HSPA+ WIFI ROUTER

NETCOMM LIBERTY SERIES

HIGH

MED

LOW

SIGNAL STRENGTH

3G MODE

INTERNET

WLAN

LAN 4/WAN

LAN 3

LAN 2

LAN 1

POWER

ROGERS

NetComm

Preface

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

Important Notice and Safety Precaution

- Before servicing or disassembling this equipment, always disconnect all power or telephone lines 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 20cm from human body.
- The operation of this device may affect medical electronic devices, such as hearing aids and pacemakers
- The antennas must be connected to this product prior to connecting the telephone cord.
- The telephone cord must be disconnected prior to disconnecting the antennas.

TABLE OF CONTENTS

OVERVIEW

1. Overview

The NetComm 3G25W-R integrates a Wireless LAN and 3G WAN into one unit. Connection to the Internet is achieved through either a 3G service or via a fixed line xDSL/Cable/Satellite connection to the 3G25W-R's WAN port, providing you with the flexibility to choose how you access the Internet.

The 3G25W-R's automatic failover ensures you are always connected by activating the xDSL/Cable/Satellite connection should the 3G connection drop out.

Users are able to share a single 3G connection via both a wired and wireless connection to the 3G25W-R. With a built in 2 transmit, 2 receive (2T2R) 802.11n wireless access point, this router provides wireless speeds of up to 300Mbps, 6 times faster than 11g technology[1].

On top of this, the 3G25W-R has four LAN ports for wired connections to multiple devices. Rather than being restricted to certain USB modems, the 3G25W-R allows the user to simply insert an active SIM and utilise 3G Mobile Broadband for internet connectivity.

The 3G25W-R includes advanced security features such as VPN pass-through, a full complement of wireless security options and a built in firewall.

1 - Maximum wireless signal rate and coverage values are derived from IEEE Standard 802.11g and 802.11n Draft 2.0 specifications. Actual wireless speed and coverage are dependent on network and environmental conditions included but not limited to volume of network traffic, building materials and construction/layout.

3G25W-R Features

- Powerful wireless router with support for 3G Mobile Broadband
- Creates instant Wireless hotspots to share the Internet connection of a 3G or DSL/Cable connection
- Supports Wireless N standard with data speeds up to 300Mbps
- One WAN port for alternate wired Internet connection (DSL/Cable/Satellite via Ethernet)
- Four LAN ports to connect wired devices like PCs or gaming consoles
- Ensures connectivity and business continuity with auto Internet failover from 3G Mobile Broadband to the Ethernet based WAN port.
- Easy Wi-Fi Protected Setup (WPS) by the single touch of a button to establish a secure wireless connection
- Full Wireless security - WEP, WPA, WPA2
- Browser based interface for configuration and management: OS independent and easy to use

Package Contents

Your 3G25W-R WiFi Router package contains the following items:

- Rocket Hub (3G25W-R Internet only)
- Quick Start Guide
- User Guide on CD
- Power Supply Unit
- Ethernet Cable
- SIM card
- Wireless Security Card
- Attachable 3G antenna (recommended)

If any of the above items are damaged or missing, please contact your dealer immediately.

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Minimum System Requirements

Before continuing with the installation of your 3G25W-R Wireless Router, please confirm that you comply with the minimum system requirements.

- Active SIM card for 3G Broadband access if you want to use a 3G Broadband service.

Note: Active SIM card is included in the box

- Computer with Windows, Macintosh, or Linux-based operating systems with a working Ethernet adapter with TCP/IP Protocol installed.
- Internet Explorer version 6.0 and above, Mozilla Firefox version 3.0 and above or Safari 5 and above.

Wireless Computer System Requirements

- Computer with a working 802.11b, 802.11g, 802.11n wireless adapter

LED indicators

TITLE	ICON	DESCRIPTION
3G Signal Strength		
HIGH		On: High signal strength present
MED		On: Medium signal strength present
LOW		On: Low signal strength present
3G Mode	3G	On: 3G service detected. Flashing: Data going via the 3G connection. Off: 2G service detected.
INTERNET	www	On: Active Internet connection
WLAN		On: The wireless function is enabled. Flashing: Data going via the wireless network.
LAN 4/WAN	4	On: A Device is connected. Flashing: Data going via Ethernet port 4
LAN 3	3	On: A Device is connected. Flashing: Data going via Ethernet port 3
LAN 2	2	On: A Device is connected. Flashing: Data going via Ethernet port 2
LAN 1	1	On: A Device is connected. Flashing: Data going via Ethernet port 1
Power		On: Power is being supplied to the router.

Some SIM cards are locked and require a code to be entered before the router is able to use the SIM. This can mean the SIM is PIN locked to prevent its use in another device, PUK locked (after entering an incorrect PIN number) or alternatively the router itself can be Network (MEP) locked.

In the event your SIM is PIN, PUK or the router is network locked, the following lights (LEDs) will illuminate on your router in the following orders:

PIN Locked:

The 3G Mode, INTERNET and 3G Signal Strength LEDs will illuminate in an ascending order to indicate a SIM PIN lock.

PUK Locked:

The 3G Signal Strength and 3G Mode, INTERNET LEDs will illuminate in an alternating pattern to indicate a PUK lock.

Network Locked:

The 3G Mode, INTERNET and 3G Signal Strength LEDs will flash on and off to indicate a network lock.

Please refer to the information you received with your SIM to obtain your PIN and PUK codes.

You will need to contact Rogers Customer Care to obtain the Network unlock code.

Restoring Factory Defaults

This feature will reset the Router to its factory default configuration. Occasions may present themselves where you need to restore the factory default settings on your router.

Typical situations are:

- You have lost your password and unable to login to the router.
- You have purchased the router from someone else and need to reconfigure the device.
- You are asked to perform a factory reset by a member of the Support Staff.

In order to restore your router to its factory default settings, please follow these steps:

- Ensure that the router is powered on (for at least 20 seconds).
- Use a paper clip or a pencil tip to depress the reset button for ten seconds and release.

At this point, the reset is in progress. Do not power off the unit.

After the router reboots, the default settings are now restored. This entire process takes several minutes to complete.

Once you have reset the router to its default settings you will be able to access the device's web configuration using the address http://192.168.1.1 with password "admin".

Default Settings

LAN (Management)
Static IP Address: 192.168.1.x

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

WAN (Internet)
WAN mode: DHCP

Wireless
SSID: (refer to the wireless security card insert)

Security: WPA2-PSK

Wireless Security Key: (refer to the wireless security card insert)

Router Access
Password: admin

CONNECTING YOUR 3G25W-R WIFI ROUTER

2. Connecting your 3G25W-R WiFi Router

Step 1: Attach the antenna.

1. Remove the antenna from its plastic wrapper.
2. Screw the antenna in a clockwise direction to the back panel of the unit.
3. Once secured, position the antenna upward at its connecting joint. This will ensure optimal reception.
4. Ensure the Power Switch is off.

DO NOT connect the 3G25W-R to power before performing the installation steps below.

Step 2: Insert the SIM into the 3G25W-R.

Step 3: Insert the Ethernet cable into the LAN Port:

Insert the Ethernet cable into LAN port on the back panel of the 3G25W-R, and into an available Ethernet port on the network adapter in the computer you will use to configure the 3G25W-R.

Step 4: Power on the 3G25W-R:

1. Connect the power adapter to the DC jack on the back panel of your 3G25W-R.
2. Then plug the other end of the power adapter into a wall outlet or power strip.
3. Turn on the Power Switch.

Step 5: Complete the setup.

1. All LEDs will flash to indicate power has been applied.
2. The LEDs will flash ON and OFF as the 3G25W-R performs its start-up initialisation and Internet connection processes. This will take a few minutes.

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Setting up your computer

Having physically connected your 3G25W-R, the next step is to configure the router to establish a broadband connection. Depending on your computers current settings you may first need to reconfigure the TCP/IP (Network Settings) to access your Wireless Router.
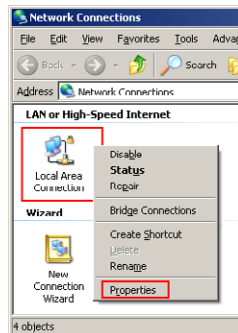
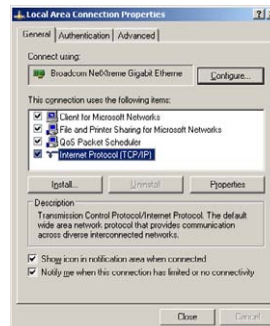Follow the appropriate instructions for your operating system.

For Windows 2000/XP

- Click on "Start" -> "Control Panel" (in Classic View). In the Control Panel; double click on "Network Connections" to continue.
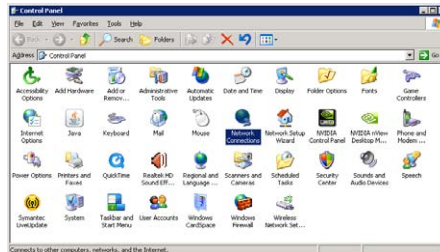
- Single RIGHT click on "Local Area connection", then click "Properties".
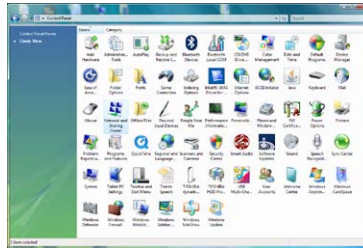

- Double click on "Internet Protocol (TCP/IP)".

- Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue


- Click "Show icon in notification area when connected" then click on "OK" to complete the setup procedure.

For Windows Vista-32/64

- Click on "Start" -> "Control Panel" -> "Network and Sharing Center".
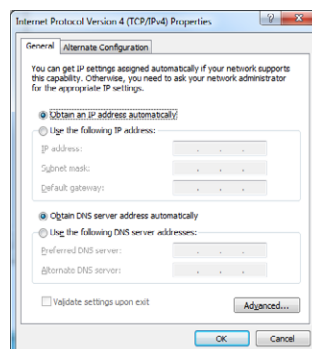
- In the Manage network connections on the left hand side of the window, click on "Manage network connections" to continue.

- Single RIGHT click on "Local Area connection", then click "Properties".
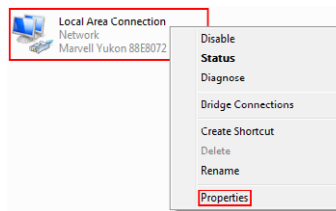
- The screen will display the information "User Account Control". Click "Continue" to continue.

