AZTECH FG7003GRV(AC)

SingTel - Gigabit Ethernet DUAL-BAND Wireless AC Residential Gateway

SINGAPORE | JANUARY 2014

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CONTENTS

Hardware Features

WAN Connection

- 1-Port Gigabit Ethernet WAN Port for ONT (FTTH) Connection

LAN Connection

- 4-Port Gigabit Ethernet LAN
- Built-in Wireless a/b/g/n/ac Dual Band Access Point (2.4GHz and 5Ghz)

Others

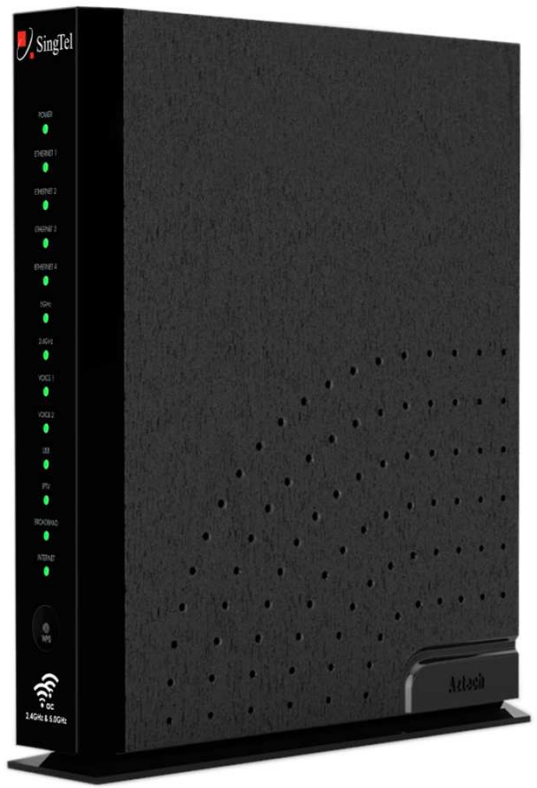
- 2 FXS Ports for connecting analog Phone sets
- WPS – Wifi Protected Setup button support
- LED Indicators for all interfaces and services

Firmware Features

- Out of the box pre-configuration to support MIO TV, MIO Voice and SingNet Broadband
- TR069 Compliant Residential Gateway (auto configuration, remote monitoring/troubleshooting, remote firmware upgrade etc.)
- Zero configuration Internet installation for FTTH
- Unique Wireless SSID and Wireless Key for each of the unit (default wireless credentials are printed on the casing label sticker)
- Dynamic LAN Port mapping for the IPTV – STB
- Port Forwarding and DMZ support, configurable from the user mode pages
- Standard support for Wireless Security / Encryption

Front Panel Indicators and Button

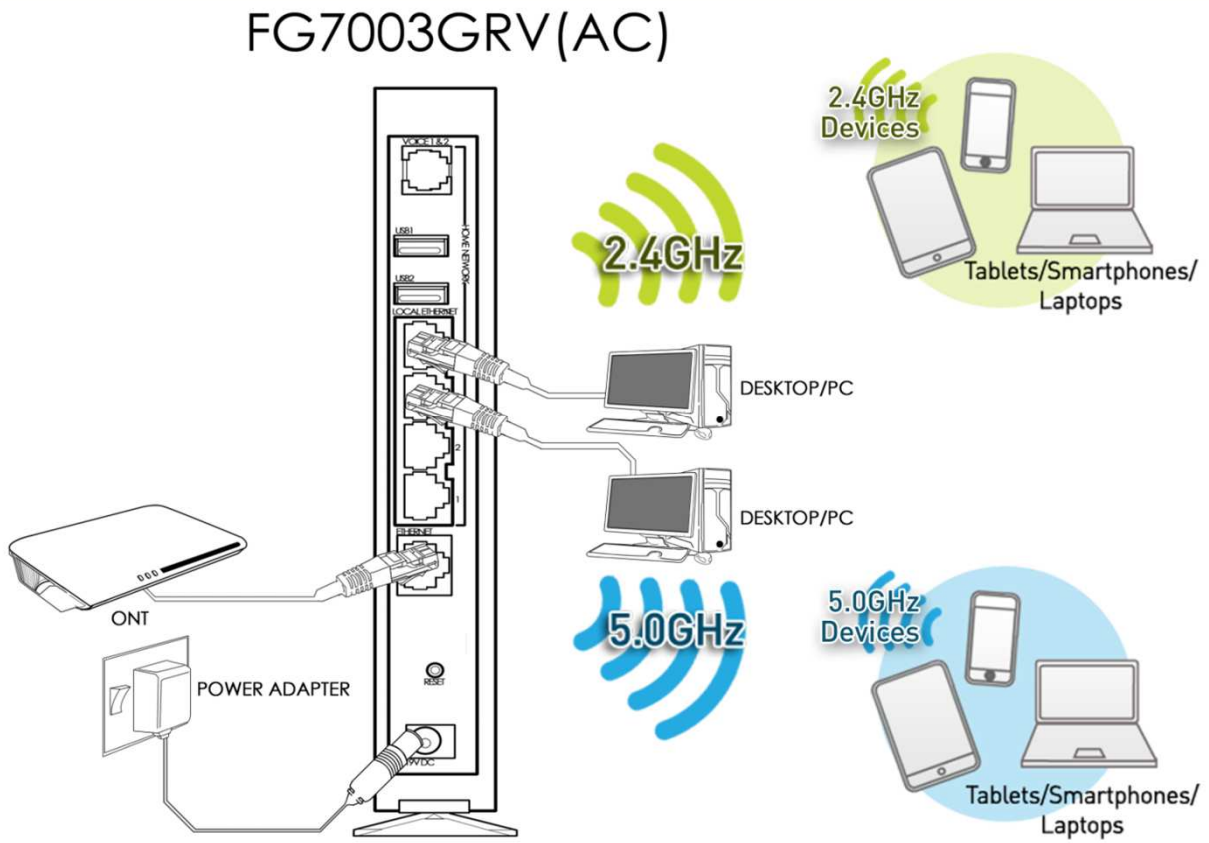
- Power
- Ethernet LAN Ports 1 to 4
- Wifi (2.4GHz and 5GHz)
- Voice 1 and 2 (Telephone)
- USB
- IPTV
- Broadband (Ethernet WAN)
- Internet
- WPS Indicator and button



Back Panel Ports and Button

- Voice 1 and 2
- USB 1
- USB 2
- Ethernet LAN Ports 1 to 4
- Ethernet WAN Port
- Reset button
- Power Adapter Jack

Recommended Hardware Setup (FTTH)

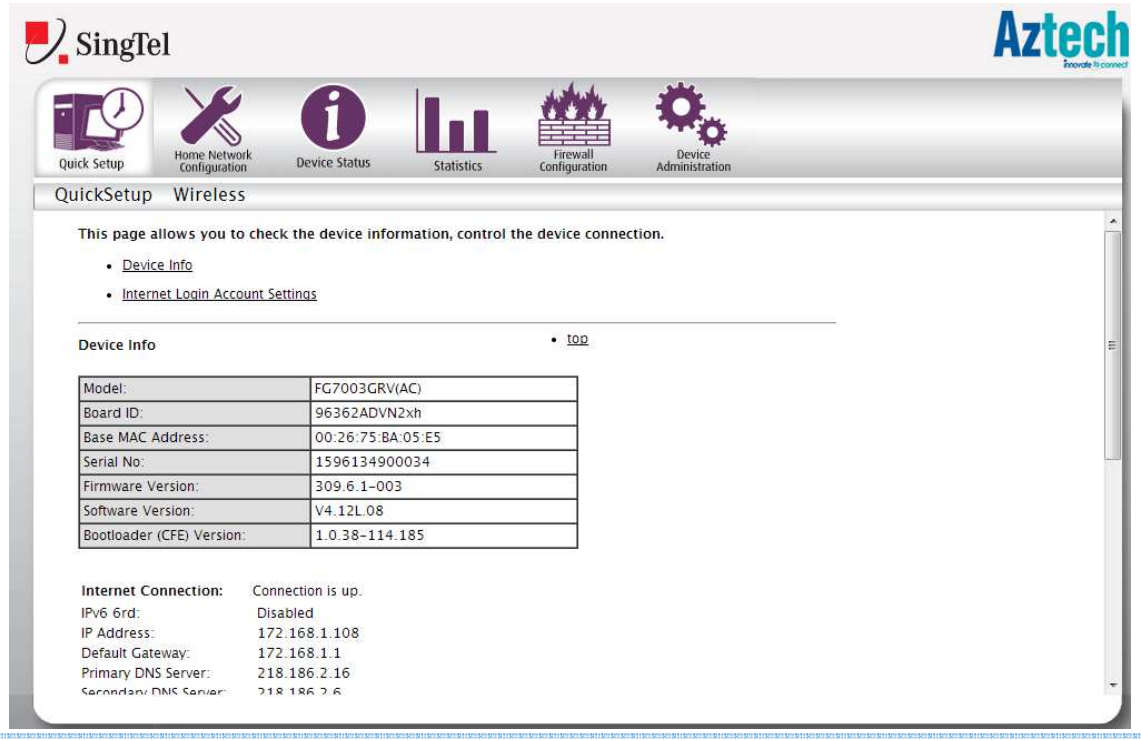


Notes:

1. 5GHz connectivity is recommended for more bandwidth intensive activities such as video streaming within shorter range.
2. 2.4GHz connectivity is recommended for normal surfing activities within a larger area.

FTTH

To check the Internet connection for FTTH , go to http://192.168.1.254, scroll down to Device Info> Internet Connection



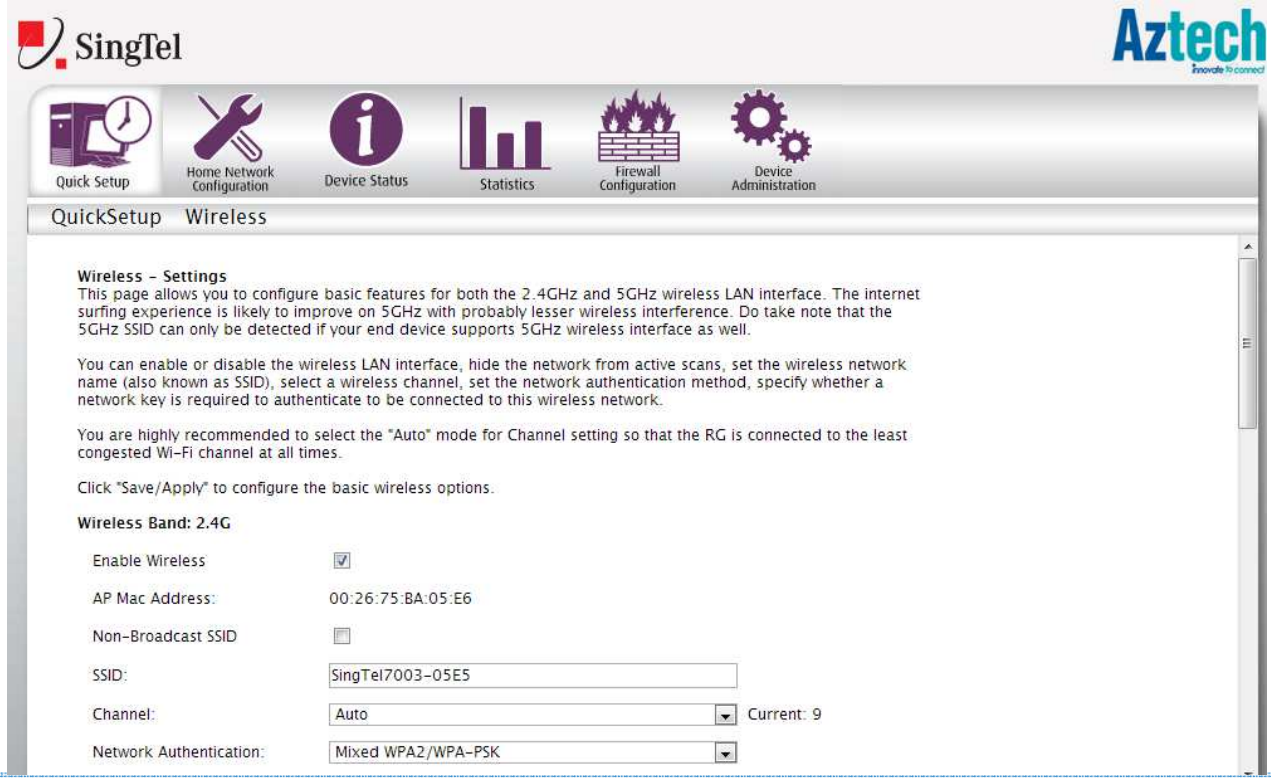
The Default Wireless Configuration

Each unit is preconfigured with a unique wireless network name and a unique password. The information on the default wireless can be found on the casing label sticker.

- The default wireless authentication is Mixed WPA2/WPA-PSK
- The wireless encryption is TKIP + AES
- Wireless channel is set to Auto
- The WPS is enabled by default.
- Both 2.4GHz and 5GHz SSIDs share the same network key by default.

