





## **USER GUIDE**

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#### Save Our Environment

When this equipment has reached the end of its useful life, it must be taken to a recycling centre and processed separately from domestic waste.

The cardboard box, the plastic contained in the packaging, and the parts that make up this device can be recycled in accordance with regionally established regulations. Never dispose of this electronic equipment along with your household waste. You may be subject to penalties or sanctions under the law. Instead, ask for disposal instructions from your municipal government.

Please be responsible and protect our environment.

This manual covers the following products: NetComm 3G29WN2

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# *NetGomm®* Overview

### Introduction

This manual provides information related to the installation, operation, and utilisation of the 3G29WN2.

### **Target Users**

The individual reading this manual is presumed to have a basic understanding of telecommunications terminology and concepts.

### Prerequisites

Before continuing with the installation of your 3G29WN2, please confirm that you comply with the minimum system requirements below.

**ADSL Requirement:** 

- An activated ADSL broadband connection to an ISP (Internet Service Provider)
- . ADSL In-Line Splitter/Filter (Please refer to "Do I need a micro filter?" for more information)

Note: Connection at ADSL2 or 2+ rates depends on the service offered by your ISP; the device will operate at standard ADSL rates in the absence of the 2 or 2+ service. Consult your ISP for details.

### **3G Requirement:**

An activated 3G SIM Card

#### PC Requirement:

- A Web Browser such as Internet Explorer, Netscape Navigator, Mozilla Firefox, Opera, Safari etc.
- Computer with Windows, Macintosh, or Linux-based operating systems with a working Ethernet adapter with TCP/IP Protocol installed.
- Wireless Computer System Requirements:
  - Computer with a working 802.11b, 802.11g or 802.11n wireless adapter.

#### Do I need a micro filter?

Micro filters are used to prevent interference between phones and fax machines, and your ADSL service. If your ADSL-enabled phone line is being used with any equipment other than your ADSL Modem then you will need to use one Micro filter for each phone device in use. Telephones and/or facsimiles in other rooms that are using the same line will also require Microfilters. A suitable Micro filter can be purchased from NetComm or your Service Provider, if required.

### Notation

The following symbols are utilised in this user manual:



The following note provides a warning



The following note provides relevant information

## **Product Introduction**

### Product Overview

- Dual Internet connectivity between ADSL and 3G interfaces.
- Connect with ADSL2+ at up at 24Mbps speeds.
- Connect with 3G at up to 21Mbps speeds.
- Automatic failover from ADSL to 3G to ensure you are always online.
- The ability to share your internet with high speed Wireless N.
- Multiple wired connections possible with four Ethernet ports.
- USB port for print and storage serving functionality.

Speeds are dependent on network coverage. See your 3G provider coverage maps for more details. The total number of WiFi users can also affect data speeds. Maximum wireless signal rate and coverage values are derived from IEEE Standard 802.11g and 802.11n 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.

## Package Contents

The 3G29WN2 package consists of:

- NetComm Gateway Series ADSL2+/ 3G Router.
- Phone cable (RJ-11).
- Power Adapter.
- Quick Start Guide
- Ethernet Cable (RJ-45)
- Wireless Security Card
- Warranty Card
- 1 x Detachable WiFi antenna
- 2 x Detachable 3G antennas

If any of these items are missing or damaged, please contact NetComm Support immediately by visiting the NetComm Support website at: <a href="http://www.netcomm.com.au/contact-us/technical-support">http://www.netcomm.com.au/contact-us/technical-support</a>

## Product Features

The NetComm 3G29WN2 Dual ADSL2+/ 3G Wireless N Gateway is designed for business and home users that rely on a constant and reliable high speed Internet connection. By integrating an ADSL2+ and HSPA+ (3G) modem into one device, users will have the flexibility to decide how they connect to the internet. Featuring automatic failover, the router will automatically connect to 3G should the ADSL connection fail, providing users with a constant and reliable connection to the internet. This flexibility is a necessity for any business or personal user who engages in internet critical activities.

Both connection methods with allow you to share the internet among multiple users with a built-in wireless access point offering speeds of up to 300Mbps and four Ethernet ports for wired connection.

The USB port can be used to connect and share a printer or a storage device making it a true office in a box solution.



## Physical Dimensions and Indicators

### LED Indicators

The 3G29WN2 has been designed to be placed on a desktop. All of the cables exit from the rear for better organization. The LED indicator display is visible on the front of the router to provide you with information about network activity and device status. See below for an explanation of each of the indication lights.



igure 1: 3G29WN2 LED	Indicator Icons
----------------------	-----------------

LED	ICON	COLOUR	MODE	FUNCTION
Davia	d	Blue	On	The router is powered on.
Power	Ċ	Blue	Off	The router is not powered on.
			On	An Ethernet link is established.
LAN 1-4	<u></u> ≟₽− <u></u> 4₽	Blue	Off	There is no Ethernet link established.
			Blinking	Data is transmitting/receiving over the Ethernet connection.
			On	Local WiFi access to the Router is enabled and working.
WiFi	((m))	Blue	Off	The Wireless Module is not installed or not enabled.
			Blinking	Data is transmitting/receiving over the WiFi interface.
			On	The ADSL link is established
ADSL	ADS	Blue	Blinking slowly	There is no ADSL link established.
			Blinking	The ADSL line is training for a broadband signal.
			On A link to the Internet is established.	
		Blue	Off	Modem is in bridged mode or an ADSL connection is not present.
Internet	Ū.		Blinking	Data is transmitting/receiving over the Internet.
		Lavender		The Internet connection has auto failed over from ADSL to 3G.
	2G 🖊	Blue	On	The 3G connection is active.
3G Mode	20 BI	Dide	Off	There is no available 3G connection.
	/ 50	Lavender	On	The 2G connection is active.
		Blue	On	The 3G signal strength is strong.
3G Signal	-M	Lavender	On	The 3G signal strength is medium.
SG Signal	ッ	Red	On	The 3G signal strength is weak.
		neu	Blinking	The SIM card is not installed or not detected.
USB	aÎT.	Blue	On	A USB device is plugged into the USB port.
USD	¥	Dine	Off	There is no USB device plugged into the USB port.

Table 1: 3G29WN2 LED Indicator and Icon Functions

### 3G29WN2 Default Settings

The following tables list the default settings for the 3G29WN2.