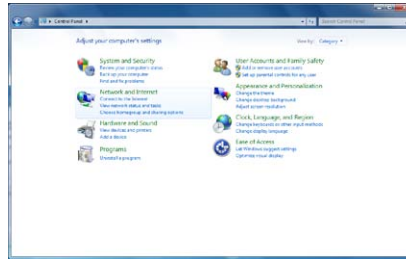- Double click on "Internet Protocol Version 4 (TCP/IPv4)".
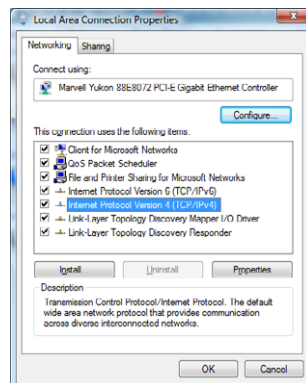
- Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue.

- Click on "OK" to complete the setup procedure.

For Windows 7-32/64

- Click on "Start" -> "Control Panel" (in Category View) -> "View network status and tasks".

- In the Control Panel Home, click on "Change adapter settings" on the left hand side of the window to continue.
- Single RIGHT click on "Local Area Connection", then click "Properties".

- Double click on "Internet Protocol Version 4 (TCP/IPv4)".

- Check "Obtain an IP address automatically" and "Obtain DNS server address automatically" then click on "OK" to continue.
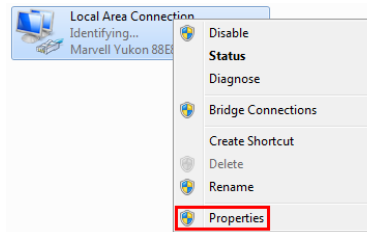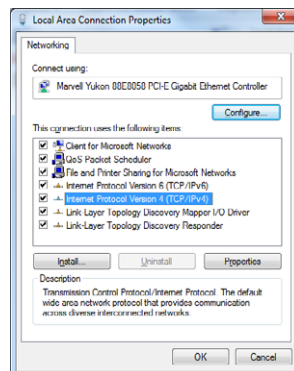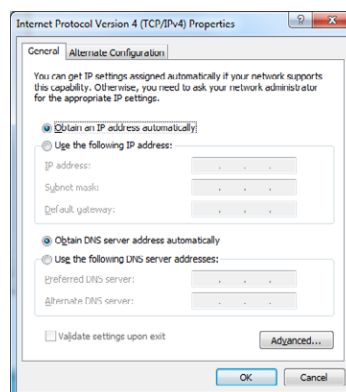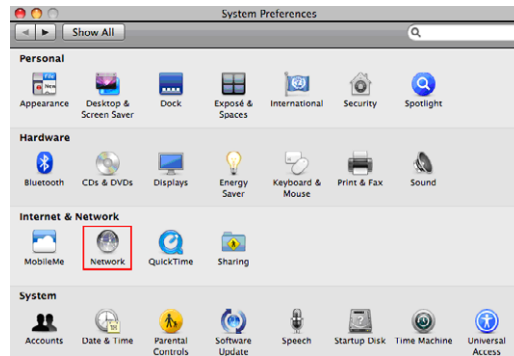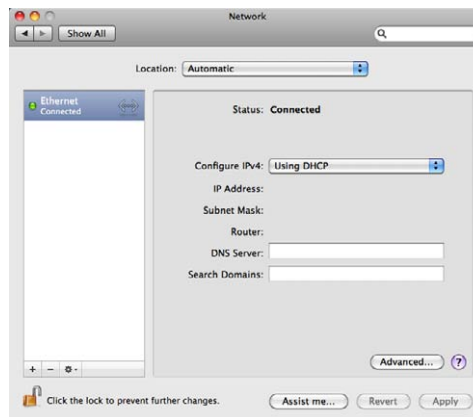

- Click on "OK" to complete the setup procedure.

For Mac OSX 10.6

- Click on the Apple menu and click on "System Preferences".

- Click on the "Network" icon.

- Set "Location" to Automatic.

- In the "Configure IPv4" section, choose "Using DHCP".

- Click on "Apply".

WEB CONFIGURATION

3. Web Configuration Wizard

Having setup your computer, the next step is to establish a connection to the internet. Please follow the steps below to configure your 3G25W-R Wireless router via the web configuration wizard.

Open your web browser (e.g. Internet Explorer/Firefox/Safari) and type http://192.168.1.1/ into the address bar at the top of the window.

At the login screen, type "admin" (without quotes) in the System Password field. Then click on Login.

Note: admin is the default login password for the unit.

- Click on "Wizard" and then on "Enter".

This page shows you the steps needed to configure your 3G25W-R unit.

- Click "Next" to continue.
- If you want to change the system password, enter the current system password into the "Old Password" field and then enter the new password into both the "New Password" and "Reconfirm" fields and then click "Next". (If you do not wish to change the password, leave the fields blank and click "Next")
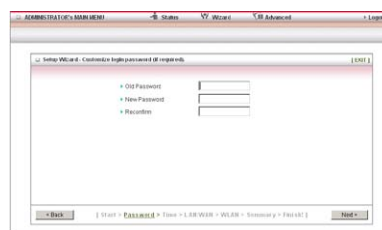
- The time zone should be set correctly by default, if it is not, please select your Time zone from the pull down menu and click "Next".
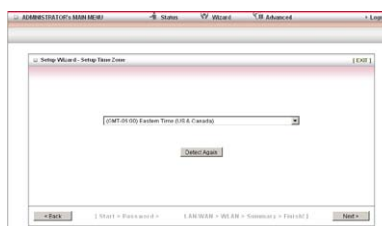
- Enter the following APN to configure your connection: fixed-isp.apn and then click "Next".
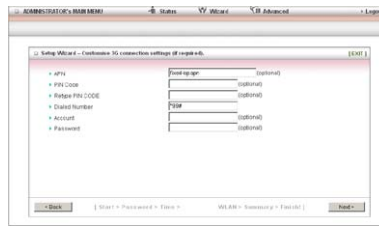
If you want to change the wireless network name or channel settings, you can do so on this page. Change the settings as needed and click "Next". (If you wish to use the default settings, click "Next")
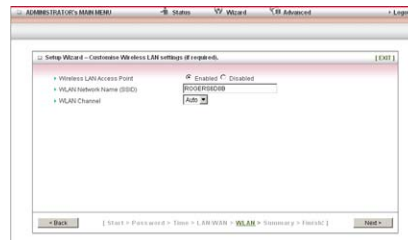
- If you want to change the wireless network security settings, you can do so on this page. Change the settings as needed and click "Next". (If you wish to use the default settings, click "Next")

- Confirm the setup information and click "Apply Settings" if everything is correct. You can also click "Back" to go back and change any of the previously configured settings.

The router will then apply your configured settings.

Once completed, your router is configured and ready to connect to the internet.

- Click "Finish" to be taken to the Status page to confirm you are connected.

The "Link Status" field should now show "Connected" as per the screenshot below.
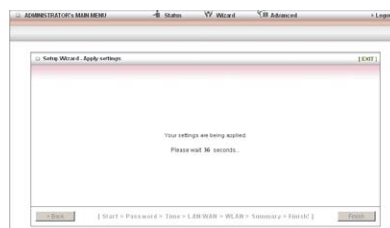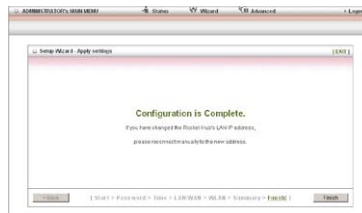

ITEM	Description
IP Address	The current WAN IP address of the router
Subnet Mask	The current subnet mask in use by the router
Gateway	The gateway in use by the router to access the internet
Domain Name Server	The Domain name server converts IP addresses to human readable format
Connection Time	The time the current connection to the internet has been active
Link Status	The current connection status (disconnected, connecting, and connected)
Signal Strength	The current signal strength of your 3G service
Network Name	The current network carrier providing your 3G connection
SIM Status	The current status of the inserted SIM
Wireless mode	The current status of the wireless network (enabled or disabled)
SSID	The current wireless network name is use by the router
Channel	The current wireless channel in use on your wireless network
Security	The currently selected wireless security in use on your wireless network
Octets	The number of data packets which have passed into and out of the router
Unicast Packets	The number of unicast packets which have passed into and out of the router
Multicast packets	The number of multicast packets which have passed into and out of the router.

ADVANCED

4. Advanced Configuration

To access the advanced configuration options of your 3G25W-R, you need to login to the web configuration and click on the Advanced menu at the top of the page.

Open your web browser (e.g. Internet Explorer/Firefox/Safari) and type http://192.168.1.1/ into the address bar at the top of the window.

At the login screen, type "admin" (without quotes) in the System Password field. Then click on Login.

Note: admin is the default login password for the unit.

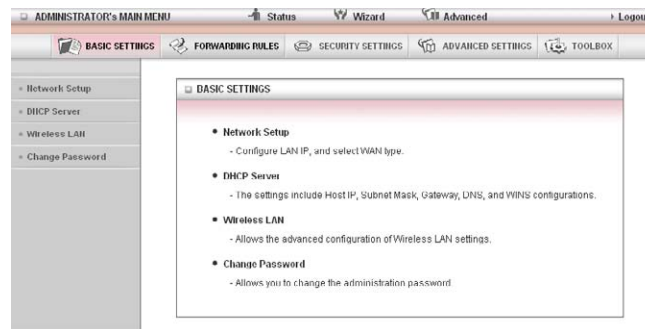Click on the "Advanced" link at the top of the page.

After that, click on any of the top menu items to access the respective setting pages.

Basic Settings

The Basic Setting page allows you to configure a number of basic settings on the unit. This section deals with these features. Click on any links on the menu on the left to configure the respective settings.

