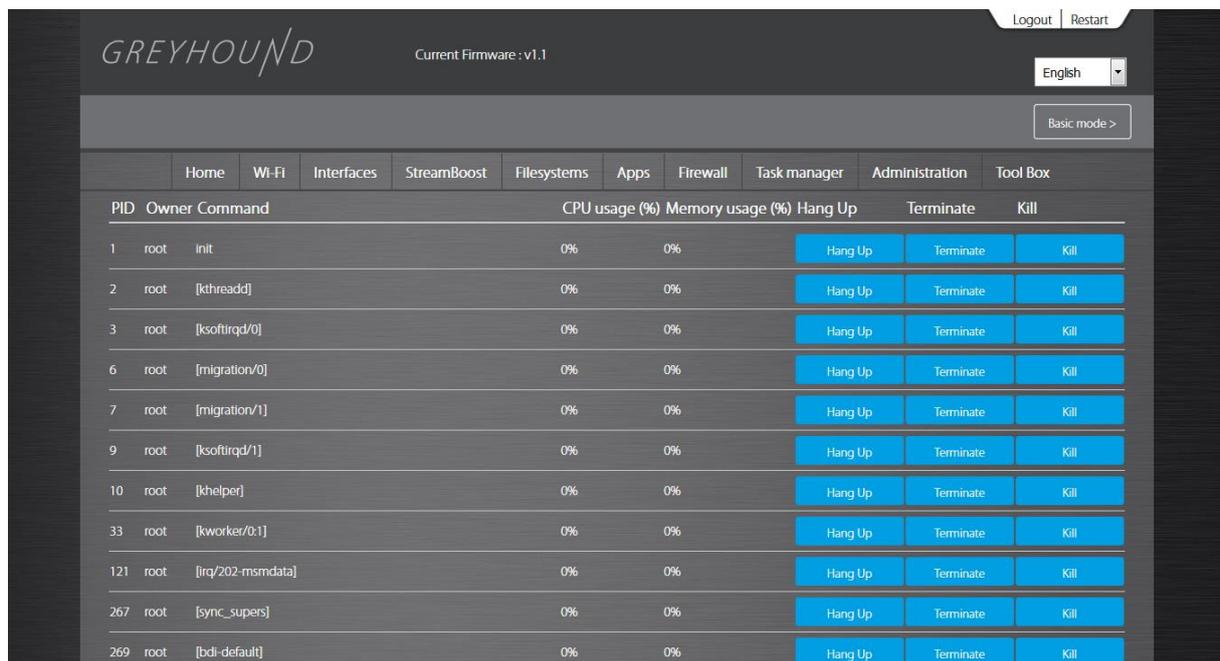
Home Wi-Fi Interfaces StreamBoost Filesystems Apps Firewall Task manager Administration Tool Box

Kernel logs

```
Ox0, Ox2, Ox0 )
[ 2310.101562] [wifi0] FWLOG: [2357670] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox3c, Ox40, Ox1 )
[ 2312.109747] [wifi0] FWLOG: [2359437] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox18, Ox40, Ox1 )
[ 2316.126241] [wifi0] FWLOG: [2363254] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox0, Ox2, Ox0 )
[ 2329.179943] [wifi0] FWLOG: [2377126] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox3d, Ox40, Ox1 )
[ 2334.200531] [wifi0] FWLOG: [2381611] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox0, Ox2, Ox0 )
[ 2336.208841] [wifi0] FWLOG: [2384470] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox22, Ox40, Ox1 )
[ 2339.221087] [wifi0] FWLOG: [2387730] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox0, Ox2, Ox0 )
[ 2345.245735] [wifi0] FWLOG: [2393848] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox0, Ox2, Ox0 )
[ 2352.274539] [wifi0] FWLOG: [2400021] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox3e, Ox40, Ox1 )
[ 2357.295251] [wifi0] FWLOG: [2406087] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox0, Ox2, Ox0 )
[ 2361.311590] [wifi0] FWLOG: [2410193] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox3f, Ox40, Ox1 )
[ 2363.319806] [wifi0] FWLOG: [2411721] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox26, Ox40, Ox1 )
[ 2367.336332] [wifi0] FWLOG: [2416285] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox0, Ox2, Ox0 )
[ 2373.361355] [wifi0] FWLOG: [2422405] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox0, Ox2, Ox0 )
[ 2375.369572] [wifi0] FWLOG: [2423754] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox40, Ox40, Ox1 )
[ 2380.390190] [wifi0] FWLOG: [2429548] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox6, Ox0, Ox2, Ox0 )
[ 2390.431334] [wifi0] FWLOG: [2439780] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox29, Ox40, Ox1 )
[ 2396.456076] [wifi0] FWLOG: [2445871] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox0, Ox2, Ox0 )
[ 2406.497188] [wifi0] FWLOG: [2456176] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox2a, Ox40, Ox1 )
[ 2412.522149] [wifi0] FWLOG: [2462178] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox0, Ox2, Ox0 )
[ 2422.563417] [wifi0] FWLOG: [2472400] WAL_DBGID_TX_BA_SETUP ( Ox43ff08, Ox0, Ox2b, Ox40, Ox1 )
```

Here you can view the messages the kernel puts out.

## Processes



GREYHOUND Current Firmware: v1.1 English Basic mode >

Home Wi-Fi Interfaces StreamBoost Filesystems Apps Firewall Task manager Administration Tool Box

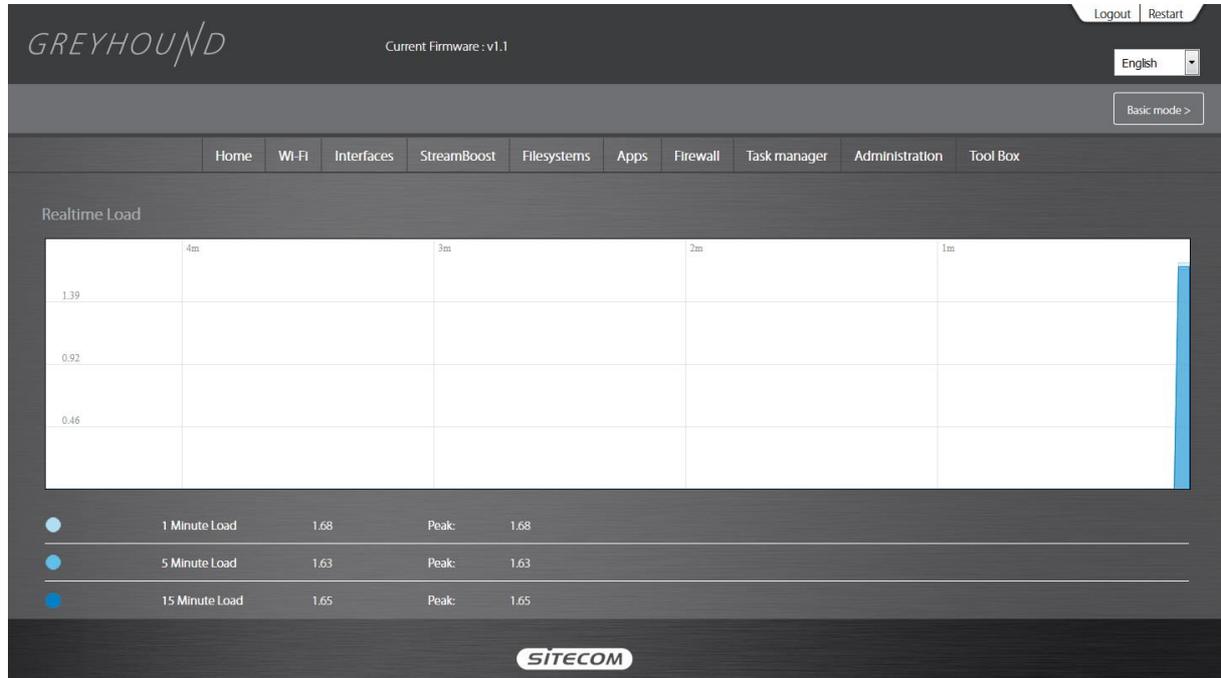
PID	Owner	Command	CPU usage (%)	Memory usage (%)	Hang Up	Terminate	Kill
1	root	init	0%	0%	Hang Up	Terminate	Kill
2	root	[kthreadd]	0%	0%	Hang Up	Terminate	Kill
3	root	[ksftirqd/0]	0%	0%	Hang Up	Terminate	Kill
6	root	[migration/0]	0%	0%	Hang Up	Terminate	Kill
7	root	[migration/1]	0%	0%	Hang Up	Terminate	Kill
9	root	[ksftirqd/1]	0%	0%	Hang Up	Terminate	Kill
10	root	[khelper]	0%	0%	Hang Up	Terminate	Kill
33	root	[kworker/0:1]	0%	0%	Hang Up	Terminate	Kill
121	root	[irq/202-msmdata]	0%	0%	Hang Up	Terminate	Kill
267	root	[sync_supers]	0%	0%	Hang Up	Terminate	Kill
269	root	[bdi-default]	0%	0%	Hang Up	Terminate	Kill

Here you can see the running processes. There are 3 buttons to alter the functionality of the process.

- **Hang up:** This signal is used to report the termination of the controlling process on a terminal to jobs associated with that session; this termination effectively disconnects all processes in the session.
- **Terminate:** A generic signal used to cause program termination. It is the normal way to politely ask a program to terminate.

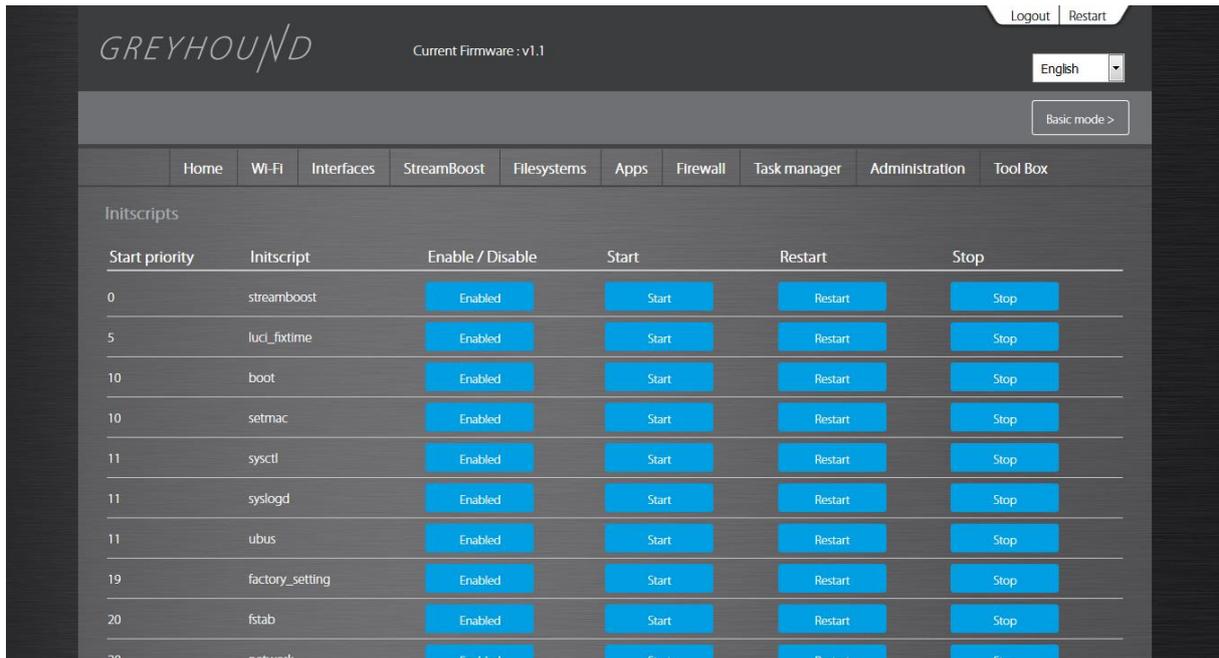
- **Kill:** Used to cause immediate program termination. It cannot be handled or ignored, and is therefore always fatal. It is also not possible to block this signal.