LAN (MANAGEMENT)		
Static IP Address:	192.168.1.1	
Subnet Mask:	255.255.255.0	
Default Gateway:	192.168.1.1	

Table 2: 3G29WN2 Default Settings – LAN

WIRELESS (WIFI)		
SSID:	(Refer to the included Wireless Security Card)	
Security:	WPA-PSK/WPA2-PSK (Mixed mode)	
Security Key:	(Refer to the included Wireless Security Card)	

Table 3: 3G29WN2 Default Settings – Wireless

3G29WN2 WEB INTERFACE ACCESS		
Username:	admin	
Password:	admin	

Table 4: 3G29WN2 Default Settings - Web Interface Access

### Restore Factory Default Settings

Restoring factory defaults will reset the 3G29WN2 to its factory default configuration. Occasions may present themselves where you need to restore the factory defaults on your 3G29WN2 such as:

- You have lost your username and password and are unable to login to your 3G29WN2's web configuration page.
- You have purchased your 3G29WN2 from someone else and need to reconfigure the device to work with your ISP.
- You are asked to perform a factory reset by NetComm Support staff.

In order to restore your 3G29WN2 to its factory default settings, please follow these steps:

- Ensure that your 3G29WN2 is powered on (for at least 10 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;
- When the indicator lights return to steady blue, reset is complete. The default settings are now restored. The entire
  process takes about 45 seconds to complete;
- Once you have reset your 3G29WN2 to its default settings you will be able to access the device's configuration web interface using http://192.168.1.1 with username 'admin' and password 'admin';



## Integrated Interfaces

The following integrated interfaces are available on the 3G29WN2:



Figure 2: 3G29WN2 Rear Panel

REAR PANEL	DESCRIPTION	
3G Main / 3G Aux	3G antennas for connecting to a 3G service broadcast from a 3G base station.	
Power	Connect the supplied power adapter to this connector to power up the router.	
On /Off (lcon )	Push to turn the 3G29WN2 on and off	
USIM	USIM card slot. Insert your SIM card here.	
USB	Connect your USB printer or storage device here.	
Reset	Reset button. Depress for 10 seconds using a paperclip, toothpick or similar thin object to return the 3G29WN2 to factory default settings.	
LAN x 4	4 x 10/100 Ethernet switch to connect wired devices.	
DSL	Telephone jack (RJ-11) to connect to your telephone wall socket (ADSL Line).	
WiFi	WiFi antenna for distributing the local wireless signal.	

Table 5: 3G29WN2 Rear Panel - Interface Descriptions

## Safety and Product Care

With reference to unpacking, installation, use and maintenance of your electronic device, the following basic guidelines are recommended:

- To avoid fire or shock hazard do not use or install this product near water. For example, do not install near a bathtub, kitchen sink, laundry tub, or near a swimming pool. Also, do not expose the equipment to rain or damp areas (e.g. a wet basement).
- Do not connect the power supply cord on elevated surfaces. Allow the power cord to lie freely. There should be no obstructions in the path of the cord and no heavy items should be placed onto it. In addition, do not walk on, step on or mistreat the cord.
- To safeguard the equipment against overheating, make sure that all ventilation openings in the unit housing that offer exposure to air are unobstructed.



### WARNING

Disconnect the power line from the device before servicing.

## Transport and Handling

When transporting the 3G29WN2, it is recommended to return the product in the original packaging. This ensures the product will not be damaged.



In the event the product needs to be returned, ensure it is securely packaged with appropriate padding to prevent damage during courier transport.



# Installation and Configuration of the 3G29WN2

## Placement of your 3G29WN2

Just like your mobile phone, the location of the 3G29WN2 will affect its signal strength to a 3G Mobile Base Station (Cell Tower). The data speed achievable is relative to the 3G signal strength, which is affected by many environmental factors. Please keep in mind that the 3G29WN2 will need adequate signal strength in order to provide Internet connectivity whilst choosing a location to place your 3G29WN2 router.

Similar the 3G connection signal strength, the wireless connection signal strength between your 3G29WN2 and your WiFi devices will be stronger the closer your connected devices are to your 3G29WN2. Your wireless connection and performance will degrade as the distance between your 3G29WN2 and connected devices increases. This may or may not be directly noticeable, and is greatly affected by the individual installation environment.

If you have concerns about your network's performance that might be related to range or obstruction factors, try moving the computer to a position between three to five meters from the 3G29WN2 in order to see if distance is the problem.



Please note: While some of the items listed below can affect network performance, they will not prohibit your wireless network from functioning; if you are concerned that your network is not operating at its maximum effectiveness, this checklist may help.

If you experience difficulties connecting wirelessly between your WiFi Devices and your 3G29WN2, please try the following steps:

- In multi-storey homes, place the 3G29WN2 on a floor that is as close to the centre of the home as possible. This may mean placing the 3G29WN2 on an upper floor.
- Try not to place the 3G29WN2 near a cordless telephone that operates at the same radio frequency as the 3G29WN2 (2.4GHz).

## Avoid obstacles and interference

Avoid placing your 3G29WN2 near devices that may emit radio "noise," such as microwave ovens. Dense objects that can inhibit wireless communication include:

- Refrigerators.
- Washers and/or dryers.
- Metal cabinets.
- Large aquariums.
- Metallic-based, UV-tinted windows.
- If your wireless signal seems weak in some spots, make sure that objects such as those listed above are not blocking the signal's path (between your devices and the 3G29WN2).

## Cordless Phones

If the performance of your wireless network is impaired after considering the above issues, and you have a cordless phone:

- Try moving cordless phones away from your 3G29WN2 and your wireless-enabled computers.
- Unplug and remove the battery from any cordless phone that operates on the 2.4GHz band (check manufacturer's information). If this fixes the problem, your phone may be interfering with the 3G29WN2.
- If your phone supports channel selection, change the channel on the phone to the farthest channel from your wireless network. For example, change the phone to channel 1 and move your 3G29WN2 to channel 11. See your phone's user manual for detailed instructions.
- If necessary, consider switching to a 900MHz or 5GHz cordless phone.

## Choose the "Quietest" Channel for your Wireless Network

In locations where homes or offices are close together, such as apartment buildings or office complexes, there may be wireless networks nearby that conflict with your wireless network. Use the Site Survey capabilities found in the Wireless Utility of your wireless adapter to locate any other wireless networks that are available (see your wireless adapter's user manual), and switch your Router and computers to a channel as far away from any other detected networks as possible.

Experiment with more than one of the available channels, in order to find the clearest connection and avoid interference from neighbouring cordless phones or other wireless devices.

## Hardware installation

- 1. Connect the power adapter to the Power socket on the back of the 3G29WN2.
- 2. Plug the power adapter into the wall socket and switch on the power.
- 3. Wait approximately 60 seconds for the NetComm 3G29WN2 to power up.