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Network Setup

This Page allows you to change the LAN (Local Area Network) settings on your 3G25W-R Wireless router and the WAN (Wide Area Network) connection.
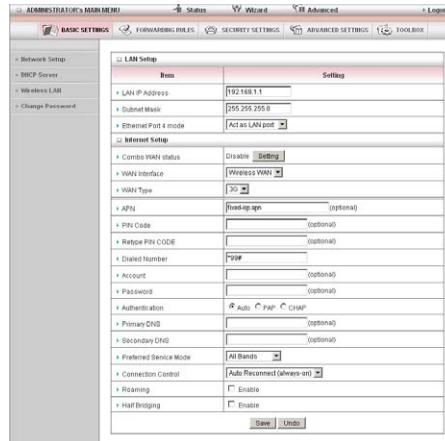
LAN IP Address: the local IP address of the 3G25W-R.

(The computers on your network must use this IP address as their Default Gateway. You can change it if necessary.)

Subnet Mask: Enter 255.255.255.0 in the subnet field.

Ethernet Port Mode: If using the WAN failover feature, set this to "Act as WAN port", otherwise leave this set to "Act as LAN port".

Note: When utilising the WAN failover feature, ensure the Ethernet Port Mode is set to "Act as WAN port", failure to do so may result in the router being uncontactable and a power cycle will be required to restore normal functionality.

Combo WAN status: Configure the WAN failover feature. By default, your primary connection is 3G. Please select the appropriate secondary connection method from this page.

WAN Interface: Select Ethernet WAN or Wireless WAN.

WAN Type: WAN connection type. Click the WAN Type pull down menu to choose the appropriate connection type from the following options:
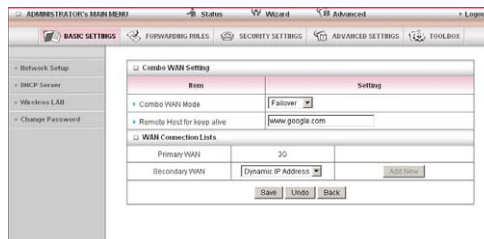
Combo WAN mode: Select "Failover" from the pull down menu to enable the automatic failover feature.

Select a high availability website in order to check if your WAN connection has dropped. For example: www.google.com

Click "Add New" and select the appropriate secondary WAN connection method.

Click "Save" to save your WAN failover settings.

3G (The default connection type)

Note: The WAN fields may not be necessary for your 3G connection. The information on this page will only be used when required by your 3G service provider. Please contact your 3G provider to obtain this information if needed.
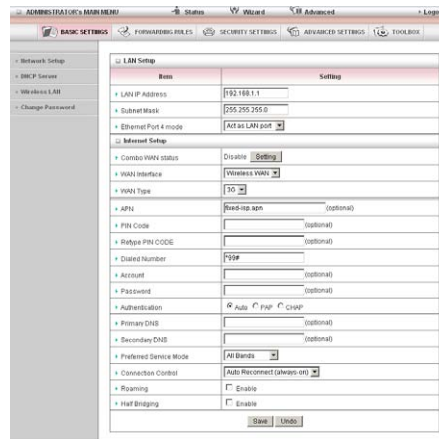
This is the default operation mode of the router and should be suitable for the majority of users. The Access Point Name (APN) should be set by default. If it is not, or you require a different APN, please contact Rogers Customer Care to obtain the correct APN to use.

OPTION	DESCRIPTION
APN:	Enter the APN for your 3G service. This should default to: fixed-isp.apn
Pin Code:	Enter the Pin Code for your SIM card (if required).
Dial-Number:	This number is required to connect to your 3G service. (Unless advised otherwise by Rogers Customer Care, this setting should not be changed)
Account:	The username provided by your 3G service provider to enable access to your 3G service.
Password:	The password provided by your 3G service provider to enable access to your 3G service.
Authentication:	Choose the appropriate authentication type for your 3G service.
Primary DNS:	Manually assign a Primary DNS Server.
Secondary DNS:	Manually assign a Secondary DNS Server.
Connection Control: There are 3 modes to select from:-	
Connect-on-demand:	The 3G25W-R will connect to the internet when a client sends outgoing packets.
Auto Reconnect (Always-on):	The 3G25W-R will automatically reconnect to the internet until the connection is manually disconnected.
Manually:	The 3G25W-R will not connect to the internet until someone clicks the connect button in the Status-page.
Roaming:	Enable 3G roaming on the connection.
Half Bridging:	This option enables "Half Bridging" for this connection type. (Half bridging is utilised to enable a single computer to be 'Live' on the internet. This means any services, such as internet gaming, which would usually require port forwarding for are able to be connected to directly.)

Static IP Address
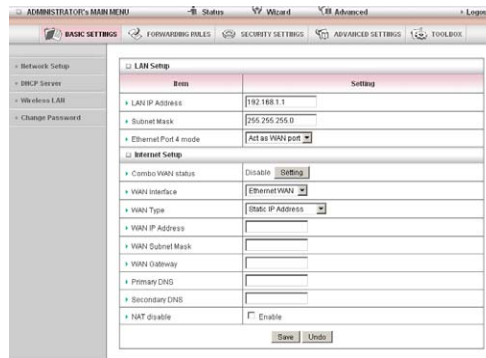
This utilises the Ethernet WAN port to provide a connection to the Internet with a static IP address assigned from your Internet Service Provider (ISP).

Enter the WAN IP Address, Subnet Mask, Gateway and the Primary and Secondary DNS as supplied by your Internet Service Provider (ISP).

NAT disable: This option disables "Network Address Translation" for this connection type.

Click Save to complete the connection setup process.

Dynamic IP Address

This utilises the Ethernet WAN port to provide a connection to the Internet with a dynamic IP address assigned from your Internet Service Provider (ISP).
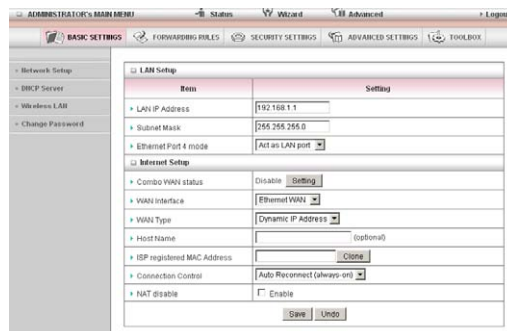
OPTION	DESCRIPTION
Host Name:	Set the hostname for your connection (optional - Refer to your ISP for more information).
ISP register MAC address:	You can change the WAN port MAC address if needed to clone your 3G modem (optional - Refer to your ISP for more information).
Connection Control: There are 3 modes to select from:-	
-Connect-on-demand:	The 3G25W-R will connect to the internet when a client sends outgoing packets.
- Auto Reconnect (Always-on):	The 3G25W-R will automatically reconnect to the internet until the connection is manually disconnected.
- Manually:	The 3G25W-R will not connect to the internet until someone clicks the connect button in the Status-page.
NAT disable:	This option disables "Network Address Translation" for this connection type.

PPP over Ethernet

This utilises the Ethernet WAN port to provide a PPP over Ethernet (PPPoE) connection to the Internet.

OPTION	DESCRIPTION
PPPoE Account:	The account name given to you by your ISP.
PPPoE Password:	The password given to you by your ISP. (For security, this field appears blank. If you don't want to change the password, leave it empty)
Primary DNS/Secondary DNS:	This feature allows you to manually assign a Primary and Secondary DNS Server (optional - Refer to your ISP for more information).
Connection Control: There are 3 modes to select from:-	
Connect-on-demand:	The 3G25W-R will connect to the internet when a client sends outgoing packets.
Auto Reconnect (Always-on):	The 3G25W-R will automatically reconnect to the internet until the connection is manually disconnected.
Manually:	The 3G25W-R will not connect to the internet until someone clicks the connect button in the Status-page.
Maximum Idle Time:	The amount of inactivity on the internet connection before it is disconnected. Set it to zero or enable "Auto-reconnect" to disable this feature.
PPPoE Service Name:	Enter the service name if your ISP requires it (optional - Refer to your ISP for more information).
Assigned IP address:	Enter the IP address assigned to your service. This is usually left blank.
Maximum Transmission Unit (MTU):	The default MTU value is 0 (auto). It is set automatically when you connect.
NAT disable:	This option disables "Network Address Translation" for this connection type.
Half Bridging:	This option enables "Half Bridging" for this connection type. (Half bridging is utilised to enable a single computer to be 'Live' on the internet. This means any services, such as internet gaming, which would usually require port forwarding for are able to be connected to directly.)

PPTP
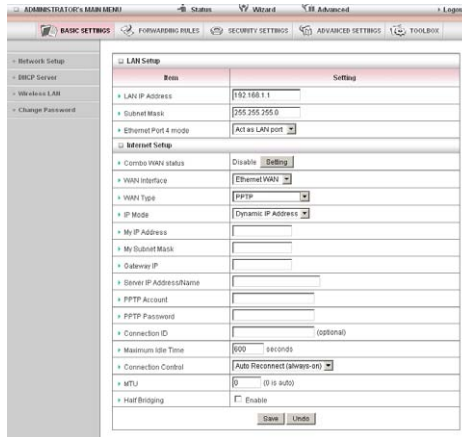
This utilises the Ethernet WAN port to provide a PPTP Virtual Private Network (VPN) connection to a PPTP server.

Please verify your connection type and select the appropriate IP Mode: Static IP Address or Dynamic IP Address.

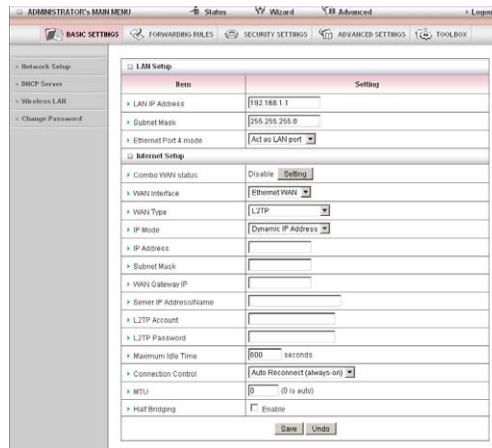| OPTION	DESCRIPTION
Static IP Address:	Enter the IP address information provided to you by your service provider.
My IP Address, My Subnet Mask and WAN Gateway IP:	The IP address, subnet mask and Gateway IP address supplied to you by your PPTP provider.
Static IP and Dynamic IP Address connection types:	
Server IP Address/Name:	the IP address or URL of the PPTP server.
PPTP Account and Password:	The username and password supplied to you by your PPTP provider. (If you don't want to change the password, leave it empty)
Connection ID:	Enter your connection ID if required.
Maximum Idle Time:	The amount of inactivity on the internet connection before it is disconnected. Set it to zero or enable "Auto-reconnect" to disable this feature.
Connection Control: There are 3 modes to select from:-	
- Connect-on-demand:	The 3G25W-R will connect to the internet when a client sends outgoing packets.
- Auto Reconnect (Always-on):	The 3G25W-R will automatically reconnect to the internet until the connection is manually disconnected.
- Manually:	The 3G25W-R will not connect to the internet until someone clicks the connect button in the Status-page.
Maximum Transmission Unit (MTU):	The default MTU value is 0(auto). It is set automatically when you connect.
Half Bridging:	This option enables "Half Bridging" for this connection type. (Half bridging is utilised to enable a single computer to be 'Live' on the internet. This means any services, such as internet gaming, which would usually require port forwarding for are able to be connected to directly.)