## Realtime Load



On this page you can view the actual load on the entire network. The page shows 3 graphs in 3 different colors.

## Initscripts



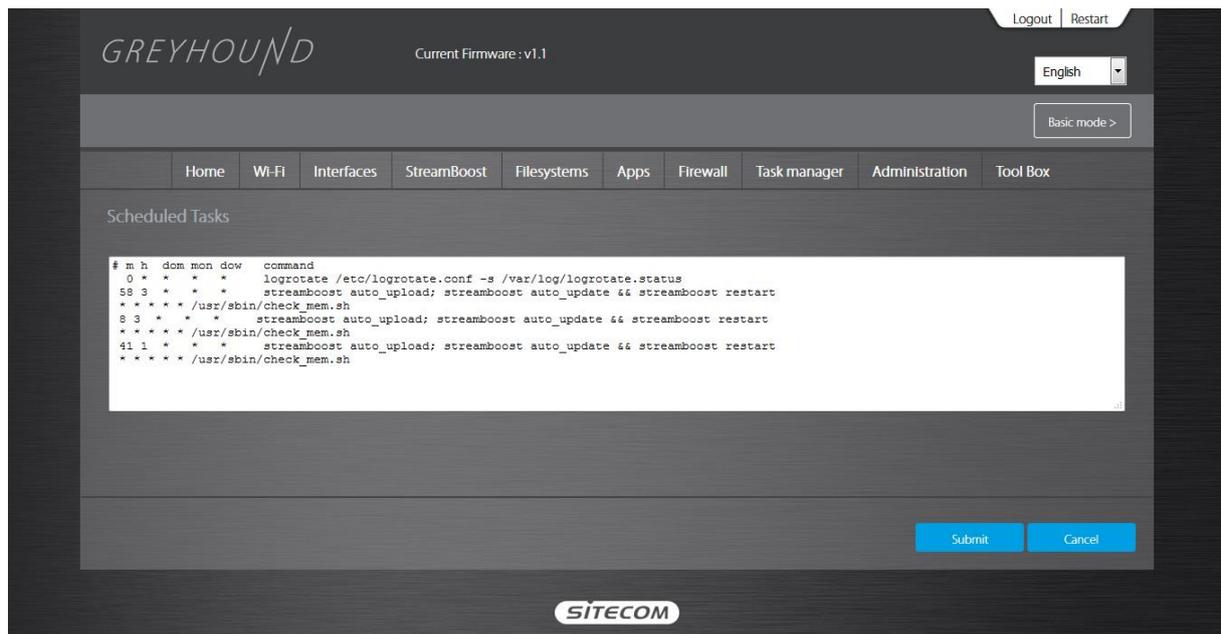
The screenshot shows the GREYHOUND router management interface. At the top, there is a navigation bar with the GREYHOUND logo, 'Current Firmware - v1.1', and a language dropdown set to 'English'. Below the navigation bar is a menu with options: Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The main content area is titled 'Initscripts' and contains a table with the following columns: Start priority, Initscript, Enable / Disable, Start, Restart, and Stop. The table lists several services, all of which are currently 'Enabled'.

Start priority	Initscript	Enable / Disable	Start	Restart	Stop
0	streamboost	Enabled	Start	Restart	Stop
5	luci_firmware	Enabled	Start	Restart	Stop
10	boot	Enabled	Start	Restart	Stop
10	setmac	Enabled	Start	Restart	Stop
11	sysctl	Enabled	Start	Restart	Stop
11	syslogd	Enabled	Start	Restart	Stop
11	ubus	Enabled	Start	Restart	Stop
19	factory_setting	Enabled	Start	Restart	Stop
20	fstab	Enabled	Start	Restart	Stop
20	network	Enabled	Start	Restart	Stop

On this page you can see the scripts controlling the various functions of the router. There are 4 buttons available.

- **Enable/Disable:** You can choose whether you want the service to be automatically started during bootup.
- **Start:** Start the service.
- **Restart:** Restart the service.
- **Stop:** Stop the service.

## Scheduled Tasks



The screenshot shows the 'Scheduled Tasks' configuration page in the GREYHOUND web interface. The page header includes the GREYHOUND logo, 'Current Firmware: v1.1', and a language dropdown set to 'English'. A navigation menu at the top contains links for Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The main content area is titled 'Scheduled Tasks' and contains a text area with the following cron entries:

```
# m h dom mon dow    command
0 * * * *          logrotate /etc/logrotate.conf -s /var/log/logrotate.status
58 3 * * *          streamboost auto_upload; streamboost auto_update && streamboost restart
* * * * * /usr/sbin/check_mem.sh
8 3 * * *           streamboost auto_upload; streamboost auto_update && streamboost restart
* * * * * /usr/sbin/check_mem.sh
41 1 * * *          streamboost auto_upload; streamboost auto_update && streamboost restart
* * * * * /usr/sbin/check_mem.sh
```

At the bottom right of the text area, there are 'Submit' and 'Cancel' buttons. The SITECOM logo is visible at the bottom center of the interface.

This window allows you to edit the crontab file. This contains the schedule of cron entries to be run at specified times. The commands that can be used are standard Unix commands.

# Administration

## Administration – 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. You can choose to set the time manually or via a NTP server.

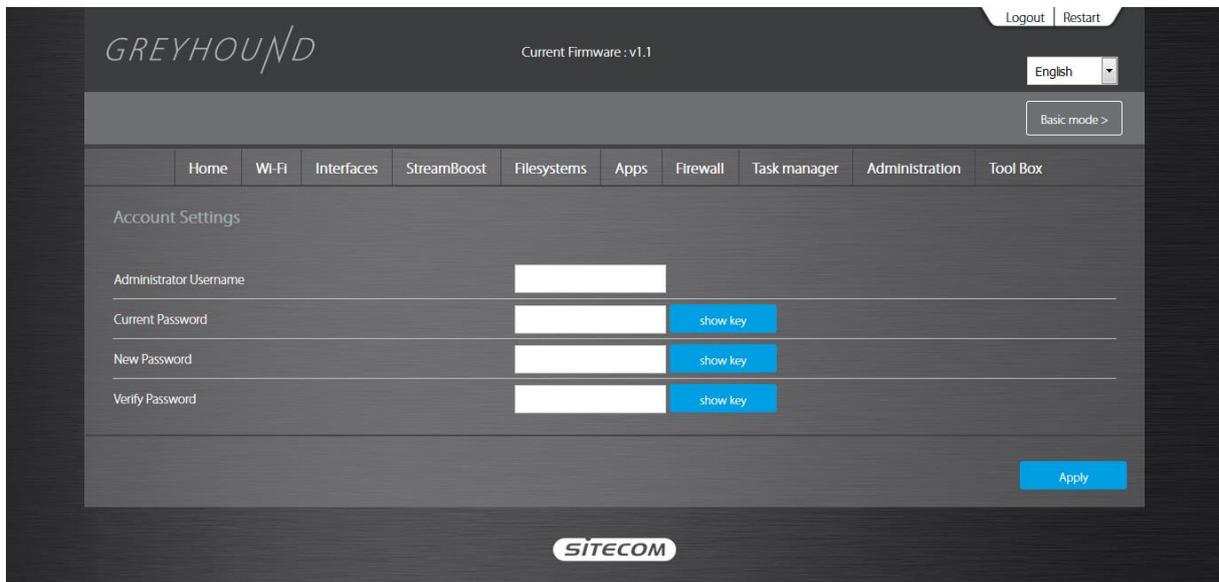
The screenshot displays the GREYHOUND router's administration interface. At the top, it shows the logo, current firmware version (v1.1), and language (English). A navigation menu includes Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The 'Time Zone' section is active, showing 'Date and Time Settings' with two radio buttons: 'Manually Set Date and Time' (selected) and 'Automatically Get Date and Time'. Under manual settings, the date is 2016/02/08 and the time is 13:50 (24-Hour). A 'Synchronize with PC' button is present. Under automatic settings, the NTP server is 'pool.ntp.org'. The 'Time Zone' dropdown is set to 'UTC+00:00 Gambia, Liberia, Morocco'. The 'Enable Daylight Saving' checkbox is unchecked. The 'Start' and 'End' of Daylight Saving Time are both set to January 1st at 00:00. At the bottom, there are 'Save & Apply', 'Save', and 'Cancel' buttons. The SITECOM logo is at the very bottom.

- **NTP server:** You can set an NTP server address.
- **Set Time Zone:** Select the time zone of the country you are currently in. The router will set its time based on your selection.
- **Enable Daylight Saving:** 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 **Save & Apply** at the bottom of the screen to save the above configuration.

## Administration – Administration

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.



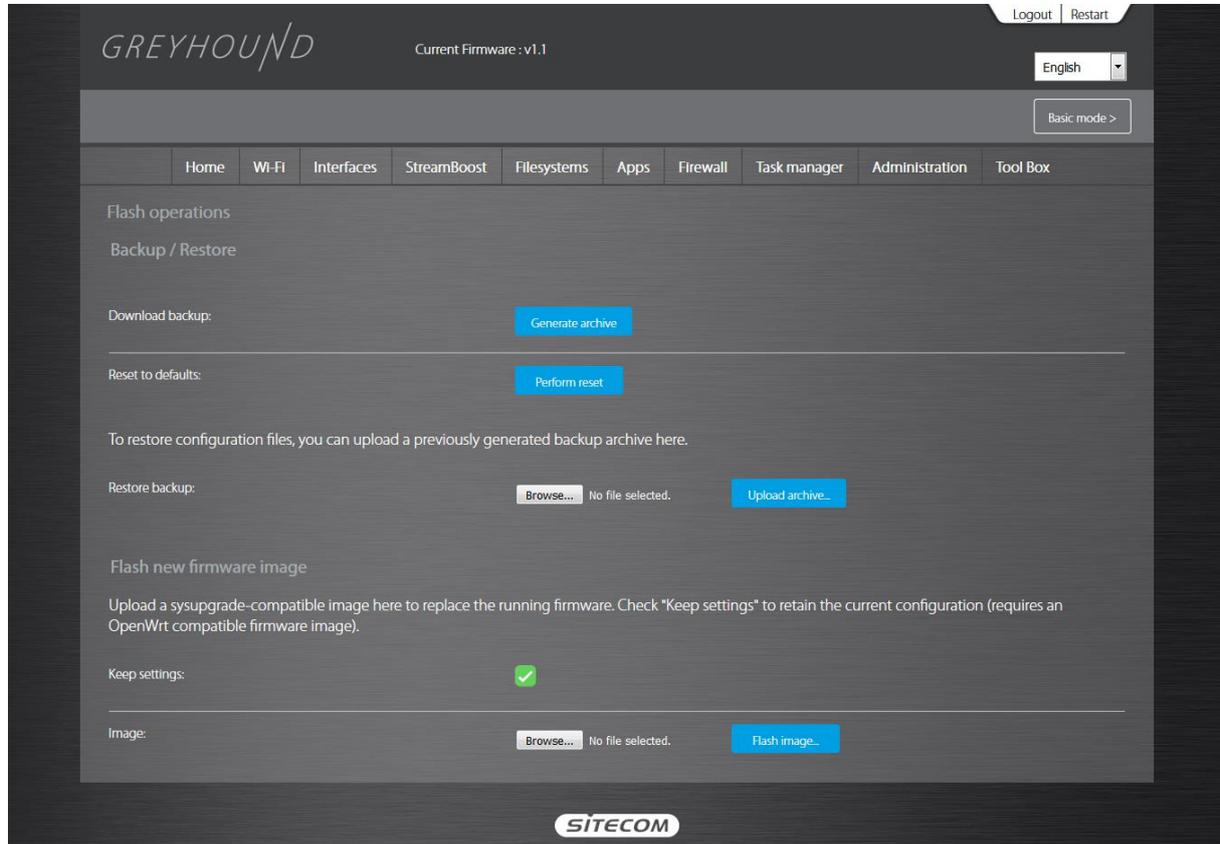
The screenshot displays the web-based management interface for a GREYHOUND router. The top navigation bar includes 'Logout' and 'Restart' links, the current firmware version 'v1.1', a language dropdown set to 'English', and a 'Basic mode >' button. A secondary navigation bar contains menu items: Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration (selected), and Tool Box. The main content area is titled 'Account Settings' and contains four input fields: 'Administrator Username', 'Current Password', 'New Password', and 'Verify Password'. Each password field is accompanied by a 'show key' button. An 'Apply' button is located at the bottom right of the form. The SITECOM logo is visible at the bottom center of the interface.

