



Preface

The purpose of this manual is to provide you with detailed information on the installation, operation and application of your 3G21WE HSPA+ WiFi Router.

Important Notice and Safety Precaution

- Before servicing or disassembling this equipment, always disconnect power from the device.
- Use an appropriate power supply, preferably the supplied power adapter, with an output of DC 12V 1.5A.
- Do not operate the device near flammable gas or fumes. Turn off the device when you are near a petrol station, fuel depot or chemical plant/depot. Operation of such equipment in potentially explosive atmospheres can represent a safety hazard.
- The device and antenna shall be used only with a minimum of 20 cm from the human body.
- The operation of this device may affect medical electronic devices, such as hearing aids and pacemakers.

Welcome

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Introduction

Introduction

CHAPTER-1

4

1.1 Features

- Combines Etisalat Broadband service, WiFi and Ethernet Router in one device
- Tri-band HSPA+/UMTS (850 /1900/ 2100 Mhz)
- Embedded multimode HSUPA/HSDPA/HSPA+/UMTS module
- 2 x USB 2.0 host ports
- WEP/WPA/WPA2 and 802.1x
- MAC address and IP filtering
- Static route functions
- DNS Proxy
- Integrated 802.11n AP (backward compatible with 802.11b/g)
- CLI command interface
- Web-based management
- Supports VPN Pass-through
- NAT/PAT
- DHCP Server/Relay/Client
- Configuration backup and restoration

Package Contents 1.2

Your package contains the following:

- Etisalat HSPA+ WiFi Router
- Printed Quick Start Guide
- CD (Containing User Guide)
- Ethernet Cable
- Security Card
- Power Supply



1.3 LED Indicators

The LED indicators are explained in the table below.

| LED | | | | |
|----------|----------|-------|-------|---|
| High | 3) | Green | 0 n | High signal strength |
| | | | Off | No activity, Router powered off or on other signal strength |
| Med |) | Green | 0 n | Medium signal strength |
| | | | Off | No activity. The Router is powered off or is currently using another signal strength |
| Low | | Green | 0 n | Low signal strength |
| | | | Off | No activity. The Router is powered off or is currently using another signal strength |
| 3 G | 3G)) | Green | 0 n | Connection established with the 3G network |
| | | | Off | Either there is no activity, the Router is powered off, or there is no cable or no powered device connected to the associated port |
| | | | Blink | Connecting with 3G network |
| 2 G | 2G)) | Green | 0 n | Connection established with the 2G network |
| | | | Off | Either there is no activity, the Router is powered off, or there is no cable or no powered device connected to the associated port |
| | | | Blink | Connecting with 2G network |
| LAN 1~4 | 1₽ ₽₽ | Green | On | Powered device connected to the associated LAN port (includes devices with Wake-on-LAN capability where a slight voltage is supplied to an Ethernet connection) |
| | | | Off | No device connected or Connected device is off |
| | | | Blink | LAN activity present (traffic in either direction) |
| Internet | ŵwŵ | Green | 0 n | Internet connection established |
| | , C | | Off | No connection to the internet or Router powered off |
| | | | Blink | Data is currently being transmitted through the Internet connection |
| WiFi | ((m)) | Green | 0 n | Local WiFi access to the Router is enabled and working |
| | | | Off | Local WiFi access to the Router is disabled |
| | | | Blink | Data being transmitted or received over WiFi. |
| POWER | ڻ ل | Green | 0 n | Power on |
| | - | | Off | Power off |

1.4 Panels

The rear and side panels shown below contain the ports for data and power connections.



- (1) SIM card slot
- (2) Four RJ-45 Ethernet LAN ports
- (3) Reset button
- (4) Power jack for DC power input (12VDC / 1.5A).
- (5) External 3G SMA Connector (Optional)
- Note: The External 3G Connector allows you to plug in an external 3G antenna (not provided) and select it as the main 3G signal input. By default, the gateway obtains a stable 3G signal from the internal antennas (built-in the gateway). For more details please refer to Chapter 4.2 Signal Selection.

(6) Two USB Printer/Hard Drive ports

(7) Power button

Introduction



Advanced

This chapter explains advanced setup for your Router:



2.1 TCP/IP SETTINGS

It is likely that your computer will automatically obtain an IP Address and join the network.

This is because the Dynamic Host Configuration Protocol (DHCP) server (on the device) will start automatically when your Router powers up.

This automatic assignment requires that DHCP is configured on your computers. It is likely that this is already the case, but should you be required to configure this, please see the instructions on the following page.

WINDOWS XP

To access the dialog box that allows you to configure your network connection, click on Start > Control Panel > Network Connections. Then right mouse click on the Local Area Connection and select Properties. Select Internet Protocol (TCP/IP) then select Properties

DHCP MODE

You can set your PC to DHCP mode by selecting Obtain an IP address automatically in the dialog box shown below.

| You can get IP settings assigned this capability. Otherwise, you ne the appropriate IP settings. | l automatically if your network supports ed to ask your network administrator for |
|--|--|
| Obtain an IP address autor | natically |
| O Use the following IP addres | s: |
| IP address: | |
| Subnet mask: | |
| Default gateway: | |
| Obtain DNS server address | automatically |
| O Use the following DNS serv | ver addresses: |
| Preferred DNS server: | and an and |
| Alternate DNS server: | 41 4 4 |
| | Advanced. |

STATIC IP MODE

The following steps show how to assign a Static IP address to your PC using subnet 192.168.1.x

- 1: Change the IP address to the domain of 192.168.1.x (1<x<254) with subnet mask of 255.255.255.0.
- 2: Set the default Router and DNS server to the Router's IP address.
- NOTE: The IP address of the Router is 192.168.1.1. (Default), so the PC must be set with a different IP. In the case below, the PC's IP address is set as 192.168.1.2

| this capability. Utherwise, you i the appropriate IP settings. | need to ask your network administrator I |
|---|--|
| Ubtain an IP address aut | omatically ess |
| IP address: | 192.168.1.2 |
| Subnet mask: | 255.255.255.0 |
| Default gateway: | 192.168.1.1 |
| Obtain DNS server addre | es automaticallu |
| Use the following DNS se | erver addresses: |
| Preferred DNS server: | |
| Alternate DNIC second | |

3: Click Ok to submit the settings.

M A C O S X 10.46

To access the dialog box that allows you to configure your network connection. Browse to the Apple menu and select System Preferences. From the System Preferences menu, click the Network icon and then select the Ethernet connection.

DHCP MODE

You can set your Mac to DHCP by selecting DHCP from the Configure drop down list. After clicking Apply, your Mac's IP Address will now be automatically assigned from the Router.



STATIC MODE

 From the Configure drop down list, you can set your computer to Static IP mode by selecting the option Manually.

| | Location | Automatic | |
|---|-------------------|-----------------|--|
| Ethernet 2 Connected | 9-9- | Status: | Connected |
| FireWire Not Connected | Y | | Using DHCP Using DHCP with manual address |
| AirPort | 1 | Configure | / Manually |
| Bluetooth PAN | 6-2 | IP Address | Off |
| Not Connected | 11 | Subnet Mask | Create PPPoE Service |
| US8 Etet (en5) Not Connected | \Leftrightarrow | Router: | 192.168.1.1 |
| USB Et et (en3) | <-> | DNS Server: | 192.168.1.1, 192.168.1.1 |
| | | Search Domains: | |
| + - 0- | | | Advanced |

The following steps show how to assign a Static IP address to your Mac

- Choose an IP address between 192.168.1.2 192.168.1.254 (Do not choose the Router IP of 192.168.1.1). enter this IP address into the field marked IP Address, and enter a Subnet Mask of 192.168.1.1
- 3. Set the Router and DNS server field to 192.168.1.1 (The Router's IP address).
- NOTE: The IP address of the Router is 192.168.1.1. (default), so the computer must be set with a different IP to the Router. In the case below, the PC's IP address is set as 192.168.1.2

| | Location: | Automatic | • | |
|---------------------------------|-------------------|-----------------|-------------------------|----------------|
| B Ethernet Connected | 99) (19) | Status: | Connected | ind has the IP |
| AirPort Connected | <u>?</u> | | address 192.168.20.102. | |
| Not Connected | 3 | Configure: | Manually | • |
| Bluetooth | 0 | IP Address: | 192.168.1.2 | |
| Not Connected | ~ | Subnet Mask: | 255.255.255.0 | |
| Not Connected | ¥ | Router: | 192.168.1.1 | |
| Ethernor (en3) | \Leftrightarrow | DNS Server: | 192.168.1.1 | |
| USB Etet (en5) Not Connected | \Leftrightarrow | Search Domains: | | |
| USB Etet (en2) | <-> | | | |
| | | | 0 | Advanced |

4. Click Apply to submit the settings.

WINDOWS VISTA/7

To access the dialog box that allows you to configure your network connection, click on Start > Control Panel > Network and sharing center and select Manage Network Connection. (For Windows 7, click on change adapter settings). Then right mouse click on the Local Area Connection and select Properties. Select Internet Protocol (TCP/IP) then select Properties



DHCP MODE

You can set your PC to DHCP mode by selecting Obtain an IP address automatically in the dialog box shown below.

| Seneral | Alternate Configuration | | | | |
|--------------------------------|---|--------------------------------|------------------|-------------------|----------------------|
| You car this cap for the | n get IP settings assigned auto ability. Otherwise, you need appropriate IP settings. | omatically if to ask your i | your n networ | etwork k admir | supports istrator |
| () O | otain an IP address automatic | ally | | | |
| O Us | e the following IP address: | | | | |
| IP ac | idress: | | | | |
| Subr | iet mask: | e :- | | | |
| Defa | ult gateway: | (| G | ×. | |
| () O | otain DNS server address auto | matically | | | |
| O Us | e the following DNS server ad | dresses: | | | |
| Prefe | erred DNS server: | ÷. | | | |
| Alter | nate DNS server: | | | | |
| | | | | Adv | anced |
| | | | | Muv | anceum |

STATIC IP MODE

To configure your Router manually, your PC must have a static IP address within the Router's subnet. The following steps show how to assign a Static IP address to your PC using subnet 192.168.1x

- 1: Select Use the following IP Address. Choose an IP address between 192.168.12 - 192.168.1.254
- NOTE: The Ip address of the Router is 192.168.1.1 (default), so the PC must be set with a different Ip. In the case below, the PC's IP address is set as 192.168.2
- 2: Set the Router and DNS server field to 192.168.1.1 (The Router's IP address).

| You can get IP settings assigned this capability. Otherwise, you r | d automatically if your network support need to ask your network administrator |
|---|---|
| for the appropriate IP settings. | |
| Obtain an IP address auto | matically |
| • Use the following IP addres | 55: |
| IP address: | 192.168.1.2 |
| Subnet mask: | 255 . 255 . 255 . 0 |
| Default gateway: | 192.168.1.1 |
| | and an all and the Bar |
| Obtain DNS server address | er addresses |
| Preferred DNS server: | 192 168 1 1 |
| ricicited bits server. | 132.100.1.1 |
| 10 000 | |

3. Click Ok to apply the settings.

2.2 Default Settings

The following are the default settings for the Router

- Local (LAN) access (username: admin, password: admin)
- Remote (WAN) access (username: support, password: support)
- User access (username: user, password: user)
- LAN IP address: 192.168.1.1
- Remote WAN access: disabled
- NAT and firewall: enabled
- Dynamic Host Configuration Protocol (DHCP) server on LAN interface: enabled

Technical Note

During power on, the device initializes all settings to default values. It will then read the configuration profile from the permanent storage section of flash memory. The default attributes are overwritten when identical attributes with different values are configured. The configuration profile in permanent storage can be created via the web user interface or telnet user interface, or other management protocols. The factory default configuration can be restored either by pushing the reset button for more than five seconds until the power LED blinks or by clicking the Restore Default Configuration option in the Restore Default Settings screen (see section 6.7.3).

2.3 Login Procedure

To login to the web interface, follow the steps below:

- NOTE: The default settings can be found in 3.3 Default Settings.
- 1: Open a web browser and enter the default IP address for the Router in the Web address field. In this case http://192.168.1.1
- NOTE: For remote access, use the WAN IP address shown on the WUI Homepage screen and login with remote username and password.
- A dialog box will appear, as illustrated below. enter the default username and password, as defined in section 3.3 Default Settings.