L2TP

This utilises the Ethernet WAN port to provide a L2TP Virtual Private Network (VPN) connection to a L2TP server.

Please verify your connection type and select the appropriate IP Mode: Static IP Address or Dynamic IP Address.
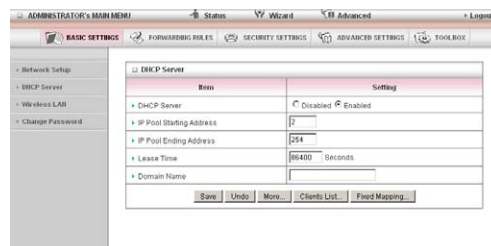
Static IP Address:

Enter the IP address information provided to you by your service provider.

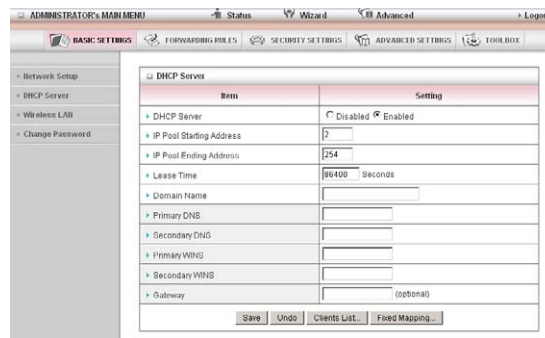| OPTION	DESCRIPTION
IP Address, Subnet Mask and WAN Gateway IP:	The IP address, subnet mask and Gateway IP address supplied to you by your L2TP provider.
Static IP and Dynamic IP Address connection types:	
Server IP Address/Name:	the IP address or URL of the L2TP server.
L2TP Account and Password:	The username and password supplied to you by your L2TP provider. (If you don't want to change the password, leave it empty)
Maximum Idle Time:	The amount of inactivity on the internet connection before it is disconnected. Set it to zero or enable "Auto-reconnect" to disable this feature.
Connection Control: There are 3 modes to select from:-	
Connect-on-demand:	The 3G25W-R will connect to the internet when a client sends outgoing packets.
Auto Reconnect (Always-on):	The 3G25W-R will automatically reconnect to the internet until the connection is manually disconnected.
Manually:	The 3G25W-R will not connect to the internet until someone clicks the connect button in the Status-page.
Maximum Transmission Unit (MTU):	The default MTU value is 0(auto). It is set automatically when you connect.
Half Bridging:	This option enables "Half Bridging" for this connection type. (Half bridging is utilised to enable a single computer to be 'Live' on the internet. This means any services, such as internet gaming, which would usually require port forwarding for are able to be connected to directly.)

DHCP Server

This Page allows you to change the Dynamic Host Configuration Protocol (DHCP) server settings on the 3G25W-R. The DHCP Server enables computers or devices connecting to the 3G25W-R to automatically obtain their network configuration settings. By default, the DHCP server is enabled.

OPTION	DESCRIPTION
DHCP Server:	Enable or disable the DHCP server.
IP Pool Starting/Ending Address:	Whenever there is a request, the DHCP server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting / ending address of the IP address pool
Lease Time:	Length of the DHCP lease time
Domain Name:	Optional, this information will be passed to the client

Click "Save" to save these settings or "Undo" to cancel. You can also check the DHCP client list by clicking the "Client List" button.

(See the section "DHCP Client List" below for more information) The "Fixed Mapping…" button allows you to map a specific IP address to a specific MAC address. (See the section "DHCP Fixed Mapping" below for more information) Click the "More…" button for the following extended options:

| OPTION	DESCRIPTION
Primary DNS:	Optional, this information will be passed to the client
Secondary DNS:	Optional, this information will be passed to the client
Primary WINS:	Optional, this information will be passed to the client
Secondary WINS:	Optional, this information will be passed to the client
Gateway:	Optional, this information will be passed to the client

DHCP Clients List

This is the list of currently connected devices utilising DHCP. If you wish to set a permanent IP address for a particular DHCP client (or device), select the appropriate DHCP client by clicking in the "Select" box. This will ensure the clients current IP address is always assigned to it.

DHCP Fixed Mapping
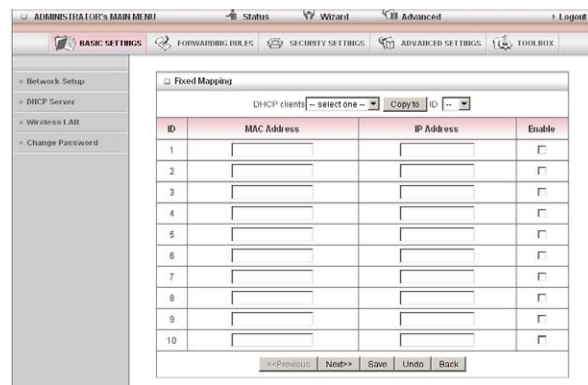
DHCP Fixed Mapping allows you to reserve a specific IP address for a specific device. The DHCP Server will reserve a specific IP for a device based on that devices unique MAC address. You can enter a new Fixed Mapping by entering the MAC address of the device and the IP address you wish to allocate to it. Click on the "Enable" checkbox to activate the DHCP fixed mapping entry.

NetComm
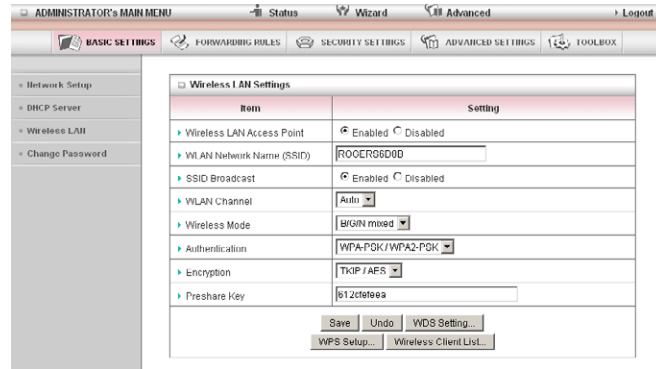
Wireless

The Wireless LAN settings page allows you to configure the wireless network features of the router.

OPTION	DESCRIPTION
WLAN Network Name (SSID):	Network ID is used for identifying the Wireless LAN (WLAN). Client stations can roam freely over this product and other Access Points that have the same Network ID.
(Please refer to the included Wireless security card insert for your default SSID)	
SSID Broadcast:	The router will broadcast the SSID so that wireless clients can find the wireless network.
WLAN Channel:	The wireless radio channel in use by your network.
Wireless Mode:	Choose B/G Mixed, B only, G only, and N only, G/N Mixed or B/G/N mixed. (The factory default setting is B/G/N mixed)
Authentication:	You may select from the following authentication types to secure your wireless network:- • Open • Shared • Auto • WPA • WPA-PSK • WPA2 • WPA2-PSK • WPA/WPA2 • WPA-PSK/WPA2-PSK.

WPA-PSK/WPA2-PSK is a newer type of security. This type of security gives a more secure network compared to WEP. Use TKIP Encryption Type for WPA-PSK and AES for WPA2-PSK.

Please enter the key in the "Preshare Key". The key needs to be more than 8 characters and less than 63 characters. It can be any combination of letters and numbers.

Refer to the included Wireless Security Card for the default WPA-PSK2 key in use on your router.

Note: The configuration for WPA-PSK and WPA2-PSK is identical

After configuring wireless security, you also need to configure your wireless adapter to use the same security settings before you can connect wirelessly. Not all wireless adapter supports WPA-PSK/WPA2-PSK/WPA/WPA2 security. Please refer to your wireless adapter user guide for more information.

 It is strongly recommended to set up wireless security such as WPA-PSK (when the wireless client supports WPA) in order to secure your network. Click "Save" to save these settings or click "Undo" to cancel.

WDS (Wireless Distribution System)
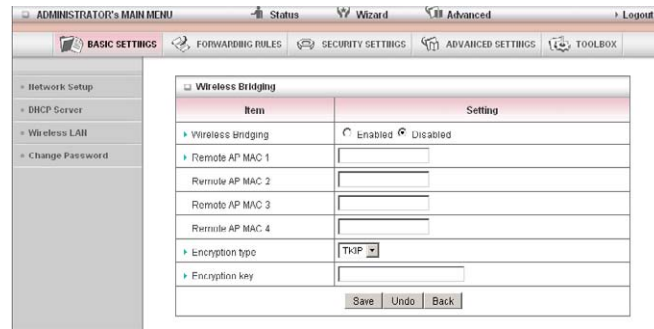
WDS allows you to connect to other Wireless Access Points, and in doing so extend a wired infrastructure to locations where cabling is not possible or inefficient to implement.

Enter the MAC address of the other wireless Access Points taking part in the WDS network and then click "Save".

WPS Setup

Wi-Fi Protected Setup (WPS) offers safe and easy way to connect wirelessly.

Simply push the WPS button on the router and then press the WPS on your wireless device within 2 minutes and the WLAN connection should be completed automatically.

| OPTION	DESCRIPTION
AP PIN:	The current PIN used to connect. • Click "Generate New PIN" to force the router to create a new PIN.
Config Mode:	Set the router to be either the Registrar or Enrollee.
Config Status:	You can discard the current WPS configuration by clicking "Release".
Config Method:	Set the WPS configuration method to either Push Button or PIN code.

These settings should not need to be changed.

Wireless Client List

The list of currently connected wireless devices is shown here.