- **Administrator Username:** By default this is 'admin'.
- **Current Password:** Fill in the current password to allow changing to a new password.
- **New Password:** Enter your new password.
- **Verify Password:** Enter your new password again for verification purposes.

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

## Administration – Backup/Flash Firmware

Use the "Generate archive" button to save the current configuration to a file on your PC. You can then use the "Restore backup" button to restore the saved configuration to the router. Alternatively, you can use the "Reset to Factory Defaults" button to force the router to perform a power reset and restore the original factory settings.

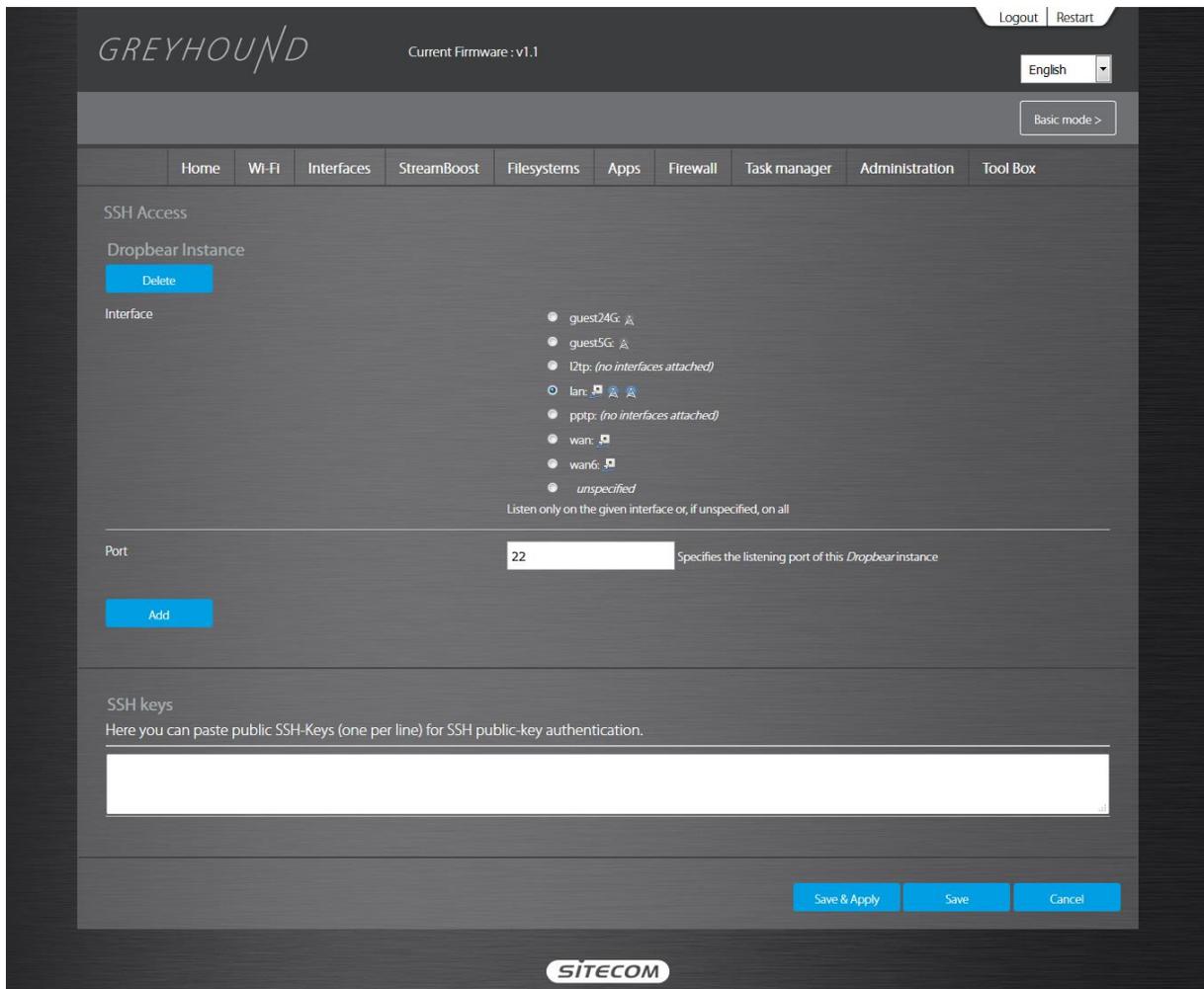


This page also allows you to upgrade the Broadband router's system firmware. To upgrade the firmware of your Broadband router, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to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

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

## Administration – SSH

SSH is a cryptographic (encrypted) network protocol to allow remote login and other network services to operate securely over an unsecured network.

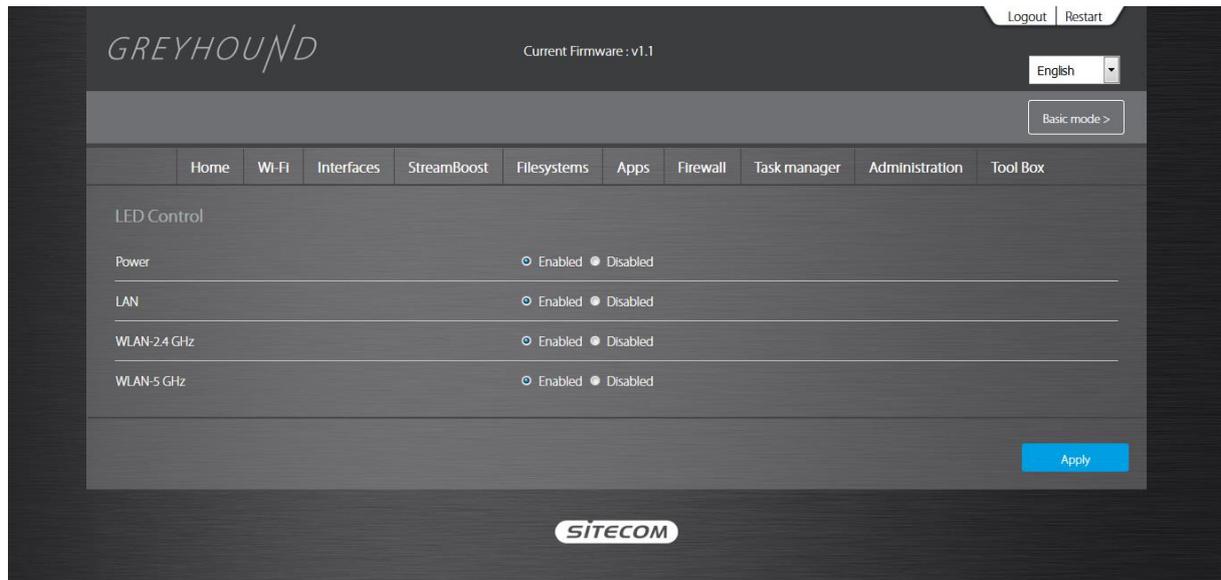


The screenshot displays the GREYHOUND administration interface. At the top, it shows the logo, current firmware version (v1.1), and language settings (English). A navigation menu includes Home, Wi-Fi, Interfaces, StreamBoost, Filesystems, Apps, Firewall, Task manager, Administration, and Tool Box. The main content area is titled 'SSH Access' and features a 'Dropbear Instance' section with a 'Delete' button. Below this is an 'Interface' selection list with radio buttons for: guest24G, guest5G, l2tp (no interfaces attached), lan, pptp (no interfaces attached), wan, wan6, and unspecified. A note indicates that the service will listen only on the selected interface or on all if unspecified. The 'Port' field is set to 22, with a note that it specifies the listening port of this Dropbear instance. An 'Add' button is located below the port field. The 'SSH keys' section contains a text area for pasting public SSH keys. At the bottom, there are 'Save & Apply', 'Save', and 'Cancel' buttons. The SITEMCOM logo is visible at the very bottom of the interface.

- **Interface:** Select the interface on which you want the SSH service to be active.
- **Port:** Select the port on which you want the SSH service to be active. Default is 22.
- **SSH keys:** Here you can paste public SSH-Keys (one per line) for SSH Public-key authentication.

## Administration – LED Configuration

On this page you can switch the LEDs on the router on or off.

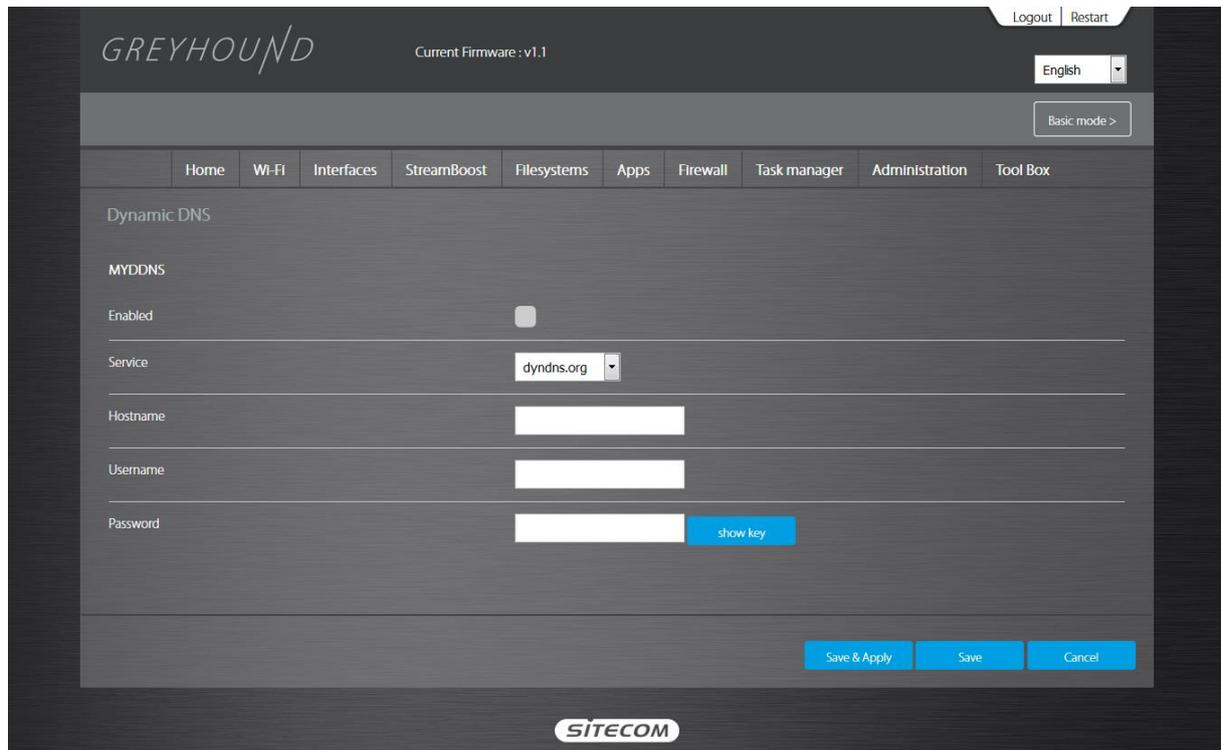


- **Power:** This switches of the lighting behind the Greyhound logo.
- **LAN:** This switches of all 4 LAN LEDs.
- **WLAN-2.4GHz:** This switches off the 2.4GHz WLAN LED.
- **WLAN-5GHz:** This switches off the 5GHz WLAN LED.