Click Ok to continue.

| Connect to 192. | 168.1.1 ? 🔀 |
|---|--|
| | G.P. |
| The server 192.168 username and pass | .1.1 at HSPA WiFi Router requires a word. |
| Warning: This serve password be sent in without a secure co | r is requesting that your username and an insecure manner (basic authentication nnection). |
| <u>U</u> ser name: | 2 |
| Password: | |
| | Remember my password |
| | |
| | OK Cancel |

NOTE: The login password can be changed later (see 6.8.2 Passwords)





Basic

This chapter explains basic setup for your Route

CHAPTER-3

3.1 WEB USER INTERFACE HOMEPAGE

The web user interface (WUI) is divided into two window panels, the main menu (on the top) and the display screen (on the bottom). The main menu has the following options: Basic, HSPA/3G Settings, WiFi, Advanced Settings and Diagnostics.

Selecting one of these options will open a submenu with more options. Basic is discussed below while subsequent chapters introduce the other main menu selections.

NOTE: The menu options available within the web user interface are based upon the device configuration and user privileges (i.e. local or remote).

BASIC

The Basic screen is the WUI homepage and the first selection on the main menu. It provides information regarding the firmware, 3G, and IP configuration.

The following table provides further details.

| Option | |
|-------------------------|---|
| Model Name | The model name of the device. |
| Board ID | The Hardware version of the device |
| Bootloader version | The bootloader version of the device. |
| Router Firmware version | The firmware version of the device. |
| Wireless driver version | The wireless driver version of the wireless module. |
| Mac Address | The MAC address of the device's LAN connection interface |
| Serial Number | The serial number of the device |
| Network | The name of or other reference to the mobile network operator. |
| Link | Shows the connection status of the current connection. |
| Mode | The radio access technique currently used to enable internet access. It can be HSUPA, HSDPA, UMTS, or Disconnected. |
| Signal strength | The mobile network (UMTS) signal quality available at the device location. This signal quality affects the performance of the unit. If two or more bars are green, the connection is usually acceptable. |
| SIM info | Shows the SIM card status on the device. |
| LAN IP Address | Shows the IP address for LAN interface. |
| WAN IP Address | Shows the IP address for WAN interface. |
| Primary DNS Server | Shows the IP address of the primary DNS server. |
| Secondary DNS server | Shows the IP address of the secondary DNS server. |
| Date/Time | The time according to the device's internal clock |





Settings

This menu includes Etisalat service Setup and PIN Configuration

CHAPTER-4

This menu includes Etisalat service Setup.

NOTE: Sections 8.3 and 8.4.2 also provide information about the Etisalat service.

4.1 Etisalat SERVICE SETUP

Select your service settings according to predefined or custom profiles.

Setup instructions are provided in the following sections for your assistance.

4.1.1 PROFILE SETUP

Etisalat will provide the information required to complete the first time setup instructions below. Only complete those steps for which you have information and skip the others.

The Modify Profiles link enables you to enter a custom 3G network setup. To add a custom profile, click the add button and enter the appropriate 3G network information as supplied by your provider.

- 1. If your SIM card is not inserted into the Router, please turn the Router off. Then insert the SIM and turn the Router on.
- To connect to Etisalat's 3G network please select the Etisalat UAE profile with the Etisalat's APN as etisalat.
 ae. Authentication Method should be provided by Etisalat; or just leave it set to AUTO if not required. If you have not received the username and password, leave these fields empty.

| RSIC | HSP | R/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|------|---|--|---------------|------------|-------------------|--------|
| F | 1SPA/3G Settings : Profile: Authentication Meth | Setup Etisalat NONE oticolat aa | × | | | |
| I | P Compression: Data Compression: | Off ¥ Off ¥ | | | | |
| 1 | All Bands/Autom | atic | G3G-2100 Only | | | |
| 1 | Save Connect | Disconnest | | | | |

3. Select IP compression and Data compression to be ON or OFF. By default they are set to off.

- 4. Click the Save button to save the new settings.
- 5. Press the Connect button to connect to Internet. The Device Info for 3G network box in the WUI Basic screen should indicate an active connection, as shown below. The 3G and Internet LEDs on the front panel of the Router should also be blinking.

| HSP | R/3G SETTIN | GS WI-FI | MANAGEMENT | ADVANCED SETTINGS S |
|---------------------|--------------|---------------------------|------------|---------------------|
| Deale a Harra | | | | |
| basic > nome | | | | |
| Model Name: | | 3G21WE | | |
| Board ID: | | 96369G-133 | | |
| Gateway Firmwa | re Version: | J301-402NCM-T01_R00_I | RC1 | |
| Bootloader (CFE | Version: | 1.0.37-102.6-11 | | |
| Wireless Driver V | /ersion: | 5.10.85.0.cpe4.402.4 | | |
| Link: | Connected | | | |
| Mode: | UMTS | | | |
| Signal Strength: | Y. | 1 | | |
| SIM Info: | SIM inserte | d | | |
| | | | | |
| This information re | flects the c | urrent status of your con | nection. | |
| | | | | |
| LAN IP Address: | 192 | .168.1.1 | | |
| WAN IP Address: | 10.1 | 194.23.67 | | |
| Primary DNS Ser | ver: 139 | .130.4.4 | | |
| Secondary DNS | Server: 203 | .50.2.71 | | |
| Date/Time: | Sat | Jan 1 00:12:45 2000 | | |

If the LEDs are off, then either your profile settings are incorrect, the SIM card is not working or the service network is unavailable. In either case, contact Technical Support for further instructions.

4.2 Antenna Selection

Allows the end user the select the 3G signal input from external antennas (not provided). It also provides a signal strength comparison between the internal antennas and the external antennas.

اتصالات etisalat

HSPA+ WI-FI Router

RDVRNCED SETTINGS STATUS

HSPA/3G Settings> Signal Selection

Thip page allow you for manually parted the 30 signal inputs be either internal antennar or an external antennar (not inclused). By default dable signal is collected on the antennars built incide the rooter. To use an external antenna, please connect it to the Antenna Connector next to the Power input on the back of the rooter. asket External Antennar and did Sawhophy.

you select Auto Select, the router can detect and select automatically the higher signal strength from the internal antennas and from the external input. The Auto elect process takes about 170 seconds. Please close the web browser on your computer and do not use Internet during the whole process.

| Current Signal Input: | Internal Antennas |
|-----------------------|--|
| Select Signal Input: | C Auto Select C Internal Antennas C External Antenna |

Save/Apply





UIFI



CHAPTER-5

The WiFi submenu provides access to Wireless Local Area 5.1 SETTINGS Network (LAN) configuration settings including:

- Wireless network name
- Channel restrictions (based on country)
- Security
- Access point or bridging behaviour
- Station information

| | HSPR/3G SETTINGS | WI-FI Setup | MR | nagemer | IT | ADVANC | D SETTINGS | STATU |
|--|--|---------------------------------------|--------------------|----------------------------|--------------------------|-------------------------------|--------------------------------------|----------------|
| Wi-Fi > Set | ings | Security Configuration | | | | | | |
| This page all active scans Click "Apply | ows you to configure your Wi- , set the wireless network nar 'Save" to configure the basic v | MAC Filter | or di d res | sable the trict the c | wireless L tannel set | AN interface, based on col | nide the network intry requiremen | c from Its. |
| 🗹 Enat | ile Wi-Fi | | | | | | | |
| Enat | le SSID Broadcast | | | | | | | |
| Clien | ts Isolation | | | | | | | |
| BSSID: | 00:1A:2B:14:BE:82 | | | | | | | |
| | | · · · · · · · · · · · · · · · · · · · | | ~ | | | | |
| Country: | UNITED ARAB EMIRATE | .5 | | | | | | |
| Country: Max Clients | UNITED ARAB EMIRATE | | | | | | | |
| Country: Max Clients Wireless -(| UNITED ARAB EMIRATE | 5 E | | | | | | |
| Country: Max Clients Wireless - 0 Enabled | UNITED ARAB EMIRATE 16 Suest/Virtual Access Points SSID | s K Hidden | Isolate Clients | Max Clients | BSSID | | | |
| Country: Max Clients Wireless - (Enabled | UNITED ARAB EMIRATE 16 UNITED ARAB EMIRATE SID V0_Guest1 | s Hidden | Isolate Clients | Max Clients | BSSID N/A | | | |
| Country: Max Clients Wireless - (Enabled | UNITED ARAB EMIRATE 16 Suest/Virtual Access Points SID VM0_Guest1 VM0_Guest2 | s Hidden | Isolate Clients | Max Clients 16 16 | BSSID N/A N/A | | | |

This screen allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. The Wireless Guest Network function adds extra networking security when connecting to remote hosts.

| | HSPR/3G SETTINGS | WI-FI | MA | NAGEMER | IT | RDVRNCED SETTINGS STRT |
|------------------------------------|---|--|--------------------------|--------------------------|-------------------------|---|
| Wi-Fi > : | Settings | | | | | |
| This pag active so Click "Ap | e allows you to configure your cans, set the wireless network oply/Save" to configure the bas | Wi-Fi settings. You can e name (also known as SSI ic wireless options. | hable or d)) and res | sable the trict the c | wireless L hannel se | AN interface, hide the network from t based on country requirements. |
| I₹ E | Enable Wi-Fi | | | | | |
| V E | Enable SSID Broadcast | | | | | |
| | Clients Isolation | | | | | |
| ssiD: | ETISALAT1234 | a wireless network profile | on their c | omputers. | | |
| BSSID: | 00:1A:28:14:8E:82 | | | | | |
| Country | UNITED ARAB EMIRA | ATES | | ~ | | |
| Max Clie | ents: 16 | | | | | |
| | | | | | | |
| Wireles | s - Guest/Virtual Access Po | ints | Incluin | Man | | |
| Enabl | led SSID | Hidden | Clients | Clients | BSSID | |
| | w0_Guest1 | | Γ | 16 | N/A | |
| | | | | 10 | 817.0 | |
| | w0_Guest2 | | | 16 | TUDA | |

| Option | Description |
|--|--|
| Enable WiFi | A checkbox that enables or disables the wireless LAN interface. When selected, the Web UI displays Hide Access point, SSID, and County settings. The default is Enable WiFi. |
| Enable SSID Broadcast | Deselect Enable SSID Broadcast to protect the access point from detection by wireless active scans. |
| | To check AP status in Windows XP, open Network Connections from the Start Menu and select View Available Network Connections. If the access point is hidden, it will not be listed there. To connect a client to a hidden access point, the station must add the access point manually to its wireless configuration. |
| Clients Isolation | 1. Prevents clients PC from seeing one another in My Network Places or Network Neighborhood. |
| | 2. Prevents one wireless client communicating with another wireless client. |
| SSID | Sets the wireless network name. SSID stands for Service Set Identifier. All stations must be configured with the correct SSID to access the WLAN. If the SSID does not match, that user will not be granted access. |
| | The naming conventions are: Minimum number of characters: 1, maximum number of characters: 32. |
| BSSID | The BSSID is a 48bit identity used to identify a particular BSS (Basic Service Set) within an area. In Infrastructure BSS networks, the BSSID is the MAC (Medium Access Control) address of the AP (Access Point) and in Independent BSS or ad hoc networks, the BSSID is generated randomly. |
| Country | A drop-down menu that permits worldwide and specific national settings. Each county listed in the menu enforces specific regulations limiting channel range: US= worldwide, Japan=1-14, Jordan= 10-13, Israel= 1-13 |
| Max Clients | The maximum number of clients that can access the router. |
| Wireless - Guest / Virtual Access Points | This router supports multiple SSIDs called Guest SSIDs or Virtual Access Points. To enable one or more Guest SSIDs select the radio buttons under the Enable heading. To hide a Guest SSID, select its radio button under the Hidden heading. |
| | Do the same for Isolate Client and Disable WMM Advertise functions. For a description of these two functions, see the entries for "Client Isolation" and "Disable WMM Advertise" in this table. Similarly, for Max Clients and BSSID headings, consult the matching entries in this table. NOTE: Remote wireless hosts are unable to scan Guest SSIDs. |

5.2 SECURITY

This Router includes a number of options to help provide a secure connection to the Etisalat Network.

Security features include:

- WEP / WPA / WPA2 data encryption
- SPI Firewall
- VPN Pass-Through
- MAC address IP filtering
- Authentication protocols PAP / CHAP

BF

You can authenticate or encrypt your service on the WiFi Protected Access algorithm, which provides protection against unauthorized access such as eavesdropping.

The following screen appears when Security is selected. The Security page allows you to configure security features of your Router's wireless LAN interface. You can set the network authentication method, select data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.

| SIC | HSPR/3G SET | TINGS WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|-----|---|--|--|----------------------------------|
| | Wi-Fi > Security | | | |
| | This page allows you to config You may setup configuration n | ure security features of the nanually | wireless LAN interface. | |
| | Manual Setup AP | | | |
| | You can set the network auther specify whether a network key Click "Apply/Save" when done | ntication method, selecting is required to authenticate | data encryption, to this wireless network and | specify the encryption strength. |
| | Select SSID: | ETISALAT1234 | | |
| | Network Authentication: | Mixed WPA2/WPA -PSK | ~ | |
| | WPA Pre-Shared Key: WPA Group Rekey Interval: WPA Encryption: WEP Encryption: | 0 TKIP+AES V Disabled V | Click here to display | |

Click Save/Apply to configure the wireless security options.