Change Password
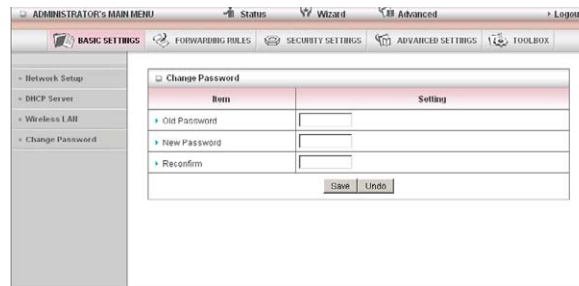
This page allows you to change the 3G25W-R web configuration password. Please type in the old password (the factory default password is admin) and then type in the new password. Type the same new password in the "Reconfirm field" and click "Save".

Forwarding Rules

The Forwarding Rules page allows you to configure the port forwarding management on the router. Click on any of the menu items on the left to access the respective settings page.
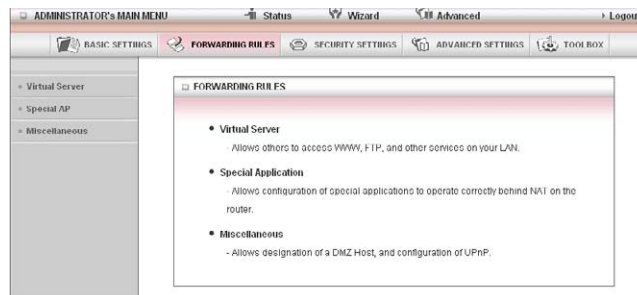
Note: Forwarding rules are a necessary feature as by default NAT (Network Address Translation) will automatically block incoming traffic from the Internet to the LAN unless a specific port mapping exists in the NAT translation table. Because of this, NAT provides a level of protection for computers that are connected to your LAN.

However this also creates a connectivity problem when you want to make LAN resources available to Internet clients. For example, to play network games or host network applications.

There are three ways to work around NAT and to enable certain LAN resources available from the Internet:

- Port Forwarding (available in the Virtual Server page)
- Port Triggering (available in the Special AP page)
- DMZ Host (available in the Miscellaneous page)

Virtual Server
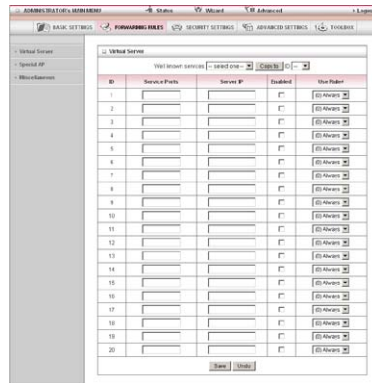
A virtual server is defined as a Service Port, and all requests to this port will be redirected to the computer specified by the Server IP.

Virtual Servers can also work with Scheduling Rules, and give you more flexibility on Access control.

(For further instructions on scheduling rules, please refer to the "Scheduling" section later in this guide)

For example, if you have an FTP server (the default port is 21) at 192.168.1.10, a Web server (the default port is 80) at 192.168.1.20, and a VPN server (the default port is 1723) at 192.168.1.60, then you would need to specify the following virtual server mappings:

Note: At any given time, only one IP address can bind to a particular Service Port.

Service Port	Server IP	Enable	Use Rule#
21	192.168.1.10	√	(0) Always
80	192.168.1.20	√	(0) Always
1723	192.168.1.60	√	(0) Always

Click "Save" to save the settings or "Undo" to cancel.

Special Applications
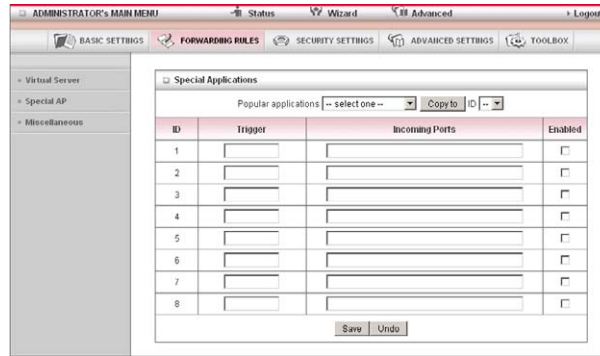
Some applications like On-line games, Video conferencing and Internet telephony require multiple connections

to the internet. As such, these applications cannot work with a pure NAT router such as the 3G25W.

The Special Applications feature allows some of these applications to work with this router.

Note: If this fails to make the application work, try to set up that computer as the DMZ host instead.

(For further instructions on setting up a DMZ host, please refer to the "Miscellaneous" section below)

OPTION	DESCRIPTION
Trigger:	The outbound port number that will be triggered by the application..
Incoming Ports:	When the trigger packet is detected, the inbound packets sent to the specified port numbers will be allowed to pass through the firewall.

The 3G25W-R also provides predefined settings for some popular applications. To use the predefined settings, select your application from the Popular application list, select an unused ID from the list and then click Copy to. The predefined settings will then be added to the list.

Click "Save" to save the settings or "Undo" to cancel.

Miscellaneous
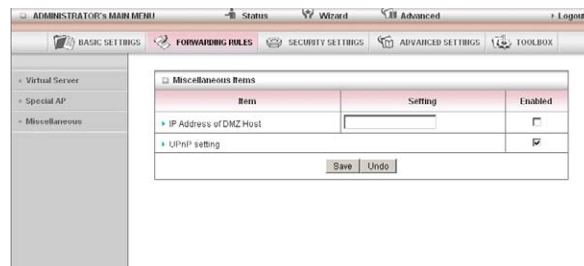
A Demilitarized Zone (DMZ) Host is a computer without the protection of firewall. It allows that particular computer to be exposed to unrestricted 2-way communication to the internet. It is mostly used for Internet games, Video conferencing, Internet telephony and other special applications.

To enable DMZ, enter the IP address of the computer you want to be live on the internet and click on "Enable".

Note: This feature should be used only when necessary.

UPnP Setting: The device also supports uPnP. If the DMZ host operating system supports this function enable it to automatically configure the required network settings.

Click "Save" to save the settings or "Undo" to cancel.

Security Setting

The Security Setting page allows you to configure the security management on the router such as Packet filters and MAC Control. Click on any of the menu items on the left to access the respective setting page.
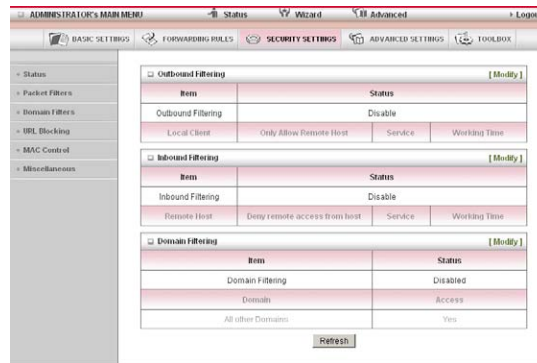
ITEM	Description
Outbound Filtering	The currently configured outbound filtering rules
Inbound Filtering	The currently configured inbound filtering rules
Domain Filtering	The currently configured domain filtering rules

Packet Filters

The Packet Filter enables you to control what packets are allowed to pass through the router. There are two types of packet filter, Outbound Packet Filter which applies to all outbound packets and the Inbound Packet Filter which only applies to packets that are destined for a Virtual Server or DMZ host only.

(For further instructions on setting up MAC Level Filtering, please refer to the "MAC Control" section below)
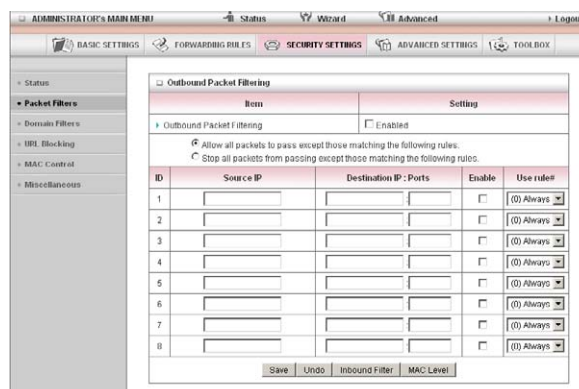
Outbound Filter:

To enable an Outbound Filter, tick the "Enable" tick box at the top of the page.

There are two types of filtering policies:

1. Allow all data traffic to pass except those that match the specified rules.

2. Deny all data traffic to pass except those that match the specified rules.

You can specify up to 48 filtering rules for each direction (Inbound or Outbound). For each rule you will need to define the following:

- Source IP address
- Source port
- Destination IP address
- Destination port
- Protocol: TCP or UDP or both.
- Use Schedule Rule#

For source or destination IP address, you can define a single IP address (192.168.1.1) or a range of IP addresses (192.168.1.100-192.168.1.200). Leaving these fields empty implies all IP addresses are matched.

For source or destination port, you can also define a single port (80) or a range of ports (1000-1999). Use the prefix "T" or "U" to specify either the TCP or UDP protocol e.g. T80, U53, U2000-2999. No prefix indicates both TCP and UDP are defined. Leaving this field empty implies all ports are matched.

The Packet Filter also works with Scheduling Rules, and gives you more flexibility on Access control. (For further instructions on scheduling rules, please refer to the "Scheduling" section later in this guide) Click "Save" to save the settings or "Undo" to cancel.

Inbound Filter:

To access the Inbound Packet Filter page, click on the "Inbound Filter" button on the bottom of the Outbound Filter page. All the settings on this page are the same as those for the Outbound Filter.
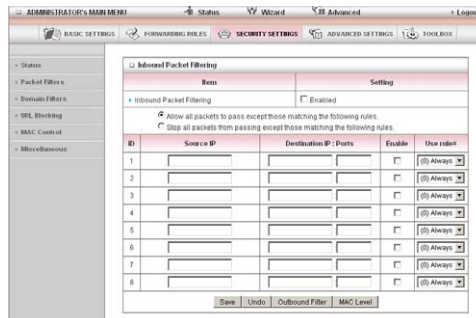
Click "Save" to save the settings or "Undo" to cancel.

Domain Filters
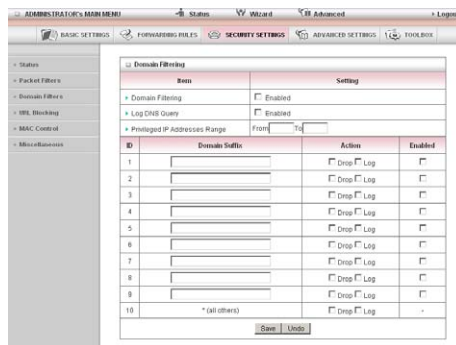
Domain Filters enable you to prevent users from accessing specific domain addresses.