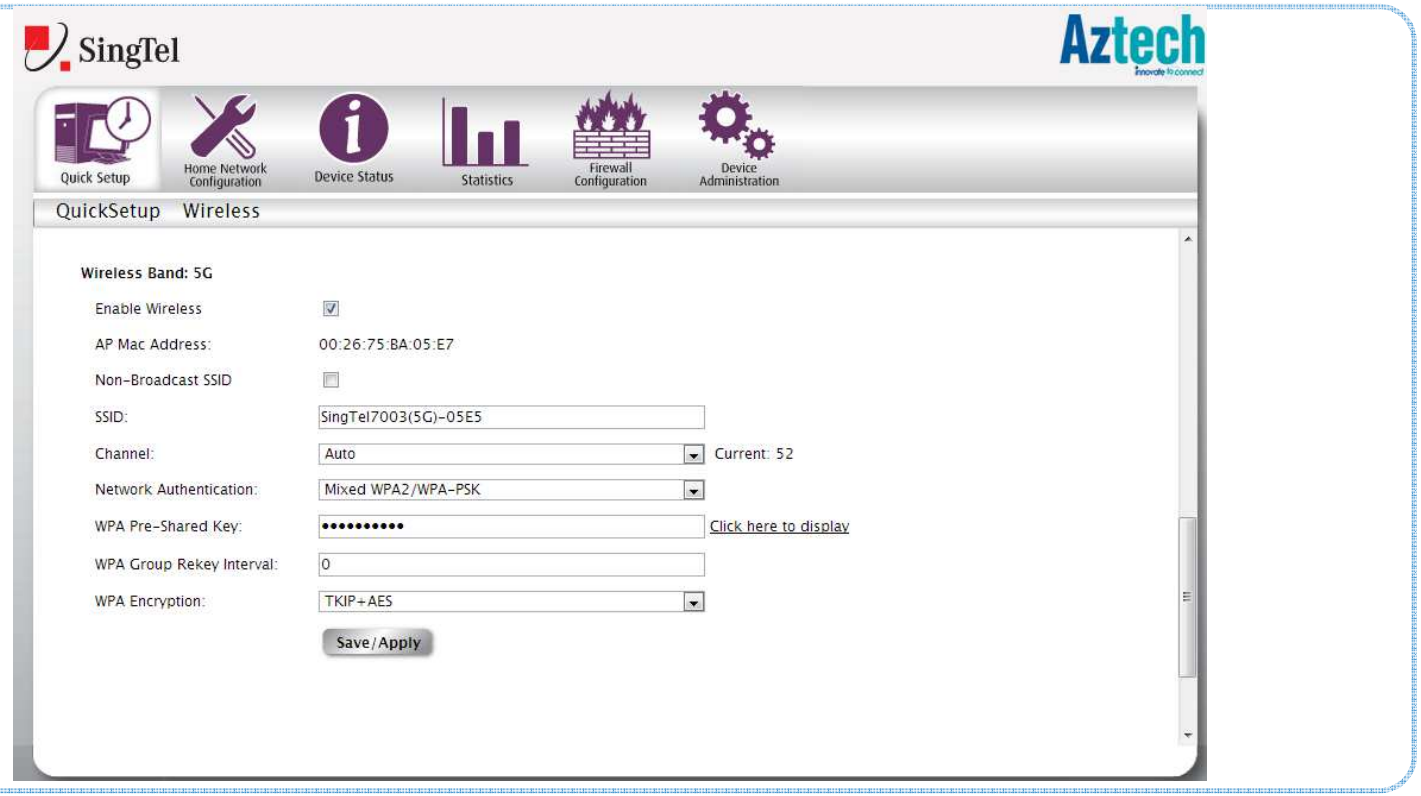
Changing the Wireless Settings

Open your web-browser (e.g. Internet Explorer) and go to http://192.168.1.254, click on Wireless link.

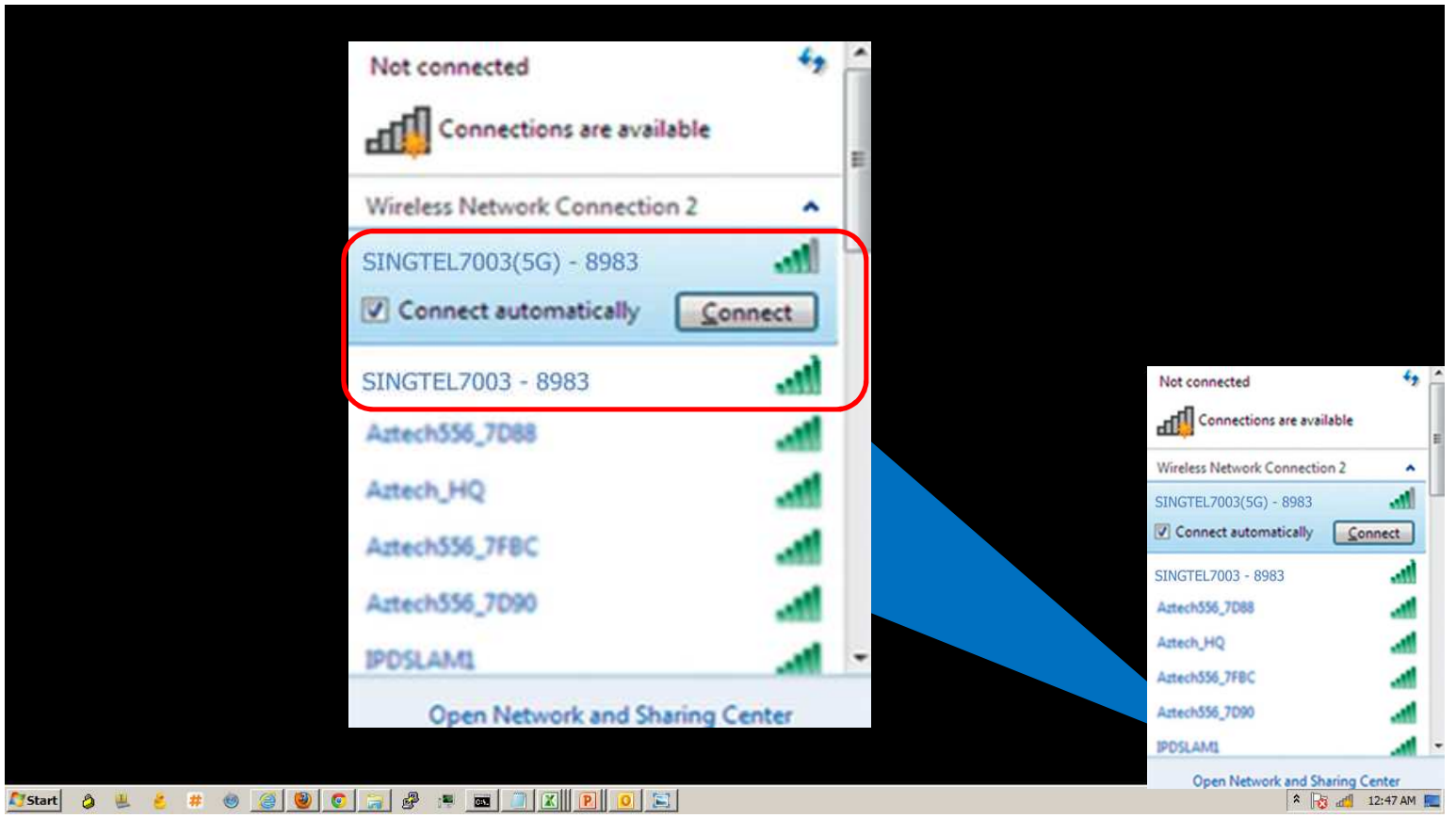


5GHz

The internet surfing experience is likely to improve on 5GHz with probably lesser wireless interference. Do take note that the 5GHz SSID can only be detected if your end device supports 5GHz wireless interface as well.



Connecting to 2.4GHz and 5GHz Band



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How to do WPS Pairing

Step 1. Press the WPS button on the RG once,

- upon pressed, WPS LED will start blinking green

Step 2. Press the WPS button on client device within 120 seconds from step 1 above.

- Once the connection is authenticated and established, WPS LED will be solid green, followed by OFF within the next few seconds.

Note:

- WPS pairing is only available for 2.4GHz, and it is enabled by default

Known wireless devices that supports 5GHz band

- iPhone 5
- iPhone 5S
- iPad 2
- iPad 3
- iPad 4
- iPad mini
- iPad Air
- HTC One
- HTC One S
- HTC One X
- Sony Xperia Z Ultra
- Sony Xperia Z1
- HTC Evo 4G LTE
- Samsung Galaxy S3
- Samsung Galaxy S4
- Samsung Galaxy Note 10.1
- Samsung Galaxy Tab 2 7.0 (GT-P3113)
- Samsung Galaxy Note 1
- Samsung Galaxy Note 2
- Samsung Galaxy Note 3
- Samsung Galaxy Note 8.0 with LTE
- Samsung Galaxy Note 10.1 2014 Edition (LTE)

Note: This list of devices that supports 5G does not necessarily support wireless AC.

How to enjoy wireless AC

- Wireless Client: Wireless client need to be able to support wireless AC.

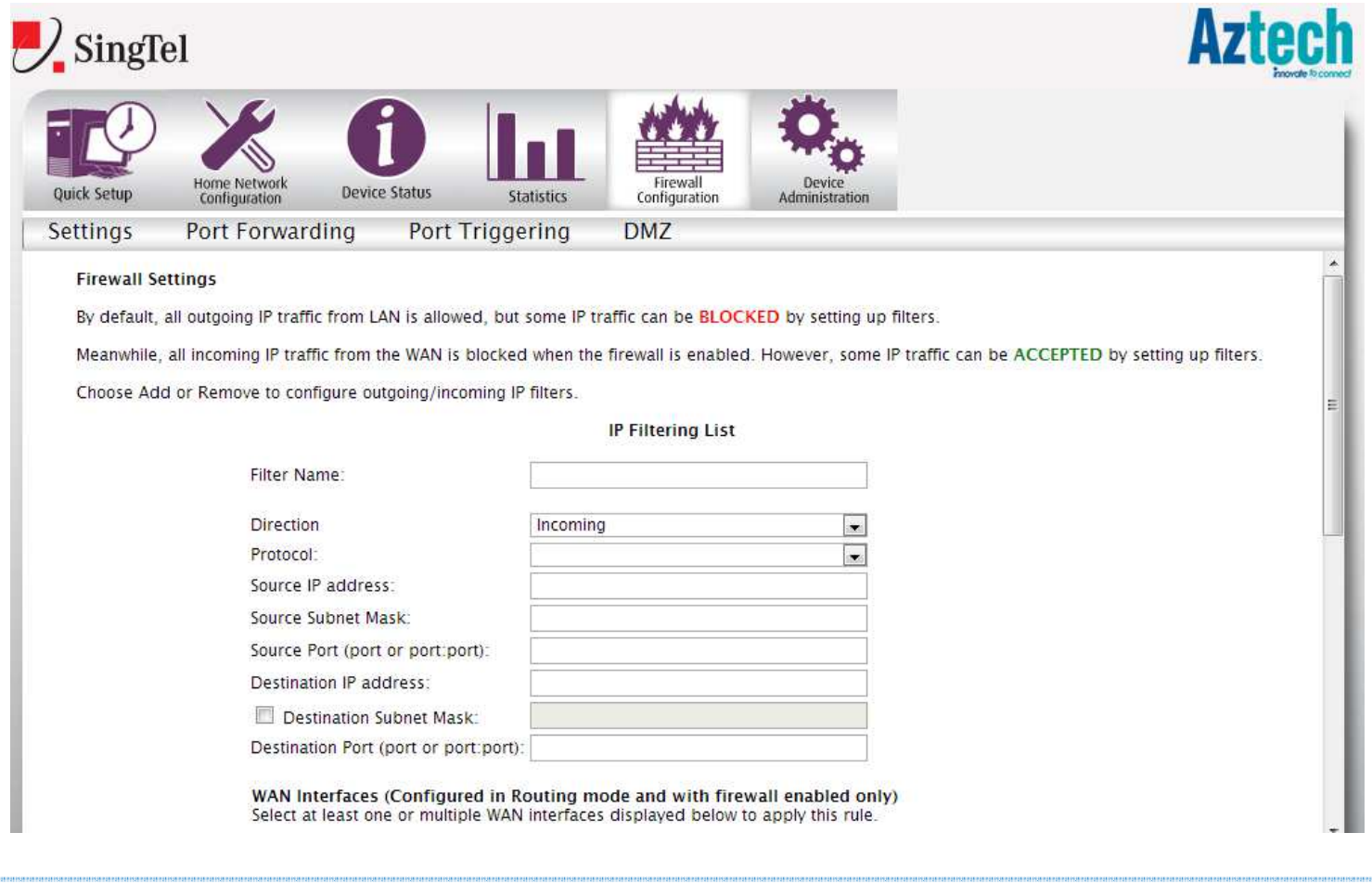
- List of wireless client adapters that support wireless AC:
  - Aztech WL592USB, WL593USB
  - Asus USB-AC53, USB-AC56, PCE-AC68

- List of mobile devices that supports wireless AC:
  - Sony Xperia Z1, Xperia Z Ultra
  - Samsung Galaxy Note 10.1 2014 Edition (LTE), Galaxy S4 with LTE (GT-I9505)

Notes:

1. This list of devices that supports wireless AC is not exhaustive.
2. Wireless performance is also dependent on the client
3. For end devices which do not support wireless AC, it can still connect to the RG using other wireless mode e.g. a/b/g/n but will not be able to achieve the wireless AC speed.