WIFI

| Option | Description |
|------------------------|---|
| Select SSID | Your Service Set Identifier (SSID), sets your Wireless Network Name. You can connect multiple devices including Laptops, Desktop PCs and PDAs to your Wireless Router. To get additional devices connected, scan for a network, and locate the SSID shown on your Wireless Security Card. If the SSID does not match, access is denied. |
| Network Authentication | This option is used for authentication to the wireless network. Each authentication type has its own settings. For example, selecting 802.1X authentication will reveal the RADIUS Server IP address, Port and key fields. |
| WPA-Pre-Shared Key | It is useful for small places without authentication servers such as the network at home. It allows the use of manually-entered keys or passwords and is designed to be easily set up for home users. |
| WPA Encryption: | Select the data encryption method for the WPA mode. There are three types that you can choose, TKIP, AES, TKIP+AES. |
| | TKIP (Temporary Key Integrity Protocol) takes the original master key only as a starting point and derives its encryption keys mathematically from this master key. Then it regularly changes and rotates the encryption keys so that the same encryption key will never be used twice. |
| | AES (Advanced Encryption Standard) provides security between client workstations operating in ad hoc mode. It uses a mathematical ciphering algorithm that employs variable key sizes of 128, 192 or 256 bits. |
| | TKIP+AES combine the features and functions of TKIP and AES. |

5.3 CONFIGURATION

The following screen appears when you select Configuration. This screen allows you to control the advanced features of the Wireless Local Area Network (WLAN) interface:

- Select the channel which you wish to operate from
- Force the transmission rate to a particular speed
- Set the fragmentation threshold
- Set the RTS threshold
- Set the wake-up interval for clients in power-save mode
- Set the beacon interval for the access point
- Set Xpress mode
- Program short or long preambles

Click Save/Apply to set the advanced wireless configuration.



| Option | Description | Fragmentation | A threshold, specified in bytes, that determines whether packets will be | |
|-----------------------------------|---|-----------------------|--|--|
| Band | The new amendment allows IEEE 802.11g units to fall back to speeds of 11 Mbps, so IEEE 802.11b and IEEE 802.11g devices can coexist in the same network. The two standards apply to the 2.4 GHz frequency band. IEEE 802.11g creates data-rate parity at 2.4 GHz with the IEEE 802.11a standard, which has a 54 Mbps rate at 5 GHz. (IEEE 802.11a has other differences compared to IEEE 802.11b or g, such as offering more channels.) | Threshold | fragmented and at what size. On an 802.11 WLAN, packets that exceed the fragmentation threshold are fragmented, i.e., split into, smaller units suitable for the circuit size. Packets smaller than the specified fragmentation threshold value are not fragmented. Enter a value between 256 and 2346. If you experience a high packet error rate, try to slightly increase your Fragmentation Threshold. The value should remain at its default setting of 2346. Setting the Fragmentation Threshold too low may result in poor performance. | |
| Channel | Drop-down menu that allows selection of a specific channel. | RTS Threshold | Request to Send, when set in bytes, specifies the packet size beyond which the | |
| Auto Channel Timer (min) | Auto channel scan timer in minutes (O to disable) | | WLAN Card invokes its RTS/CTS mechanism. Packets that exceed the specified RTS threshold trigger the RTS/CTS mechanism. The NIC transmits smaller packet without using RTS/CTS. The default setting of 2347 (maximum length) disables | |
| 802.11n/EWC | With drop-down menu, "Auto" is for 11n and "Disable" is for 11g | | RTS Threshold. | |
| Bandwidth | Drop-down menu specifies the following bandwidth: 20MHz and 40MHz. | DTIM Interval | Delivery Traffic Indication Message (DTIM), also known as Beacon Rate. The | |
| Control Sideband | This is available for 40MHz. Drop-down menu allows selecting upper sideband or lower sideband | | entry range is a value between 1 and 65535. A DTIM is a countdown informin clients of the next window for listening to broadcast and multicast messages When the AP has buffered broadcast or multicast messages for associated | |
| 802.11n Rate | Drop-down menu specifies the following fixed rates. The maximum rate for bandwidth, 20MHz, is 130MHz and the maximum bandwidth, 40MHz, is 270MHz | | clients, it sends the next DTIM with a DTIM Interval value. AP Clients hear the beacons and awaken to receive the broadcast and multicast messages. The default is 1 | |
| 802.11n Protection | It is similar as 802.11g protection. In Auto mode the router will use RTS/CTS to improve 802.11n performance in mixed 802.11n/ 802.11g/ 802.11b networks. Turn protection off to maximize 802.11n throughput under most conditions. | Beacon Interval | The amount of time between beacon transmissions. Each beacon transmission identifies the presence of an access point. By default, radio NICs passively | |
| Support 802.11n client only | Drop-down menu allows selecting "On/Off". Choosing "On" allows the client with 11n only to connect, not for 11g or 11b; choosing "Off" allows the client with 11n/11g/11b to connect | | scan all RF channels and listen for beacons coming from access points to f a suitable access point. Before a station enters power save mode, the stat needs the beacon interval to know when to wake up to receive the beacon (and learn whether there are buffered frames at the access point). The ent | |
| 54g Rate | Drop-down menu that specifies the following fixed rates: Auto: Default. Uses the 11 Mbps data rate when possible but drops to lower rates when necessary. | | value is represented in ms. Default is 100. Acceptable entry range is 1 to 0xffff (65535) | |
| | 1 Mbps, 2Mbps, 5.5Mbps, or 11Mbps fixed rates. The appropriate setting is dependent on signal strength. | Global Max Clients | The device can support 4 SSID, and each SSID can set its own max clients, but it can't be bigger than Global max clients. "Global Max Clients" limits the total | |
| Multicast Rate | Setting multicast packet transmit rate. | N TM | associated clients of the 4 SSID. | |
| Basic Rate | Setting basic transmit rate. | Xpress™ Technology | XpressIM lechnology is compliant with draft specifications of two planned wireless industry standards. | |
| | | Transmit Power | The router will set different power output (by percentage) according to this selection. | |

5.4 MAC FILTER

This screen appears when Media Access Control (MAC) Filter is selected. This option allows access to be restricted based upon the unique 48-bit MAC address.

To add a MAC Address filter, click the Add button shown below.

To delete a filter, select it from the table below and click the Remove button.

| BASIC | HSPR/3G SETT | INGS WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|-------|---------------------------|-----------------|------------|-------------------|--------|
| | Wi-Fi > MAC Filter | | | | |
| | Select SSID: ETISALAT123 | v | | | |
| | MAC Restrict Mode: 💽 Disa | abled C Allow C | Deny | | |
| | MAC Address Remove | | | | |
| | Add Remove | | | | |

| Option | Description |
|--------------|---|
| MAC Restrict | Disabled – Disables MAC filtering |
| Mode | Allow – Permits access for the specified MAC addresses. |
| | NOTE: Add a wireless device's MAC address before clicking the Allow radio button or else you will need to connect to the Router's web user interface using the supplied yellow Ethernet cable and add the wireless device's MAC address. Deny – Rejects access for the specified MAC addresses |
| MAC Address | Lists the MAC addresses subject to the MAC Restrict Mode. The Add button prompts an entry field that requires you type in a MAC address in a two- character, 6-byte convention: xx:xx:xx: xx:xx where xx are hexadecimal numbers. A maximum of 60 MAC addresses can be added. |

| BA | SIC | HSPR/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS | | |
|----|--|------------------|-------|------------|-------------------|--------|--|--|
| | | | | | | | | |
| | Wi-Fi > MAC Filter | | | | | | | |
| | Enter the MAC address and click "Apply/Save" to add the MAC address to the wireless MAC address filters. | | | | | | | |
| | MAC Address: (xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx | | | | | | | |
| | | | A | pply/Save | | | | |

Enter the MAC address on the screen below and click Save/Apply.

5.5 WIRELESS BRIDGE

The following screen appears when selecting Wireless Bridge, and goes into a detailed explanation of how to configure wireless bridge features of the wireless LAN interface. Click Save/Apply to implement new configuration settings.

| IC HSPA/3G SETTING | is WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|--|--|---|--|
| Wi-Fi > Bridge | | | |
| This page asovs you to configure v Wireless Distribution System) to di bridge functionality will still be avail enables wireless bridge restriction. Click "Refresh" to update the remo Click "Apply/Save" to configure the | reress bridge features of the lable and wireless stations wi Only those bridges selecter a bridges. Wait for few sec- wireless bridge options. | e wreess LAN interface lity, Selecting Access Po I be able to associate to I in Remote Bridges will onds to update. | rou can server vimiers Bridge (also known as internative sceeps point functionality. Wreleas the AP. Selecting Enabled or Enabled(Scan) be granted access. |
| AP Mode: | Access Foint | | |
| Remote Bridges MAC Address: | | | (000000000000) |
| | | | |

| Option | Description |
|-----------------|--|
| AP Mode | Selecting Wireless Bridge (Wireless Distribution System) disables Access Point (AP) functionality while selecting Access Point enables AP functionality. In Access Point mode, wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. |
| Bridge Restrict | Selecting Disabled in Bridge Restrict disables Wireless Bridge restriction, which means that any wireless bridge will be granted access. Selecting enabled or enabled (Scan) allows wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click Refresh to update the station list when Bridge Restrict is enabled. |

5.6 STATION INFO

The following screen appears when you select Station Info, and shows authenticated wireless stations and their status. Click the Refresh button to update the list of stations in the WLAN



| Option | Description |
|------------|---|
| BSSID | The BSSID is a 48-bit identity used to identify a particular BSS (Basic Service Set) within an area. In Infrastructure BSS networks, the BSSID is the MAC (Media Access Control) address of the AP (Access Point); and in Independent BSS or ad hoc networks, the BSSID is generated randomly. |
| Associated | Lists all the stations that are associated with the Access Point, along with the amount of time since packets were transferred to and from each station. If a station is idle for too long, it is removed from this list. |
| Authorized | Lists those devices with authorized access. |

WIFI



Advanced

This chapter explains advanced setup for your Router:



6.1 LOCAL AREA NETWORK (LAN)

This screen allows you to configure the Local Area Network (LAN) interface on your Router

| BRSIC HSPR/30 | SETTINGS WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|--|--|--------------------------|--------------------------|
| Advanced Settings > Lo | cal Area Network (LAN) Setup | | |
| P Address: Subnet Mask: Enable IGMP Snoopin | 192.168.1.1 255.255.255.0 | | |
| Enable NAT Enable UPAP Deable DHCP Server Sant P Address: Enable MCP Server Sant P Address: Edsed Time (hour): Static P Lease Life MAC Address MAC Address | 192. 168. 1.2 192. 168. 1.254 24 IP Address Remove Renose 56/m | red) | |
| Configure the second 1 | ² Address and Subnet Mask for LAN | interface Seve Roboot | |

| Option | | | | |
|---|---|--|--|--|
| IP Address | Enter the IP address for the LAN interface | | | |
| Subnet Mask | Enter the subnet mask for the LAN interface | | | |
| Enable Internet Group Management Protocol (IGMP) Spooning | Enable by ticking the box Standard Mode: In standard mode, multicast traffic will flood to all bridge ports when no client subscribes to a multicast group. | | | |
| (rom) shooping | Blocking Mode: In blocking mode, the multicast data traffic will be blocked. When there are no client subscriptions to a multicast group, it will not flood to the bridge ports. | | | |
| Enable NAT | To enable/disable Network Address Translation (NAT, please refer to 7.2 for NAT setting). By default NAT is enabled. | | | |
| Enable UPnP | Tick the box to enable Universal Plug and Play | | | |
| Dynamic Host Configuration Protocol (DHCP) Server | Select enable DHCP server and enter your starting and ending IP addresses and the lease time. This setting configures the Router to automatically assign IP, default Router and DNS server addresses to every DHCP client on your LAN | | | |
| Static IP Lease List | To specify the IP address assigned through DHCP according to the MAC address of the hosts connected to the Router. | | | |
| Enable DHCP Server Relay | To relay DHCP requests from the subnet with no DHCP server on it to a DHCP server on other subnets. DHCP Server Relay is disabled by default. To access enable DHCP relay, please un-tick NAT enable first, that means to disable NAT first, and then press save button. The enable DHCP server Relay option will then show up on the same page as below: | | | |

See the field descriptions below for more details.