# Toolbox Settings

## Toolbox – 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, no-ip and other common DDNS service providers.



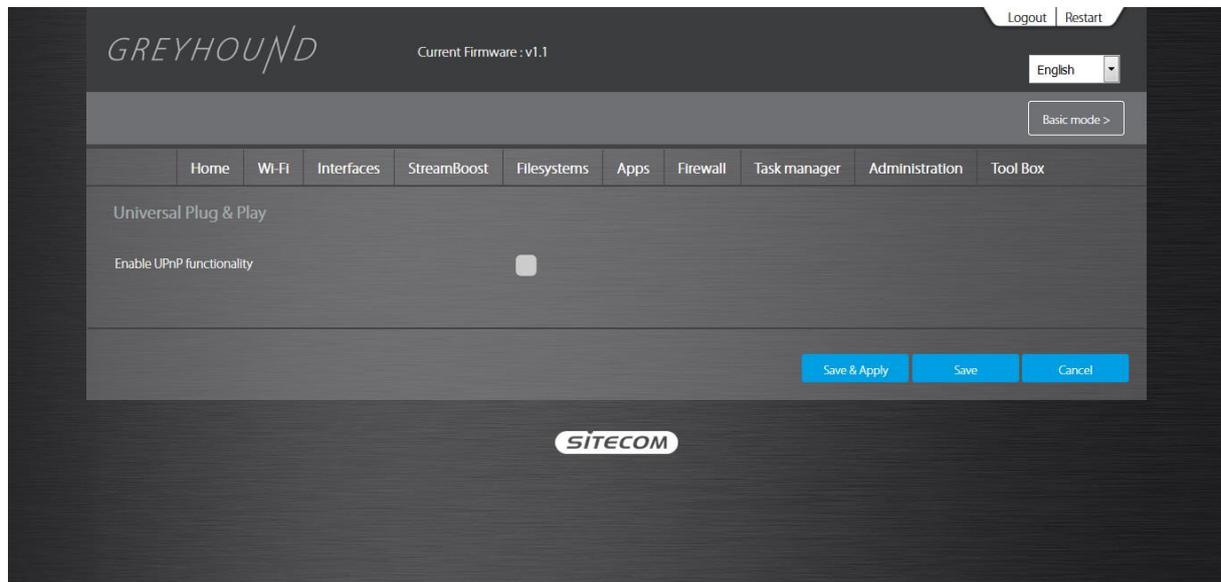
The screenshot shows the 'Dynamic DNS' configuration page in the router's web interface. The page has a dark theme with the 'GREYHOUND' logo at the top left and 'Current Firmware: v1.1' in the center. On the right, there are links for 'Logout' and 'Restart', a language dropdown set to 'English', and a 'Basic mode >' button. A navigation bar contains tabs for 'Home', 'Wi-Fi', 'Interfaces', 'StreamBoost', 'Filesystems', 'Apps', 'Firewall', 'Task manager', 'Administration', and 'Tool Box'. The main content area is titled 'Dynamic DNS' and includes a sub-section 'MYDDNS'. It features an 'Enabled' toggle switch (currently off), a 'Service' dropdown menu set to 'dyndns.org', and input fields for 'Hostname', 'Username', and 'Password'. A 'show key' button is next to the password field. At the bottom, there are three buttons: 'Save & Apply', 'Save', and 'Cancel'. The 'SITECOM' logo is at the very bottom of the interface.

- **Enable/Disable:** Enable or disable the DDNS function of this router.
- **Service:** Select a DDNS service provider.
- **Hostname:** Fill in your static domain name that uses DDNS.
- **Username:** The account that your DDNS service provider assigned to you.
- **Password:** The password you set for the DDNS service account above.

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

## Toolbox – UPnP

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

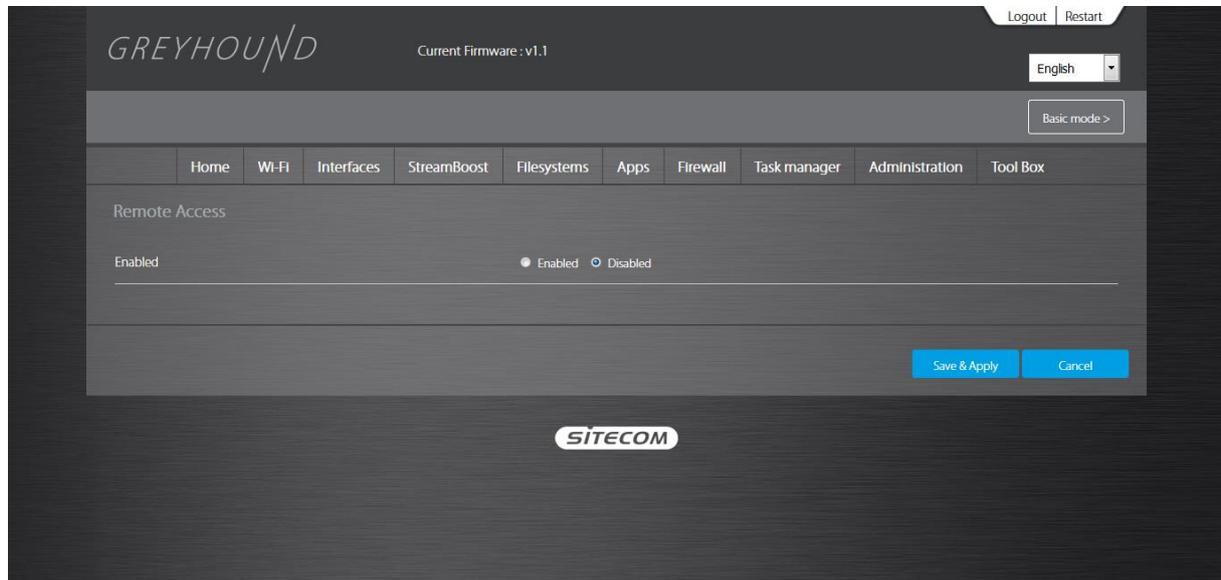


**UPnP Feature:** You can enable or Disable the UPnP feature here. After you enable the UPnP feature, all client systems that support UPnP, like Windows, can discover this router automatically and access the Internet through this router without having to configure anything. The NAT Traversal function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

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

## Toolbox – Remote Access

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.



- **Method:** Choose between 'All Hosts' or 'Specific Host'. If 'All Hosts' is chosen this means anyone can access the router's web-based configuration from a remote location, providing they know the password. If 'Specific Host' is chosen, you need to enter the IP address of the host on the Internet that will have management/configuration access to the Broadband router from a remote site.
- **Port:** The port number of the remote management web interface.

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



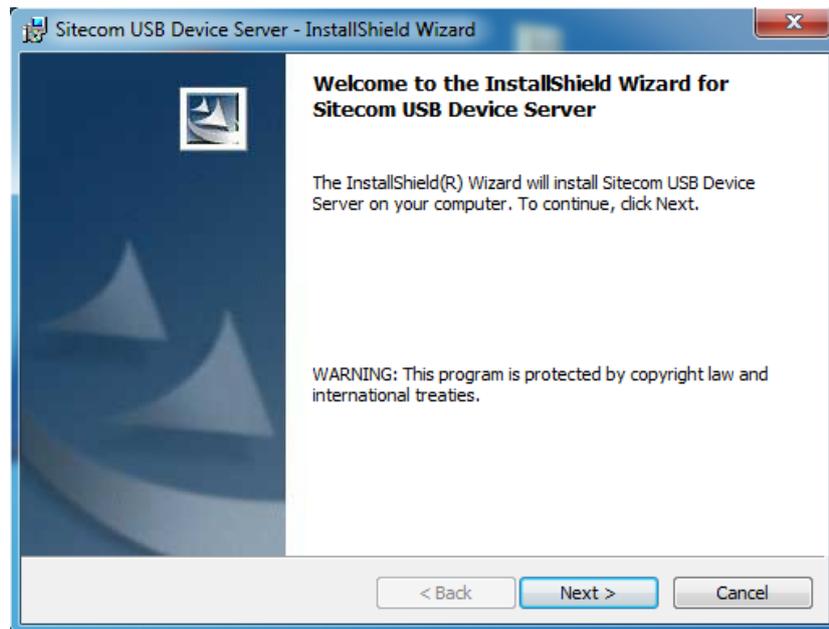
# Addendum A: NetUSB

The netUSB functionality of your router requires additional software to work with your computer. The following section will describe how the software can be installed and used.

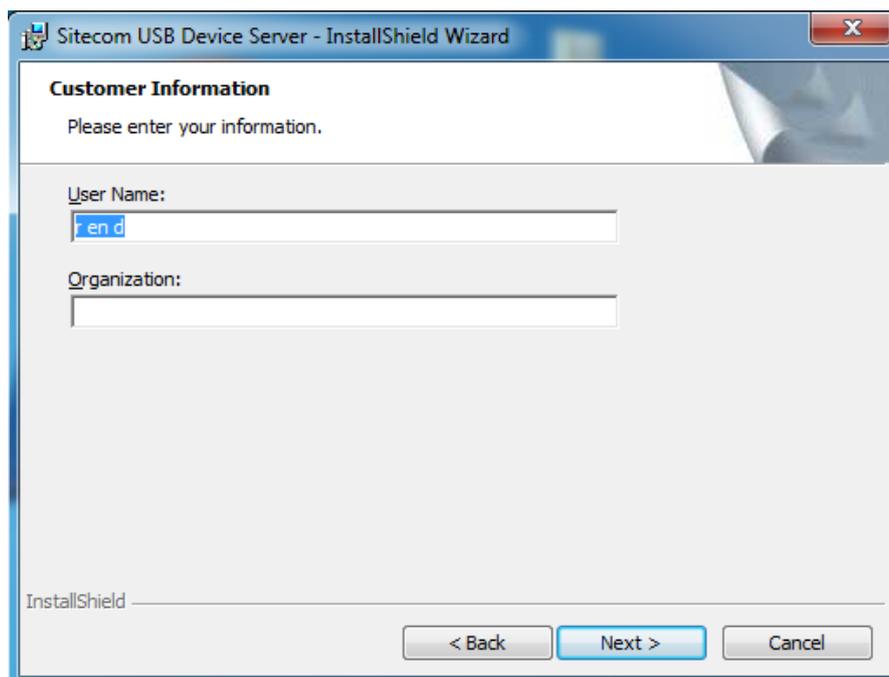
## Windows

Insert the CD-ROM that was included with your router and select install utility from the cd-menu.