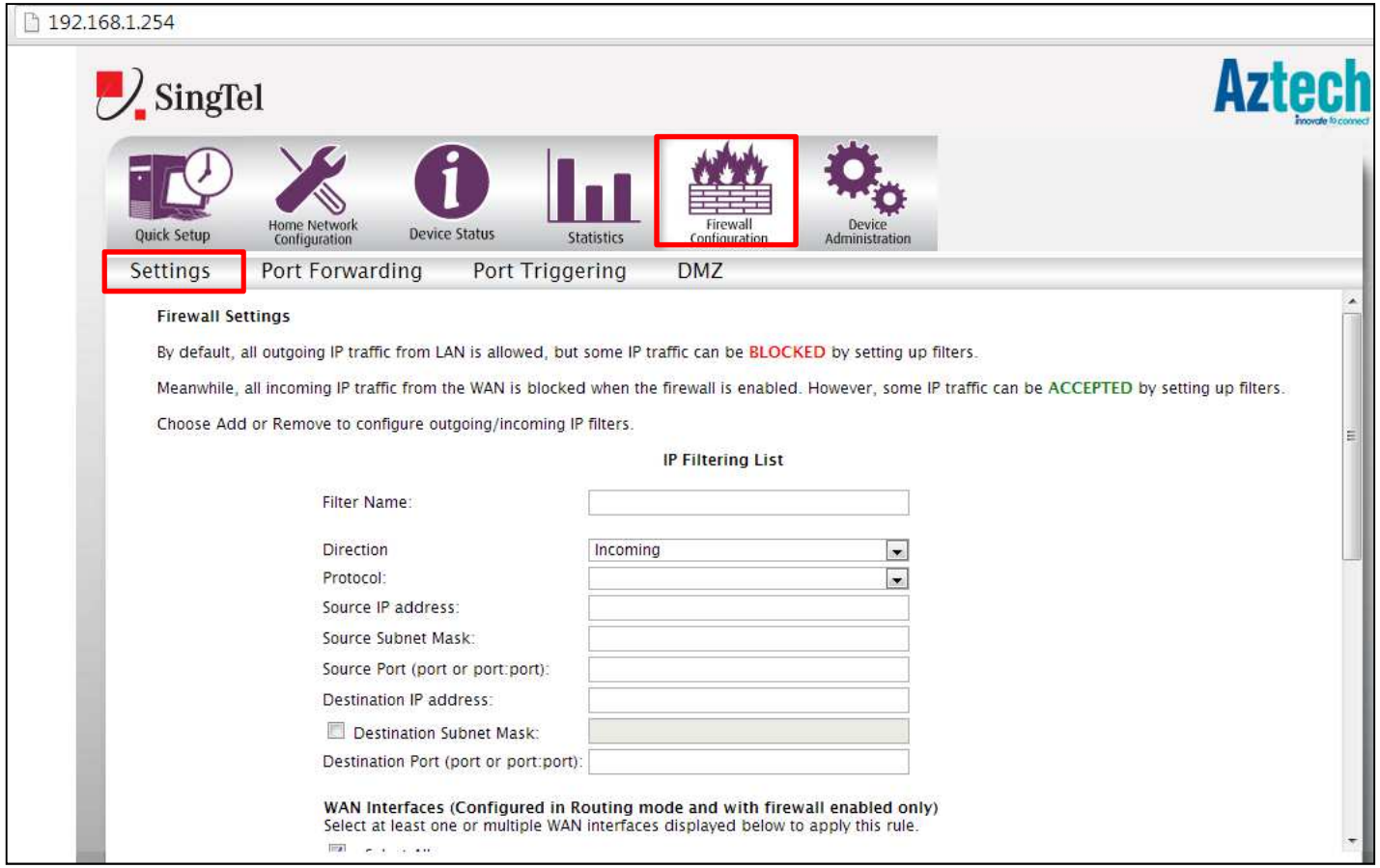
Incoming and Outgoing Firewall Settings



How To Set IP Filtering

Step 1. Launch an internet browser and go to http://192.168.1.254

Step 2. Click on Firewall Configuration Button



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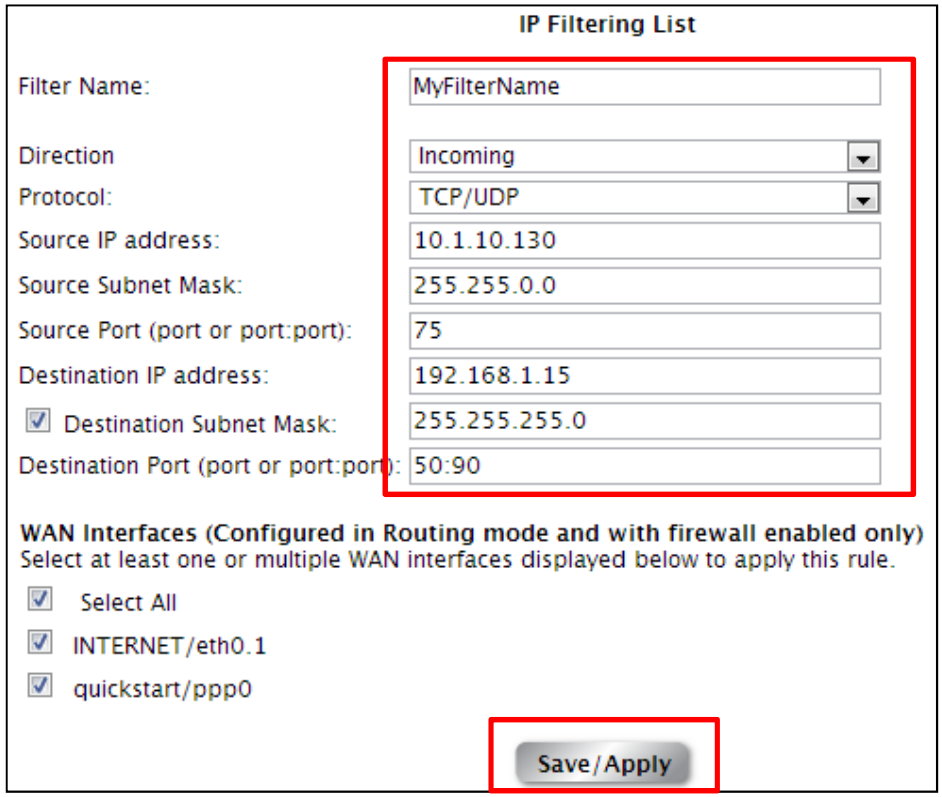
How To Set IP Filtering

Step 3. Fill in the fields required (Filter Name, traffic Direction, Protocol, Source IP Address and its port number information as well as Destination IP Address and its port number information).

Step 4. Click on Save/Apply button.



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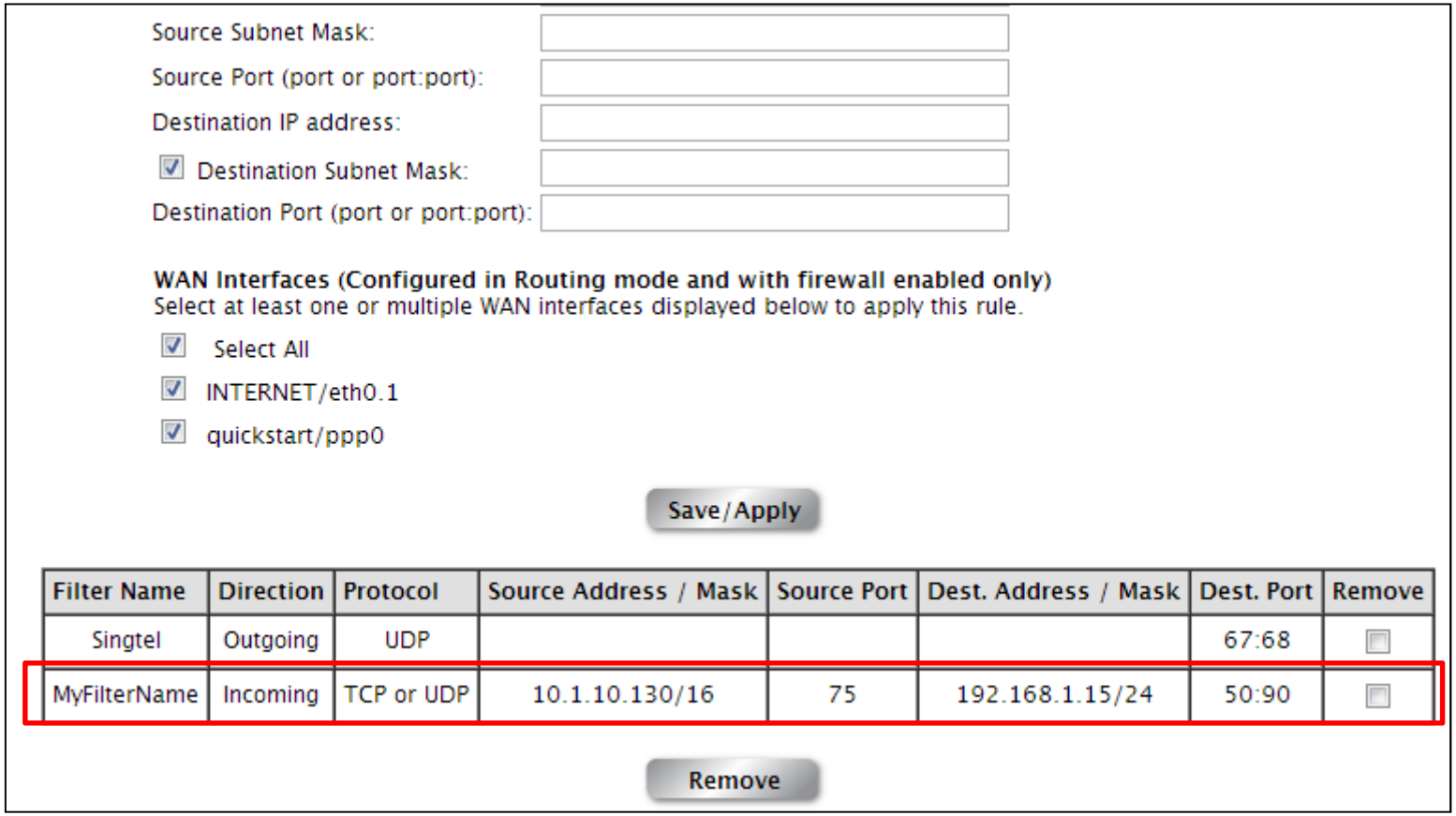
How To Set IP Filtering

Step 5. The rule keyed in will be added in the list

Note: There is a default SingTel rule created in the list, please do not remove.



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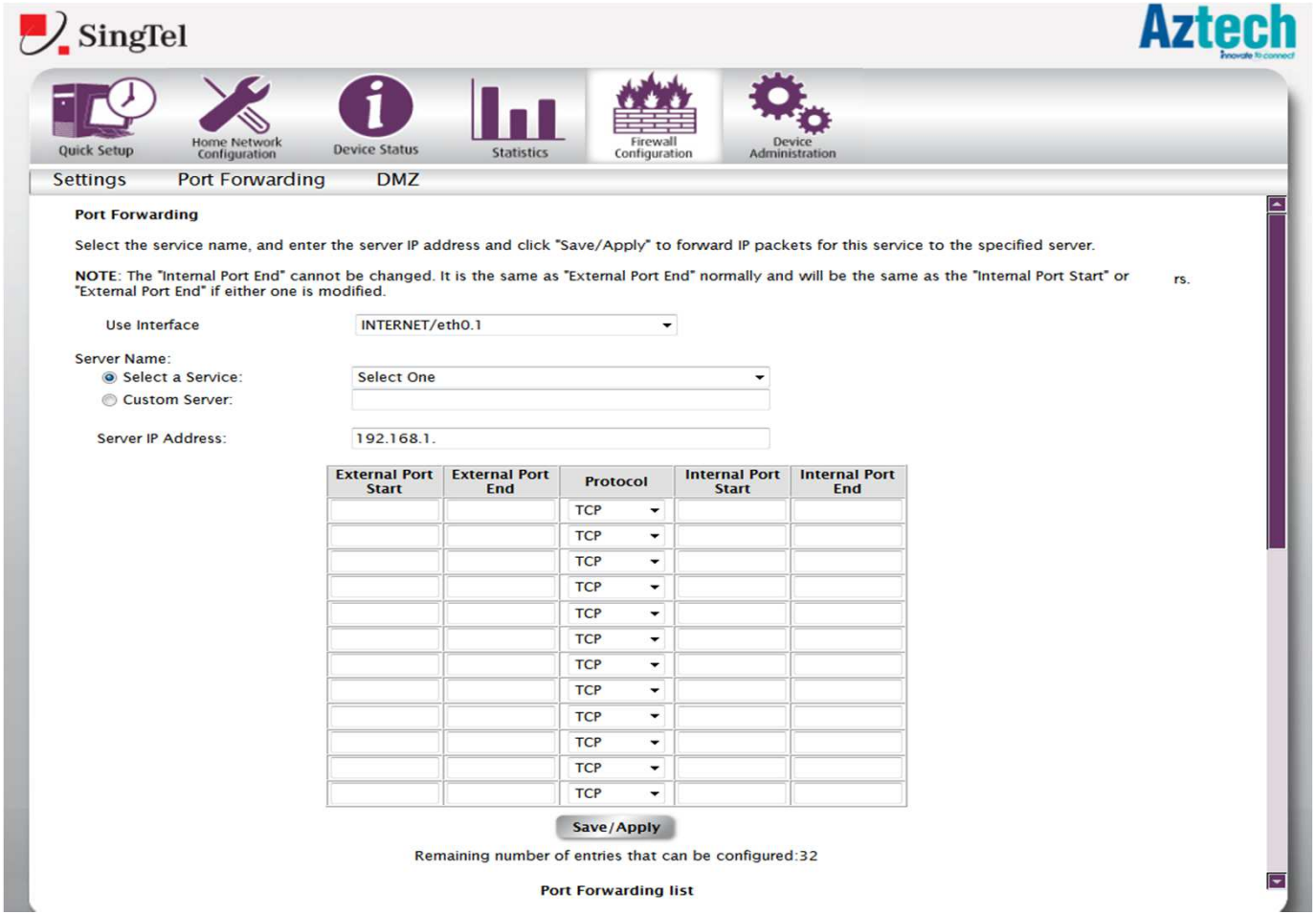
Port Forwarding