## Connecting via an Ethernet cable

- 1. Connect the supplied RJ-11 cable to the DSL port on the back of your device to the phone port that supplies your ADSL service.
- 2. And/or, insert a compatible 3G SIM card into the USIM slot on the back of the device.
- 3. Connect the supplied RJ-45 Ethernet cable from one of the Ethernet ports on the back of the device to your computer.
- 4. Connect the supplied detachable antennas to the WiFi and 3G connectors on the back of the router. (Attach antennas in a clockwise direction.)
- 5. Connect the supplied power adapter to your router and press the on/off button to power the router on.

## Connecting wirelessly

Multiple wireless devices, including laptops, desktops and PDA's can be connected to your router by following these two basic steps.

1. Using your wireless device, scan for the wireless networks in your area and select the wireless network name listed on the included Wireless Security Card and then click connect.



Please note: If you changed the wireless network name during set-up, select the wireless network displaying the new name you entered.

2. Enter the wireless security key listed on the included Wireless Security Card.



Please note: If you changed the wireless security password during set-up, enter the new password you entered.

3. To ensure wireless security, we recommend that you change the default settings through the web based user interface.



## Web Based Configuration Interface Quick Setup

Please follow the steps below to configure your 3G29WN2 Wireless router via the web based configuration wizard.

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

A login screen should appear. Type "admin" (without quotations) into both the username and password fields. Then click the Ok button. This will take you directly to the Quick Setup page.



Please note: admin is the default username and password for the unit.

Basic > Quick Setup > Step 1. Internet Setup

C ADSL only C 3G only C ADSL with 3G backup

Next

Figure 3: Basic - Quick Setup - Step 1

Connecting with ADSL

- 1. Select the ADSL only box and click Next;
- 2. Enter the User ID/Password on this screen as supplied by your Internet Service Provider (ISP).

Basic > Quick Setup > ADSL Only	
	Protocol: PPPoE User ID: Password:
	Back Next

Figure 4: Basic - Quick Setup - ADSL only

3. Click on Next to use these settings,

4. You will then be asked to enter additional setup details. These additional steps are explained below.

#### Connecting with 3G

- 1. Select the 3G only box and click the Next button.
- 2. Type the APN in the APN field. This needs to be supplied by your 3G Internet Service Provider (ISP).
- 3. Select the Authentication Method as directed by your 3G ISP. Alternatively set this field to NONE if Authentication is not required.

Basic > 3G Settings				
Profile:	Custom	APN	•	
Authentication Method:	NONE	-		
APN:				
IP Compression:	Off 🔻			
Data Compression:	Off 💌			
All Bands/Automatic	C 3G-850 Only	C 3G-2100 Only	C 3G-ALL	O 2G-ALL

Back Next

Figure 5: Quick Setup - 3G Only

4. If required enter the username and password supplied to you by your 3G ISP.

NOTE: Not all 3G users will have a username/password. Only enter this information if you have been supplied one by your 3G ISP.

- 5. Click on the Next button to save these settings and continue the setup.
- 6. You will then be asked to enter additional setup details. These additional steps are explained below

Configuring 3G backup

- 1. Select the "ADSL with 3G backup" option and click the Next button.
- 2. Follow the instructions listed above for both ADSL and 3G to set up both connections.
- 3. Check the "Enable 3G Backup" box and enter your desired backup settings.

Basic > Quick Setup > Step 3. 3G backup

🗹 Enable 3G Backup

Check Interval(sec.):	3
Retry times:	10
IP Address:	

Back Next

Figure 6: Quick Setup - 3G Backup

- 4. Click on the Next button to use save settings and continue the setup.
- 5. You will then be asked to enter additional setup details. These additional steps are explained below.



Wireless Set Up

<b>V</b>	Enable Wireless			
SSID:	NetComm \	Vireless)000	C	
Select W	reless Security le	evel:		
O Non	e 🔍 w	/EP	WPA	
Network	Authentication:	Mixed	WPA2/WI	PA -PSK 💌
WPA Pre	-Shared Key:	•••••		Click here to disp
WPA Gro	oup Rekey Inter	val: 0		
WPA End	ryption: TK	IP+AES	•	

Back Next

#### Figure 7: Quick Setup – Wireless

- 1. The default settings will appear on the wireless quick setup page.
- 2. You have the option to enable or disable the wireless signal using the Enable Wireless checkbox.
- 3. The wireless SSID (network name) can be customised here. If you change the SSID, be sure to remember the new network name or write it down so you know which network to connect to.
- 4. Select the level of wireless security and the network authentication type you require and change the wireless password.
- 5. Once you have completed entering your wireless settings click the Next button.

USB Storag	e
------------	---

Basic > Quick S	tup > Step 3. USB Storage s	ettings
USB Status: del	ected	
This page allows	ou to enable USB storage .	
Enable US8		
Netbios Name:	3629WN2	
Directory Name:	USB-Storage	
		Back Next

Figure 8: Quick Setup - USB Storage

- 1. If a USB device is plugged into the USB port, it will be auto detected and you will have the choice to Enable USB storage.
- 2. If you enable USB storage you will be shown the Netbios and Directory name. These fields can be changed for your preference.
- 3. Click the Next button once you are happy with the settings.
- 4. To access the storage device open a web browser and type <u>\\Netbios\Directory\</u>. The default access path for the USB storage is <u>\\3G29WN2\USB-Storage\</u>

**USB** Print Server

Basic > Quick Setup 2 This page allows you to a	Step 4. Print Server settings enable printer support.	
🔽 Enable on-board prin	it server.	
Printer name		
Make and model		
		Back Next

Figure 9: Quick Setup - Print	

- 1. If a USB printer is plugged into the USB port, it will be auto detected and you will have the choice to Enable the on-board print server.
- 2. If you enable the device to work as a print server you will be asked to enter the printer name and make and model. Both fields can be named anything you like. The names will be used to identify the printer later.
- 3. Click the Next button once you are happy with the settings.
- 4. To complete the network printer setup, please read Appendix A of the User Manual.

#### Passwords

Hecess to your router is controlled through three user accounts, admin, support, and user

The user name "admin" has unrestricted access to change and view configuration of your router.

The user name "support" is used to allow an ISP technician to access your router for maintenance and to run diagnostics.

The user name "user" can access the router, view configuration settings and statistics.

Use the fields below to enter up to 16 characters and click "Finish" to change or create passwords. Note: Password cannot contain a space.