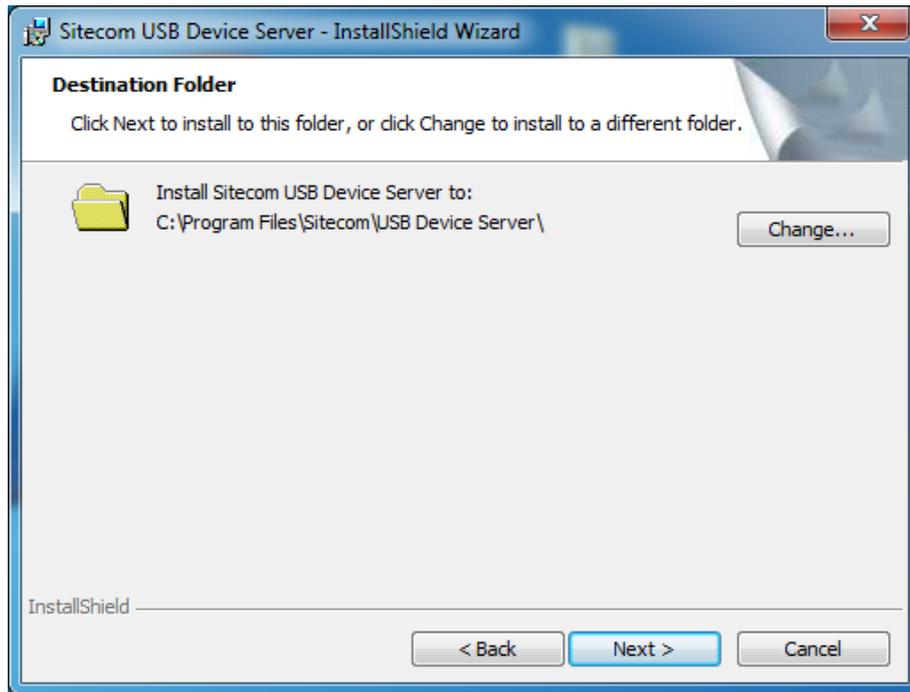
The software will inform you about what will be installed.



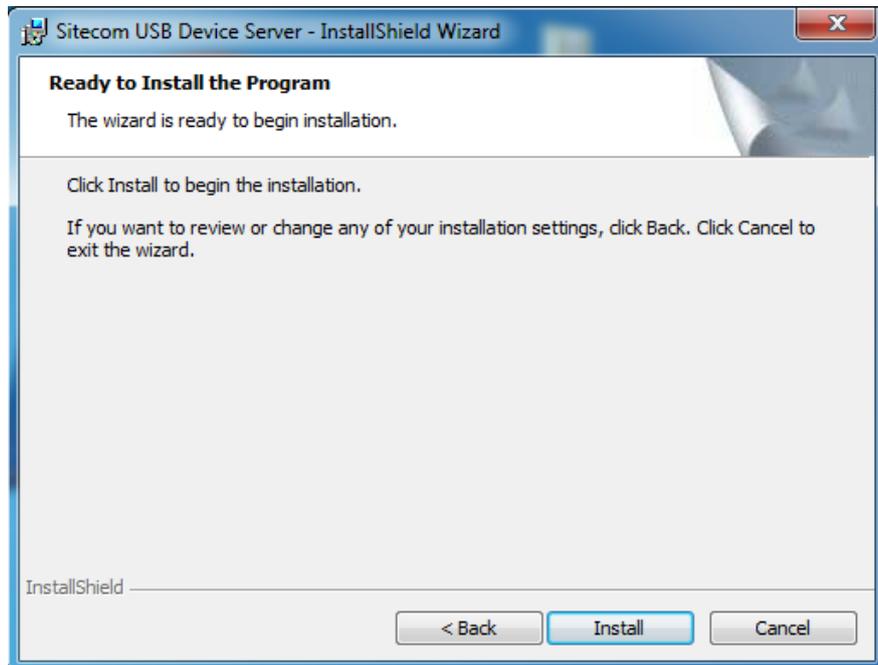
Click **Next** to continue the installation.



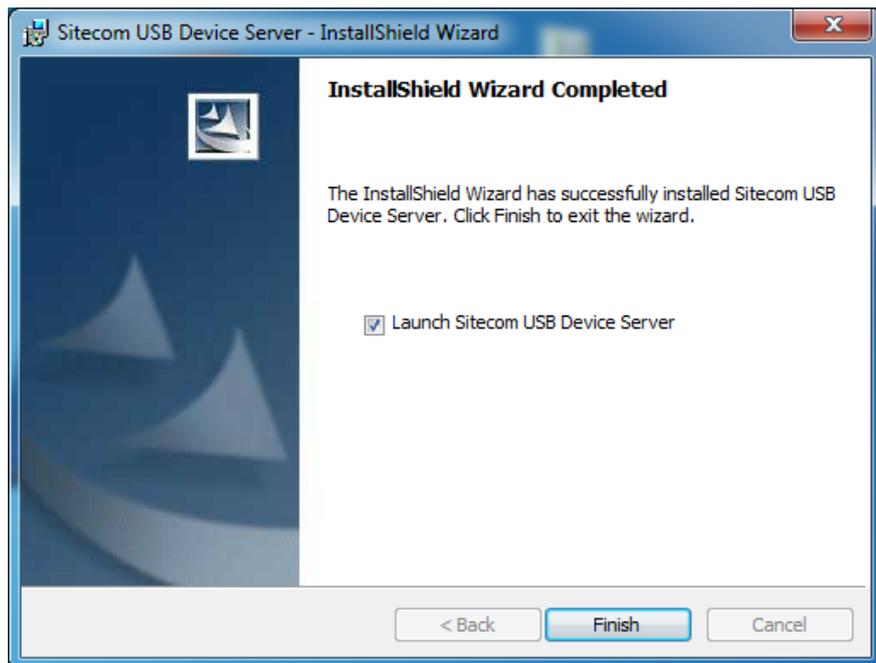
Enter your username and organization if applicable and click **Next** to continue.



Choose a folder where the software should be installed or keep it to default and click **Next** to continue.



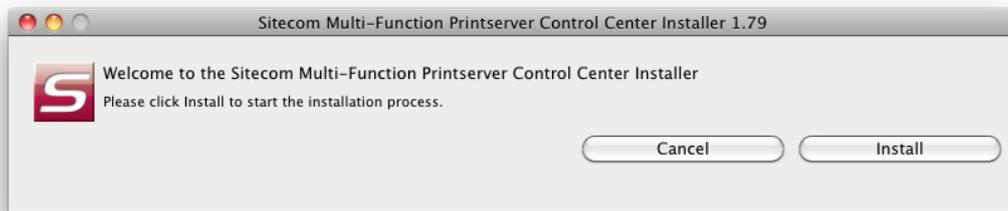
The software is now ready to be installed, Click **Install** to continue.



Once the installation is finished the software will inform you. If "**Launch Sitecom USB Device Server**" checked the software will automatically be launched after you clicked **Finish**.

## MacOS

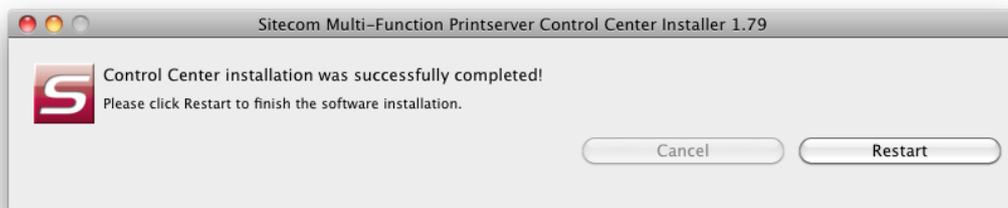
Insert the CD-ROM that was included with your router and select “Install” from the cd-menu.



Click **Install** to continue installation.



Enter your Mac username and password and click **OK** to continue.



Once the installation is finished the software will inform you and requires to restart the system.

## Connect & Disconnect

"NetUSB" allows you to use USB printers when they're actually connected to the Sitecom USB server.

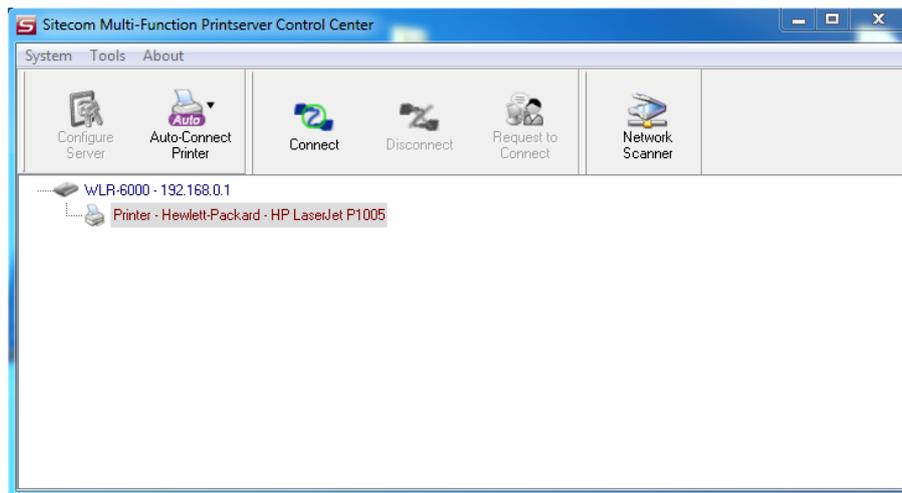
The "connect" operation is a software operation that simulates an actual USB device plug-in. Therefore, when you do a "connect" operation in the Control Center, the PC can detect a USB device's plug-in, although actually you do not plug in any USB device to your PC. Similarly, the "disconnect" operation is a software operation that simulates the disconnection of the USB device.

**Note:** If a USB device is "connected" by a PC, we say that PC has the ownership of the USB device. Only one PC can get the ownership of a USB device at the same time.

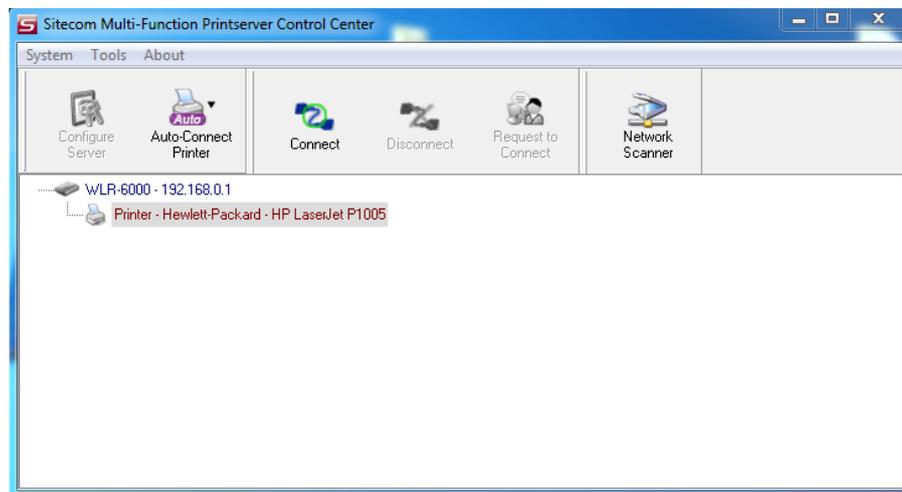
## NetUSB installation

The steps to do installation for USB devices, like MFPs:

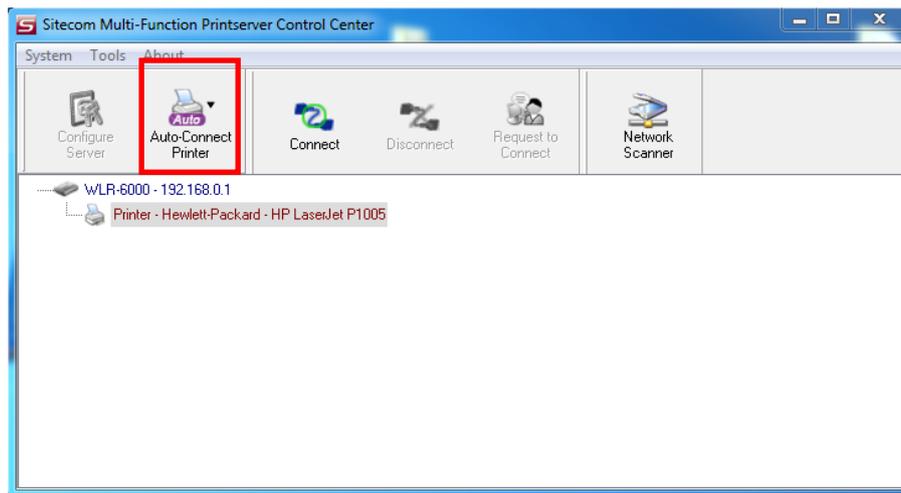
- Make sure the router is turned on.
- Connect the USB device to the USB port of the router.
- Run the Control Center. In the “USB MFP Server List” window, you can see the host names and IP addresses all of the Sitecom servers (in blue) on the network, as shown below.