NOTE: If you change your Router's IP address (first option on the chart), the installation software/connection manager may not be able to communicate with the Router. Please reset the Router's IP address to 192.168.1.1 if this occurs. Configure a second IP address by ticking the checkbox shown below and enter the following information:

| IP Address: | Enter the secondary IP address for the LAN interface. | | | |
|--------------|--|--|--|--|
| Subnet Mask: | Enter the secondary subnet mask for the LAN interface. | | | |

NOTE: The Save button saves new settings to allow continued configuration, while the Save/Reboot button not only saves new settings but also reboots the device to apply the new configuration (i.e. all new settings).

6.2 NETWORK ADDRESS TRANSLATION (NAT)



6.2.1 PORT FORWARDING

Port Forwarding allows you to direct incoming traffic from the Internet side (identified by Protocol and External port) to the internal server with a private IP address on the LAN side. The Internal port is required only if the external port needs to be converted to a different port number used by the server on the LAN side. A maximum of 32 entries can be configured.



To add a Port Forwarding rule, click the Add button. The following screen will display.

| BASIC HSPA | '3G SETTINGS WI-FI | MANAGEM | ENT ADVA | INCED SETTINGS STRTUS |
|---|---------------------------------|---|--|---------------------------------------|
| | | | | |
| NAT Port Forwardin | 9 | | | |
| Select the service car | e and enter the server IP adds | iss and didt "Apply Sav | a" to forward IP nacks | ats for this service to the specified |
| server. | | | | |
| NOTE: The "Internal I November if you modi | Port End" cannot be modified | directly. Normally, it is internal Port Ford?will! | set to the same values and to the same values of the same value of | ie as "External Port End". |
| Remaining number of | f entries that can be configure | dt 32 | | |
| Line Interface | Ince.ush0.6ash0.M | | | |
| Service Name: | | | | |
| Select a Service: | Select One | ~ | 1 | |
| Custom Service | | | | |
| Server IP Address | 192.168.1. | | | |
| | | | | |
| | | Apply/Sove | | |
| Enternal Part Start | Estomal Part End Protoco | I Jakamal Rost Flord | Internal Past End | |
| LAWITH FOR STATE | TCP | × | Internal Port Lind | |
| | TCP | ~ | | |
| | TCP | ~ | | |
| | TOP | ~ | | |
| | TCP | ~ | | |
| | TCP | ¥ | | |
| | TCP | ~ | | |
| | TCP | ~ | | |
| | TCP | ¥ | | |
| | TCP | ~ | | |
| | TCP | * | | |
| | TCP | * | | |
| | | | | |
| | | Appyrant | | |

| Options | Description | |
|---------------------|---|--|
| Select a Service | User should select the service from the list. | |
| Or Custom Server | Or create a custom server and enter a name for the server | |
| Server IP Address | Enter the IP address for the server. | |
| External Port Start | Enter the starting external port number (when you select Custom Server). When a service is selected the port ranges are automatically configured. | |
| External Port End | Enter the ending external port number (when you select Custom Server). When a service is selected the port ranges are automatically configured. | |
| Protocol | User can select from: TCP, TCP/UDP or UDP. | |
| Internal Port Start | Enter the internal port starting number (when you select Custom Server). When a service is selected the port ranges are automatic configured | |
| Internal Port End | Enter the internal port ending number (when you select Custom Server). When a service is selected the port ranges are automatically configured. | |



6.2.2 PORT TRIGGERING

Some applications require specific ports in the Router's firewall to be open for access by remote parties. Port Triggering 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



To add a Trigger Port, simply click the Add button. The following will be displayed.

| | SETTINGS | WIFE | Manag | EMENT | HUVANCED | SETTINGS STATU |
|---|---|--|---|---|---|---|
| NAT Port Triggering | | | | | | |
| Some applications such as Gateway's firewall be open existing application or crea Remaining number of e | games, video o led for access b ting your own (C ntries that can | conferencing, re y the application Custom application I be configured | mote access applicati s. You can configure on)and click "Save/Ap ž 32 | ons and others re the port settings f ply" to add it. | quire that spe rom this scree | cific ports in the n by selecting an |
| Ise Interface | ipoe usb0 | /usb0 🗸 | | | | |
| Application Name: | | | | | | |
| lect an application: | Select One | e | ~ | | | |
| Stom application: | | | | | | |
| | | | | | | |
| Trigger Port Start Trig | iger Port End | Trigger Proto | col Open Port Start | Open Port End | Open Proto | |
| Trigger Port Start Trig | iger Port End | Trigger Proto | col Open Port Start | Open Port End | Open Proto | |
| Trigger Port Start Trig | iger Port End | Trigger Proto TCP V TCP V | col Open Port Start | Open Port End | Open Proto TCP TCP TCP | |
| Trigger Port Start Trig | iger Port End | Trigger Proto TCP v TCP v TCP v TCP v | col Open Port Start | Open Port End | Open Proto TCP TCP TCP TCP | |
| Trigger Port Start Trig | iger Port End | Trigger Proto TCP TCP TCP TCP TCP TCP TCP TCP | col Open Port Start | Open Port End | Open Proto TCP TCP TCP TCP TCP | |
| Trigger Port Start Trig | iger Port End | Trigger Proto TCP V TCP V TCP V TCP V TCP V TCP V | ol Open Port Start | Open Port End | Open Proto TCP TCP TCP TCP TCP TCP | |
| Trigger Port Start Trig | iger Port End | Trigger Proto TCP ¥ TCP ¥ TCP ¥ TCP ¥ TCP ¥ TCP ¥ | col Open Port Start | Open Port End | Open Proto TCP TCP TCP TCP TCP TCP TCP | |
| Trigger Port Start Trig | iger Port End | Trigger Proto TCP V TCP V TCP V TCP V TCP V TCP V TCP V TCP V TCP V | col Open Port Start | Open Port End | Open Proto TCP TCP TCP TCP TCP TCP TCP | |

| Options | Description | | | | |
|--|---|--|--|--|--|
| Select an Application or Custom Application | User should select the application from the list. or User can enter the name of their choice. | | | | |
| Trigger Port Start | Enter the starting trigger port number (when you select custom application). When an application is selected, the port ranges are automatically configured. | | | | |
| Trigger Port End | Enter the ending trigger port number (when you select custom application). When an application is selected, the port ranges are automatically configured. | | | | |
| Trigger Protocol | TCP, TCP/UDP or UDP. | | | | |
| Open Port Start | Enter the starting open port number (when you select custom application). When an application is selected, the port ranges are automatically configured. | | | | |
| Open Port End | Enter the ending open port number (when you select custom application). When an application is selected, the port ranges are automatically configured. | | | | |
| Open Protocol | TCP, TCP/UDP or UDP. | | | | |

6.2.3 DEMILITARIZED (DMZ) HOST

Your Router will forward IP packets from the Wide Area Network (WAN) that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer.

Enter the computer's IP address and click Apply to activate the DMZ host.

Clear the IP address field and click Apply to deactivate the DMZ host.

| BASIC | HSPR/3G SE | TTINGS WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|-------------|---|--------------------------------|--------------------------------------|---|
| Ad | vanced Settings > NAT > | DMZ Host | | |
| The to t | e Gateway will forward IP pi he DMZ host computer. | ackets from the WAN that do | not belong to any of the application | s configured in the Virtual Servers table |
| Ent | er the computer's IP addres | as and click "Apply" to activa | ate the DMZ host. | |
| Cle | ar the IP address field and | click "Apply" to deactivate th | e DMZ host. | |
| DM | Z Host IP Address: | | | |
| | | | Seve/Apply | |
| | | | | |

6.3 SECURITY

Your Router can be secured with the IP Filtering function.



6.3.1 IP FILTERING

The IP Filtering screen sets filter rules that limit incoming and outgoing IP traffic. Multiple filter rules can be set with at least one limiting condition. All conditions must be fulfilled to allow individual IP packets to pass through the filter.

OUTGOING IP FILTER

The default setting for Outgoing traffic is ACCEPTED. Under this condition, all outgoing IP packets that match the filter rules will be BLOCKED.

| BASIC | HSPR/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|-------|--|-------------------------------|------------------------|-------------------------------|
| | Advanced Settings > Security > IP Fil | tering > Outgoing IP Fil | tering | |
| | By default, all outgoing IP traffic from LAP | l is allowed, but some IP tra | affic can be BLOCKED b | y setting up filters. |
| | Choose Add or Remove to configure out | going IP filters. | | |
| | Filter Name Protocol S | iource Address/Mask | Source Port Dest | Address/Mask Dest Port Remove |
| | | kd | d Remove | |
| | | | | |

To add a filtering rule, click the Add button. The following screen will display.

| Advanced Setings > Secutiy > Add IP Filter – Outgoing | |
|--|---|
| The screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new fil below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect the filter. | ter name and at least one condition t. Click 'Apply/Save' to save and activate |
| Fiter Name: | |
| Protocol: | |
| Source IP address: | |
| Source Subnet Mask: | |
| Source Port (port or portport) | |
| Destination IP address: | |
| Destination Subnet Mask: | |
| Destination Port (port or portport) | |

| Options | |
|--------------------------------------|--|
| Filter Name | The filter rule label |
| Protocol | TCP, TCP/UDP, UDP or ICMP |
| Source IP address | Enter source IP address |
| Source Subnet Mask | Enter source subnet mask |
| Source Port (port or port:port) | Enter source port number or port range |
| Destination IP address | Enter destination IP address |
| Destination Subnet Mask | Enter destination subnet mask |
| Destination port (port or port:port) | Enter destination port number or range |

Click Save/Apply to save and activate the filter.



INCOMING IP FILTER

The default setting for all Incoming traffic is BLOCKED. Under this condition only those incoming IP packets that match the filter rules will be ACCEPTED.

| Ad | vanced Setting | is > Security | > IP Filteri | ng > Incoming IP Filtering | | | | |
|-----------------|---|---|--------------|---|------------------|-----------------------------|-----------|--------|
| Wh AC Chi | en the firewall is CEPTED by sett bose Add or Rem | enabled on a ing up filters. tove to config | WAN or LA | N interface, all incoming IP tri g IP filters. | affic is BLOCKEE |). However, some IP traffic | can be | |
| | Filter Name | Interfaces | Protocol | Source Address / Mask | Source Port | Dest Address/Mask | Dest Port | Remove |

To add a filtering rule, click the Add button. The following screen will display.

| BASIC | HSPR/3G SETTIN | GS WI-FI | MANAGEMENT | ROVANCED SETTINGS STRTUS |
|-------|---|--|---|--|
| | | | | |
| | Advanced Setings > Secutiy > A | dd IP Filter – Incoming | | |
| | The screen allows you to create a fi below. All of the specified conditions the filter. | ter rule to identify incoming IP tri in this filter rule must be satisfie | affic by specifying a new ad for the rule to take effe | filter name and at least one condition ct. Click 'Apply/Save'to save and activate |
| | Fiter Name: | | 1 | |
| | Protocol | ¥ | | |
| | Source IP address: | | | |
| | Source Subnet Mask: | | | |
| | Source Port (port or part part) | | 1 | |
| | Destination IP address: | | | |
| | Destination Subnet Mask: | | | |
| | Destination Port (port or port port) | | | |
| | WAN Interfaces (Configured in R Select one or more WANILAN Interf Select All Select All Dec_usb5/usb0 Dr0br0 | outing mode and with firew aces displayed below to apply ! | all enabled) and LAN ir his rule. | terfaces |
| | | | Lasintine | |

Please refer to the Outgoing IP Filter table for field descriptions. Click Save/Apply to save and activate the filter.