Usemame:
Old Password:
New Password:
Confirm Password

	-
****	

Back Finish

Figure 10: Quick Setup – Passwords

- 1. On this page you can change the router passwords for the different levels of users.
- 2. The default password for all users is the same as the corresponding username.
- 3. Once you have completed setting the passwords click the Finish button.
- 4. You will be taken back to the home page where you can view your connection status.



## Advanced Configuration – Web User Interface

## What can you do from here?

By logging into the web user interface, you are able to configure your 3G29WN2 with a wide array of basic and advanced settings. From setting wireless security, to backing up your routers settings, uploading new firmware and setting parental controls, the web user interface is a handy tool for personalizing your device to maximize its potential. Read on for a more advanced description on all elements of the web user interface.

## Logging into the user interface

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

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

- 1. Open a web browser and enter the default IP address for the Router in the web address field at the top of the window. In this case the default IP address is http://192.168.1.1
- NOTE: For local administration (i.e. LAN access), the PC running the browser must be attached using either an Ethernet or wireless connection to the router. For remote access, use the WAN IP address shown on the WUI Homepage screen and login with remote username and password.
- 2. A dialog box will appear, as illustrated below. Enter the default username and password, as defined in the Default Settings section.
  - User Name admin.
  - Password admin.
- 3. Click OK to continue.

Connect to 192.168	.1.1 <u>? ×</u>
	Ger
Router requires a us Warning: This server	1.1 at 3G29WN Dual ADSL2+ / HSPA+ ername and password. r is requesting that your username and an insecure manner (basic authentication inection).
<u>U</u> ser name:	2
Password:	
	Remember my password
	OK Cancel

Figure 11: 3G29WN2 Login

NOTE: The login password can be changed later (see Access Control > Passwords).

## Basic

## Quick Setup

After you log into the web user interface, you will be taken directly to the Quick Setup page. See the instructions listed above in "Quick Setup" for instructions to configure your device for use.

### Home

comm gateway™ series ual ADSL2+ / 3G Wireless N Gateway					NetComm	
Basic	3G Settings	Wireless	Management	Advanced	Status	
Basic > Home						
Model Name:	3G29WN2					
Board ID:	96358A-133					
Software Version:	K611-402NCMN2-0	C01_R04				
ADSL Driver Version	: A2pB025k.d22b					
Bootloader (CFE) ¥e	rsion: 1.0.37-102.6-7					
Wireless Driver Vers	ion: 5.10.120.0.cpe4.40	2.				
Device Info for 3G	[]					
Network:	2degrees					
Link:	Connected					
Mode:	HSPA+					
Signal Strength:						
SIM Info:	SIM inserted					
3G Backup:	Disable					
3G Backup Interface	None					
This information refle	cts the current status o	of your connection.				
Line Rate - Upstream	(Kbps):					

eme nave opstream (nops)		
Line Rate - Downstream (Kbps):		
LAN IPv4 Address:	192.168.1.1	
Internet Connection:	3G	
WAN IP Address:	118.148.179.199	
Default Gateway:	usb0	
Primary DNS Server:	118.148.1.10	
Secondary DNS Server:	118.148.1.20	
Date/Time:	Fri Feb 10 15:08:27 2012	

Figure 12: Basic – Home

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, 3G Settings, Wireless, Management, Advanced and Status. 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).

The following table provides further details for each field:



FIELD	DESCRIPTION
Model Name	The model number of the device.
Board ID	A unique number assigned to the Printed Circuit Board (PCB) of the router.
Software Version	The current firmware version installed on the router.
ADSL Driver Version	The current ADSL driver version installed on the router.
Bootloader (CFE) Version	The current bootloader installed on the router.
Device Info for 3G	
Network	The name of the 3G network currently detected and in use by the router.
Link	The status of the 3G connection.
Mode	The radio access technique currently used to enable internet access. Possible modes include HSUPA, HSDPA, UMTS, EDGE, GPRS or Disconnected.
Signal Strength	The current 3G signal strength the router is receiving from your 3G service provider.
SIM Info	An indication of the SIM card status, whether it is activated and ready for use.
3G Backup	The current status of the WAN failover settings – either enabled or disabled. If enabled the HSPA+ 3G connection is set to activate if the ADSL connection becomes disconnected.
3G Backup Interface	This field indicates the WAN interface that is to be backed up.
Connection Status	
Line Rate - Upstream	The upstream line rate of the ADSL connection in Kbps (e.g. 256 Kbps).
Line Rate - Downstream	The downstream line rate of the ADSL connection in Kbps (e.g. 1500 Kbps).
LAN IPv4 Address	The IP Address to access the 3G29WN2 from the local LAN network.
Internet Connection	The current internet connection type – ADSL or 3G.
WAN IP Address	The WAN IP address to access the router from a remote WAN network.
Default Gateway	The gateway address of the 3G29WN2.
Primary DNS Server	The primary DNS address that the current internet connection of the 3G29WN2 is using.
Secondary DNS Server	The secondary DNS address that the current internet connection of the 3G29WN2 is using
Date/Time	The date and time currently set on the router.

Table 6: Basic - Home Field Descriptions

## **3G Settings**

This menu includes Setup, PIN Configuration and 3G Backup Config options.

## Setup

This page allows you to select your 3G service settings according to predefined or custom profiles. Setup instructions are provided in the following sections for your assistance.

NETCOMM GATEWAYTM SERIES Dual ADSL2+ / 3G Wireless N Gateway					ľ	Net Gomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
3G Settings > Setup Profile: Authentication Method: APN: Usemame: Password:	Custom APN PAP  internet					
MTU:	Off Off Off C 3G-850 Only C 3G-	2100 Only C 3G-ALL (	D <sub>2G-ALL</sub>			
Enable NAT	Disconnect					

Figure 13: 3G Settings – Setup

Your 3G Service Provider will provide the information required to complete the first time setup instructions below. This includes profile, username and password. Only complete those steps for which you have information and skip the others.