To enable the Domain Filter, tick the "Enable" tick box at the top of the page.

ITEM	Description
Log DNS Query:	Enable this if you want to log when someone accesses filtered URLs.
Privilege Host/Netmask:	Set a group of computers that has unrestricted access to the internet
To set a Domain Filter, you need to specify the following:	
Domain Suffix:	Please type the suffix of the URL that needs to be restricted. For example, ".com", "xxx. com".
Action:	The router action that you want when someone is accessing a URL that matches the specified domain suffix. Select Drop to block the access and/or select Log to log this access.
Enable:	Tick to enable the rule.

Click "Save" to save the settings or "Undo" to cancel.

URL Blocking

URL Blocking will block LAN computers from connecting to a pre-defined website. The major difference between the Domain Filter and URL Blocking is that Domain Filtering require users to input a suffix (e.g. xxx.com, yyy.net) while URL Blocking only requires you to input a keyword.
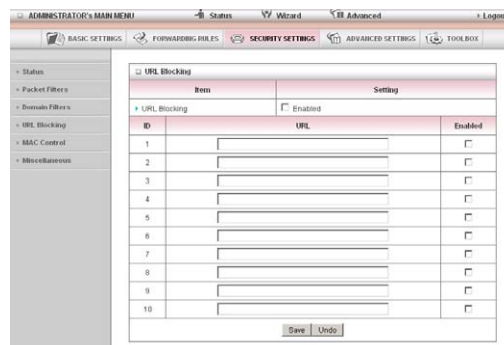
To enable URL Blocking, tick the "Enable" tick box at the top of the page.

To set a URL Blocking rule, you need to specify the following:

ITEM	Description
URL:	If any part of the Website's URL matches the pre-defined word then the connection will be blocked. For example, you can use pre-defined word "sex" to block all websites if their URLs contain the pre-defined word "sex".
Enable:	Tick to enable the rule.

Click "Save" to save the settings or "Undo" to cancel.

MAC Control

MAC Control allows you to assign different access rights for different users and to assign a specific IP address to a specific MAC address.
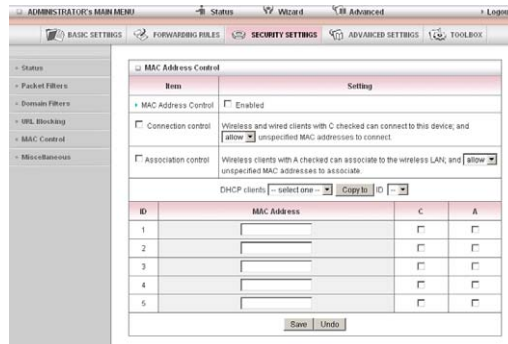
To enable MAC Address Control, tick the "Enable" tick box at the top of the page.

Two types of MAC Control are available:

ITEM	Description
Connection control:	Use this to control which clients (wired and wireless) can connect to the unit. If a client is denied access to connect to this device, it means the client cannot access the Internet either. Choose to allow or deny clients with MAC addresses that are not in the list to connect to this device.
Association control:	Check Association Control to control which wireless client can associate with the unit. If a client is denied access to associate with the unit, it means the client cannot send or receive any data via this device. Choose to allow or deny the clients with MAC addresses that are not in the list to associate to the wireless LAN.

(Click the "Next Page" or the "Previous Page" buttons to see the entire list)

Click "Save" to save the settings or "Undo" to cancel.

Miscellaneous

This page allows you to change various miscellaneous security settings on the unit.
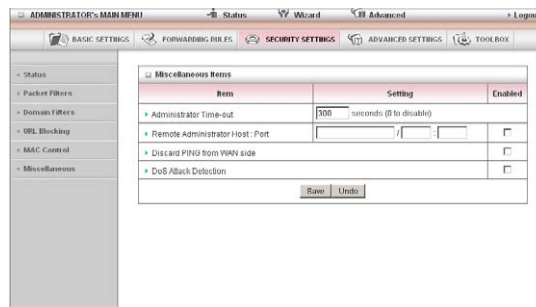
ITEM	Description
Administrator Time-out:	The period of time with no activity in the web configuration page to logout automatically, set this to zero to disable this feature.
Remote Administrator Host/Port:	Normally only Intranet users can browse the built-in web pages to perform administration tasks. This feature enables you to perform administration tasks from a remote host. If this feature is enabled, only the specified IP address can perform remote administration.

Note: If the specified IP address is 0.0.0.0, any host can connect to the router to perform administration tasks. You can also use a subnet mask (/nn) to specify a group of trusted IP addresses for example, "10.1.2.0/24".

When Remote Administration is enabled, the web server port will be shifted to 80. You can also change the web server port.

ITEM	Description
Discard PING from WAN side:	When this feature is enabled, your router will not respond to ping requests from remote hosts.
DoS Attack Detection:	When this feature is enabled, the router will detect and log where the DoS attack comes from on the Internet.

Currently, the router can detect the following (and more) DoS attack types:

- SYN Attack
- WinNuke
- Port Scan
- Ping of Death
- Land Attack

Click "Save" to save the settings or "Undo" to cancel.

Advanced Setting

The Advanced Setting page allows you to configure the advanced settings on the router such as the System log, Dynamic DNS and SNMP options. Click on any of the menu items on the left to configure the access the respective setting page.
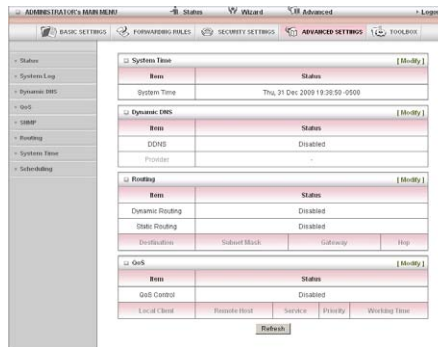
The status page shows the currently configured System Time, and if there are any configured:

- Dynamic DNS Services
- Dynamic or Static Routing rules
- QoS control rules

System Log

This enables you to set up the system log features of the router. You can also choose to send the system log to a remote syslog server (via a UDP connection).
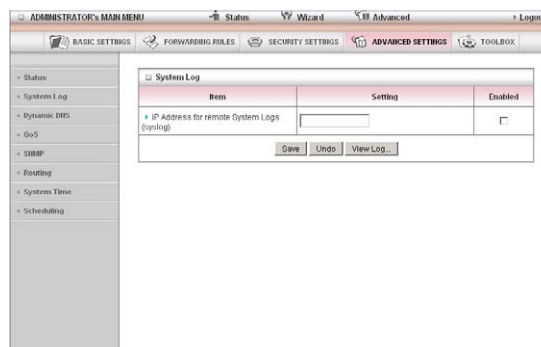
IP Address for remote System Logs (syslog): The IP address of the syslog server where the system log data will be sent.

Click the "Enabled" checkbox to enable this function.

View Log…: View the current system log.

Dynamic DNS

The Dynamic DNS feature enables users to set a static domain name for their internet connection even when

the ISP only provides a dynamic IP address.

By mapping the host name to the current public IP address of the router, users who want to connect to the router or any services behind the router from the internet can just use the Dynamic DNS hostname instead of the IP Address which might change every time the router connects to the Internet.
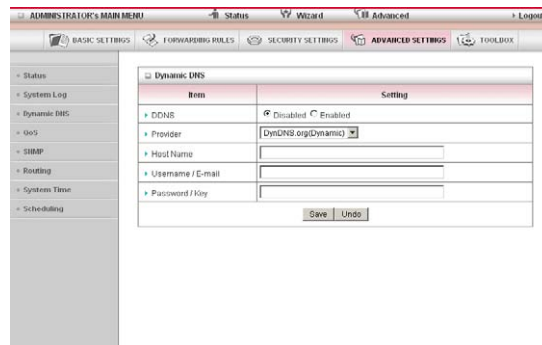
Before you can use Dynamic DNS service, you need to register an account on one of the many supported Dynamic DNS providers such as DynDNS.org, TZO.com or dhs.org.

After registering the account, the Dynamic DNS provider will provide you with the following details:

• Host Name

• Username/Email

• Password/Key

To enable the Dynamic DNS feature on the unit, click the "Enable" check box, choose the appropriate Dynamic DNS Provider and enter the details supplied by your Dynamic DNS provider.

Click "Save" to save the settings or "Undo" to cancel.

QOS

Quality of Service (QoS) provides different priority to different users or data flows. It can also guarantee a certain level of performance.

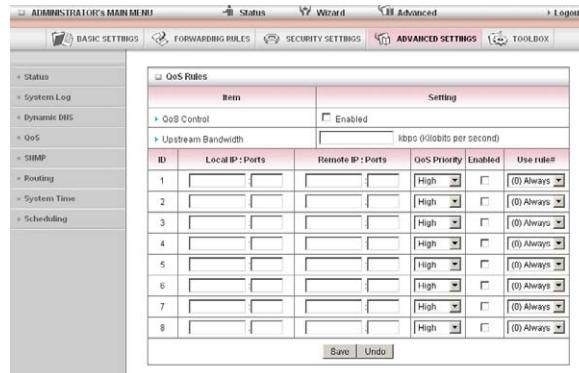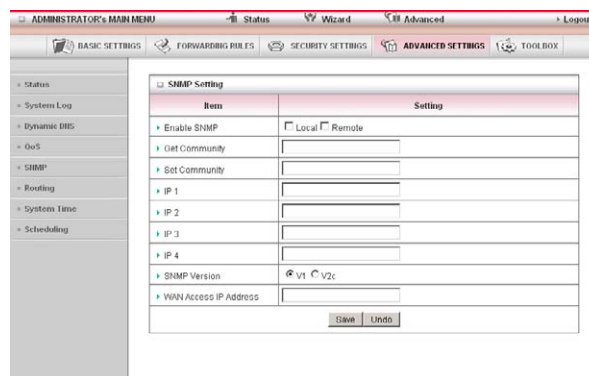| ITEM	Description
QoS Control:	This Item enables QoS function or not.
Bandwidth of Upstream:	Set the limit on the upstream speed.
Local IP:Ports:	Define the Local IP address and port to apply QoS to.
Remote IP:Ports:	Define the Remote IP address and port to apply QoS to.
QoS Priority:	This defines the priority level of the current Policy Configuration. Packets associated with this policy will be serviced based upon the priority level set. For critical applications High or Normal levels are recommended. For non-critical applications select a Low level.
User Rule#:	The QoS rules can work in conjunction with Scheduling Rules.