6.4 ROUTING

Static Route and Dynamic Route settings can be found in the Routing link as illustrated below.

| BASIC | HSPA/3G SE | TTINGS WI-F | 1 | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|-------|----------------------------|-----------------------------|------------------|--------------------------|-------------------|--------|
| | | | | | LAN | |
| | Advanced Cettingers Develo | and the first of the second | (A | | NAT | |
| | Advanced Settings > Routi | ig > static Route | (A maximum 52 en | tries can be conligured) | Security | |
| | | | | | Parental Control | |
| | | Destination | on Subnet Mask | Static Route | Routing | |
| | | | | Dynamic Route | DNS | |
| | | | Add | Remove | Print Server | |
| | | | | | USB Storage | |
| | | | | | | |

6.4.1 STATIC ROUTE

The Static Route screen displays the configured static routes. Click the Add or Remove buttons to change settings.

| Basic | HSPR/3G SETTIN | IGS WI-FI | MANAGEMENT | ADVANCED SETTING | S STATUS |
|-------|-------------------------------|------------------------|-----------------------------|------------------|----------|
| | | | | | |
| | Advanced Settings > Routing > | Static Route (A maximu | um 32 entries can be config | ured) | |
| | | Destination Subn | et Mask Gateway Interfa | ce Remove | |
| | | J | | | |
| | | | Add Remove | | |

Click the Add button to display the following screen.

| L | HSPR/3G SETTI | NGS WI-FI | | MANAGEMENT | ADVANCED SETTINGS STATUS |
|-------------------------------|---|---------------------------------------|--------------------------------------|--|--|
| Routing | g – Static Route Add | | | | |
| By defa route, pl table | ult, the 3G interface is the g lease enter the destination | gateway for all de network address | stination netwo s, subnet mask, s | rk addresses that do not e gateway then click "Save | ixist on the LAN side. To define static /Apply" to add the entry to the routing |
| Destinat | tion Network Address: | | | | |
| Subnet | Mask: | | | | |
| Subnet | Mask: | | | | |

Enter Destination Network Address, Subnet Mask, Router IP Address and/or WAN Interface. Then click Save/Apply to add the entry to the routing table.

6.4.2 DYNAMIC ROUTE

To activate this option, select the enabled radio button for Global RIP Mode.

To configure an individual interface, select the desired RIP version and operation, followed by placing a check in the enabled checkbox for that interface. Click Save/Apply to save the configuration and to start or stop dynamic routing.

| SIC | HSPR/3G SETTIN | IGS WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS | | | | |
|--------------------------------|--|-------------|------------|--------------------------|--|--|--|--|
| | | | | | | | | |
| Advan | Advanced Settings > Routing > Dynamic Route | | | | | | | |
| NOTE: I | NOTE: RIP CANNOT BE CONFIGURED on the WAN interface which is PPP mode. And the WAN interface which has NAT enabled only can be configured the operation mode as passive. | | | | | | | |
| To activ stop RF configu | To activate RIP for the WAN Interface, select the desired RP version and operation and place a check in the Enabled' checkbox. To stop RP on the WAN Interface, uncheck the Enabled' checkbox. Click the 'Apply/Save' button to star/stop RP and save the configuration. | | | | | | | |
| | | | | | | | | |
| Inter | on Version Operat | ion Enabled | | | | | | |
| ust | 2 V Passive | | | | | | | |
| Interi | ce Version Operat | Enabled | | | | | | |

6.5 PARENTAL CONTROL



6.5.1 TIME RESTRICTION

HSPA/3G SETTINGS WI-FI

MANAGEMENT ADVANCED SETTINGS STATUS

Advanced Settings > Parental Control > Time of Day Restrictions – A maximum 16 entries can be configured.

Policy Name MAC Mon Tue Wed Thu Fri Sat Sun Start Stop Remov

Add Remove

Time Restriction allows you to restrict access from a device on your Local Area network (LAN) to the Internet through the Router on selected days at certain times. Make sure to activate the Internet Time server synchronization as described in section 7.10 SNTP, so that the scheduled times match your local time.

Click Add to display the following screen. Enter the MAC address of the device that you wish to restrict access for and select days of the week and times to apply the restriction

| BASIC | HSPR/3G SET | TINGS WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS | |
|-------|--|---|---|---|--|
| | Time of Day Restriction | | | | |
| | This page adds time of day restr displays the MAC address of the Address" button and enter the M command window and type "ipc | riction to a special LAN device e LAN device where the brow IAC address of the other LAN on fig /all". | connected to the Gateway. The ser is running. To restrict other L device. To find out the MAC add | Browser's MAC Address' automatically AN device, click the "Other MAC Iress of a Windows based PC, go to | |
| | Policy Name | | | | |
| | Browser's MAC Address Other MAC Address (xxxxxxxxxxxxxxxxx) | 00: 1e:68:ac:0 e:94 | | | |
| | Days of the week Click to select | Mon Tue Wed Thu Fri S | at Sun | | |
| | Start Blocking Time (hh:mm) End Blocking Time (hh:mm) | | Save/Apply | | |



Complete the fields listed below and click Save/Apply to apply the settings.

| Options | |
|-----------------------|---|
| User Name | A user-defined label for this restriction |
| Browser's MAC Address | Allows easy identification of MAC address of the computer running the Browser |
| Other MAC Address | MAC address of another LAN device |
| Days of the Week | Select one or more days for the restrictions to apply to. |
| Start Blocking Time | Enter the time you want the restriction to start |
| End Blocking Time | Enter the time you want the restriction to end |

6.5.2 URL FILTER

| SIC | | HSPA/3G SET | TINGS WI-F | 1 | MANAGEMENT | RDVRNCED SETTING | S STATUS |
|---------------|-------------------------|----------------------------------|--------------------------------|-------------------|--------------------------|--------------------------------|----------|
| Adva Maxir | nced Setti num 100 (| ings > Parenta entries can be | l Control > URL configured. | Filter – Please s | elect the list type firs | at then configure the list ent | tries. |
| URL I | ist Type: | C To block | C To allow | | | | |
| | | | | | 2 / 2 | | |
| | | | | Addres | s Port Remove | | |

The URL Filer allows you to restrict access from a device on your Local Area Network (LAN) to certain websites on the internet.

To use this feature, first select whether to Allow or Block the URL list. If Allow is selected, only the URL addresses listed in the table will be accessible to the computers on the LAN. If Block is selected, the URL addresses listed in the table will be blocked from computers on the LAN.

ADD URL ADDRESS

| BASIC | HSPR/3G SETT | rings Wi-Fi | MANAGEMENT | ADVANCED SETTINGS STATUS | |
|-------|----------------------------------|-----------------------------|----------------------------------|--------------------------|--|
| | Parental Control – URL Filter | Add | | | |
| | Enter the URL address and port r | number then click "Save/App | ply" to add the entry to the URL | filter. | |
| | URL Address: | | Titles and 00 and 0000 is an | | |
| | Port Number . | | Lither port ou and ouou is ad | cepted.) | |
| | | | Save/Apply | | |
| | | | | | |

To add a URL address, click Add, then complete the fields listed below and click Save/Apply to apply the settings.

| URL Address | Select either a URL address or a keyword to filter. (e.g. www.badwebsite.com) |
|-------------|--|
| Port Number | Either port 80 or port 8080 is accepted. |

REMOVE URL ADDRESS

To remove a URL address, select the URL keyword you wish to remove, and click Remove.

6.6 DOMAIN NAME SERVER (DNS)

6.6.1 DNS SERVER CONFIGURATION

If Enable Automatic Assigned DNS is selected, this device will accept the first received DNS assignment from the Wide Area Network (WAN) interface during the connection process. Otherwise, you can enter the primary and optional secondary DNS server IP addresses. Click on Save to apply.

| Basic | HSPA/3G SETTINGS WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|-------|--|--|-------------------|--------|
| | | | LAN | |
| Adva | anced Settings > DNS > DNS Server Configu | ration | NAT | |
| | nood ootango. Dito - Dito oortor ootinga | | Security | |
| Selec | t the configured WAN interface for DNS server in | formation OR enter the static DNS server I | Parental Control | |
| | | | Routing | |
| ۲ | Obtain DNS server IP address automatically | DNS Server | DNS | |
| _ | | Dynamic DNS | Print Server | |
| 0 | Use the following Static DNS IP address: | | USB Storage | |
| Prima | ary DNS server: | | | |
| Seco | ondary DNS server. | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

NOTE: Click the Save button to save the new configuration. To make the new configuration effective, reboot your Router.

6.6.2 DYNAMIC DNS

The Dynamic DNS service allows a dynamic IP address to be aliased to a static hostname in any of a selection of domains, allowing the Router to be more easily accessed from various locations on the internet.

| BRSIC | HSPR/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|-------|--|---|--|--------------------------|--------------------|
| | Advanced Settings > DNS > Dynam | nic DNS | | | |
| | The Dynamic DNS service allows you Gateway to be more easily accessed | to alias a dynamic IP addr from various locations on t | ess to a static hostname he Internet. | in any of the many domai | ins, allowing your |
| | Choose Add or Remove to configure E | ynamic DNS. | | | |
| | | Hostname Username | Service Interface Re | move | |
| | | Add | Remove | | |

NOTE: The Add/Remove buttons will be displayed only if the Router has been assigned an IP address from the remote server.

To add a dynamic DNS service, click the Add button and this screen will display

| BASIC | HSPA/3G SETTI | NGS WI+FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|----------------------|-----------------------|---------------------------|--------------------|--------------------------|
| Add Dyna | mic DNS | | | |
| This page | allows you to add a D | ynamic DNS address from (| DynDNS.org or TZO. | |
| D-DNS pr | ovider | DynDNS.org | | |
| Hostname | | | | |
| Interface | | poe_usb0/usb0 💌 | | |
| DynDNS | Settings | | | |
| Usemame | | | | |
| Username Password | | | | |
| | | | | |
| | | | A mark of Carrow | |

| D-DNS provider | Select a dynamic DNS provider from the list. |
|----------------|--|
| Hostname | Enter the name for the dynamic DNS server. |
| Interface | Select the interface from the list. |
| Username | Enter the username for the dynamic DNS server. |
| Password | Enter the password for the dynamic DNS server. |



6.7 DEVICE SETTINGS

The Device Settings screens allow you to backup, retrieve and restore the default settings of your Router. It also provides a function for you to update your Router's settings.

6.7.1 BACKUP SETTINGS

The following screen appears when Backup is selected. Click the Backup Settings button to save the current configuration settings.

You will be prompted to define the location of a backup file to save to your PC.

| | HSPA/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|--------------|----------------------------|---|---|---|---|
| | | | | | |
| Management | > Device Settings > Ba | ckup | | | |
| Backup Gatew | ay configurations. You m | ay save your Gateway c | onfigurations to a file on y | our PC. | |
| | | | | | |
| | | Bac | kup Settings | | |
| | | | | | |
| | Management Backup Gatew | HSPR/3G SETTINGS Management > Davice Settings > Ba Backup Gateway configurations. You m | HSPA/3G SETTINGS WI-FI Management > Device Settings > Backup Backup Gateway configurations. You may save your Gateway c | HSPA/3G SETTINGS WIFI MANAGEMENT Management > Device Settings > Backup Backup Gateway configurations. You may save your Gateway configurations to a file on y Backup Settings | HSPA/3G SETTINGS WI-FI MANAGEMENT ADVANCED SETTINGS Management > Device Settings > Backup Backup Gateway configurations. You may save your Gateway configurations to a file on your PC. Backup Settings |

6.7.2 UPDATE SETTINGS

The following screen appears when selecting Update from the submenu. By clicking on the Browse button, you can locate a previously saved filename as the configuration backup file. Click on the Update settings to load it.

| BASIC | HSPA/3G SETTINGS WI-FI MANAGEMENT ADVANCED SETTINGS STATUS |
|-------|--|
| | |
| | Management > Device Settings > Update Saved Settings |
| | Update Gateway's settings. You may update your Gateway settings using your saved files. |
| | NOTE: This is page is NOT for manually update firmware to gateway. To update firmware, please go to Advanced Settings >Device Settings > Update Firmware. |
| | Settings File Name: Browse |
| 1 | Update Settings |

6.7.3 RESTORE DEFAULT

The following screen appears when selecting Restore Default. By clicking on the Restore Default Settings button, you can restore your Gateways default firmware settings. To restore system settings, reboot your Router.

| • Settings > Restore Default gs to the factory defaults. | | | | | 3111103 |
|---|----------------------------------|---|---|---|--|
| Settings > Restore Default js to the factory defaults. | | | | | |
| is to the factory defaults. | gement > Device Settings > I | Restore Default | | | |
| | re Gateway settings to the facto | ry defaults. | | | |
| | re Gateway settings to the facto | ry defaults. | | | |
| | • | gement > Device Settings > F e Gateway settings to the facto | gement > Device Settings > Restore Default e Gateway settings to the factory defaults. | gement > Device Settings > Restore Default e Gateway settings to the factory defaults. Settore Dria & Settore | gement > Device Settings > Restore Default e Gateway settings to the factory defaults. Britton Defa Settoro: |

NOTE: The default settings can be found in section 2.3 Default Settings.

Once you have selected the Restore Default Settings button, the following screen will appear. Close the window and wait 2 minutes before reopening your browser. If required, reconfigure

your computer's IP address to match your new configuration (see section 3.2 TCP/IP Settings for details). After a successful reboot, the browser will return to the Device Info screen. If the browser does not refresh to the default screen, close and restart the browser.