- 1. If your SIM card is not inserted into the router, then do so now.
- 2. The Authentication Method should be provided to you by your 3G service provider. Set this field to NONE if not required.
- 3. Type the APN your 3G service provider has given you in the APN field. If you were not assigned a username and password, leave these fields empty.
- 4. Select IP compression and Data compression to be "On" or "Off". By default these fields are set to "Off".
- 5. Enter the MTU rate. If you are unsure or have no preference, leave it as the default value 1500.
- 6. Enable or disable NAT (Network Address Translation) By default this is option is enabled.
- 7. Click the Save button to save the new settings.
- 8. Press the Connect button to reboot the router and to connect to the Internet. After rebooting, the Device Info for 3G network box in the GUI Basic screen should indicate an active 3G connection.



	eway™ series )SL2+ / 30	G Wireles	s N Gatew	ay	NetComm
Basic	3G Settings	Wireless	Management	Advanced	Status
3G Settings > F	PIN Configuration				
To enable/disable	allows you to enable/disable the the PIN code, please select Char code is required to be input.	PIN code or change the PIN ge PIN Code Protection. To	N Code on the SIM card. change the PIN code please selec	t PIN Code Change.	
Enable PIN					
PIN Code: Confirm PIN Cod	••••				
Remember PIN o					
Times remaining:	3				
O PIN Code ( Old PIN Code : New PIN Code : Confirm PIN Code Times remaining:	de:				
			Apply		

Figure 14: 3G Settings - PIN Configuration

On the 3G Settings > PIN Configuration page PIN Code Protection for using a SIM card with the 3G29WN2 can be enabled or disabled. An existing PIN code can also be changed on this page.

FIELD	DESCRIPTION
Change PIN Code Protection	Select this option to make any changes to the PIN code protection of the SIM card of the 3G29WN2.
Enable PIN Lock	Use this option to enable or disable the PIN lock on the 3G29WN2's SIM card
PIN Code	Enter the current or new PIN Code.
Confirm PIN Code	Re-enter to confirm the current or new PIN Code.
Remember PIN Code	Select whether the PIN field should be automatically populated or not .
Times remaining	Enter the number of attempts to enter the PIN that can be made before a user is denied access.
PIN Code Change	Select this option to change an existing PIN code.
Old PIN Code	Enter the current PIN code.
New PIN Code	Enter the new PIN code that you wish to update to.
Confirm PIN Code	Re-enter and confirm the new PIN code that you wish to update to.
Times remaining	Enter the number of attempts to enter the PIN that can be made before a user is denied access.

Table 7: 3G Settings - PIN Configuration Settings

## **3G Backup Configuration**

On this page you are able to configure your 3G29WN2 to use the 3G connection as a backup internet connection to the ADSL service. If both connection options are made available, should the ADSL connection fail for any reason the 3G configuration will automatically initiate an Internet connection to ensure the 3G29WN2 remains connected to the Internet. Once the ADSL connection has been re-established the 3G connection will failover to the ADSL connection.

G <b>Settings &gt; 3G Backup</b> se this page to enable/disa	Configuration		N2	Advanced	Status
se this page to enable/disa	the second s				
	able the 3G Backu	p feature.			
Enable 3G Backup					
heck Interval(sec.):	3				
letry times:	10	1.1			
P Address:					

FIELD	DESCRIPTION
Enable 3G Backup	Select this option to enable the 3G connection as a backup for the ADSL connection.
Check Interval	The time in seconds that the 3G29WN2 will check the status of the current internet connection.
Retry Times	The number of ping attempts the router will make before failover in the event the internet connection drops out.
IP Address	The Public IP address to be used for checking the current Internet connection by ICMP (ping) request.
Selected WAN Interface	The WAN interface to be used as a 3G backup.

Table 8: 3G Backup Configuration Settings

Click the Save/Apply button to save any changes to the settings.



## Settings

The Wireless submenu provides access to Wireless Local Area Network (WLAN) configuration settings including:

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

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 the SSID) and restrict the channel set based on country requirements. The Wireless Guest Network function adds extra networking security when connecting to remote hosts.

	ateway™ series \DSL2+ / 3	G۷	Vire	eles	ss I	N Gateway	/	NetGomm
Basic	3G Settings		Wirek	555		Management	Advanced	Status
Wireless -	- Settings							
name (also l	lows you to configure basic features known as SSID) and restrict the cha //Save" to configure the basic wirele	nnel set ba	ised on co	interface untry req	. You can uirements	enable or disable the wireless LA	AN interface, hide the networ	k from active scans, set the wireless network
🔽 En	able Wireless							
E Hid	de Access Point							
🗖 cli	ents Isolation							
SSID:	NetComm WirelessXXXX	1						
BSSID:	00:1A:2B:87:D5:5C							
Country:	AUSTRALIA					<b>•</b>		
Max Clients: Wireless -	16 Guest/Virtual Access Points:							
Enabled	SSID	Hidden	Isolate Clients	Max Clients	BSSID			
	wl0_Guest1			16	N/A			
	wl0_Guest2			16	N/A			
	wl0_Guest3			16	N/A			
Apply/S	ave							

Figure 16: Wireless - Settings

FIELD	DESCRIPTION
Enable Wireless	A checkbox that enables (default) or disables the wireless LAN interface.
Hide Access Point	Select Hide Access Point to protect the access point from detection by wireless active scans. To check AP status in Windows, 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 wireless client to a hidden access point, the user must add the access point SSID manually to its wireless configuration.
Clients Isolation	This field stops clients PC from detecting one another in My Network Places or Network Neighbourhood and prevents one wireless client communicating with another wireless client.
SSID [1-32 characters]	SSID (Service Set Identifier) sets the wireless network name. All wireless devices attempting to connect with the router must be configured with the correct SSID to access the WLAN. If the SSID does not match, the wireless device will not be granted network access.
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 (Media 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 country listed enforces specific regulations limiting channel range. For Australia and New Zealand channels are limited to numbers 1-13.
Max Clients	The maximum number of wireless clients that can be connected to the 3G29WN2 at any one time.
Wireless Guest Network	The Guest SSID (Virtual Access Point) can be enabled by selecting the Enable Wireless Guest Network checkbox. Rename the Wireless Guest Network as you wish.

Table 9: Wireless - Settings

## Security

Wireless Security settings are used to prevent unauthorised connections to your network. This can be as basic as a neighbouring user who detects and is able to connect through your wireless network, right through to actual malicious interference or 'hacking'. Whatever the case, it is a good practice to be aware of and to use wireless network security to safeguard your data and your network.