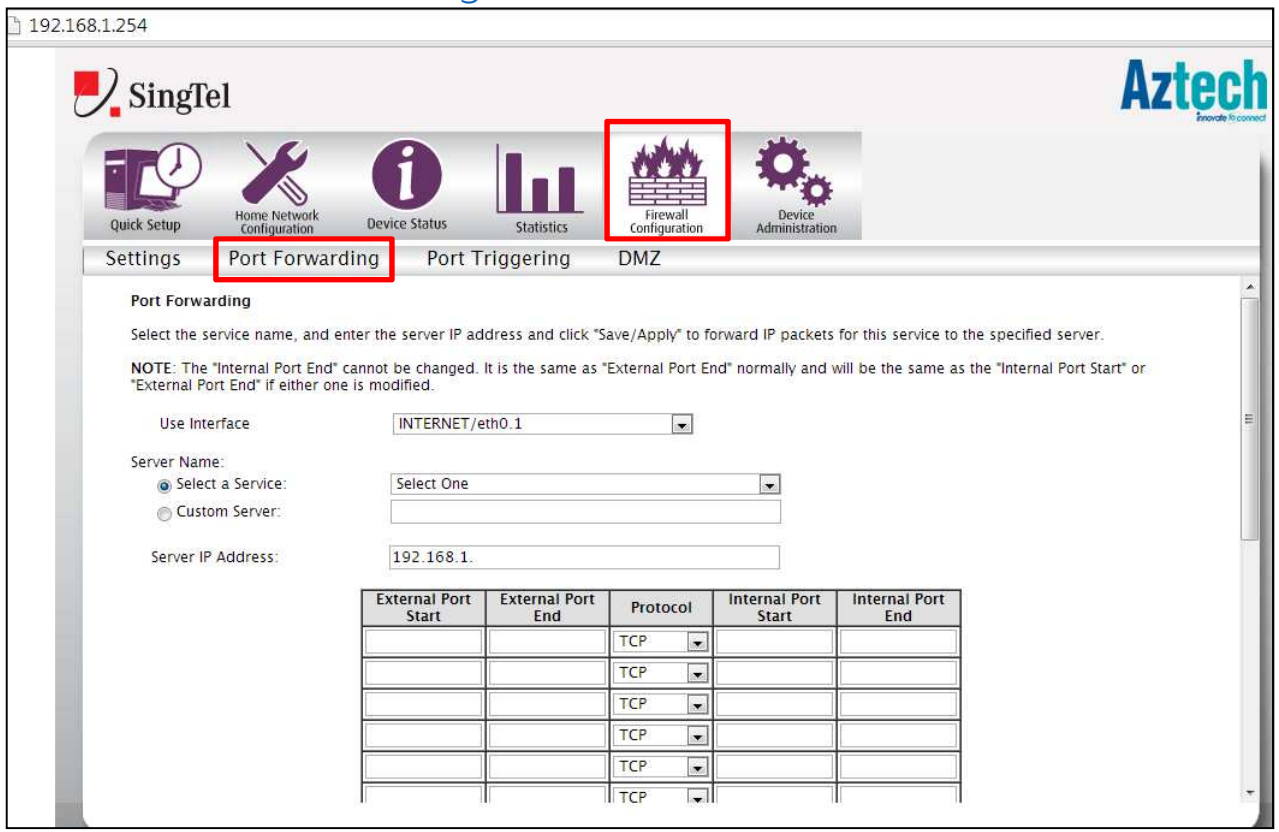


How To Set Port Forwarding

Step 1. Launch an internet browser and go to http://192.168.1.254

Step 2. Click on Firewall Configuration Button

Step 3. Click on Port Forwarding Button



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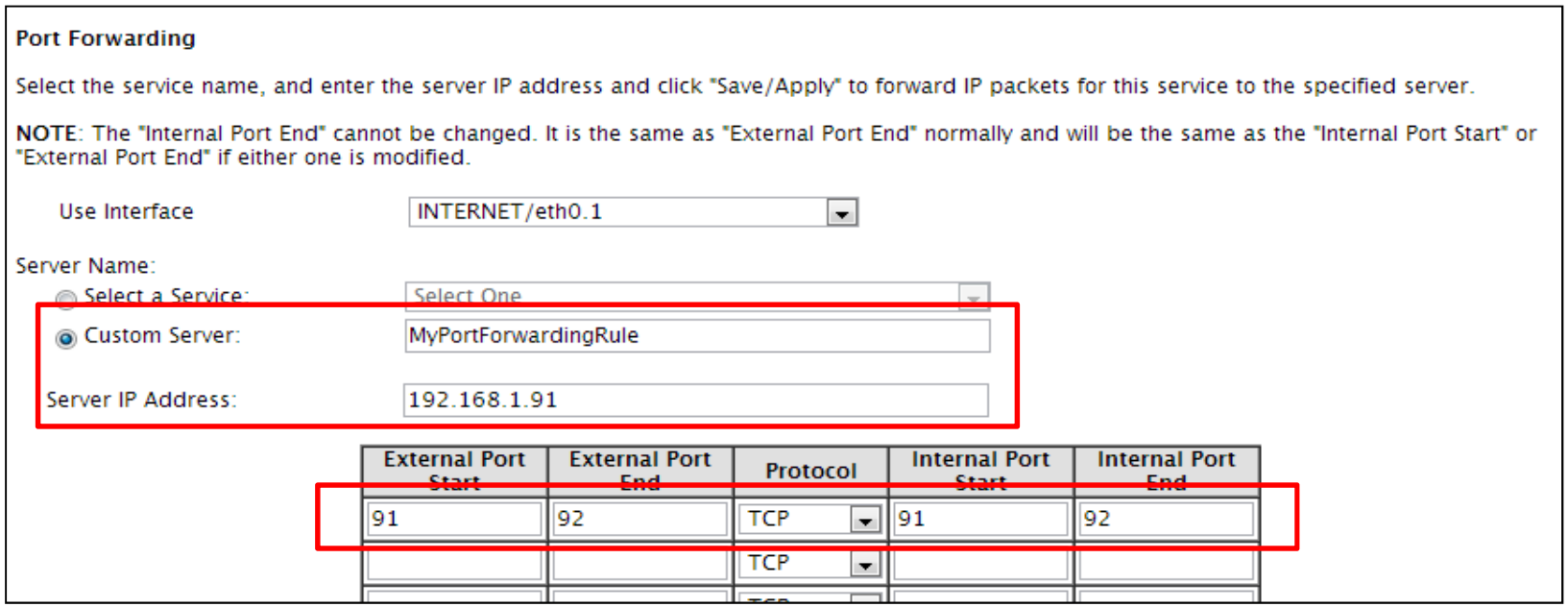
How To Set Port Forwarding

Step 4. Check and confirm the IP Address of the device where the port forwarding rule will be pointed to. Fill in the filed Server IP Address field.

Step 5. Check Custom Server radio button and fill in the application name for easy reference.

Step 6. Fill in the respective port numbers to be forwarded to the server.



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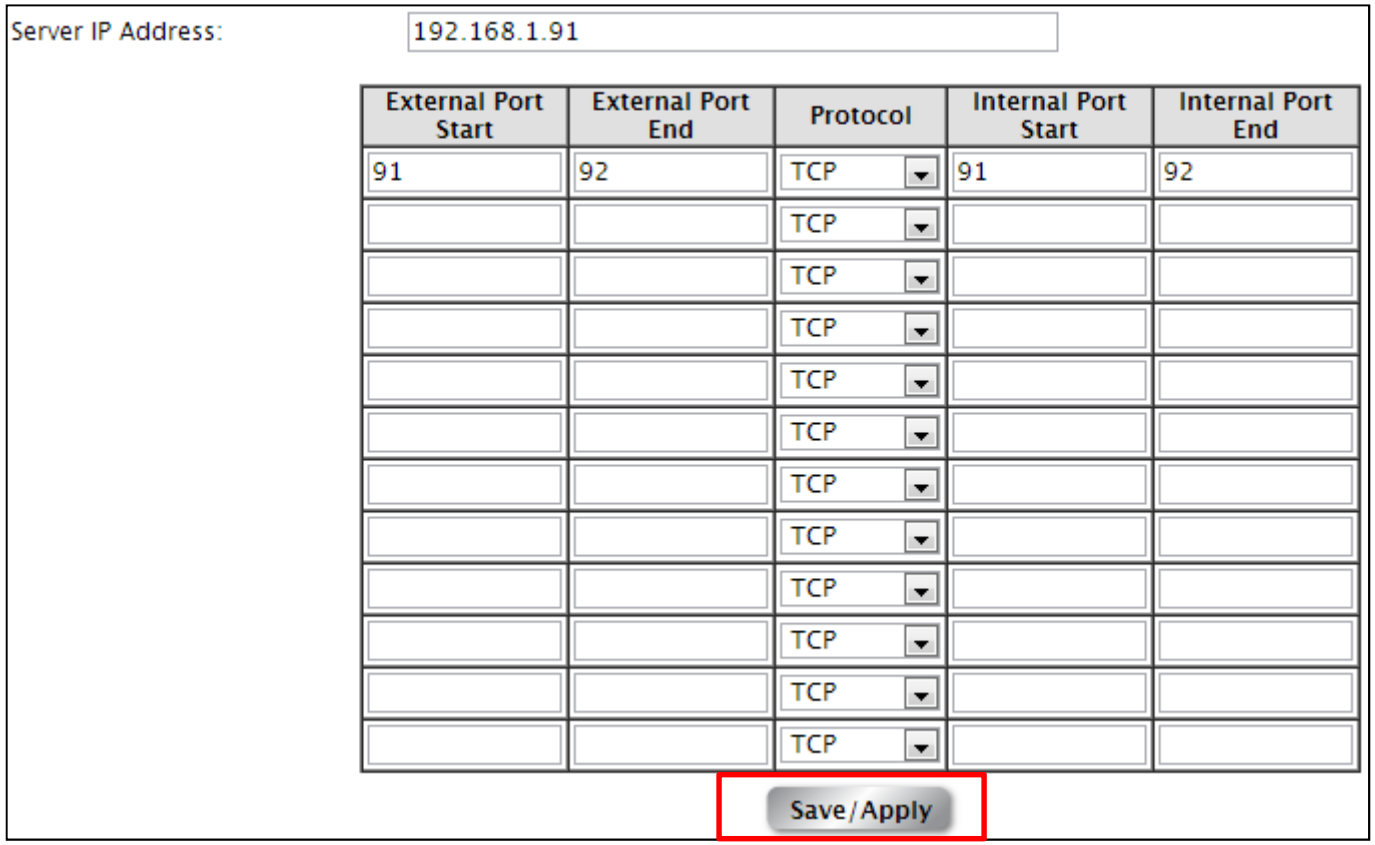
How To Set Port Forwarding

Step 7. Click on Save/Apply button.



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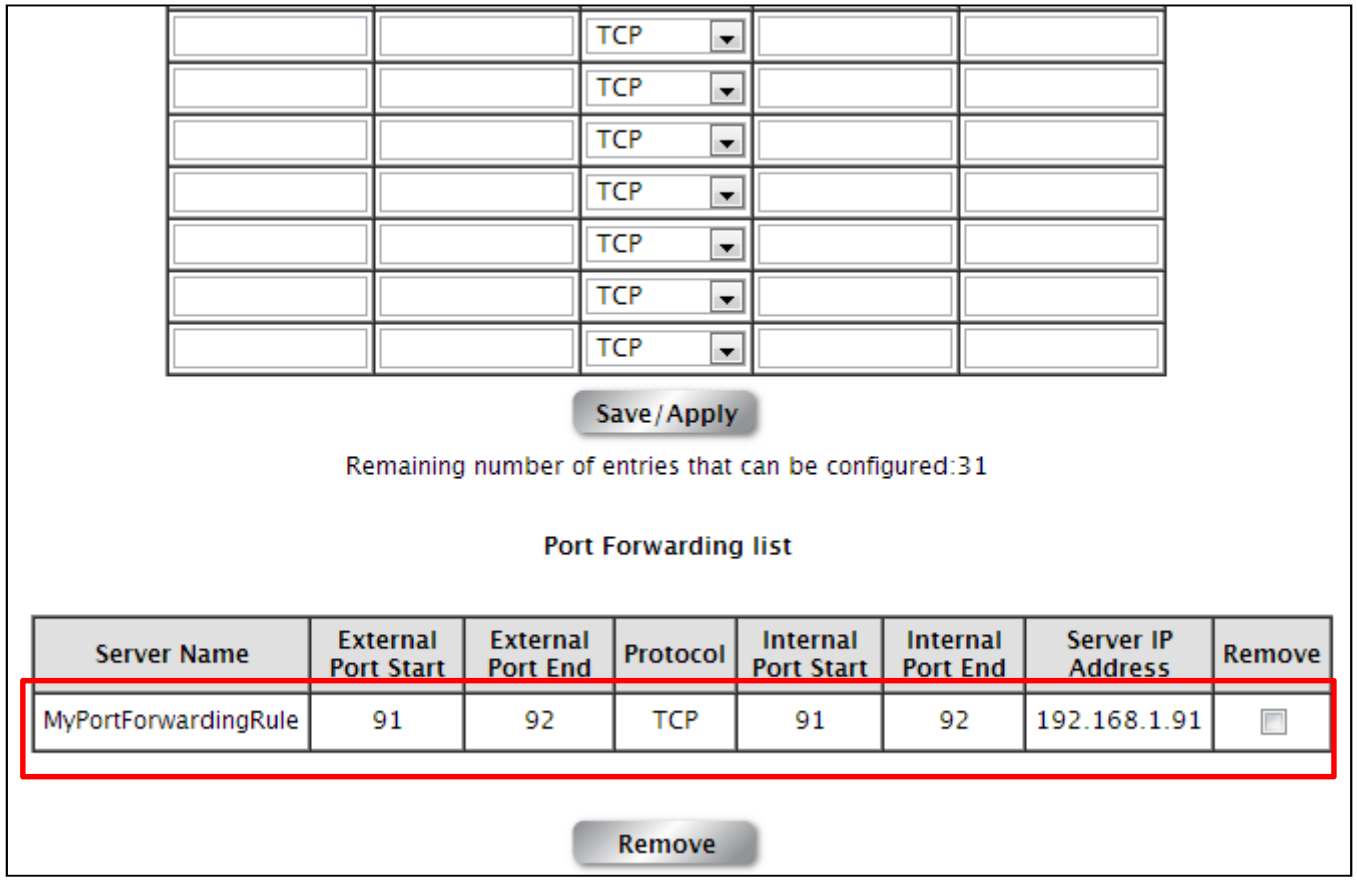
How To Set Port Forwarding