NOTE: The Restore Default function has the same effect as the reset button. If the reset button is continuously pushed for more than 5 seconds (and not more than 12 seconds), the boot loader will erase the configuration settings saved on flash memory.

6.7.4 UPDATE FIRMWARE

The following screen appears when selecting Update Firmware. By following the steps on this screen, you can update your Router's firmware. Manual device upgrades from a locally stored file can also be performed using the following screen.

| SIC | HSPH/3G SETTIN | GS WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|----------------|---|---|---|---|
| | | | | |
| Mana | gement >Device Settings | > Update Firmware | | |
| Step 1 | : Obtain an updated firmwa | re image file from your ISP | | |
| Step 2 | : Enter the path to the ima | ge file location in the box b | elow or click the "Browse | " button to locate the image file. |
| Step 3 | Click the "Update Firmwa | re" button once to upload t | he new image file. | |
| NOTE and yo | The update process for the ur Gateway will reboot. Ple | e Gateway takes about 2 m ase DO NOT close the Bro | inutes to complete, and t wser and reload/or chang | for the 3G modem takes about 10 minutes, je the webpage during the update process. |
| Firmw | are File Name: | Browse | | |
| | | | Update Firmware | |
| | | | | |

1: Obtain an updated firmware image file

2: Enter the path and filename of the firmware image file in the Firmware File Name field or click the Browse button to locate the image file.

3: Click the Update Firmware button once to upload and install the file.

NOTE: The update process will take about 2 minutes to complete. The Router will reboot and the browser window will refresh to the default screen upon successful installation. It is recommended that you compare the Software Version at the top of the Basic screen (WUI homepage) with the firmware version installed, to confirm the installation was successful.

6.8 ACCESS CONTROL

The Access Control option found in the Management drop down menu configures access related parameters in the following two areas:

- Services
- Passwords

Access Control is used to control local and remote management settings for your Router.

| Device Settings Management > Access Control > Services SNMP | |
|---|--|
| Management > Access Control > Services | |
| Management > Access Control > Services | |
| SNTP | |
| A Service Control List ("SCL") enables (Services Access Control | |
| The following ports are not recommende Passwords Save/Reboot ith them for other | |
| management purpose in some particular case (21, 2121, 22, 2222, 23, 2323, 69, 6969, 161, 16116) | |

6.8.1 SERVICES

The Service Control List (SCL) allows you to enable or disable your Local Area network (LAN) or Wide Area Network (WAN) services by ticking the checkbox as illustrated below. These access services are available: FTP, HTTP, ICMP, SSH, TELNET, and TFTP. Click Save/Apply to continue.

| | | 2000 | Inningeneri | novinice | o serimos sintos |
|---|--|--|---|---|--------------------|
| Management > | Access Control > Servi | ces | | | |
| A Service Contro The following por management pur | I List ("SCL") enables or o ts are not recommended in pose in some particular of | disables services for HTTP remote ase (21, 2121, 2 | from being used. management in case 2, 2222, 23, 2323, 69 | conflict with them for , 6969, 161, 16116) | other |
| | | Services | WAN | | |
| | | FTP | Enable | - | |
| | | HTTP | Enable 0 | port | |
| | | SNMP | Enable | | |
| | | SSH | Enable | | |
| | | TELNET | Enable | | |
| | | TETP | Enable | | |



6.8.2 PASSWORDS

The Passwords option configures your account access password for your Router. Access to the device is limited to the following three user accounts:

- admin is to be used for local unrestricted access control
- support is to be used for remote maintenance of the device
- user is to be used to view information and update device firmware

Use the fields illustrated in the screen below to change or create your password. Passwords must be 16 characters or less with no spaces. Click Save/Apply to continue.

| SIC | HSPR/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS STATUS |
|---|---------------------------------------|-------------------|----------------------------------|---|
| Managem | ent > Access Control > P | assword | | |
| Access to | your Gateway is controlled | through three use | er accounts: admin, support, a | and user. |
| The user n | ame "admin" has unrestric | ed access to cha | nge and view configuration of | your Gateway. |
| The user n | ame "support" is used to a | low an ISP techni | ician to access your Gateway | for maintenance and to run diagnostics. |
| The user n | ame "user" can access the | Gateway, view c | onfiguration settings and statis | stics, as well as, update the Gateway's software. |
| Use the fie contain a s | lds below to enter up to 16 space. | characters and cl | lick "Apply/Save" to change of | r create passwords. Note: Password cannot |
| Username Old Passv New Pass Confirm Pa | vord: word: assword: | × | | |
| | | | Apply/Save | |

6.9 Simple Network Management Protocol (SNMP)

The Simple Network Management Protocol (SNMP) allows a network administrator to monitor a network by retrieving settings on remote network devices. To do this, the administrator typically runs an SNMP management station program such as MIB browser on a local host to obtain information from the SNMP agent, in this case the 3G21WE (if SNMP enabled). An SNMP 'community' performs the function of authenticating SNMP traffic. A 'community name' acts as a password that is typically shared among SNMP agents and managers.

By default, SNMP agent is enabled on the Router.

SETTING UP SNMP AGENT

- 1. Open a web browser (le/Firefox/Safari), type in LAN address of the Router (http://192.168.1.1/ by default) to log into the web interface.
- 2. The login username and password by default is admin/admin.
- 3. Go to Advanced Settings > SNMP. Enable SNMP agent and set up all options according to the screenshot below.
- 4. Click Save/Apply to activate these settings.

| asic | HSPA | /3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|------|--|-------------------|---------------------|------------------------------|-----------------------------------|-------------------|
| | | | | | | |
| | Management > SNN | IP | | | | |
| | Simple Network Mana in this device. | agement Protocol | (SNMP) allows a i | management application to re | etrieve statistics and status fro | om the SNMP agent |
| | Select the desired val | ues and click "Ap | ply" to configure t | he SNMP options. | | |
| | SNMP Agent ODisa | able • Enable | | | | |
| | Read Community: | public | | | | |
| | Set Community: | private | | | | |
| | System Name: | 3G21WE | | | | |
| | System Location: | unknown | | | | |
| | System Contact: | unknown | | | | |
| | Trap Manager IP: | 0.0.0.0 | | | | |
| | | | | Save/Apply | | |

6.10 SIMPLE NETWORK TIME PROTOCOL (SNTP)

This screen allows you to configure the time settings of your Router. To automatically

synchronize with Internet time servers, tick the box as illustrated below.

| BASIC | HSPA/3G | SETTINGS WI | -FI | MANAGEMENT | ADVANCED SETTINGS STATUS | : |
|-------|----------------------------|---------------------|---------------|------------------------|--------------------------|---|
| | | | | | | |
| | Management > SNTP | | | | | |
| | This page allows you to th | ie modem's time c | onfiguration. | | | |
| | Automatically synchro | onize with Internet | time servers | | | |
| | First NTP time server: | Other | ~ | 0.netcomm.pool.ntp.org | | |
| | Second NTP time server: | Other | ~ | 1.netcomm.pool.ntp.org | | |
| | Third NTP time server: | None | ~ | | | |
| | Fourth NTP time server: | None | ~ | | | |
| | Fifth NTP time server: | None | ~ | | | |
| | Time zone offset: | (GMT+04:00) Ab | u Dhabi, Mus | cat | ~ | |
| | | | | | | |
| | | | | Save/Apply | | |

The following options should now appear (see screenshot below):

| Options | |
|-------------------------|---|
| First NTP time server: | Select the required server. |
| Second NTP time server: | Select second time server, if required. |
| Time zone offset: | Select the local time zone. |

Configure these options and then click Save/Apply to activate.

NOTE: SNTP must be activated to use Parental Control (section 7.5).

6.11 USB SETTINGS

The USB Settings option found in the Advanced Settings drop down menu configures USB port related parameters in the following two areas:

- Print Server
- USB Storage

| BASIC | HSPA/3G S | ETTINGS WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|---------|---------------------|----------------------------|------------|-------------------|--------|
| | | | | LAN | |
| Advan | ed > USB Storage | eottinge | | NAT | |
| Advan | eu = 050 Storage | aounga | | Security | |
| USB S | atus: not detected | | | Parental Control | |
| | | | | Routing | |
| This pa | ne allows you to en | able / disable USB storage | | DNS | |
| | ,, | | | Print Server | |
| E E | able USB storage | | | USB Storage | |
| | | | | | |
| Gatewa | ay Name (NetBIOS) | 3G21WE | | | |
| USBID | iractory Nama: | LISB Storage | | | |
| 0000 | reactory realitie. | oob olologo | | | |
| | | | | | |
| | | | Save/Apply | | |
| | | | | | |

6.11.1 PRINT SERVER

These steps explain the procedure for enabling the Print Server.

- 1: To enable the print server, Select Enable on-board print server checkbox and enter Printer name and Make and model
- NOTE: The printer name can be any text string up to 40 characters. The Make and model can be any text string up to 128 characters.

| ASIC | HSPR/ | 3G SETTINGS WI-F | I | MANAGEMENT | ADVANCED SETTING | IS STATUS | |
|------|--------------------------------|---------------------------|-------------|------------|------------------|-----------|--|
| | Advanced Settings > | Print Server | | | | | |
| | This page allows you t | o enable / disable printe | er support. | | | | |
| | Enable on-board p | rint server. | | | | | |
| | Printer name Make and model | samsung ML-1740 | | | | | |
| | | | | Save/Apply | | | |



FORWINDOWS XP:

2: Go to the Printers and Faxes application in the Control Panel and select the Add a printer function (as located on the side menu below).



3: Click Next to continue, when you see the dialog box below.

| Add Printer Wizard | |
|--------------------|---|
| | Welcome to the Add Printer Wizard |
| | This wizard helps you install a printer or make printer connections. |
| S | Eyou have a Plug and Play preter that connects through a USB post for any other hot pluggable post, such as IEEE 1934, infrared and so only you do not need to use this wested. Click Cancel Is close the watard, and three high the primer scale into your computer or port the primer toward your computer's infrared post, and turn the primer on. Windows will automatically install the primer for. |
| | To continue, click Next. |
| | < Back Next > Cancel |

4: Select Network Printer and click Next.

| If you don' that meets | t know the name or address of the printer, you can search for a printer your needs. |
|-----------------------------|--|
| What print | er do you want to connect to? |
| 🔿 Find a p | arinter in the directory |
| Connect | t to this printer (or to browse for a printer, select this option and click Next): |
| Name: | |
| | Example: \\server\printer |
| 📀 Connec | t to a printer on the Internet or on a home or office network: |
| URL: | tp://192.168.1.1:631/printers/samsung |
| | Example: http://server/printers/myprinter/.printer |
| | |
| | |

- 5: Select Connect to a printer on the Internet and enter your printer link.
- (e.g. http://192.168.1.1/printers/printername) and click Next.
- NOTE: the printer name must be the same name entered in the web user interface "printer server setting" as in step 1.

| If you don' that meets | know the name or address of the printer, you can search for a printer your needs. |
|---------------------------|--|
| What print | er do you want to connect to? |
| ◯ Find a p | rinter in the directory |
| O Connec | t to this printer (or to browse for a printer, select this option and click Next): |
| Name: | |
| | Example: \\server\printer |
| Connect | t to a printer on the Internet or on a home or office network: |
| URL | http://192.168.1.1:631/printers/samsung |
| | Example: http://server/printers/myprinter/.printer |
| | |
| | |
| | |

6: Click Have Disk and insert the printer driver CD.

Next.

8: Click "Finish".

Add Printer Wizard

O Yes

| Mapufacturer | | Vintare | • |
|------------------|-----|------------------------------|---|
| Agfa | | AGFA-AccuSet v52.3 | |
| Alps | 5 | AGFA-AccuSetSF v52.3 | |
| Apollo Apollo | E | AGFA-AccuSet 800 | |
| APS-PS | | AGFA-AccuSet 800SF v52.3 | _ |
| AST | v 5 | AGFA-AccuSet 800SF v2013.108 | * |

7: Choose Yes or No for default printer setting and click

Carcel

Default Printer Your computer will always send documents to the default printer unless you spect otherwise.

Do you want to use this printer as the delault printer?



9: Check the status of printer from Windows Control Panel, printer window. Status should show as Ready.