FIELD	DESCRIPTION
Select SSID	Pre- configured to the default SSID of the NetComm Wireless settings. This field can be changed in the Wireless > Settings section.
Network Authentication	The type of wireless security you prefer to use can be set using this field. NOTE: The wireless security types available are listed in the order of level of security from least (top) to most (bottom).
WEP Encryption	The option to enable or disable your wireless security encryption.
WPA-PSK / WPA2-PSK	A newer type of wireless security that gives a more secure network when compared to WEP. The security key needs to be more than 8 characters and less than 63 characters and it can be any combination of letters and numbers.
WPA/WPA2	WPA (WiFi Protected Access) is suitable for enterprise applications. It must be used in conjunction with an authentication server such as RADIUS to provide centralized access control and management.
Encryption Strength	The strength/length of your wireless security key. 64 bit is the default setting.
Current Network Key	The current network key that is active. You have the choice of setting up to 4 different wireless security keys
Network Key 1	The value of network key 1. The default value is a1b2c3d4e5.
Network Key 2	The value of network key 2.
Network Key 3	The value of network key 3.
Network Key 4	The value of network key 4.

Table 10: Wireless - Security Settings



## Advanced

This screen allows you to control the following advanced features of the Wireless Local Area Network (WLAN) interface:

- Select the wireless channel which you wish the router to operate from.
- Force the transmission rate to a particular speed.
- Set the fragmentation threshold. This can be used to improve throughput in noisy or congested situations.
- Set the RTS threshold. RTS stands for "Request to Send". This parameter controls what size data packet the low level RF protocol issues to an RTS packet. The default is 2346.
- Set the wake-up interval for wireless clients using power-save mode.
- Set the beacon interval for the access point.
- Set Xpress mode.

Please see the Table below for an explanation of the advanced wireless settings.

Click the Apply/Save button to set any changes to the advanced wireless configuration.

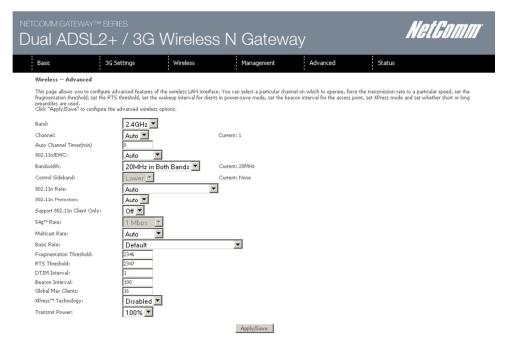


Figure 18: Wireless - Advanced Settings

FIELD	DESCRIPTION
Band	The frequency of the wireless network. 2.4GHz is standard.
Channel	Allows selection of a specific channel (1-13) or Auto mode.
Auto Channel Timer	The Auto Channel sets the length of time it takes to scan a channel in minutes.
802.11n/EWC	An equipment interoperability standard setting based on IEEE 802.11n Draft 2.0 and Enhanced Wireless Consortium (EWC).
Bandwidth	Drop-down menu specifies the following bandwidth: 20MHz in 2.4G Band and 40 MHz in 5G Band, 20MHz in both bands and 40MHz in both bands.
802.11n Rate	Drop-down menu specifies the following fixed rates. The maximum rate for bandwidth, 20MHz, is 130Mbps and the maximum bandwidth, 40MHz, is 270Mbps.
802.11n Protection	Turn off for maximized throughput. Turn on for greater security.
Support 802.11n Client Only	The option to provide wireless Internet access only to clients who are operating at 802.11n speeds.
54g Rate	In Auto (default) mode, your Router uses the maximum data rate and lowers the data rate dependent on the signal strength. The appropriate setting is dependent on signal strength. Other rates are discrete values between 1 to 54 Mbps.

Multicast rate	Setting for multicast packet transmission rate. (1-54 Mbps).
Basic Rate	Sets basic transmission rate.
Fragmentation Threshold	A threshold (in bytes) determines whether packets will be fragmented and at what size. Packets that exceed the fragmentation threshold of an 802.11 WLAN will be split into smaller units suitable for the circuit size. Packets smaller than the specified fragmentation threshold value however are not fragmented. Values between 256 and 2346 can be entered but should remain at a default setting of 2346. Setting the Fragmentation Threshold too low may result in poor performance.
RTS Threshold	Request To Send (RTS) specifies the packet size that exceeds the specified RTS threshold, which then triggers the RTS/CTS mechanism. Smaller packets are sent without using RTS/CTS. The default setting of 2347 (max length) will disables the RTS Threshold.
DTIM Interval	Delivery Traffic Indication Message (DTIM) is also known as Beacon Rate. The entry range is a value between 1 and 65535. A DTIM is a countdown variable that informs clients of the next window for listening to broadcast and multicast messages. When the AP has buffered broadcast or multicast messages for associated 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 value is 1.
Beacon Interval	The amount of time between beacon transmissions in is milliseconds. The default is 100 ms and the acceptable range is 1 – 65535. The beacon transmissions identify the presence of an access point. By default, network devices passively scan all RF channels listening for beacons coming from access points. Before a station enters power save mode, the station needs the beacon interval to know when to wake up to receive the beacon.
Global Max Clients	Here you have the option of setting the limit of the number of clients who can connect to your wireless network.
Xpress Technology	Broadcom's Xpress™ Technology is compliant with draft specifications of two planned wireless industry standards. It has been designed to improve wireless network efficiency. The default value is disabled.
Transmit Power	The option of decreasing the transmitting power of your wireless signal

Table 11: Wireless - Advanced Settings



## 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.

	NETCOMM GATEWAY <sup>TM</sup> SERIES Dual ADSL2+ / 3G Wireless N Gateway								
Basic	3G Settings	Wireless	Management	Advanced	Status				
Wireless MAC	Filter								
Select SSID: Ne	etComm WirelessXXXX	•							
MAC Restrict Mode	: O Disabled O Allow	C Deny							
MAC Address	Remove Edit								
Add Remove									

Figure 19: Wireless - MAC Filter

Disabled – Disables MAC filtering			
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			
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:xx where xx are hexadecimal numbers. A maximum of 60 MAC addresses can be added.			

Table 12: Wireless - MAC Filter Settings

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

	comm gateway™ series µal ADSL2+ / HSPA+ Router					Gomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Wireless M	AC Filter					
Enter the MAG	C address and click "Apply/Save	e" to add the MAC addr	ess to the wireless MAC add	ress filters.		
[www.www.www	(202)					

MAC Address:

		_
	1.10	
ADD	IV/Save	

Figure 20: Wireless – MAC Filter - Add MAC Address

## Wireless Bridge

The following screen appears when selecting Wireless Bridge, and gives a detailed explanation of how to configure wireless bridge features for the wireless LAN interface.

Click Apply/Save to implement new configuration settings.



#### Refresh Apply/Save

Figure 21: Wireless - Wireless Bridge

FIELD	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 the Wireless Bridge restriction, which means that any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) turns the wireless bridge restriction on. Only those bridges selected in Remote Bridges will be granted access. Click Refresh to update the station list when Bridge Restrict is enabled.