(For further instructions on scheduling rules, please refer to the "Scheduling" section later in this guide)

Click on "Save" to store your setting or "Undo" to discard your changes.

SNMP

SNMP (Simple Network Management Protocol) is a protocol designed to give a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.

ITEM	Description
Enable SNMP:	You must check Local, Remote or both to enable SNMP function. If Local is checked, this device will only respond to requests from LAN connected hosts. If Remote is checked, this device will respond to requests from the WAN connection.
Get Community:	Sets the community string your device will respond to for Read-Only access.
Set Community:	Sets the community string your device will respond to for Read/Write access.
IP 1, IP 2, IP 3, IP 4:	Input your SNMP Management host IP here. You will need to configure the address where the device should send SNMP Trap messages to.
SNMP Version:	Please select proper SNMP Version that your SNMP Management software supports.
WAN Access IP Address:	You can limit remote access to a specific IP address by entering it here.

Note: If "Remote" access is enabled, the default setting of 0.0.0.0 means any IP can obtain SNMP protocol Information.

Click on "Save" to store your setting or "Undo" to discard your changes.

Routing

Routing tables allow you to determine which physical interface address to use for outgoing IP data. If you have more than one router and subnet, you will need to configure the routing table to allow packets to find the proper routing path and allow different subnets to communicate with each other.
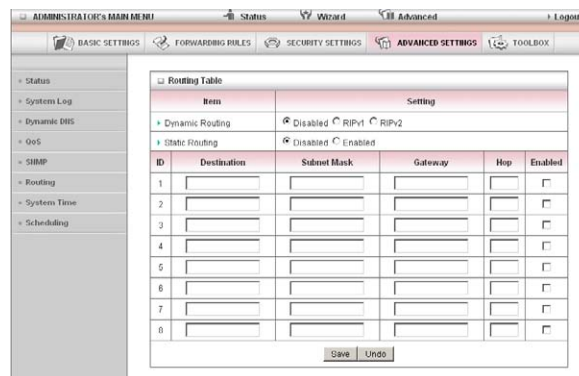
These settings are used to setup the static and dynamic routing features of the 3G25W.

ITEM	Description
Dynamic Routing:	Routing Information Protocol (RIP) will exchange information about different host destinations for working out routes throughout the network. Please only select RIPv2 if you have a different subnet in your network. Otherwise, please select RIPv1.
Static Routing:	For static routing, you can specify up to 8 routing rules.

You need to enter the destination IP address, subnet mask, gateway, hop for each routing rule, and then enable the rule by clicking the Enabled checkbox.

Click on "Save" to store your setting or "Undo" to discard your changes.

System Time

This page allows you to change the System time setting on the 3G25W-R.
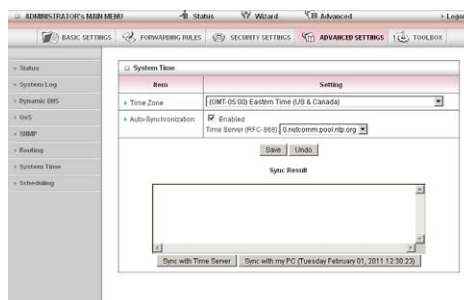
Time Zone: Select the time zone where this device is located.

ITEM	Description
Auto-Synchronization:	Select the "Enable" checkbox to enable this function.
Time Server:	Select a NTP time server to obtain the current UTC time from.
Sync with Time Server:	Select if you want to set Date and Time by NTP Protocol.
Sync with my PC:	Select if you want to set Date and Time using your computers Date and Time

Click "Save" to save the settings or "Undo" to cancel.

Scheduling

You can use scheduling to enable or disable a service at a specific time or on a specific day. Select "Enable" and then click the "New Add" button.
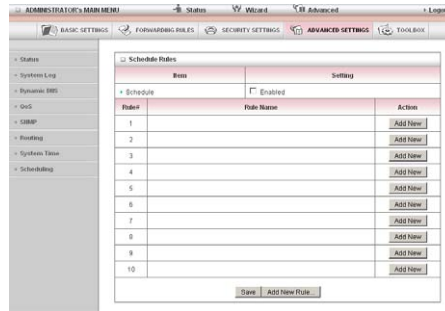
Select a name for the rule and enter the details such as the day, start time or end time and click "Save" In the example below, the rule is called "Work Hours" and it is only active between 08:00 and 17:30.
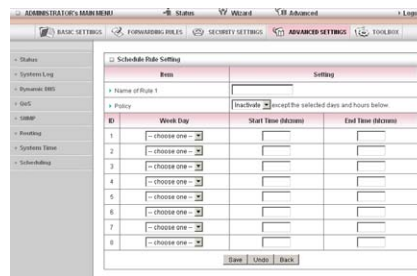
You are then able to select the scheduling rule name specified from the Packet Filter configuration section to perform the configured filtering at the scheduled time as per the screenshot below.

This example would prevent any access to the IP address 66.102.11.104 from any device connected to the router, 7 days a week, only between the hours of 08:00 and 17:30.

Click "Save" to save the settings or "Undo" to cancel.

Tool Box

The Tool Box page consists of various tools for the unit. Click on any of the menu items on the left to access the respective page.
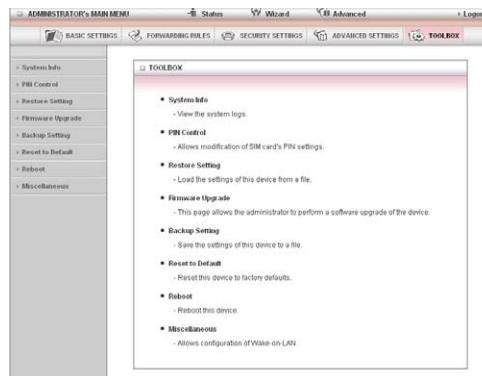
System Info

From this page you can view the current System log entries for the router.
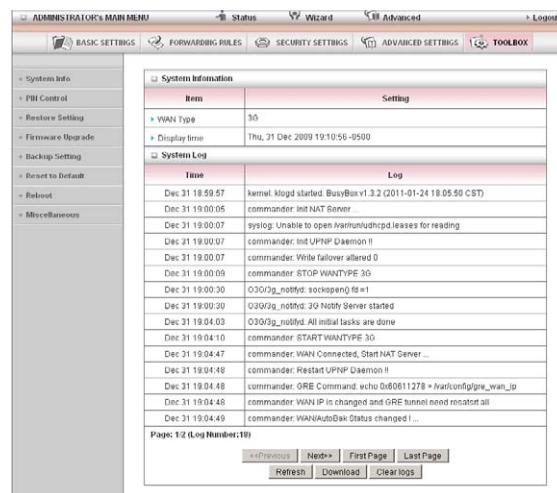
You can also select to save a copy of the syslog data to your computer by clicking the "Download" button or clear the current syslog data by clicking the "Clear Logs" button.

PIN Control

This page allows you to enable or disable SIM PIN security as well as change the current SIM PIN or store the current SIM PIN to enable the router to automatically utilise the PIN when required.
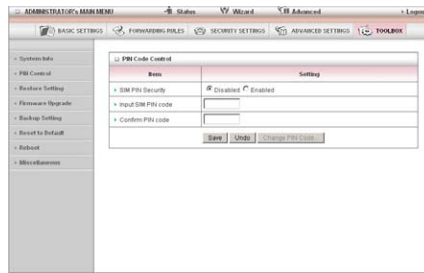
To change the PIN currently used on the inserted SIM, Click "Change PIN Code".

- Enter the current SIM PIN into the "Old PIN code" field
- Enter the new SIM PIN to be used into the "New PIN code" and "Confirm PIN code" fields.
- Click "Save" to change the SIM PIN code.

Restore Settings

This page enables you to restore a previously saved backup of the 3G25W-R's configuration.
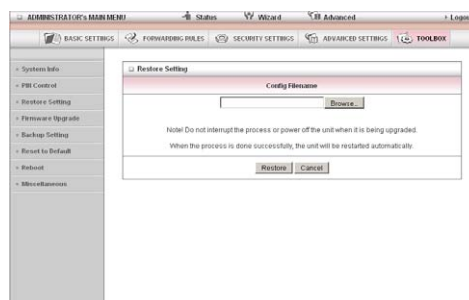
Click the "Browse" button and navigate to the location you previously saved the configuration file.

Click the "Restore" button once you have selected the appropriate .bin file to use.

Firmware Upgrade

This page enables you to update the firmware on the 3G25W-R.
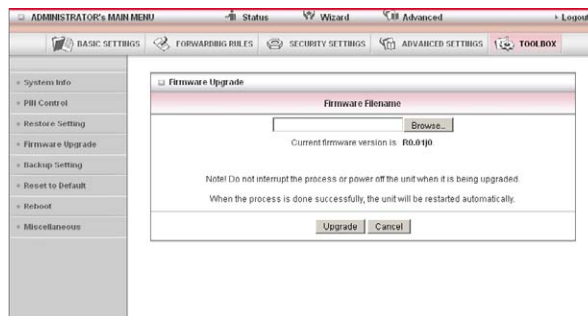
Click the "Browse" button and navigate to the location you saved the firmware update file. You can then upgrade the routers firmware by clicking the "Upgrade" button.

Backup Setting

You can backup your current settings by clicking the "Backup Setting" button then and save it as a bin file.
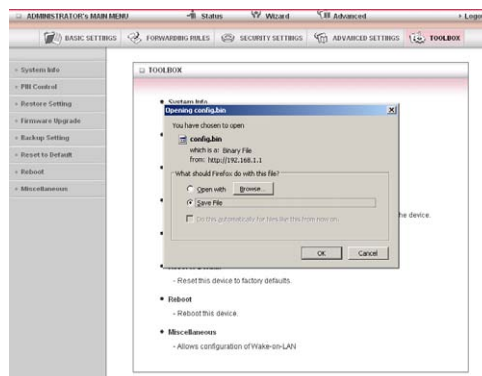
When you want to restore these settings, click the "Restore Setting" link and use the bin file you saved.