Step 8. Added rule will be shown



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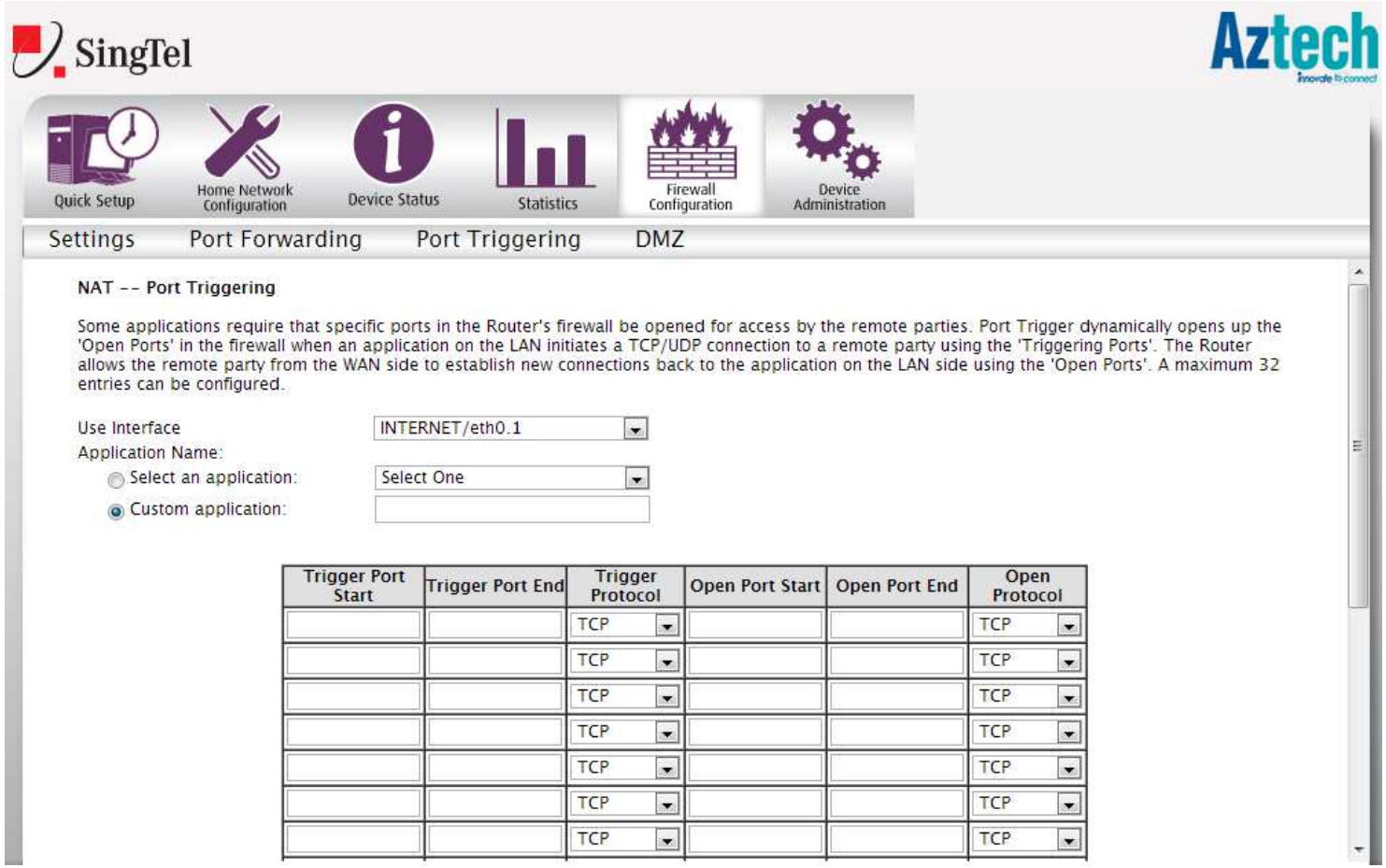
Port Triggering Settings

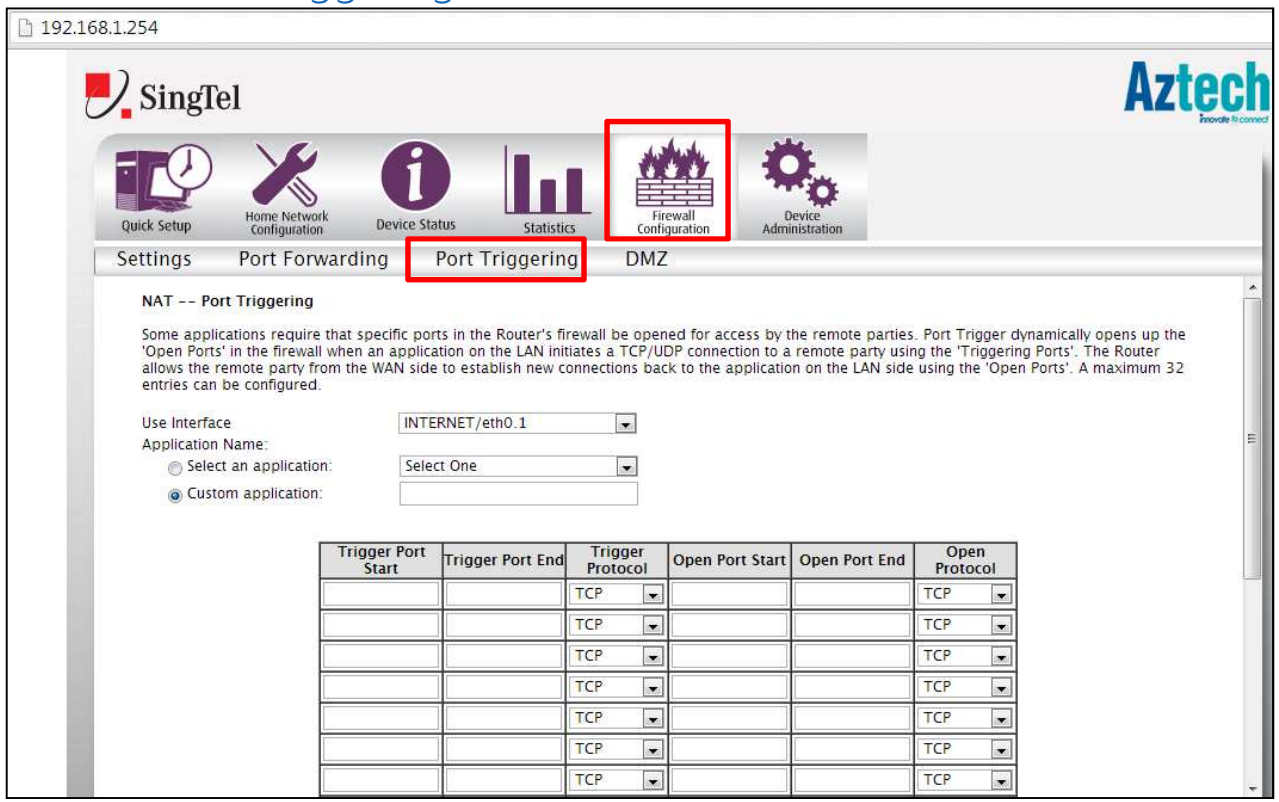


How To Set Port Triggering

Step 1. Launch an internet browser and go to http://192.168.1.254

Step 2. Click on Firewall Configuration Button

Step 3. Click on Port Triggering button



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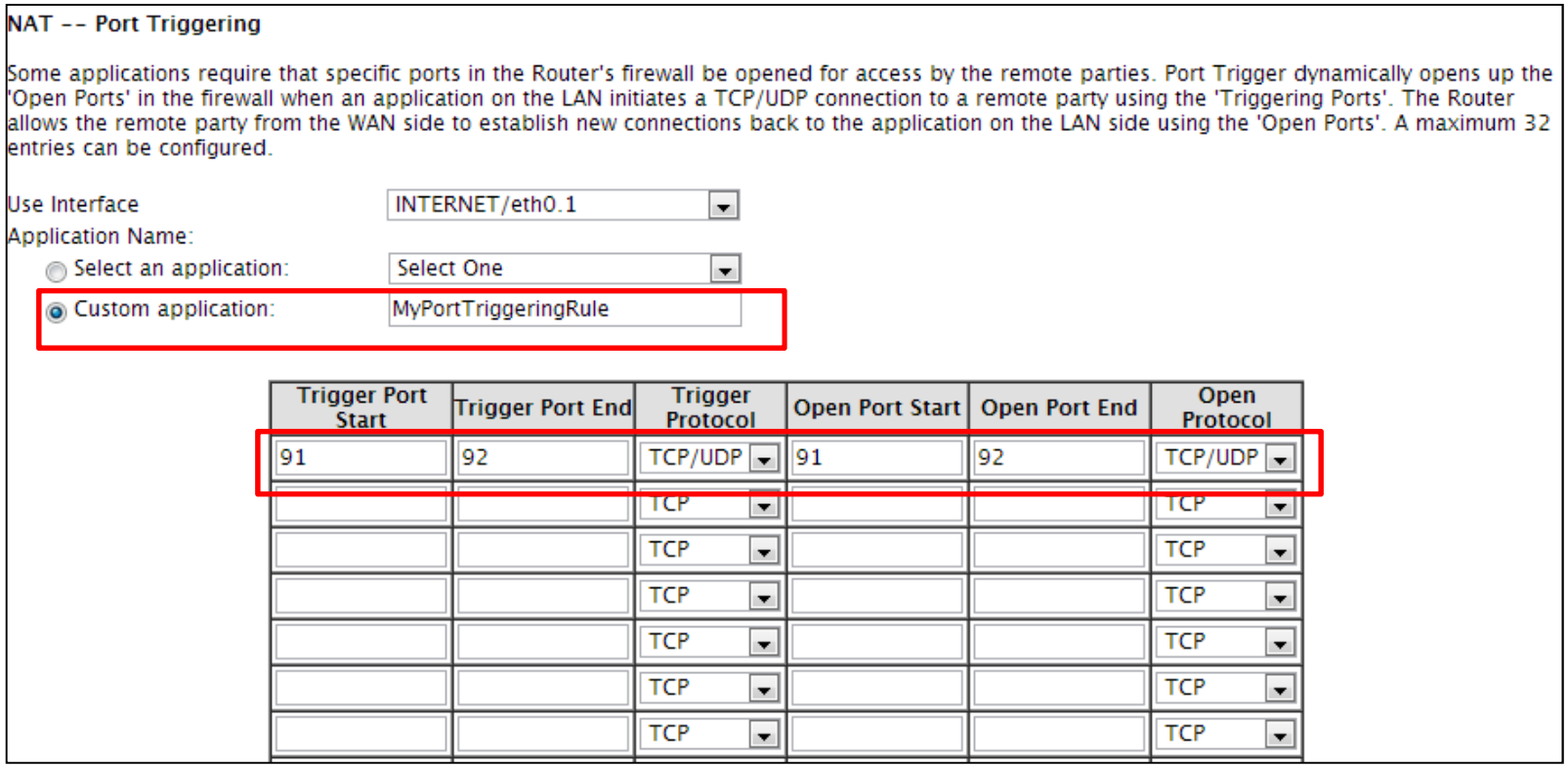
How To Set Port Triggering

Step 4. Check Custom Application radio button and fill in the application name for easy reference.

Step 5. Fill in the respective port numbers and protocol type.



NAT -- Port Triggering

Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Port Trigger dynamically opens up the 'Open Ports' in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the 'Triggering Ports'. The Router allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the 'Open Ports'. A maximum 32 entries can be configured.

Use Interface: INTERNET/eth0.1

Application Name:

- Select an application: Select One
- Custom application: MyPortTriggeringRule

Trigger Port Start	Trigger Port End	Trigger Protocol	Open Port Start	Open Port End	Open Protocol
91	92	TCP/UDP	91	92	TCP/UDP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP

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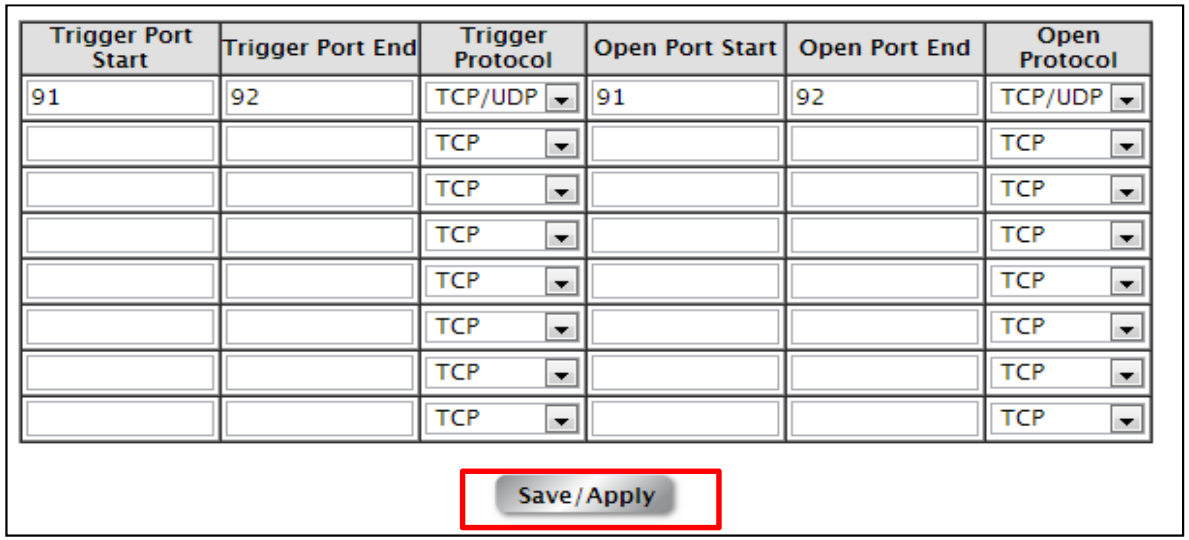
How To Set Port Triggering

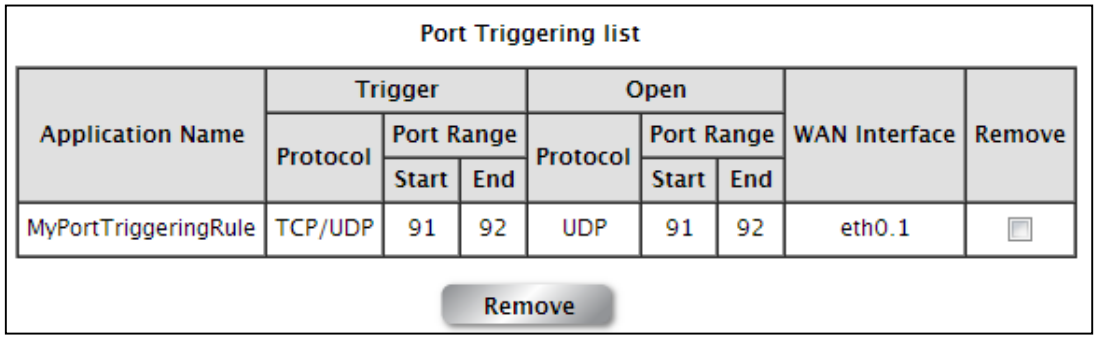
Step 6. Click on Save/Apply button.