 Image: Section of the section of t

FOR MAC OSX:

- Browse to the Apple menu and select System Preferences. In the System Preferences menu
- 2. click on Print & Fax.

| 4 1 | Show All | | | | | Q | |
|------------------------|---------------------------|-----------|--------------------|---------------------|-------------|-----------|--|
| Personal Appearance | Desktop & Screen Saver | Dock | Exposé & Spaces | International | Security | Spotlight | |
| Hardware Bluetooth | CDs & DVDs | Displays | Energy Saver | Keyboard & Mouse | Print & Fax | Sound | |
| Internet & MobileMe | Network Network | QuickTime | Sharing | | | | |
| System | | • | () | \$ | | 0 | |

3. With your Printer driver installed, please add your printer from the Printer & Fax menu.



4. Click + to add your printer from the Print & Fax menu.

| Customer Care Customer Care Share this printer Location: Kini: Generic PostGript Printer Status: Idla Open Print Queue Options & Supplies Default Printer: Last Printer Used | Show All | Print & Fax |
|---|-------------------------------------|--|
| Lucation: Kind: Generic PostScript Printer Status: Idle Open Print Queue Options & Supplies Default Printer: Last Printer Used Default Paper Size in Page Setup: A4 | Printers Customer Care r Idle | Customer Care |
| Open Print Queue Options & Supplies + - Default Printer: Last Printer Used Default Paper Size in Page Setup: A4 | | Location: Kindi: Generic PostScript Printer Status: Idle |
| + - Default Printer: Last Printer Used Default Paper Size in Page Setup: A4 | | Open Print Queue Options & Supplies) |
| Default Paper Size in Page Setup: A4 | <u>+</u> - | Default Printer: Last Printer Used |
| | Default Pape | r Size in Page Setup: A4 |

5. Select Internet Printing Protocol – IPP from the Protocol drop down list.

| | ◎ 🚔 🚯 🥏 🚍 | Q | |
|------------|--|--------|--|
| efault Fax | IP Windows Bluetooth AppleTalk More Printers | Search | |
| Protoco | ✓ Internet Printing Protocol – IPP | | |
| Address | Line Printer Daemon – LPD HP Jetdirect – Socket | | |
| | Enter host name or IP address. | | |
| Queue: | | | |
| | Leave black for default overie | | |

6. Type into the Address field "GatewayIPAddress:631" where GatewayIPAddress is the IP address of your Router (default: 192.168.1.1). See screenshot below for an example. Also enter into the Queue field "/printers/PrinterName", where PrinterName is the name you gave your printer in step 1

| •○ 含 二 (| 9 🖴 😮 🗢 🖴 | ٩ | | c |
|-------------|--|---|--------|---|
| efault Fax | IP Windows Bluetooth AppleTalk More Printers | | Search | |
| Protocol: | Line Printer Daemon - LPD | | | • |
| Address: | 192.168.1.1531 | | | • |
| | Valid and complete address. | | | |
| Queue: | /printers/samsung | | | |
| | Leave blank for default queue. | | | |

7. Select your printer from the Print Using drop down list.

| Name: | 192.168.1.1 | |
|-------------|----------------------------|---|
| Location: | unknown | |
| rint Using: | Select a driver to use | • |
| | 9 | 1 |
| | 3300 Series | 0 |
| | 350 Series 4300 Series | Ĩ |
| | S200 Series S400 Series | y in the second s |
| | 6200 Series | |
| | | |
| | | Add |

8. Click Add and check the printer status.



Print Server set up is now complete. You will now be able to print from common applications by selecting this printer from the Print dialogue box.

FOR WINDOWS VISTA

2. Go to the control panel, and select Printers. Once in the Printers page, click the Add a printer button as shown below.



3. Select add a network, wireless or Bluetooth printer.

| Add a local printer Use this option only if you don't have a USB printer. (Windows automatically installs USB printers when you plug them in.) |
|---|
| |
| Add a network, wireless or Bluetooth printer Make sure that your computer is connected to the network, or that your Bluetoo or wireless printer is turned on. |

- Click on the radio-button labeled Select a shared printer by name, and type "http://192.168.1.1:631/printers/ PrinterName" in the box below. Click Next.
- NOTE: The printername must be the same as the printer name entered in the Web User Interface during step 1



5. Next, select the driver that came with your printer. Browse through the list to select your printer driver, or click 'Have Disk' if you have your printer driver installation media.

| printer docum | entation | for a compatible printer. |
|-------------------------|------------|---------------------------|
| Manufacturer | ^ | Printers |
| Apollo | | Apollo P-1200 |
| Brother | | Apollo P2100/P2300U |
| Canon | | Apollo P2200 |
| Citizen | | |
| Dell | * | |
| 🐉 This driver is digita | ly signed | d. Have Disk |
| Tell me why driver | signing is | s important |

6. Choose whether you want this printer to be the default printer, and then click Next.

| Type a print | ername |
|---------------|-----------------------------------|
| Printer name: | samsung on http://192.168.1.1:631 |
| | V Set as the default printer |
| | |
| | |



7. Click Finish. Your device is now configured and ready for use.



| В | ASIC HSPR/3G SETTINGS WI-FI MANAGEMENT ADVANCED SETTINGS STATUS |
|-----------|---|
| | Advanced > USB Storage settings USB Status: not detected |
| | This page allows you to enable / disable USB storage . |
| | Gateway Name (NetBIOS); 3G21WE USB Directory Name: USB-Storage |
| ld | Description |
| uter Name | The hostname of the Router device. This should only be modi |

| louter Name | The hostname of the Router device. This should only be modified if there are multiple Etisalat HSPA+ WiFi Router 's on your network. The default name is "Etisalat21". |
|----------------|---|
| JSB Drive Name | The name of USB drive. This should only be modified if there are multiple USB devices connected to your Etisalat HSPA+ WiFi Router . The default name is "3G21WE" |

6.11.2 USB STORAGE

The Etisalat HSPA+ WiFi Router allows you to connect a USB storage device and share it with all of the users on the network.

By default, this feature is already enabled, so it is simply a matter of connecting your USB storage device and entering the appropriate network location.

If you wish to modify any of these features, the steps below explain the procedure for enabling the USB Storage.

1: Ensure that the Enable USB Storage checkbox is checked in the Web User Interface.

To do this, log into the device using the procedure found in Section 3.4 then select Advanced settings > USB settings > USB Storage from the menu along the top of the page. Enable USB Storage checkbox and enter the Router Name and USB Drive Name.

FOR WINDOWS XP:

- 2: Open a web-browser (such as Internet explorer, Firefox or Safari) and type in the address \\"GatewayName"\"USBDriveName"\ (e.g. \\3G21WE\USB-Storage)
- NOTE: There is no username and password required to access the USB drive, the user will be able to read/write the folder/files in the USB drive.

| 😴 USB-storage on USB-Storage (bigpond21) | |
|--|---------|
| File Edit View Favorites Tools Help | <u></u> |
| 🚱 Back 🔹 🕥 🕤 🏂 Search 🌔 Folders 🔠 🖛 | |
| Address 😪 \\ 3G21WE \USB-storage | 🛩 🛃 Go |
| File and Folder Tasks ausb1_1 Image: State of the s | |

TO MAP THE USB STORAGE DRIVE

To enable easy access to the USB Storage Drive, you can map the network location. To do this, use the following steps:

- 1. Click on the Start button and click My Computer
- 2. Clink on tools > Map network drive
- In the Folder field, enter the address of the USB Storage Drive \\GatewayName\ USBDriveName (e.g. \\3G21WE\USB-Storage)
- 4. To access the USB Storage Drive in the future, you can simply double-click on the item in the My Computer menu

FOR MAC OSX:

- 2. From the Finder, select the Go and then click Connect to Server
- 3. In the address field of the Connect to Server dialog, type in the address:
- smb:// "GatewayName"/"USBDriveName" (e.g. smb://3G21WE/USB-Storage)

| 🔞 ⊖ 🔘 | Conne | ct to Server | | |
|-------------------|------------------|--------------|--------|-------|
| Server Address: | | | | |
| smb:// 3G21W | E / USB-Storage | | - + | Ο, |
| Favorite Servers: | | | | |
| 🔤 smb:// 3G2 | 1WE /USB-Storage | | | |
| | | | | |
| | | | | |
| | | | | |
| Remove | \square | Brow | rse Co | nnect |

4. Click the + button to add this server to the list of Favourites and then click Connect

| (😣 ⊖ 🔘 | Conne | ect to Server | |
|-------------------|------------------|---------------|---------|
| Server Address: | | | |
| smb:// 3G21Wi | E /USB-Storage | | + 0, |
| Favorite Servers: | | | |
| 🔤 smb:// 3G2 | HWE /USB-Storage | | |
| | | | |
| | | | |
| | | | |
| Remove | | Browse | Connect |

5. Select the Guest radio button and then click Connect

| 75秋 | Enter your user name and password to access the file server "Etisalat 21". |
|-----|--|
| * | Connect as: O Guest |
| | O Registered User |
| ₩. | Cancel Conne |

FOR WINDOWS VISTA

- 2. Open a web-browser (such as Internet explorer, Firefox or Safari)
- 3. Type in the address "\\GatewayName\USBDriveName\" (e.g. \\3G21WE\USB-Storage)

| J V 3G21WE \usb-s | torage | ▼ *y Search | | | | | |
|-----------------------|------------------|--------------------|----------------------------|------|--|--|--|
| Organize 🔻 📗 Views 👻 | 🙆 Burn | | | _ | | | |
| avorite Links | Name | Date modified | Туре | Size | | | |
| Documents Pictures | usb1_1 usb2_1 | 1/01/2000 10:36 AM | File Folder File Folder | | | | |
| Music | | | | | | | |
| More » | | | | | | | |

NOTE: There is no username and password required to access the USB drive. Any network user will be able to read/ write the folder/files in the USB drive.

TO MAP THE USB STORAGE DRIVE

To enable easy access to the USB Storage Drive, you can map the network location. To do this, use the following steps:

- 5. Click on the Start button and click Computer
- 6. Click the Map network drive button
- In the Folder field, enter the address of the USB Storage Drive \\GatewayName\ USBDriveName (e.g. \\3G21WE\USB-Storage)
- 8. To access the USB Storage Drive in the future, you can simply double-click on the item in the Computer menu

6.12 SAVE AND REBOOT

This function saves the current configuration settings and reboots your Router.



- NOTE1: It may be necessary to reconfigure your TCP/IP settings to adjust for the new configuration. For example, if you disable the Dynamic Host Configuration Protocol (DHCP) server you will need to apply Static IP settings.
- NOTE2: If you lose all access to your web user interface, simply press the reset button on the rear panel for 5-7 seconds to restore default settings.



Diagnostics

Introduction



The Diagnostics menu has the following submenus:

- Diagnostics
- System Log
- 3G Network
- Statistics
- Route
- ARP
- DHCP
- PING



7.1 DIAGNOSTICS

The Diagnostics menu provides feedback on the connection status of the device. The individual tests are listed below. If a test displays a fail status:

- 1: Click on the Help link
- 2: Now click Re-run Diagnostic Tests at the bottom of the screen to re-test and confirm the error
- 3: If the test continues to fail, follow the troubleshooting procedures in the Help screen

| Status > Diagnostic Tests | | | | |
|--|------------------------------------|------------------------|--|---|
| | | | | |
| /our Gateway is capable of testing 'Rerun Diagnostic Tests" at the bo collow the troubleshooting procedu | your WAN attom of this ares. | and LAN c page to m | onnections. The individual ake sure the fail status is co | tests are listed below. If a test displays a fail sta onsistent. If the test continues to fail, click "Help" |
| Test the connection to your loc | al network | | | |
| Test your Wired Connection 1 | : PASS | Help | | |
| Test your Wired Connection 2 | 2: PASS | Help | | |
| Test your Wired Connection 3 | B: PASS | Help | | |
| Test your Wired Connection 4 | : FAIL | Help | | |
| Test your Wireless Connection | n: PASS | Help | | |

Diagnostics

| Wired Connection | Pass: Indicates that the Ethernet interface from your computer is connected to the LAN port of this Router. |
|------------------------------------|---|
| | Fail: Indicates that the Router does not detect the Ethernet interface on your computer. |
| Wireless connection | Pass: Indicates that the wireless card is ON. |
| | Down: Indicates that the wireless card is OFF. |
| Ping Default Router | Pass: Indicates that the Router can communicate with the first entry point to the network. It is usually the IP address of the ISP's local Router. |
| | Fail: Indicates that the Router was unable to communicate with the first entry point on the network. It may not have an effect on your Internet connectivity. Therefore if this test fails but you are still able to access the Internet, there is no need to troubleshoot this issue. |
| Ping Primary Domain Name Server | Pass: Indicates that the Router can communicate with the primary Domain Name Server (DNS). |
| | Fail: Indicates that the Router was unable to communicate with the primary Domain Name Server (DNS). It may not have an effect on your Internet connectivity. Therefore if this test fails but you are still able to access the Internet, there is no need to troubleshoot this issue. |

7.2 SYSTEM LOG

This function allows you to view system events and configure related options. Follow the steps below to enable and view the System Log.