- Click the server. Then all USB devices attached to the server will be shown.



- Please follow the user manual of the USB device to install its driver. For example, you may put the driver CD of the USB device in the CD-ROM player to install the driver.
- When you are asked to plug in the USB device into PC's USB port, click the desired USB device in the Control Center and then click the “Auto-Connect Printer” button to do the connect operation and get the ownership of the USB device. The computer name of the device owner will be shown at the end of the device.



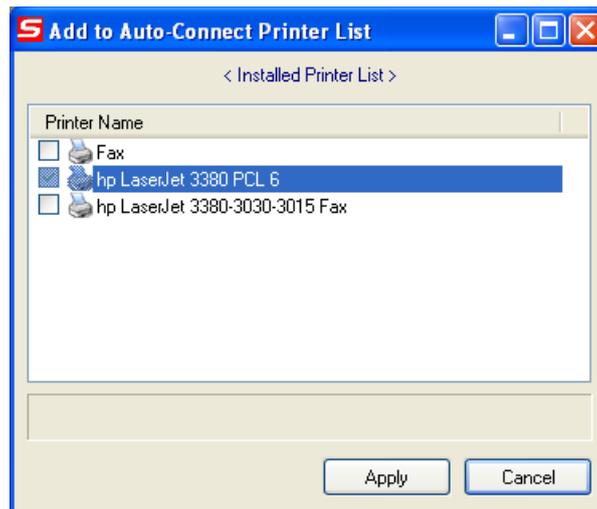
- PC will automatically detect that the USB device is plugged-in. On the right side of the Windows Task Bar, you can see the information of the new device. Continue to follow the user manual of the USB device to do the rest jobs of installation, until the driver installation has finished.

After the installation, you can see the newly created devices on the PC. If the USB device is a MFP, you can see a new printer and a new scanner from the "Control Panel".

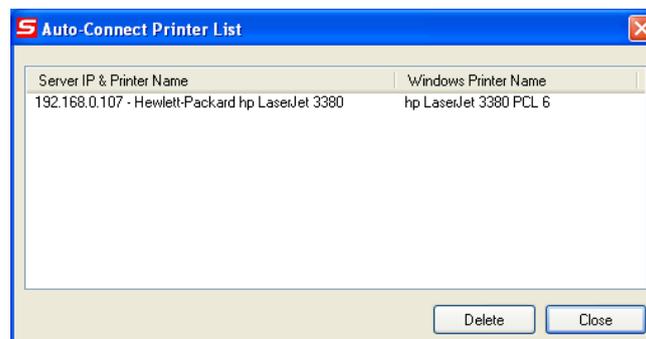
## NetUSB Printing using Auto-Connect Printer

After the driver is installed, you can see a newly created printer in the Control Panel. Follow the steps below to perform NetUSB printing.

- In the Control Center, click the MFP server that has the desired printer (or MFP) attached.
- Click the desired printer (or MFP).
- Click the "Auto Connect Printer" button and choose "Set Auto-Connect Printer". The following figure will appear.



- Choose the desired printer. The desired printer must be the Windows printer (this is a logical printer) that matches the printer attached on the MFP server (this is a physical printer). Then click the "Apply" button.

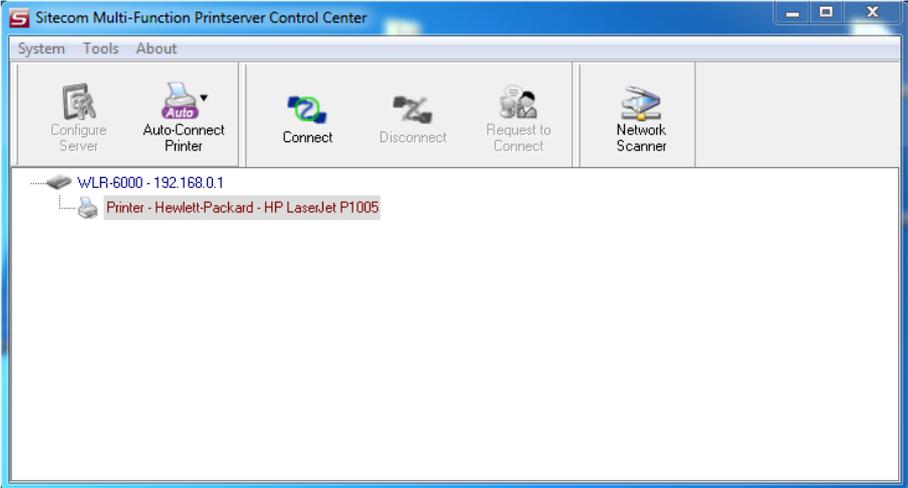


- Then, the printer will be marked as an "Auto-Connected Printer" in red. If you choose "Auto-Connected Printer List" in the "Tools" menu, you can see a newly created item that describes the association between the Windows printer and the physical printer on the server.
- Then try to issue a print job to the desired printer. You will see the Control Center will automatically do a connect operation and, once the print job finished, it will hold the connection. However, the connection will be released immediately when another user do the printing afterward. At the same time, the printer is automatically disconnected with your PC.
- When you do a print job again. The control center will automatically do a connecting operation on printing again. This is so-called "Auto Connect / Disconnect" operation.

**Note:** Under the “Auto-Connected Printer” setting, it is not necessary to manually press the “Connect” button when printing. If you press the “Connect” button for printing, please make sure to click “Disconnect” button after you finish the printing. Otherwise, other users cannot print properly. It is because you are the only ownership of the connected printer.

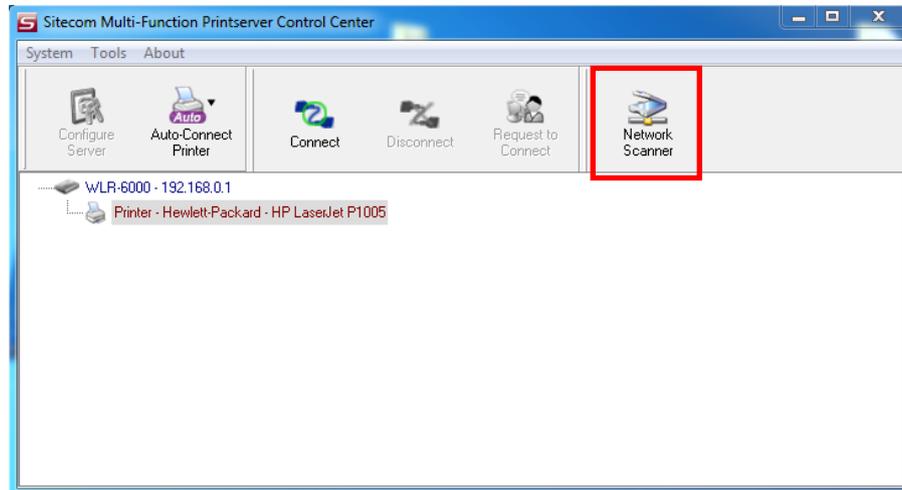
**AutoRun**

You can make the Control Center be run automatically after you login Windows. To do this, you choose the “Configuration” item in the “Tools” menu. The following window will appear. Click the check box and then on the “OK” button. This feature is enabled by default.

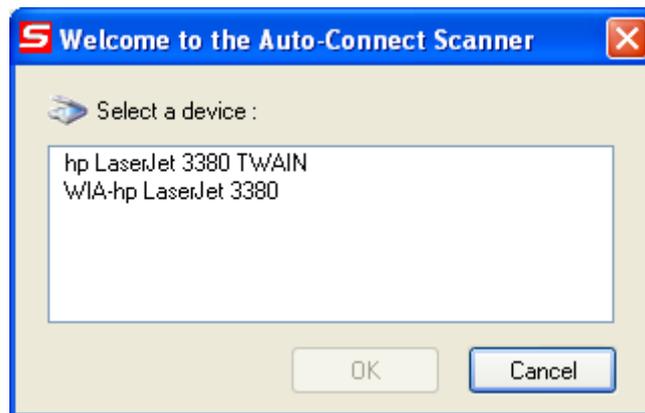


## NetUSB Scanning using Network Scanning

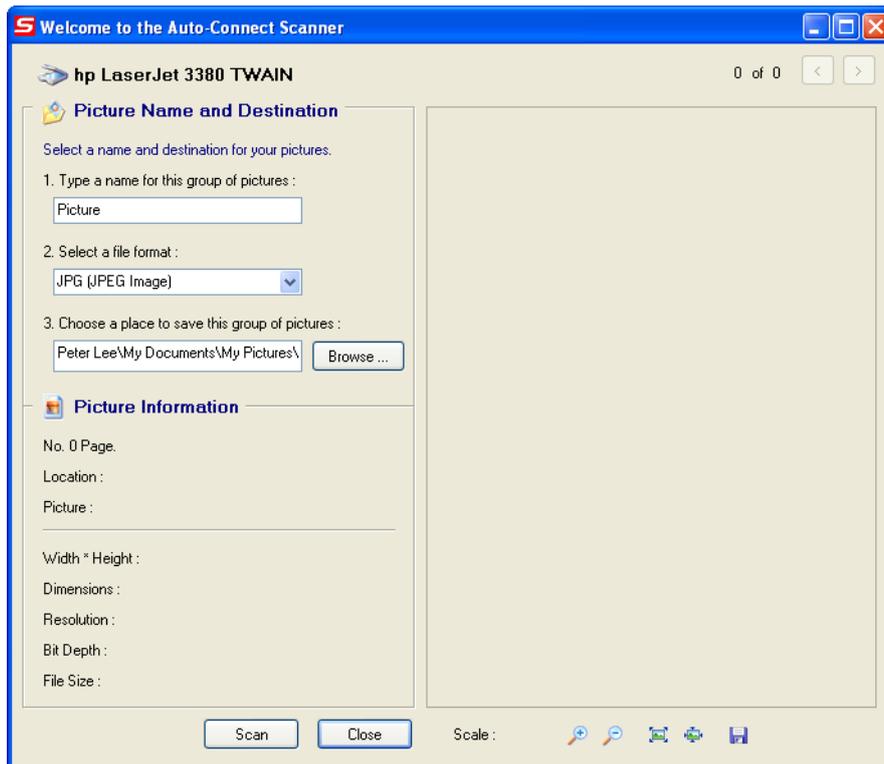
- In the Control Center, click the MFP server that has the desired MFP attached.
- Click the desired MFP.
- Click the “Network Scanner” button.



- Then you can see that the Control Center will automatically do a “connect” operation. The following window will appear.



- Choose one of TWAIN or WIA item. Click “OK”. The following window will appear.



- Follow the usual steps to do scanning.

# 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: GREYHOUND v1 001  
Product description: Wi-Fi Router AC2600

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

### CE/LVD

· EN 60950-1: 2006+A11 (2009)

### CE/EMC

· EN 301 489-1 V1.8.1  
· EN 301 489-17 V2.1.1

### RADIO SPECTRUM

· EN 300 328 V1.7.1 2006-10  
· EN 50385 2002  
· EN 301 893 V1.5.1.