Trigger Port Start	Trigger Port End	Trigger Protocol	Open Port Start	Open Port End	Open Protocol
91	92	TCP/UDP	91	92	TCP/UDP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP

Save/Apply

Step 7. Created rule will be shown in the list



Port Triggering list

Application Name	Trigger			Open			WAN Interface	Remove
	Protocol	Port Range		Protocol	Port Range			
		Start	End		Start	End		
MyPortTriggeringRule	TCP/UDP	91	92	UDP	91	92	eth0.1	

Remove

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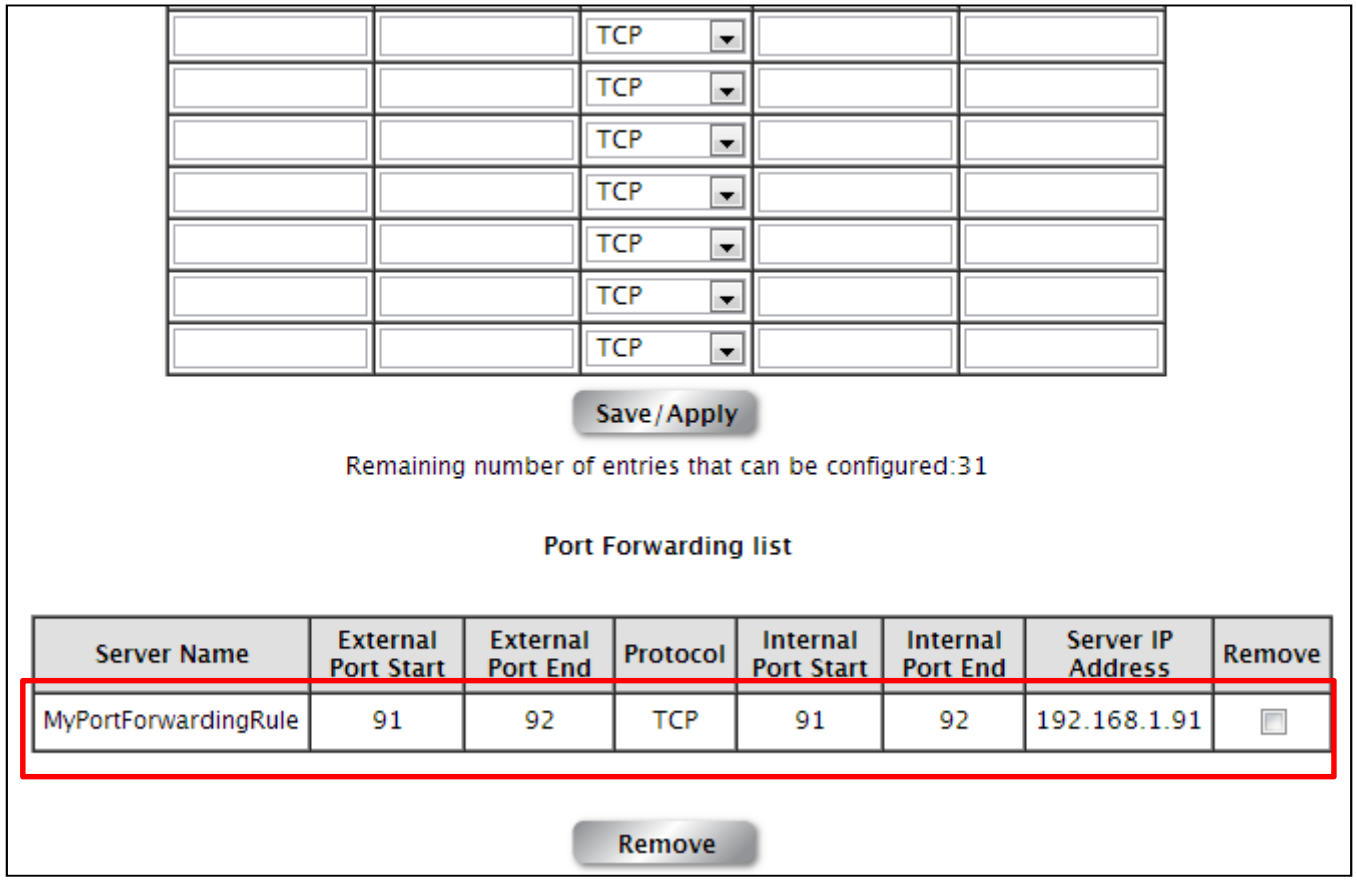
How To Set Port Triggering

Step 8. Added rule will be shown



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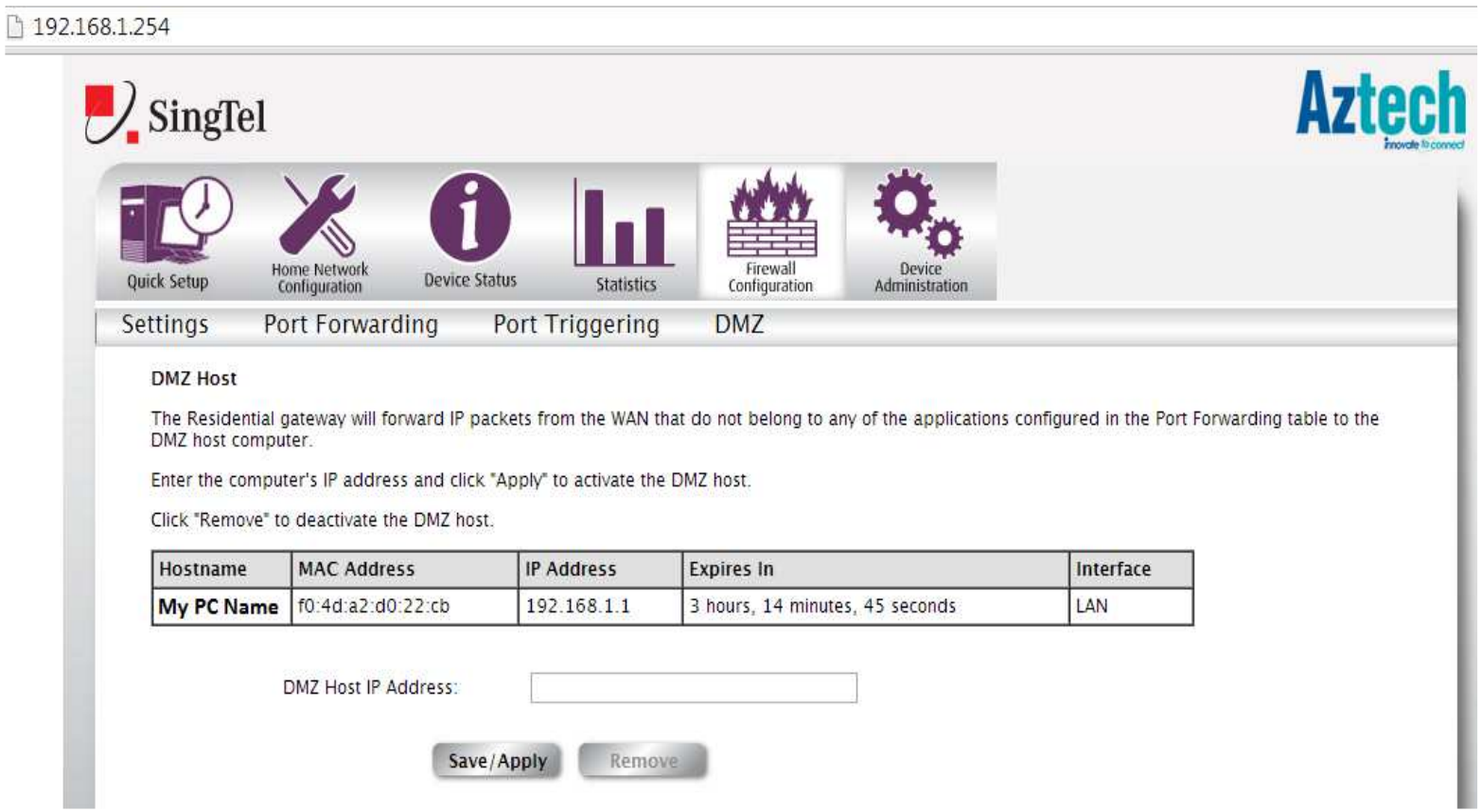
DMZ


192.168.1.254
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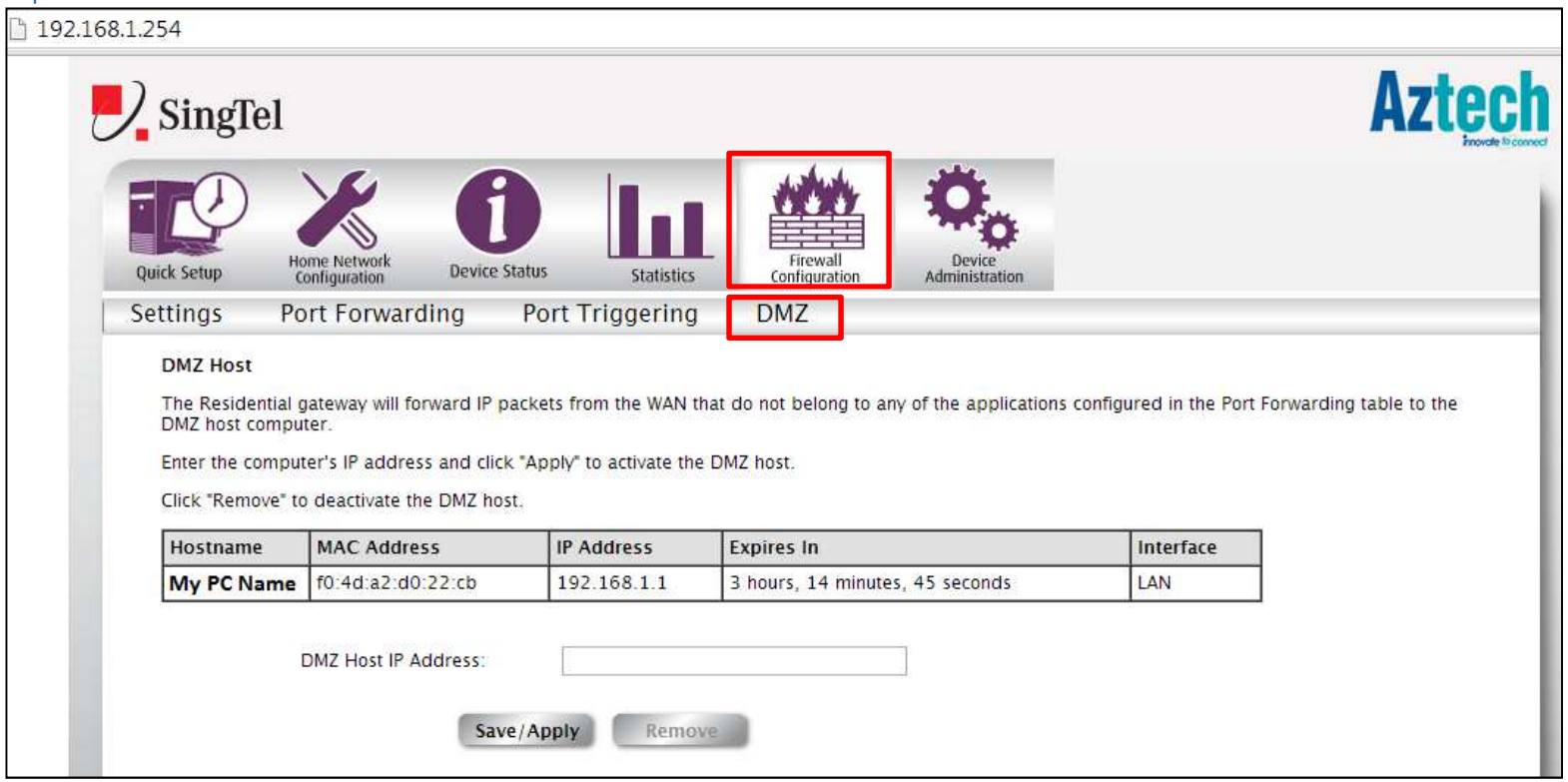
Quick Setup
Home Network Configuration
Device Status
Statistics
Firewall Configuration
Device Administration
Settings
Port Forwarding
Port Triggering
DMZ
DMZ Host
The Residential gateway will forward IP packets from the WAN that do not belong to any of the applications configured in the Port Forwarding table to the DMZ host computer.
Enter the computer's IP address and click "Apply" to activate the DMZ host.
Click "Remove" to deactivate the DMZ host.
Hostname
MAC Address
IP Address
Expires In
Interface
My PC Name
f0:4d:a2:d0:22:cb
192.168.1.1
3 hours, 14 minutes, 45 seconds
LAN
DMZ Host IP Address:
Save/Apply
Remove