### 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.

NETCOMM GATE		à Wireles	s N Gatew	ay	M	let Gomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Wireless Stat	ion Info					
This page shows a	uthenticated wireless stations and	their status.				
MAC Associa	ted Authorized SSID Int	erface				

Refresh

Figure 22: Wireless - Station Info

FIELD	DESCRIPTION
MAC	The MAC address of any connected wireless client.
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.
SSID	The SSID(Service Set Identifier) of your wireless network.
Interface	The wireless interface being used to connect to the network.

le 14: Wireless - Station Info Fields



# *NetComm* Management

## **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 Routers firmware.

### Backup

The following screen appears when Backup is selected. Click the Backup Settings button to save the current configuration settings. You will be prompted for the location to save the backup file to on your PC.



### Update

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

NETCOMM GATEN		i Wireles	s N Gatewa	ay	Ne	t Comm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Tools Update S Update the router se Settings File Name:	attings. You may update your rou	iter settings using your save	ed files. Update Settings			

Figure 24: Management - Device Settings - Update

### **Restore Default**

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

NETCOMM GATE Dual AD		à Wireles	s N Gatew	ay	M	let Comm <sup>®</sup>
Basic	3G Settings	Wireless	Management	Advanced	Status	
Tools Restore	Default Settings					
Restore the router :	settings to the Factory defaults.					

Figure 25: Management - Device Settings - Restore Default Settings

NOTE: The Restore Default function has the same effect as the reset button. The device board hardware and the boot loader support the reset to default 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.

### Update Firmware

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

- 1. Obtain an updated software image file
- 2. Enter the path and filename of the firmware image file in the Software File Name field or click the Browse button to locate the image file.
- З. Click the Update Software button once to upload and install the file.

G291

inkni

System Name:

System Location:

System Contact: Trap Manager IP:

NETCOMM GATE	NetGomm				
Basic	3G Settings	Wireless	Management	Advanced	Status
Management >	Device Settings > Update Fir	mware			
Step 1: Obtain th	e latest Firmware file from NetCo	mm.			
Step 2: Enter the	path to the file location in the box	below or click the "Browse	" button to locate the file.		
Step 3: Click the	"Update Software" button once to	upload the new Firmware	file.		
Software File Nan	Browse				
			Update Software		
		Figure 26: N	Aanagement - Device Setting	s - Update Firmware	

### 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 3G29WN2 (if SNMP is 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.

NETCOMM GATE	eway™ series )SL2+ / 30	G Wireles	s N Gatew	ay		NetGomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
SNMP - Configu	ıration					
Simple Network N	Nanagement Protocol (SNMP) allo	ws a management application	n to retrieve statistics and status f	from the SNMP agent in this	device.	
Select the desired	values and click "Apply" to config	jure the SNMP options.				
SNMP Agent	O Disable 💿 Enable					
Read Community: Set Community:	public					

Save/Apply

Figure 27: Management - SNMP

OPTIONS	DESCRIPTION
Read Community	Read device Settings.
Set Community	Read and change device settings.
System Name	Default system name is 3G29WN2.
System Location	User defined value.
System Contact	User defined value.
Trip Manager IP	The IP address of the administrator machine.



## TR-069 Client

TR-069 enables provisioning, auto-configuration or diagnostics to be automatically performed on your router if supported by your Internet Service Provider (ISP).



Figure 28: Management - TR-069 Client

FIELD	DESCRIPTION			
Inform	Set to enable to activate TR-069 client settings.			
Inform interval	Time in seconds that data is sent to the Auto-Configuration Server (ACS).			
ACS URL	The address where the ACS server is located.			
ACS User Name	The user name to access the ACS server.			
ACS Password	The password to access the ACS server.			
WAN Interface used by TR-069 Client	The connection used to send and receive data to the ACS server.			

Table 16: Management - TR-069 Settings

## SNTP

This interface allows you to configure the time settings of the 3G29WN2.

Basic	3G Settings	Wireless	Management	Advanced	Status	
Time settings						
This page allows you to co	onfigure the device's time	settings.				
Automatically synchr	onize with Internet time s	ervers				
First NTP time server:	Other		nm.pool.ntp.or			
Second NTP time server:	Other		nm.pool.ntp.or			
Third NTP time server:	None					
Fourth NTP time server:	None					
Fifth NTP time server:	None	-				
		Canberra, Melbourne,		(		

FIELD	DESCRIPTION
First NTP Time Server	Select the required internet time server.
Second NTP Time Server	Select a second time server if required.
Time Zone Offset	Set the local time zone.

Table 17: Management - SNTP Settings

NOTE: SNTP must be activated to use Parental Control.

### Access Control

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

- Services
- Passwords

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

#### 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. The following access services are available: FTP, HTTP, ICMP, SNMP, SSH, TELNET, and TFTP. Click the Apply/Save button after making any changes to continue.

	eway™series )SL2+ / 3G '	Wireless N	Gatewa	y	Nei	Gomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Management >	Access Control > Services					
The following por	I List ("SCL") enables or disables servic ts are not recommended for HTTP rem pose in some particular case (21, 2121,	note management in case conflict v	vith them for other 1, 16116)			
		Services	WAN			
		FTP	Enable			
		НТТР	Enable 80 port			
		ICMP	🗖 Enable			
		SNMP	🗖 Enable			
		SSH	🗖 Enable			
		TELNET	Enable			
		TFTP	Enable			
			Save/Apply			
		Figure	30: Management - A	ccess Control - Serv	vices	

### 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 the Apply/Save button after making any changes to continue.

comm gateway Jal ADSI		i Wireless	N Gatewa	ay		NetGomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Access Control Pas	swords					
Access to your router is c	ontrolled through three user	accounts: admin, support, and	user			
The user name "admin" h	has unrestricted access to ch	ange and view configuration o	f your router.			
The user name "support"	is used to allow an ISP tec	nnician to access your router fi	or maintenance and to run diagn	stics.		
The user name "user" car	n access the router, view cor	figuration settings and statistic	cs.			
Use the fields below to e	nter up to 16 characters and	click "Apply/Save" to change	or create passwords. Note: Pas	word cannot contain a spa	ce.	
Usemame:		•				
Old Password:	****					
New Password:						
Confirm Password:						
			Apply/Save			

Figure 31: Management - Access Control - Passwords



### Save/Reboot

This option saves the current configuration settings and reboots the 3G29WN2 router.