This certifies that the following designated Sitecom product:

Product number: GREYHOUND v1 001  
Product description: Wi-Fi Router AC2600

Complies with the requirements of the following directives and carries the CE marking accordingly:  
R&TTE Directive 99/5/EC, EMC directive 2004/95/EC and Low Voltage Directive 2006/95/EC.  
This declaration is the responsibility of the manufacturer / importer:

Sitecom Europe B.V.  
Rotterdam, 1 June 2015

**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 OVERENSSTEMMELSEERKLÆRING**

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:



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

# Addendum C: GNU/GPL Information

Parts of the firmware of the Greyhound Wireless Broadband Router 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	Linux	<a href="http://www.kernel.org">www.kernel.org</a>	3.4.103	GPL V2
2	OpenWrt	<a href="https://downloads.openwrt.org/attitude_adjustment/12.09/">https://downloads.openwrt.org/attitude_adjustment/12.09/</a>	12.09	GPL V2
3	6rd	<a href="http://sourceforge.net/projects/dslite-6rd/">http://sourceforge.net/projects/dslite-6rd/</a>	4	GPL V2
4	6tunnel	<a href="http://toxygen.net/6tunnel/">http://toxygen.net/6tunnel/</a>	0.11rc2	GPL V2
5	alsa-lib	<a href="http://www.alsa-project.org/">http://www.alsa-project.org/</a>	1.0.24.1	GPL V2
6	alsa-utils	<a href="http://www.alsa-project.org/">http://www.alsa-project.org/</a>	1.0.24.2	GPL V2
7	Avahi	<a href="http://avahi.org/download/">http://avahi.org/download/</a>	0.6.31	LGPL
8	background-size-polyfill	<a href="https://github.com/louisremi/background-size-polyfill">https://github.com/louisremi/background-size-polyfill</a>	20121123	MIT
9	base-files	<a href="http://openwrt.org/">http://openwrt.org/</a>	118.2	GPL V2
10	block-mount	<a href="https://dev.openwrt.org/browser/trunk/package/">https://dev.openwrt.org/browser/trunk/package/</a>	0.2.0	GPL V2
11	busybox	<a href="http://www.busybox.net/">http://www.busybox.net/</a>	1.19.4	GPL V2
12	Cups	<a href="http://www.cups.org/">http://www.cups.org/</a>	1.4.4	GPL V2
13	Curl	<a href="http://curl.haxx.se/">http://curl.haxx.se/</a>	7.29.0	GPL V2
14	d3js	<a href="http://d3js.org/">http://d3js.org/</a>	3.1.6	BSD
15	db47	<a href="http://download.oracle.com/berkeley-db/">http://download.oracle.com/berkeley-db/</a>	4.7.25.NC	GPL V2
16	DBus	<a href="http://dbus.freedesktop.org/releases/dbus/">http://dbus.freedesktop.org/releases/dbus/</a>	1.4.14	GPL V2
17	ddns-scripts	<a href="https://dev.openwrt.org/browser/trunk/package/">https://dev.openwrt.org/browser/trunk/package/</a>	1.0.0	GPL V2
18	devmem2	<a href="https://dev.openwrt.org/browser/packages/utils/devmem2/">https://dev.openwrt.org/browser/packages/utils/devmem2/</a>	1	GPL V2
19	directfb	<a href="http://www.directfb.org/downloads/Core/DirectFB-1.4">http://www.directfb.org/downloads/Core/DirectFB-1.4</a>	1.4.2	GPL V2
20	dnsmasq	<a href="http://thekelleys.org.uk/dnsmasq">http://thekelleys.org.uk/dnsmasq</a>	2.66	GPL V2
21	dosfstools	<a href="http://www.daniel-baumann.ch/software/dosfstools">http://www.daniel-baumann.ch/software/dosfstools</a>	3.0.12	GPL V2
22	ds-lite	<a href="https://dev.openwrt.org/browser/trunk/package/">https://dev.openwrt.org/browser/trunk/package/</a>	4	GPL V2
23	e2fsprogs	<a href="http://e2fsprogs.sourceforge.net/">http://e2fsprogs.sourceforge.net/</a>	1.42.4	GPL V2

24	etherwake	<a href="http://ftp.debian.org/debian/pool/main/e/etherwake">http://ftp.debian.org/debian/pool/main/e/etherwake</a>	1.09	GPL V2
25	ethtool	<a href="http://sourceforge.net/projects/gkernel/">http://sourceforge.net/projects/gkernel/</a>	3.4.1	GPL V2
26	Expat	<a href="http://expat.sourceforge.net/">http://expat.sourceforge.net/</a>	2.0.1	GPL V2
27	Fcgi	<a href="http://www.fastcgi.com/dist/">http://www.fastcgi.com/dist/</a>	2.4.0	GPL V2
28	fdk-aac	<a href="http://downloads.sourceforge.net/opencore-amr/">http://downloads.sourceforge.net/opencore-amr/</a>	0.1.1	GPL V2
29	ffmpeg	<a href="http://ffmpeg.org/releases/">http://ffmpeg.org/releases/</a>	1.0.1	GPL V2
30	file	<a href="ftp://ftp.astron.com/pub/file/">ftp://ftp.astron.com/pub/file/</a>	5.11	GPL V2
31	freetype	<a href="http://www.freetype.org/">http://www.freetype.org/</a>	2.4.8	GPL V2
32	gcc	<a href="http://gcc.gnu.org/">http://gcc.gnu.org/</a>	4.6.3	GPL V2
33	gdbm	<a href="http://www.gnu.org/software/gdbm/">http://www.gnu.org/software/gdbm/</a>	1.9.1	GPL V2
34	gettext	<a href="https://www.gnu.org/software/gettext/">https://www.gnu.org/software/gettext/</a>	2	GPL
35	hotplug2	<a href="http://code.google.com/p/hotplug2/">http://code.google.com/p/hotplug2/</a>	201	GPL V2
36	Ifplugd	<a href="http://0pointer.de/lennart/projects/ifplugd/">http://0pointer.de/lennart/projects/ifplugd/</a>	0.28	GPL
37	Igmpproxy	<a href="http://sourceforge.net/projects/igmpproxy/">http://sourceforge.net/projects/igmpproxy/</a>	0.1	GPL V2
38	Iperf	<a href="http://sourceforge.net/projects/iperf/">http://sourceforge.net/projects/iperf/</a>	2.0.5	GPL V2
39	iproute2	<a href="http://www.netfilter.org/projects/iptables/index.html">http://www.netfilter.org/projects/iptables/index.html</a>	3.3.0	GPL V2
40	iptables	<a href="http://www.netfilter.org/projects/iptables/index.html">http://www.netfilter.org/projects/iptables/index.html</a>	1.4.10	GPL
41	iputils	<a href="http://www.skbuff.net/iputils">http://www.skbuff.net/iputils</a>	20101006	GPL V2
42	Jansson	<a href="http://www.digip.org/jansson/releases/">http://www.digip.org/jansson/releases/</a>	2.2.1	GPL V2
43	Jquery	<a href="http://jquery.com/">http://jquery.com/</a>	1.7.2	MIT
44	jquery-contextmenu	<a href="http://abeautifulsite.net/2008/09/jquery-context-menu-plugin/">http://abeautifulsite.net/2008/09/jquery-context-menu-plugin/</a>	1.01	MIT
45	jquery-flot	<a href="http://www.flotcharts.org/">http://www.flotcharts.org/</a>	0.8.0	MIT
46	jquery-jscrollpane	<a href="http://jscrollpane.kelvinluck.com">http://jscrollpane.kelvinluck.com</a>	2.0.0beta10	MIT
47	jquery-sparkline	<a href="http://omnipotent.net/jquery.sparkline">http://omnipotent.net/jquery.sparkline</a>	1.4.3	BSD
48	jquery-swapsies	<a href="http://biostall.com/swap-and-re-order-divs-smoothly-using-jquery-swapsie-plugin">http://biostall.com/swap-and-re-order-divs-smoothly-using-jquery-swapsie-plugin</a>	20100709	MIT
49	jquery-ui	<a href="http://jqueryui.com/">http://jqueryui.com/</a>	1.8.21	MIT
50	json-c	<a href="https://s3.amazonaws.com/json-c_releases/releases/">https://s3.amazonaws.com/json-c_releases/releases/</a>	0.11	GPL V2
51	libdaemon	<a href="http://0pointer.de/lennart/projects/libdaemon/">http://0pointer.de/lennart/projects/libdaemon/</a>	0.14	GPL V2
52	Libelf	<a href="http://www.mr511.de/software/">http://www.mr511.de/software/</a>	0.8.13	GPL V2
53	libevent2	<a href="http://www.monkey.org/~provos/libevent/">http://www.monkey.org/~provos/libevent/</a>	2.0.19	GPL V2
54	libgcrypt	<a href="http://directory.fsf.org/security/libgcrypt.html">http://directory.fsf.org/security/libgcrypt.html</a>	1.5.0	GPL V2

55	libgpg-error	<a href="http://www.gnupg.org/related_software/libgpg-error/">http://www.gnupg.org/related_software/libgpg-error/</a>	1.9	GPL V2
56	libid3tag	<a href="http://sourceforge.net/projects/mad/files/libid3tag/">http://sourceforge.net/projects/mad/files/libid3tag/</a>	0.15.1b	GPL V2
57	libiwinfo	<a href="https://dev.openwrt.org/browser/trunk/package/">https://dev.openwrt.org/browser/trunk/package/</a>	44	GPL V2
58	Libjpeg	<a href="http://www.ijg.org/files/">http://www.ijg.org/files/</a>	6b	GPL V2
59	Libmad	<a href="http://www.underbit.com/products/mad/">http://www.underbit.com/products/mad/</a>	0.15.1b	GPL V2
60	libnetfilter_conntrack	<a href="http://www.netfilter.org/projects/libnetfilter_conntrack/">http://www.netfilter.org/projects/libnetfilter_conntrack/</a>	0.9.1	GPL V2
61	libnfnetlink	<a href="http://netfilter.org/projects/libnfnetlink/">http://netfilter.org/projects/libnfnetlink/</a>	1.0.0	GPL V2
62	libnl-tiny	<a href="https://github.com/sabotage-linux/libnl-tiny">https://github.com/sabotage-linux/libnl-tiny</a>	0.1	GPL V2
63	Libogg	<a href="http://sourceforge.net/projects/libogg">http://sourceforge.net/projects/libogg</a>	1.1.4	BSD
64	libpcap	<a href="http://www.tcpdump.org/release/">http://www.tcpdump.org/release/</a>	1.1.1	GPL V2
65	libpng	<a href="http://www.libpng.org/pub/png/libpng.html">http://www.libpng.org/pub/png/libpng.html</a>	1.2.46	GPL V2
66	librpc	<a href="git://nbd.name/uclibc-rpc.git">git://nbd.name/uclibc-rpc.git</a>	0.9.32-rc2	GPL V2
67	Libsysfs	<a href="http://linux-diag.sourceforge.net/Sysfsutils.html">http://linux-diag.sourceforge.net/Sysfsutils.html</a>	2.1.0	LGPL
68	libtheora	<a href="http://downloads.xiph.org/releases/theora/">http://downloads.xiph.org/releases/theora/</a>	1.0	GPL V2
69	libtool	<a href="http://www.gnu.org/software/libtool/">http://www.gnu.org/software/libtool/</a>	2.4	GPL V2
70	libubox	<a href="git://nbd.name/luci2/libubox.git">git://nbd.name/luci2/libubox.git</a>	2013-10-19	GPL V2
71	libubus	<a href="git://nbd.name/luci2/ubus.git">git://nbd.name/luci2/ubus.git</a>	2013-08-08	GPL
72	libupnp	<a href="http://pupnp.sourceforge.net/">http://pupnp.sourceforge.net/</a>	1.6.18	BSD
73	libusb	<a href="http://libusb.sourceforge.net/">http://libusb.sourceforge.net/</a>	0.1.12	GPL V2
74	libxml2	<a href="http://xmlsoft.org/sources/">http://xmlsoft.org/sources/</a>	2.7.8	GPL V2
75	lighttpd	<a href="http://download.lighttpd.net/lighttpd/releases-1.4.x">http://download.lighttpd.net/lighttpd/releases-1.4.x</a>	1.4.30	BSD
76	logrotate	<a href="http://packages.debian.org/unstable/admin/logrotate">http://packages.debian.org/unstable/admin/logrotate</a>	3.8.1	GPL V2
77	lua	<a href="http://www.lua.org/ftp/">http://www.lua.org/ftp/</a>	5.1.4	MIT
78	luci	<a href="http://luci.subsignal.org/">http://luci.subsignal.org/</a>	0.11	Apache2
79	lzo	<a href="http://www.oberhumer.com/opensource/lzo/download/">http://www.oberhumer.com/opensource/lzo/download/</a>	2.06	GPL V2
80	madplay	<a href="http://sourceforge.net/projects/mad">http://sourceforge.net/projects/mad</a>	0.15.2b	GPL V2
81	matrixssl	<a href="http://www.matrixssl.org/download.html">http://www.matrixssl.org/download.html</a>	1.2.4	GPL V2
82	mdadm	<a href="http://www.kernel.org/pub/linux/utils/raid/mdadm/">http://www.kernel.org/pub/linux/utils/raid/mdadm/</a>	3.2.5	GPL V2
83	miniupnpd	<a href="http://miniupnp.free.fr/">http://miniupnp.free.fr/</a>	1.8.20130426	BSD
84	Mkdosfs	<a href="http://www.daniel-baumann.ch/software/dosfstools">http://www.daniel-baumann.ch/software/dosfstools</a>	3.0.12	GPL V3
85	mpg123	<a href="http://mpg123.sourceforge.net/">http://mpg123.sourceforge.net/</a>	1.14.4	LGPL
86	mplayer	<a href="http://www.mplayerhq.hu/MPlayer/releases/">http://www.mplayerhq.hu/MPlayer/releases/</a>	1.1.1	GPL V2