1: Click Configure System Log to continue.



2: Select the system log options (see table below) and click Save/Apply.

| BASIC | HSPR/3G SETTINGS WI-FI MANAGEMENT ADVANCED SETTINGS STATUS |
|-------|---|
| | |
| | Diagnostics > System Log > Configuration |
| | If the log mode is enabled, the system will begin to log all the selected events. For the Log Level, all events above or equal to the selected level will be logged. For the Display Level, all logged events above or equals to the selected devel will be displayed. If the selected mode is "Remote" or Both, events will be sent to the sectional P advata and UDP port of the remote systog server. If the selected mode is "Loca" or "Both, events will be recorded in the local memory. |
| | Select the desired values and click 'Apply/Save' to configure the system log options. |
| | Log: Disable Enable |
| | Log Level: Debugging 🖌 Display Level: Error 🎽 Mode: Local 🐨 |
| | |
| | Back ApphylSave |

| Log | Indicates whether the system is currently recording events. You can enable or disable event logging. By default, it is disabled. |
|---------------|---|
| Log level | Allows you to configure the event level and filter out unwanted events below this level. The events ranging from the highest critical level |
| | "Emergency" down to this configured level will be recorded to the log buffer on the Router's SDRAM. When the log buffer is full, the newest event will wrap up to the top of the log buffer and overwrite the oldest event. By default, the log level is "Debugging", which is the lowest critical level. The log levels are defined as follows: |
| | Emergency is the most serious event level, whereas Debugging is the least important. For instance, if the log level is set to Debugging, all the events from the lowest Debugging level to the most critical level emergency level will be recorded. If the log level is set to error, only error and the level above will be logged. |
| Display Level | Allows you to select the logged events and displays on the View System Log window for events of this level and above to the highest emergency level. |
| Mode | Allows you to specify whether events should be stored in the local memory, be sent to a remote syslog server, or to both simultaneously. If remote mode is selected, the view system log will not be able to display events saved in the remote syslog server. When either Remote mode or Both mode is configured, the Web UI will prompt the you to enter the Server IP address and Server UDP port. |

7.3 3G NETWORK

Select this option for detailed status information on your Gateways 3G connection.

| A description of the second second | Olama Minelana II | a s a su | | |
|------------------------------------|---------------------|--|--|--|
| Manufacturer | Sierra Wireless, II | ncorporated | | |
| Model | MC8700 | | | |
| IMEL | 353446035006600 | | | |
| FSN | C9D3090116110 | , | | |
| | | | | |
| IMSI 5050 HW Rev 1.0 | 13431604326 | | | |
| System mode | : WCDMA | | | |
| WCDMA band | : | | | |
| WCDMA chan | nel: 4436 | | | |
| GMM (PS) sta | te: REGISTERED | 0 | | |
| MM (CS) state | : IDLE | | | |
| angini an ang | an joo (aanij | | | |
| Signal level(R | SSI) | 18 | | |
| Quality(Ec/lo) | | -6.5 dB | | |
| Network Regis | stration Status | registered | | |
| Network Name | Ð | | | |
| Country Code | £ | | | |
| Network Code | | 01 | | |
| Cell ID | | 00CC14BF | | |
| Primary Scra | mbling Code (PSC) | 0070 (REF) | | |
| Data Session | Status | Connected | | |
| | | | | |
| | | | | |
| HSUPA Categ | 074 | 6 | | |

Consult the table on the next page for detailed field descriptions

3: Click View System Log. The results are displayed as follows.

| Date/Time | Facility | Severity | Message |
|--------------------|----------|----------|---|
| Dec 13 06:53:52 | user | info | kernel: io scheduler noop registered (default) |
| Dec 13 06:53:52 | user | info | kernel: PPP generic driver version 2.4.2 |
| Dec 13 06:53:52 | user | info | kernel: NET: Registered protocol family 24 |
| Dec 13 06:53:52 | user | warn | kemel: bcm963xx_mtd driver v1.0 |
| Dec 13 06:53:52 | user | notice | kernel: usbmon: debugfs is not available |
| Dec 13 06:53:52 | user | warn | kernel: PCI: Enabling device 0000:00:0a.0 (0000 -> 0002) |
| Dec 13 06:53:52 | user | debug | kernel: PCI: Setting latency timer of device 0000:00:0a.0 to 64 |

Diagnostics

| Manufacturer | The manufacturer of the embedded 3G module. | | | | | | | | | |
|-----------------|---|--|--|--|--|--|--|--|--|--|
| Model | The model name of the embedded 3G module. | | | | | | | | | |
| FW Rev. | The firmware version of the 3G module. | | | | | | | | | |
| IMEI | The IMel (International Mobile equipment Identity) is a 15 digit number that is used to identify a mobile device on a network. | | | | | | | | | |
| FSN | Factory Serial Number of the 3G module. | | | | | | | | | |
| IMSI | The IMSI (International Mobile Subscriber Identity) is a unique 15-digit number used to identify an individual user on a UMTS network. | | | | | | | | | |
| HW Rev. | The hardware version of the 3G module. | | | | | | | | | |
| System Mode | WCDMA/Europe CMDA 2000 / America | | | | | | | | | |
| WCDMA band | The 3G radio frequency band which supports dual-band UTMS/HSDPA/HSUPA frequencies (850/2100 MHz), IMT2000 is 2100 MHz, WCDMA800 is 850MHz | | | | | | | | | |
| WCDMA | The 3G channel. | | | | | | | | | |
| channel | | | | | | | | | | |
| MM (CS) state | Circuit Switching state | | | | | | | | | |
| Signal Strength | The 3G signal strength in dBm. | | | | | | | | | |
| | Signal level -109 ~ -103 -101 ~ -93 -91 ~ -87 -85 ~ -79 -77 ~ -52 in dBm | | | | | | | | | |
| | 5 Signal | | | | | | | | | |
| | bars | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | LED Low Medium High | | | | | | | | | |
| | | | | | | | | | | |

7.4 STATISTICS

These screens provide detailed information for:

- Local Area Network (LAN) and Wireless Local Area Network (WLAN)
- 3G Interfaces

NOTE: These statistics page refresh every 15 seconds

| | HSPA | /3G SE | TTING | 5S | WI-FI | | | MANAGE | ĺ | MENT | MENT ADVANCED SETTINGS |
|---------------|---------------------------|--------|-------|-------|---------|-------|------|--------|---|------|------------------------|
| | | | | | | | | | | | |
| Charlens & Ch | at a station of the state | | | | | | | | | | |
| Status P Su | ausues > | LAN | | | | | | | | | |
| 1 | | n : | | | - | | | | | | LAN |
| птепасе | | Kecen | ea | | _ | ransm | πεα | | | | 3G network |
| | Bytes | Pkts | Errs | Drops | Bytes | Pkts | Errs | Drops | | | |
| ENET1 | 0 | 0 | 0 | 0 | 83395 | 496 | 0 | 0 | | | |
| ENET2 | 0 | 0 | 0 | 0 | 83331 | 495 | 0 | 0 | | | |
| ENET3 | 0 | 0 | 0 | 0 | 83267 | 494 | 0 | 0 | | | |
| ENET4 | 2523204 | 19130 | 0 | 0 | 6323875 | 15694 | 0 | 0 | | | |
| | 2018117 | 17617 | 0 | 0 | 6198315 | 14778 | 42 | 0 | | | |

7.4.1 LAN STATISTICS

This screen displays statistics for the Ethernet and Wireless LAN interfaces.

| itatus > Si | atistics > | LAN | | | | | | | | |
|--------------------|------------|-------|------|-------|---------|-------|------|-------|--|--|
| Interface Received | | | | T | ransmi | itted | | | | |
| | Bytes | Pkts | Errs | Drops | Bytes | Pkts | Errs | Drops | | |
| ENET1 | 0 | 0 | 0 | 0 | 83459 | 497 | 0 | 0 | | |
| ENET2 | 0 | 0 | 0 | 0 | 83395 | 496 | 0 | 0 | | |
| ENET3 | 0 | 0 | 0 | 0 | 83331 | 495 | 0 | 0 | | |
| ENET4 | 2562562 | 19411 | 0 | 0 | 6431912 | 15946 | 0 | 0 | | |
| wl0 | 2019602 | 17636 | 0 | 0 | 6198758 | 14782 | 42 | 0 | | |

7.4.2 3G STATISTICS

Click Etisalat[™] network in the Statistics submenu to display the screen below.

| HS | PA/3G SETT | INGS U |
|---------------------|------------|----------|
| Status > Statistics | ≥ 3G netw | ork |
| | | |
| Statistics of WA | N Inbound | Outbound |
| Octects | 636 | 307650 |
| Packets | 2 | 3425 |
| Drops | 0 | 0 |
| Error | 0 | 0 |



7.5 ROUTE

Select Route to display the paths the Router has found.



| Field | | | | | | | |
|-------------|---|--|--|--|--|--|--|
| Destination | Destination network or destination host | | | | | | |
| Router | next hop IP address | | | | | | |
| Subnet Mask | Subnet mask of Destination | | | | | | |
| Flag | U: route is up | | | | | | |
| | !: reject route | | | | | | |
| | G: use Router | | | | | | |
| | H: target is a host | | | | | | |
| | R: reinstate route for dynamic routing | | | | | | |
| | D: dynamically installed by daemon or redirect | | | | | | |
| | M: modified from routing daemon or redirect | | | | | | |
| Metric | The 'distance' to the target (usually counted in hops). It is not used by recent kernels, but may be needed by routing daemons. | | | | | | |
| Service | Shows the name for WAN connection | | | | | | |
| Interface | Shows connection interfaces | | | | | | |

Diagnostics

7.6 ARP

Click ARP to display the ARP information.

| IC | | HSPA/3G S | ETTINGS WI-FI | |
|----|--------------|-----------|-------------------|--------|
| | Status > ARP | | | |
| | IP address | Flags | HW Address | Device |
| | 102 169 1 2 | Complete | 00-1E-68-AC-0E-94 | br0 |

| Field | |
|----------------------|--|
| IP address | Shows IP address of host pc |
| Flags | Complete Incomplete Permanent Publish |
| HW Address Device | Shows the MAC address of host pc Shows the connection interface |

7.7 DYNAMIC HOST CONFIGURATION PROTOCOL (DHCP)

Click DHCP to display the DHCP information.

| | HSPR/3G SETTING | 55 WI-FI | MRORGEMENT | RDVRNCED SETTINGS STRTUS |
|-----------------|------------------------------------|---------------------------|--|--------------------------|
| Status > D | ICP Leases | | | |
| | ame MAC Address IP Address | | | |
| Hostnam | e MAC Address | IP Address | Expires In | |
| Hostnam PDG6 | e MAC Address 00:1e:68:ac:0e:94 | IP Address 192.168.1.2 | Expires In 21 hours, 37 minutes, 21 seconds | |

| Field | | |
|-------------|--|--|
| Hostname | Shows the device/host/Pc network name | |
| MAC Address | Shows the Ethernet MAC address of the device/host/Pc | |
| IP address | Shows IP address of device/host/Pc | |
| Expires In | Shows how much time is left for each DHCP Lease | |

7.8 PING

В

The PING menu provides feedback of connection test to an IP address or a host name.

| ASIC | | HSPA/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS | | |
|------|--|------------------|-------|------------|-------------------|--------|--|--|
| | | | | | | | | |
| | Status > PING | | | | | | | |
| | Please type in a host name or an IP Address. Click Submit to check the connection automatically. | | | | | | | |
| | Host Name or IP Address: | | | | | | | |
| | | Submit | | | | | | |

Input an IP address or a host name, e.g www.google.com and press Submit. The connection test result will be shown as below.

| BASIC | HSPA/3G SETTINGS | WI-FI | MANAGEMENT | ADVANCED SETTINGS | STATUS |
|--|---|--|--|-------------------|--------|
| PING www 56 bytes fr 56 bytes fr 56 bytes fr 56 bytes fr www.l.4 4 packets t round-trip | r.l.google.com (74.125 om 74.125.127.103; icn om 74.125.127.103; icn om 74.125.127.103; icn om 74.125.127.103; icn google.com ping statis ransmitted, 4 packets i min/avg/max = 256.8; | .127.103): 56 data np_seq=0 ttl=41 tim np_seq=1 ttl=41 tim np_seq=2 ttl=41 tim np_seq=3 ttl=41 tim tics received, 0% pack /267.7/272.1 ms | bytes ne=270.1 ms ne=270.0 ms ne=256.8 ms ne=272.1 ms et loss | | |

The above screen is showing a successful ping result.