Reset to Default

You can reset your 3G25W-R to the factory default settings by clicking on this link.
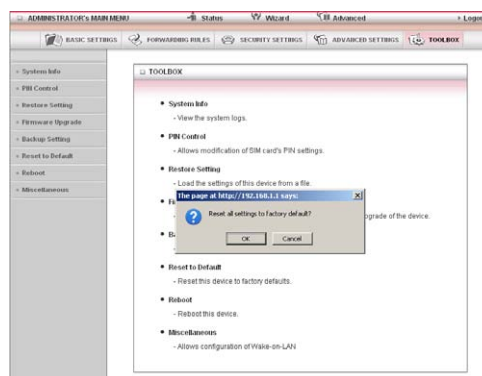
After clicking "OK", the router will reset and start up with the default settings loaded.

Reboot

You can reboot your router by clicking on the "Reboot" link. This can be useful to ensure restore settings are loaded.
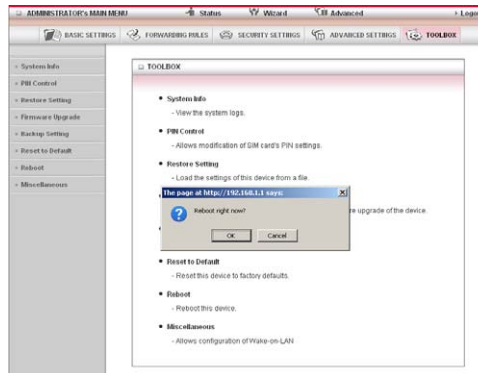
Miscellaneous

You can configure Wake-on-LAN (WOL) from this page.
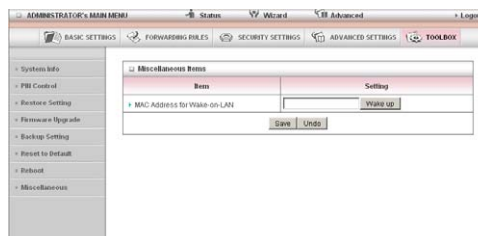
Wake-on-LAN enables the router to start-up a computer or device (if the computer supports it) when a WOL packet is detected on the network going to the client MAC you have entered.

APPENDICES

5. Appendix A: WAN Failover

The WAN failover feature of the 3G25W-R is designed to provide a backup WAN connection in case your primary connection should fail.

To use this feature, you will require both a regular WAN connection and a 3G WAN connection.

Please follow these steps to set up WAN failover on your 3G25W-R:

- Ensure a primary (3G) WAN connection is configured by following the steps outlined in the Network Setup section of the User Guide.
- Set up a secondary (non-3G) WAN connection by following the steps outlined in the Network Setup section of the User Guide.
- Open your web browser (e.g. Internet Explorer/Firefox/Safari) and navigate to http://192.168.1.1/.
- At the login screen, type in "admin" (without quotes) in the System Password field. Then click on Login.
- Navigate to the Network Setup page.
- Click the Combo WAN status button and select "Failover" from the pull down menu and enter a public IP address (for example 'www.google.com') into the Remote Host for keep alive box.

The 3G25W-R will periodically check that it can connect to this address to determine if the WAN connection is still running.

- You will also need to click "Add New" and select the appropriate secondary WAN type.
- In the Network Setup page, make sure that "Ethernet Port 4 mode" is set to "Act as WAN port" and that the selected WAN Type is your primary (3G) WAN connection and click Save.

You are now ready to use the internet connection as normal.

- When your primary (3G) WAN connection fails, the 3G25W-R will automatically failover to the secondary (non-3G) WAN connection.

Please allow up to 2 minutes for this change to occur.

- When your primary (3G) WAN connection reconnects, the 3G25W-R will automatically revert to this connection.

Please allow up to 2 minutes for this change to occur.

- To confirm that the process in Step 9 is complete, refresh the status page of the web interface after 1 minute.

6. Appendix B: Establishing your Wireless Connection

Windows XP (Service Pack 2)

1. Open the Network Connections control panel (Start -> Control Panel -> Network Connections):

2. Right-click on your Wireless Network Connection and select View Available Wireless Networks:

3. Select the wireless network as shown on your Wireless Security card and click Connect.

4. Enter the network key as shown on your Wireless Security card.

5. The connection will show Connected.

Windows Vista

1. Open the Network and Sharing Center (Start > Control Panel > Network and Sharing center).

2. Click on "Connect to a network".

3. Choose "Connect to the Internet" and click on "Next".

4. Select the wireless network as shown on your Wireless Security card and click Connect.

5. Enter the network key as shown on your Wireless Security card and click "Next".

6. Select the appropriate location. This will affect the firewall settings on the computer.

7. Click on both "Save this network" and "Start this connection automatically" and click "Next".

Windows 7

1. Open the Network and Sharing Center (Start > Control Panel > Network and Sharing center).

2. Click on "Change Adapter settings" on the left-hand side.

3. Right-click on "Wireless Network Connection" and select "Connect / Disconnect".

4. Select the wireless network as shown on your Wireless Security card and click Connect.

5. Enter the network key as shown on your Wireless Security card.

6. You may then see a window that asks you to "Select a location for the 'wireless' network". Please select the "Home" location.

7. You may then see a window prompting you to setup a "HomeGroup". Click "Cancel" on this.

8. You can verify your wireless connection by clicking the "Wireless Signal" indicator in your system tray.

9. After clicking on this, you should see an entry matching the SSID of your 3G25W-R with "Connected" next to it.

Mac OSX 10.6

1. Click on the Airport icon on the top right menu.

2. Select the wireless network as shown on your Wireless Security card.

3. On the new window, select "Show Password", type in the network key in the Password field and then click on OK.

4. To check the connection, click on the Airport icon and there should be a tick on the wireless network name.

Notes: For other operating system (Windows 98SE, Windows ME, Windows 2000 etc) or if you use a wireless adaptor utility to configure your wireless connection, please consult the wireless adapter documentation for additional information.

7. Appendix C: Troubleshooting

Using the indicator lights (LEDs) to Diagnose Problems

The LEDs are useful aides for finding possible problem causes.

Power LED

The Power LED does not light up.

Step	Correct Action
1	Make sure that the 3G25W-R power adaptor is connected to the device and plugged in to an appropriate power source. Use only the supplied power adaptor.
2	Check that the 3G25W-R and the power source are both turned on and device is receiving sufficient power.
3	Turn the 3G25W-R off and on.
4	If the error persists, you may have a hardware problem. In this case, you should contact your vendor.

Web Configuration

I cannot access the web configuration.PS CORRECTIVE ACTION

Step	Correct Action
1	Make sure you are using the correct IP address of the 3G25W. You can check the IP address of the device from the Network Setup configuration page.
2	Check that you have enabled remote administration access. If you have configured an inbound packet filter, ensure your computer's IP address matches it.
3	Your computer's and the 3G25W's IP addresses must be on the same subnet for LAN access. You can check the subnet in use by the router on the Network Setup page.
4	If you have changed the devices IP address, then enter the new one as the URL you enter into the address bar of your web browser.

The web configuration does not display properly.

Step	Correct Action
1	Delete the temporary web files and log in again. In Internet Explorer, click Tools, Internet Options and then click the Delete Files ... button. When a Delete Files window displays, select Delete all offline content and click OK. (Steps may vary depending on the version of your Internet browser.)

Login Username and Password

I forgot my login username and/or password.

Step	Correct Action
1	Press the Reset button for ten seconds, and then release it. When the LINK LED begins to blink, the defaults have been restored and the 3G25W-R restarts. You can now login with the factory default password "admin" (without the quotes)
2	It is highly recommended to change the default username and password. Make sure you store the username and password in a safe place.

WLAN Interface

I cannot access the 3G25W-R from the WLAN or ping any computer on the WLAN.

Step	Correct Action
1	Check the Wi-Fi LEDs on top of the unit and verify the WLAN is enabled as per the LED Indicator section.
2	If you are using a static IP address for the WLAN connection, make sure that the IP address and the subnet mask of the 3G25W-R and your computer(s) are on the same subnet. You can check the routers configuration from the Network Setup page.

Internet Access

I cannot access the Internet.

Step	Correct Action
1	Make sure the 3G25W-R is turned on and connected to the network. You can verify this by checking which LEDs are illuminated and then referring to the LED Indicator section to verify the current connection status.
2	Verify your 3G settings from the Network Setup page. If you are unsure of the required 3G Settings (APN, Username, Password, etc), please contact Rogers Customer Care.

Internet connection disconnects.

The internet connection drops out periodically.

Step	Correct Action
1	Check for available 3G coverage
2	Check for appropriate signal strength
3	Check for a schedule rules to prevent internet access from the Scheduling configuration page.
4	Contact your 3G SIM provider to verify your 3G service is active.

8. Legal and Regulatory Information

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and

this device must accept any interference received, including interference that may cause undesired operation.

Important Note:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

The transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada RF exposure requirements

In order to ensure compliance with the RF exposure requirements specified in Health Canada Safety Code 6, this device may be operated while held in the hand, but not when held close to the body, carried in a pocket or holster, or similar configuration that allows close proximity to the body."

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

1. this device may not cause interference

2. this device must accept any interference, including interference that may cause undesired operation of the device.

Son Fonctionnement est soumis aux deux conditions suivantes:

1. Le matériel ne peut étre source D'interfénces et

2. Doit acceter toutes les interferences reques, Y compris celles pouvant provoquer un fonctionnement indésirable.

This Class [B] digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada

This device has been designed to operate with the antennas listed below, and having a maximum gain of [4] dB. Antennas not included in this list or having a gain greater than [4] dB are strictly prohibited for use with this device. The required antenna impedance is [50] ohms.

CANADIAN CLASS B STATEMENT: This digital device does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications.

Cet appareil numerique respecte les limites de bruits radioelectriques applicable aux appareils numeriques de Classe B prescrities dans la norme sur le material brouilleur: "Apparelis Numeriques," NMB-003 edictee par le minister des Communications.

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bridge-utils 0.9.5

dhcpcd-1.3

ISC DHCP V2 P5

syslogd spread from busybox

wireless tools

ntpclient of NTP client implementation

GNU Wget

Availability of source code

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