87	mtdd-utils	<a href="http://processors.wiki.ti.com/index.php/MTD_Uutilities">http://processors.wiki.ti.com/index.php/MTD_Uutilities</a>	1.4.5	GPL V2
88	mysql	<a href="http://dev.mysql.com/">http://dev.mysql.com/</a>	5.1.53	GPL V2
89	ncurses (terminfo)	<a href="http://www.gnu.org/software/ncurses/">http://www.gnu.org/software/ncurses/</a>	5.7	GPL V2
90	netatalk	<a href="http://netatalk.sourceforge.net">http://netatalk.sourceforge.net</a>	2.2.1	GPL
91	netifd	<a href="git://nbd.name/luci2/netifd.git">git://nbd.name/luci2/netifd.git</a>	2013/7/16	GPL V2
92	ngrep	<a href="http://ngrep.sourceforge.net">http://ngrep.sourceforge.net</a>	1.45	BSD
93	ntfs-3g	<a href="http://www.tuxera.com/community/ntfs-3g-download">http://www.tuxera.com/community/ntfs-3g-download</a>	2011.4.12	GPL V2
94	odhcp6c	<a href="https://github.com/sbyx/odhcp6c.git">https://github.com/sbyx/odhcp6c.git</a>	2014/12/10	GPL V2
95	opencore-amr	<a href="http://sourceforge.net/projects/opencore-amr/">http://sourceforge.net/projects/opencore-amr/</a>	0.1.3	Apache2
96	openssl	<a href="http://www.openssl.org/source/">http://www.openssl.org/source/</a>	1.0.2a	BSD
97	openvpn	<a href="http://openvpn.net">http://openvpn.net</a>	2.2.2	GPL V2
98	opkg	<a href="http://downloads.yoctoproject.org/releases/opkg/">http://downloads.yoctoproject.org/releases/opkg/</a>	618	GPL V2
99	pcre	<a href="http://www.pcre.org/">http://www.pcre.org/</a>	8.11	BSD
100	php	<a href="http://www.php.net/distributions/">http://www.php.net/distributions/</a>	5.4.5	BSD
101	phpMyAdmin	<a href="http://www.phpmyadmin.net/">http://www.phpmyadmin.net/</a>	4.0.4.1	GPL
102	popt	<a href="http://freecode.com/projects/popt">http://freecode.com/projects/popt</a>	1.7	GPL V2
103	ppp	<a href="http://ppp.samba.org/">http://ppp.samba.org/</a>	2.4.5	GPL V2
104	pure-ftpd	<a href="http://www.pureftpd.org/project/pure-ftpd">http://www.pureftpd.org/project/pure-ftpd</a>	1.0.32	BSD
105	quagga	<a href="http://download.savannah.gnu.org/releases/quagga/">http://download.savannah.gnu.org/releases/quagga/</a>	0.99.21	GPL
106	radvd	<a href="http://v6web.litech.org/radvd/">http://v6web.litech.org/radvd/</a>	1.9.1	BSD
107	raphael	<a href="http://raphaeljs.com/">http://raphaeljs.com/</a>	2.1.0	MIT
108	rdisc6	<a href="http://www.remlab.net/ndisc6/">http://www.remlab.net/ndisc6/</a>	1.0.2	GPL V2
109	Rdncssd	<a href="http://rdncssd.linkfanel.net/">http://rdncssd.linkfanel.net/</a>	1.0.2	GPL V2
110	readline	<a href="http://cnswww.cns.cwru.edu/php/chet/readline/rltop.html">http://cnswww.cns.cwru.edu/php/chet/readline/rltop.html</a>	5.2	GPL V2
111	resolveip	<a href="https://dev.openwrt.org/browser/trunk/package/resolveip">https://dev.openwrt.org/browser/trunk/package/resolveip</a>	2	GPL V2
112	rp-pppoe	<a href="http://www.roaringpenguin.com/products/pppoe">http://www.roaringpenguin.com/products/pppoe</a>	3.10	GPL V2
113	samba	<a href="http://www.samba.org/">http://www.samba.org/</a>	3.6.5	GPL V3
114	SDL	<a href="http://www.libsdl.org/release/">http://www.libsdl.org/release/</a>	1.2.14	GPL V2
115	shairport-sync	<a href="git://github.com/mikebrady/shairport-sync.git">git://github.com/mikebrady/shairport-sync.git</a>	2.3.6	GPL V2
116	swap-utils	<a href="http://sourceforge.net/projects/redswap/">http://sourceforge.net/projects/redswap/</a>	2.21.2	GPL V2
117	sysfsutils	<a href="http://linux-diag.sourceforge.net/Sysfsutils.html">http://linux-diag.sourceforge.net/Sysfsutils.html</a>	2.1.0	GPL V2
118	sysstat	<a href="http://pagesperso-orange.fr/sebastien.godard">http://pagesperso-orange.fr/sebastien.godard</a>	9.0.6	GPL V2

119	Tc	<a href="http://lartc.org/">http://lartc.org/</a>	3.3.0	GPL V2
120	tftp-hpa	<a href="http://www.kernel.org/pub/software/network/tftp">http://www.kernel.org/pub/software/network/tftp</a>	0.48	BSD
121	transmission	<a href="http://www.transmissionbt.com">http://www.transmissionbt.com</a>	2.71	GPL V2
122	uboot	<a href="http://www.denx.de/wiki/U-Boot">http://www.denx.de/wiki/U-Boot</a>	2012.07	GPL V2
123	uboot-envtools	<a href="http://www.denx.de/wiki/U-Boot">http://www.denx.de/wiki/U-Boot</a>	2012.04.01	GPL V2
124	ubus	<a href="git://nbd.name/luci2/ubus.git">git://nbd.name/luci2/ubus.git</a>	2013-8-8	LGPLv2.1
125	uci	<a href="git://nbd.name/uci.git">git://nbd.name/uci.git</a>	2013-6-11	LGPLv2.1
126	uclibc	<a href="http://www.uclibc.org/downloads/">http://www.uclibc.org/downloads/</a>	0.9.33.2	LGPL
127	uclibc++	<a href="http://cxx.uclibc.org/src/">http://cxx.uclibc.org/src/</a>	0.2.4	LGPL
128	urijs	<a href="http://medialize.github.io/URI.js/">http://medialize.github.io/URI.js/</a>	0.1	MIT
129	util-linux	<a href="ftp://ftp.kernel.org/pub/linux/utils/util-linux/">ftp://ftp.kernel.org/pub/linux/utils/util-linux/</a>	2.21.2	GPL V2
130	wide-dhcpv6	<a href="https://sourceforge.net/projects/wide-dhcpv6/">https://sourceforge.net/projects/wide-dhcpv6/</a>	20080615	BSD
131	wireless-tools	<a href="http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux">http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux</a>	29	GPL V2
132	xl2tpd	<a href="http://www.xelerance.com/software/xl2tpd/">http://www.xelerance.com/software/xl2tpd/</a>	1.3.1	GPL V2
133	zlib	<a href="http://www.zlib.net/">http://www.zlib.net/</a>	1.2.7	Zlib
134	Zoneinfo	<a href="http://www.iana.org/time-zones/repository/releases">http://www.iana.org/time-zones/repository/releases</a>	2011n	GPL V2

## Availability of source code

This product contains open source software, including software licensed under the GNU General Public License (GPL) v2/v3 and/or the Lesser/Library General Public License (LGPL) v2/2.1/3 as specified in the "Licensing Information" available above. As per the license terms of these licenses Sitecom Europe B.V. offers to send you the source code for the open source components in this product on a CD/DVD for up to three years after support for this product has stopped for a charge of EUR 10. Please note that the source code of the firmware might already be on the support CD/DVD that is shipped with your product.

To get a copy of the software, please send an e-mail to [gpl-request@sitecom.com](mailto:gpl-request@sitecom.com) or write to Sitecom Europe B.V., P.O. Box 12040, 3004GA Rotterdam, The Netherlands. Please specify the device type and version number when contacting us to ensure smooth handling of your request. For your convenience you may also find the source code for the latest supported firmware version on the product's website during the time the product is supported. If you cannot find the source code for the relevant firmware please contact us.

## No Warranty

The free software included in this product is distributed in the hope that it will be useful, but WITHOUT ANY LIABILITY OF OR ANY WARRANTY FROM THE LICENSOR.

## GNU GENERAL PUBLIC LICENSE

Version 2, June 1991 Copyright (C) 1989, 1991 Free Software Foundation, Inc. 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

## Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too. When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things. To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it. For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights. We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software. Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations. Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all. The precise terms and conditions for copying, distribution and modification follow.

## TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you". Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program. You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions: a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change. b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or

any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License. c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.) These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it. Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program. In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following: a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or, b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or, c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.) The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable. If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program. If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances. It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice. This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

## **NO WARRANTY**

11. Because the program is licensed free of charge, there is no warranty for the program, to the extent permitted by applicable law. Except when otherwise stated in writing the copyright holders and/or other parties provide the program "as is" without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the program is with you. Should the program prove defective, you assume the cost of all necessary servicing, repair or correction.

12. In no event unless required by applicable law or agreed to in writing will any copyright holder, or any other party who may modify and/or redistribute the program as permitted above, be liable to you for damages, including any general, special, incidental or consequential damages arising out of the use or inability to use the program (including but not limited to loss of data or data being rendered inaccurate or losses sustained by you or third parties or a failure of the program to operate with any other programs), even if such holder or other party has been advised of the possibility of such damages.

## **END OF TERMS AND CONDITIONS**

Revision 1.0

© Sitecom Europe BV 2016

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.