How To Set DMZ

Step 1. Launch an internet browser and go to http://192.168.1.254

Step 2. Click on Firewall Configuration Button

Step 3. Click on DMZ button



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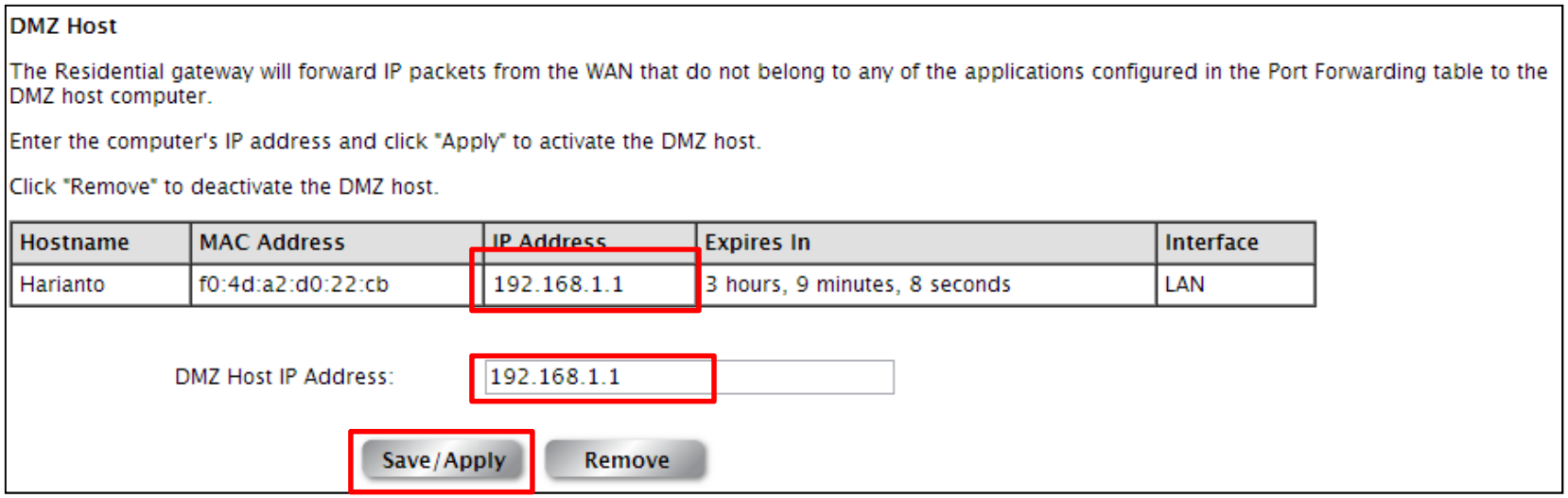
How To Set DMZ

Step 4. Copy the IP Address value from list of clients table.

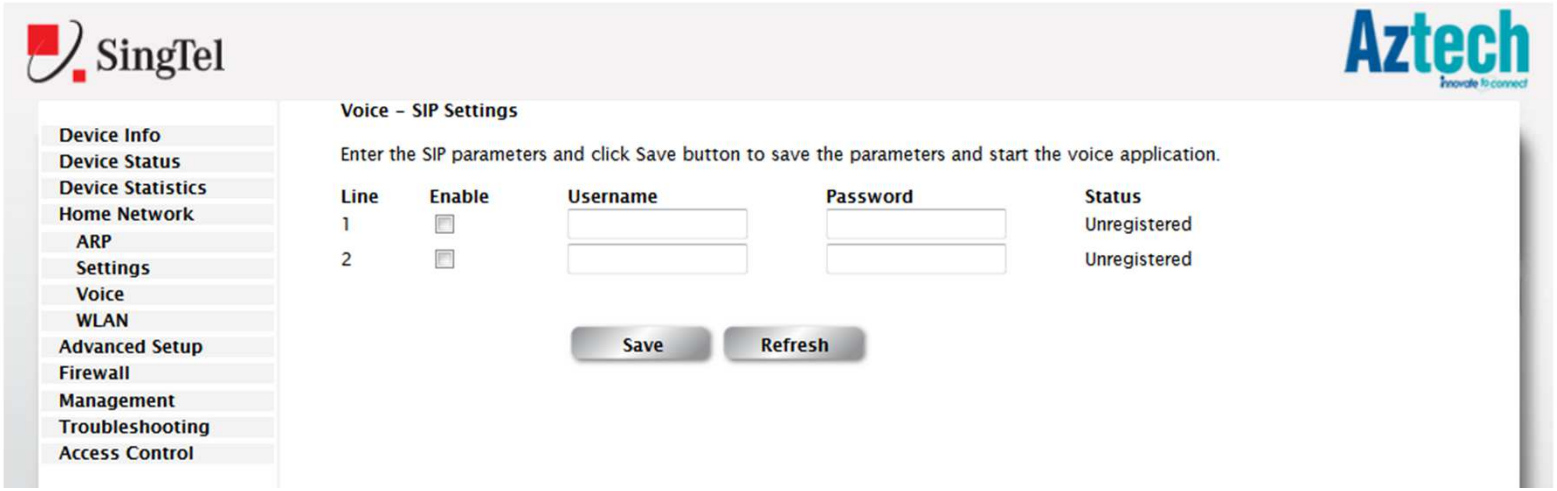
Step 5. Paste on the DMZ Host IP Address field.

Step 6. Click on Save/Apply button



Configuring the VOIP Username and Password

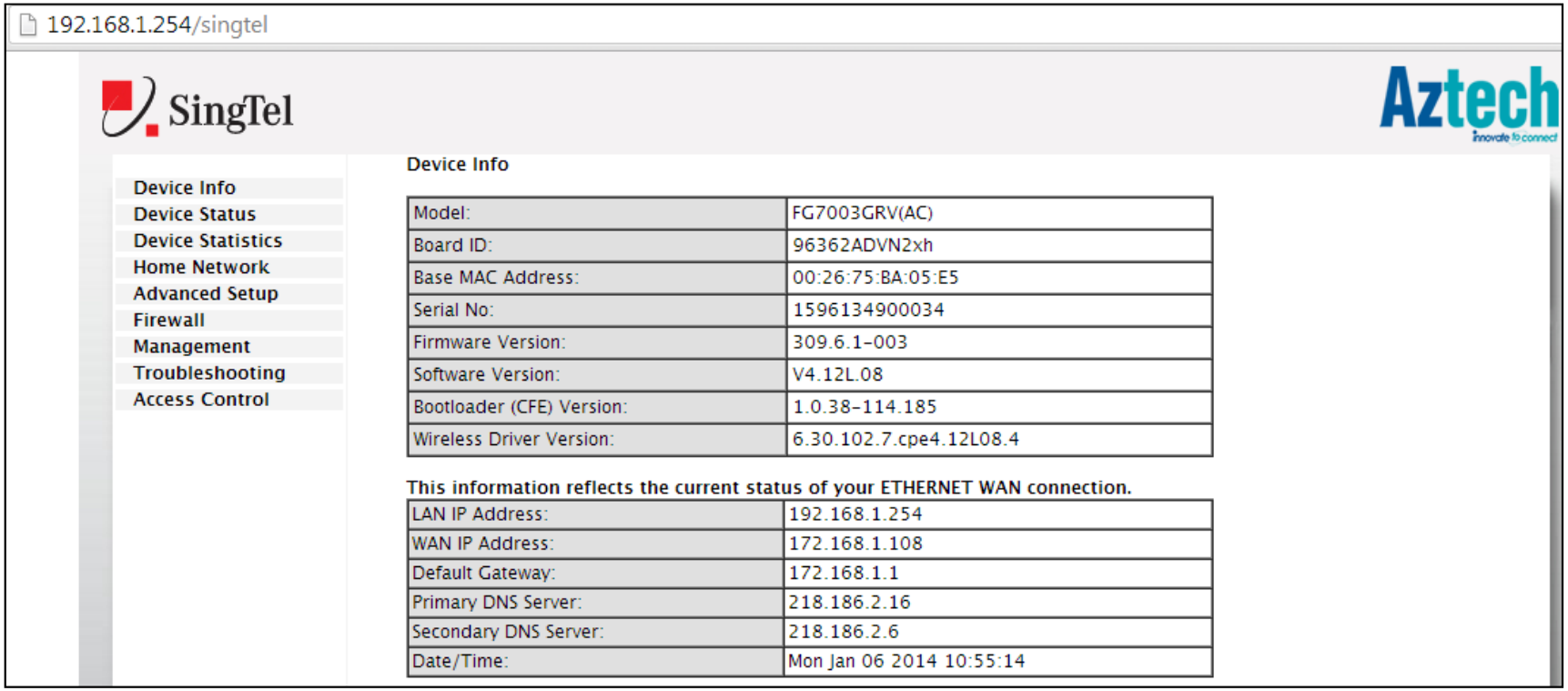
The voip username and password can be configured on the admin page. It's under Home Network> Voice.



How To Set MioVoice

Step 1. Launch an internet browser and go to http://192.168.1.254/singtel

Step 2. Enter admin / H3ll0t3ch when prompted for username and password respectively.



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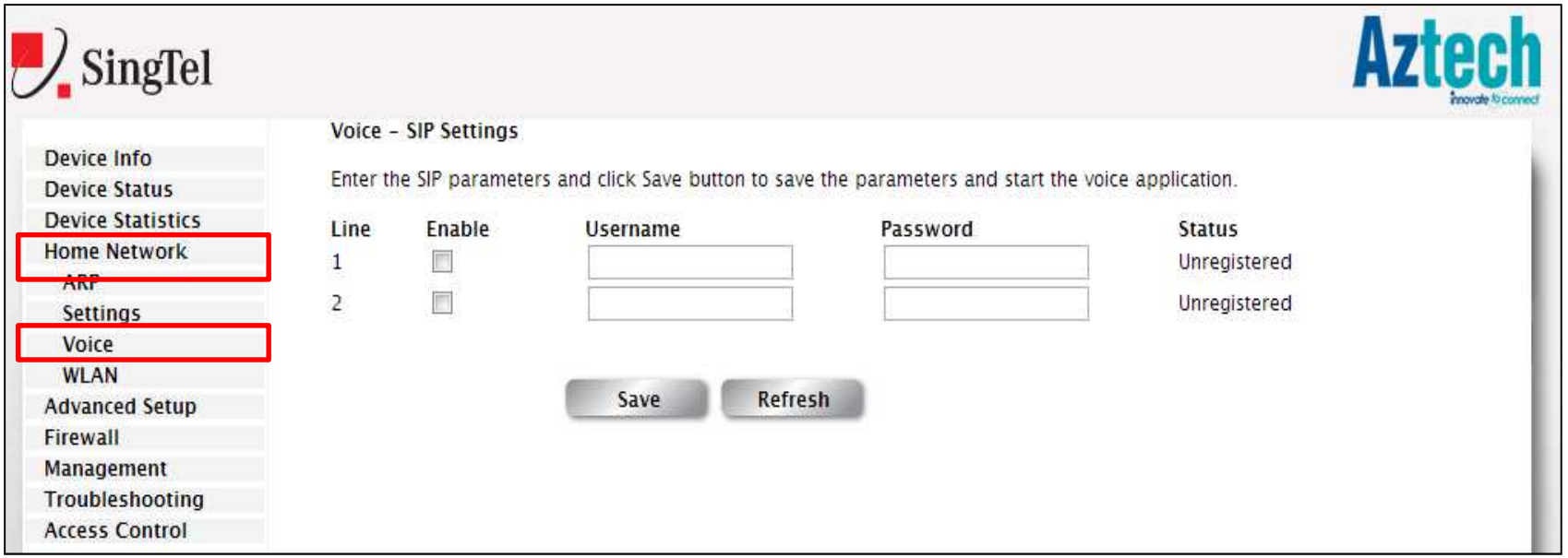
How To Set MioVoice

Step 3. On the left hand navigation bar, click on Home Network

Step 4. Click on Voice



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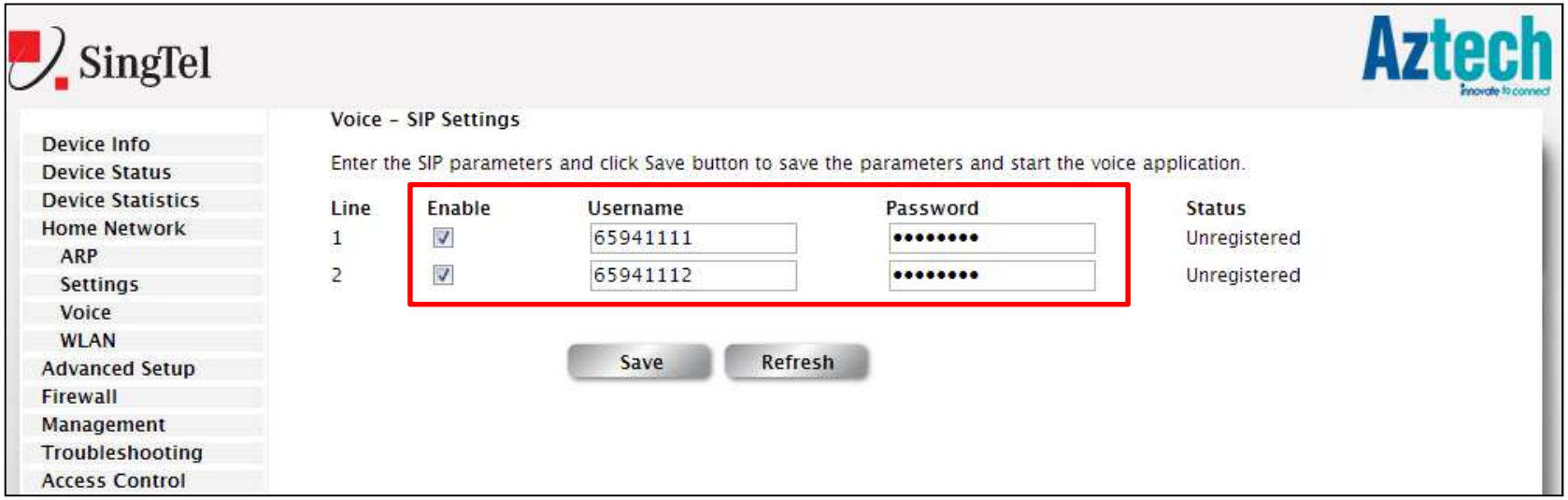
How To Set MioVoice

Step 5. Check Enable checkbox

Step 6. Fill in the respective MioVoice account(s) and click on Save button



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LED Troubleshooting

Power

- Steady Red – reset button is pressed
- Steady Red – unit is booting up or unit failed to boot
- Green – firmware is loaded to the RAM / unit has successfully booted up
- Off – no power or PSU faulty

Ethernet LAN 1-4

- Blinking Green – indicates activity on the port
- Steady Green – Ethernet device is connected to he port
- Off – there is no Ethernet device plugged in to the port or the cable is faulty

LED Troubleshooting

Wireless

- Steady Green – wireless device(s) associated to the wireless AP
- Blinking Green – indicates wireless activity
- Off – no wireless device associated with the AP or AP is not activated

Voice 1 and 2

- Steady Green – voice account is registered
- Blinking Green – indicates an on going call or the phone is off hook
- Off – voice account is not set or account registration failed

LED Troubleshooting

USB

- Steady Green – USB device is connected to the port
- Off – no device is connected

Broadband on FTTH

- Steady Green – WAN ethernet port is connected to the ONT or an ethernet device
- Off – No connection on the WAN ethernet port

LED Troubleshooting

IPTV

- Steady Green – IPTV service is working, STB is plugged in and streaming
- Steady Red – STB is not connected to the RG or
  STB in on DRA mode (if STB is connected to the RG) or
  STB is rebooting (if STB is connected to the RG) or
  IPTV service failed (if STB is connected to the RG) or
  no multicast streams coming (if STB is connected to the RG)
- Off – no service or service is down

LED Troubleshooting

Internet on FTTH

- Steady Green –connection is up and the interface is with an IP address
- Off - no internet connection

WPS

- Steady Green – WPS is activated and a client is authenticated
- Blinking Green – WPS is ready to connect
- Off - WPS not activated

Wireless Troubleshooting

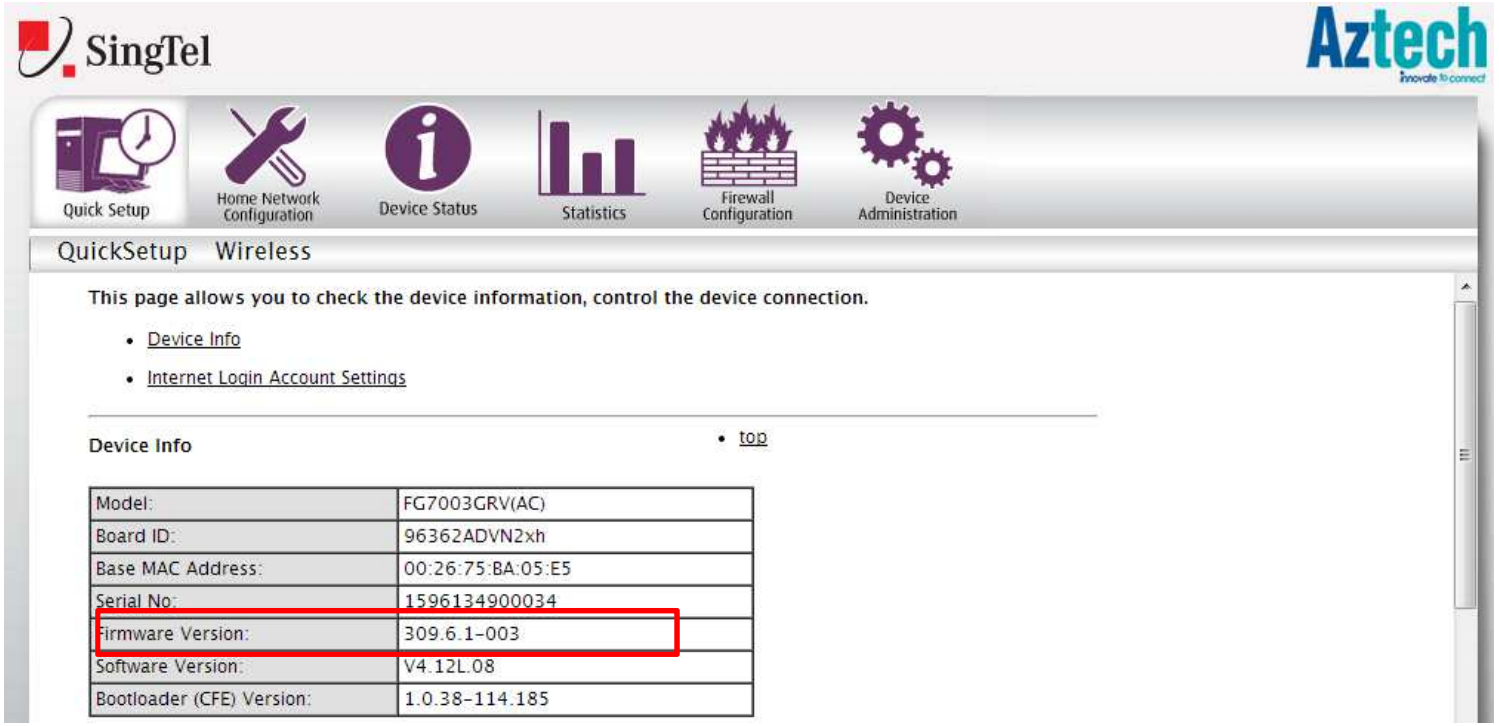
1. Always start with checking the wireless credentials, SSID and wireless security, if the wireless clients cannot connect to the AP
2. Think of the possibility of wireless channel congestion
   - ¤ Please ensure wireless channel setting is set as "Auto" at all times. Should channel congestion is suspected, it is recommended to reboot the RG.
   - ¤ If the wireless channel is so congested, the wireless client may get an IP address but might not be able to, from time to time, surf the internet or use the wireless network resource
3. Place the RG on a flat surface away from:
   - ¤ Blockage such as artificial barriers
   - ¤ Electronic devices such at bluetooth devices, microwave ovens and cordless telephones
   - ¤ Water containing equipment filled with water

Where to Check Firmware Version

Step 1. Launch an Internet Browser

Step 2. Fill in the Address bar http://192.168.1.254 and enter

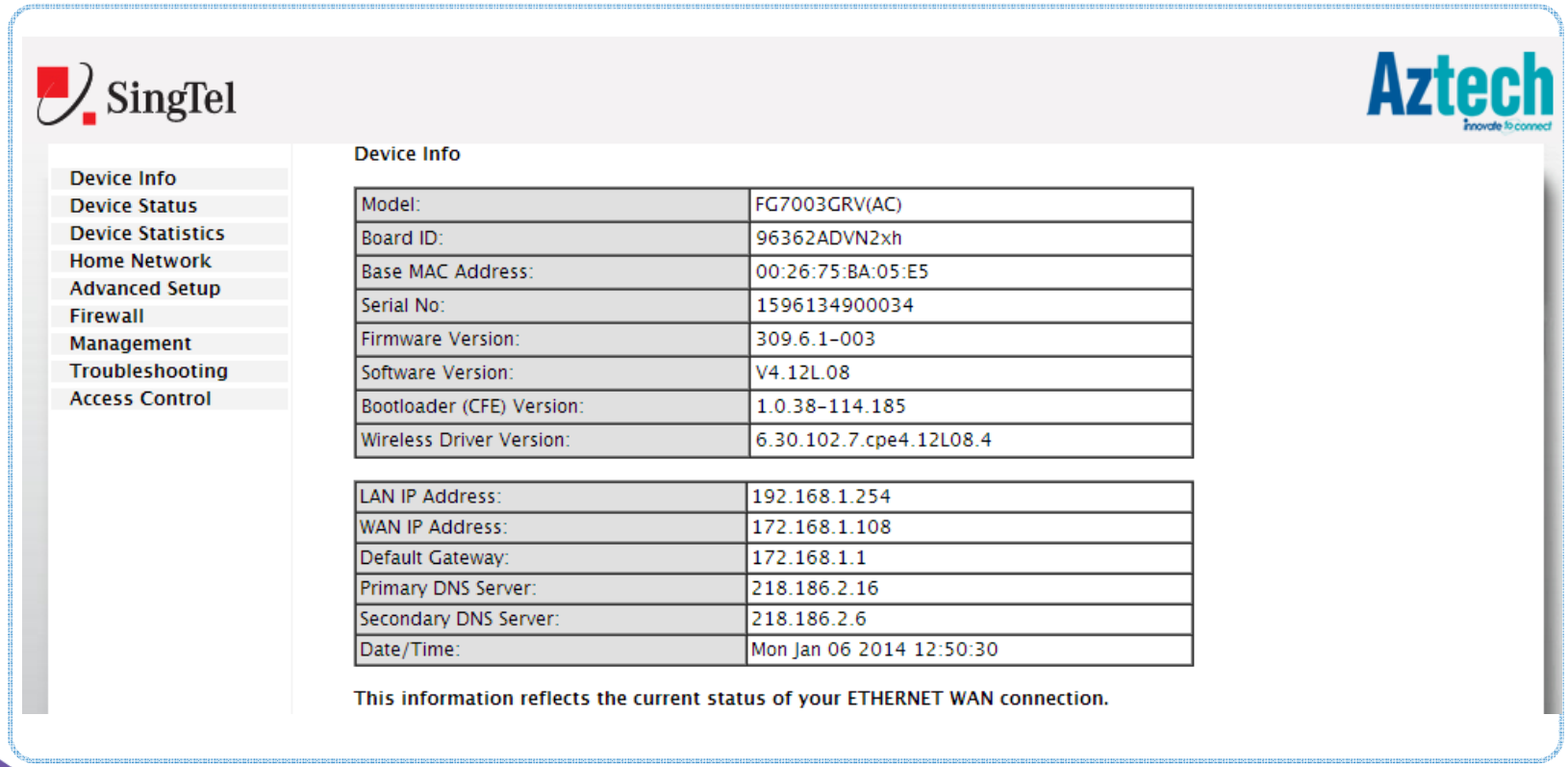
Step 3. Firmware version information is located on the web page under the Device Info



Accessing the Admin GUI

http://192.168.1.254/singtel

Username: admin | Password: H3ll0t3ch



Frequently Asked Questions

CAN I USE BOTH 2.4GHz AND 5GHz BAND AT THE SAME TIME?

Yes, both bands are enable by default. Please note that the same client can only connect to either one of the band available at any point of time.

WHAT IS THE MAXIMUM NUMBER OF CLIENT IT CAN SUPPORT FOR WIRELESS?

30 for 2.4ghz band and 30 for 5ghz band.

CAN I CONFIGURE MAC FILTERING 0N FG7003GRV(AC)?

No, MAC filtering feature is currently not supported.

Frequently Asked Questions

RG COMPARISON

Main Features	Feature	Aztech DSL7000GRV(S) (Current)	Aztech DSL7002GRV(S) (Current)	Aztech FG7003GRV(AC) (New)
Services Supported	ADSL	Yes	Yes	Not Available
	FTTH	Yes	Yes	Yes
	mioVoice	Yes	Yes	Yes
	mioTV	Yes	Yes	Yes
Operating Frequency	2.4 GHz	Yes	Yes	Yes
	5.0 GHz	No	Yes	Yes
Wireless Connection Mode		Wireless b/g/n	Wireless a/b/g/n	Wireless a/b/g/n/ac
MAC Filtering		Not supported	Not Supported	Not Supported[1]
WPS Push Button (2.4GHz only)		Disabled by default	Yes[2]	Yes (enabled by default)
Gigabit Ethernet LAN		4	4	4
Voice Ports (FXS)		2	2	2
USB Host Support		Disabled by default	Disabled by default	Disabled by default
DDNS		Not Supported	Not Supported	Not Supported[1]

Notes:

1. Under development
2. Firmware dependant

Frequently Asked Questions

HOW CAN I TELL IF MY WIRELESS CLIENT (i.e. the mobile / wireless device) SUPPORTS 5GHZ BAND?

- By doing wireless SSID scanning, if the client supports 5GHz band, you will be able to see the default 5GHz SSID, with prefix of SingTel7003(5G)-xxxx as illustrated below.

Please note that if the wireless client/adapter is able to see the 5GHz SSID, it does not necessarily mean that it is a Wireless AC client. There is a need to check against the hardware specifications if it really is a wireless AC client.

support contact info

Service Center Address:

31 Ubi Road 1 Aztech Building

Lobby B 5th Floor

Singapore 408694

Hotline:

6594 2297

Email:

support@aztech.com

Operating Hours

Monday to Friday: 9:00 AM to 6:15 PM

Saturday: 9:00 AM to 1:00 PM

(Except Public Holidays)

Thank You

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