NETCOMM GATE	way™ series SL2+ / 30	NetComm					
Basic	3G Settings	Wireless	Management	Advanced	Status		
Click the button below to reboot the router.							

- NOTE 1: 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.
- NOTE 2: 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.

## Advanced

## ATM Interface

The ATM interface page shows the settings of all available DSL ATM interfaces.

NETCOMM GATEWAYM SERIES Dual ADSL2+ / 3G Wireless N Gateway										
Basic	3G Settings	W	reless	Mar	nagement	Advance	d	St	atus	
	DSL ATM Interface Configuration Choose Add, or Remove to configure DSL ATM interfaces.									
	Interface	Vpi Vc	DSL Latency	Category	Link Type	Connection Mode	Qo\$	Remove		
	atm0 8 35 Path0 UBR EoA DefaultMode Enabled									

Add Remove

Figure 32: Advanced - ATM Interfaces

FIELD	DESCRIPTION
Interface	This field shows the interface name.
VPI	This field shows the VPI value. For most Australia connections the VPI is 8, for most new Zealand connections the VPI is 0.
VCI	This field shows the VCI value. For most Australia connections the VCI is 35, for most new Zealand connections the VCI is 100.
DSL Latency	The value of the DSL Latency.
Category	This field shows the ATM service classes.
Link Type	This field shows the type of link in use.
Connection Mode	This field shows the selected mode of connection.
QoS	This field shows the status of the Quality of Service (QoS) function.
Remove	Select this field to remove the ATM configuration.

Table 18:Advanced - ATM Interface Settings



## WAN Service

Select WAN Service from the Advanced menu to display the status of all configured PVC(s). A new PVC can be added or an existing entry can be edited.

NETCOMM GATEWAY <sup>TM</sup> SERIES Dual ADSL2+ / 3G Wireless N Gateway									NetComm			
Basic	3G Settin	gs	Wirele	ess	Manag	gement		Advanc	ed:	s	tatus	
Wide Area Network (WAN) Service Setup Choose Add, Remove or Edit to configure a WAN service over a selected interface. ETH and PTM/ATM service can not coexist.								_				
	Interface	Description	Туре	¥lan8021p	VlanMuxId	ConnId	Igmp	NAT	Firewall	Remove	Edit	
	ppp0	pppoe_0_8_35	PPPoE	N/A	N/A	N/A	Disabled	Enabled	Enabled		Edit	

#### Add Remove

Figure 33: Advanced - WAN Service

FIELD	DESCRIPTION
Interface	This field shows the interface name that the PVC uses.
Description	A descriptive name assigned to the PVC.
Туре	This field shows what type of connection the PVC is.
VLAN802.1p	The VLAN tag of the PVC (if applicable).
VLANMuxID	The MUX Server ID of the selected PVC.
ConnID	The VLAN Connection ID of the selected PVC.
IGMP	This field indicates whether IGMP multicast traffic is enabled or disabled for the selected PVC.
NAT	This field indicates whether Network Address Translation (NAT) is enabled or disabled.
Firewall	This field indicates whether the inbuilt firewall is enabled or disabled for the selected PVC.

Table 19: Advanced - WAN Service Settings

### NETCOMM GATEWAY™ SERIES - 3G29WN2 - Dual ADSL2+/3G Gateway

						_
NETCOMM GATE					NetGomm	
Dual AD	SL2+ / 30	G Wireless	s N Gatew	ay	notoomm	
Basic	3G Settings	Wireless	Management	Advanced	Status	
PPP Username						
PPP usually requir	es that you have a user name an	id password to establish your o	connection. In the boxes below, e	enter the user name and passw	word that your ISP has provided you.	
PPP Usemame: PPP Password: PPPoE Service Na Authentication Me		×				
Enable Fulle	one NAT					
🔲 Dial on dem	and (with idle timeout timer)					
PPP IP exte	nsion					
Enable NAT						
Enable Fire	vall					
Use Static I	Pv4 Address					
MTU: 1492						
Enable PPF	Debug Mode					
Bridge PPP	oE Frames Between WAN and	Local Ports				
Multicast Prex	¥ 1P Multicast Proxy					
Enable ML	Multicast Proxy					
		Figure 2	Back Next	Corvice Cottin		
		Figure 3	4: Advanced - WAN	service settings		

FIELD	DESCRIPTION
PPP Username	Enter your broadband username as supplied by your Internet Service Provider (ISP) into this field.
PPP Password	Enter your broadband password as supplied by your Internet Service Provider (ISP) into this field.
PPPoE Service Name	A name to identify the PPP connection should be entered into this field.
Authentication Method	The type of authentication the connection uses. If you are unsure which option to use select the AUTO option.
Enable Fullcone NAT	Enable 1 to 1 mapping of an IP address and port to an internal host.
Dial On demand	Initiate an internet connection when data traffic bound for the internet passes through the router.
PPP IP Extension	Enable PPP IP Extension for this connection (if supported by your ISP).
Enable NAT	Enable Network Address Translation (NAT) for this connection.
Enable Firewall	Enable the inbuilt firewall for this connection.
Use Static IP V4 Address	Use a Static IP Address (as supplied by your ISP) for this connection.
MTU	Set the MTU (Maximum Transmit Unit) size. A PPPoE connection requires an MTU of 1492.
Enable PPP Debug Mode	Enable extended PPP logging for this connection.
Bridge PPP Connections between WAN and Local ports	Use this field if you need to configure your PPPoE connection from a LAN connected host instead of the router.
Enable IGMP Multicast Proxy	Use this option to enable IGMP Multicast support on the connection.
Enable MLD Multicast proxy	Enable IPV6 IGMP Multicast support on the connection.

Table 20: Advanced - WAN Service Settings



# LAN

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

NETCOMM GATEWAY <sup>T</sup> Dual ADSL		Wireless	N Gatewa	ay	Ke	tGomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Local Area Network (L	AN) Setup					
Configure the Router IP Ad	ldress and Subnet Mask for	LAN interface. GroupName	Default 💌			
IP Address: Subnet Mask:	192.168.1.1 255.255.255.0					
Enable IGMP Snoopi	ng					
End IP Address: I Leased Time (hour) (2 OPTION 42: OPTION 66: OPTION 150: OPTION 160: Static IP Lease List: (A MAC Address IP Add	r 92.168.1.2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	a configurad)				

 $\square$  Configure the second IP Address and Subnet Mask for LAN interface

Figure 35: Advanced - LAN

See the field descriptions below for more details.

FIELD	DESCRIPTION
IP Address	The IP address of the LAN interface.
Subnet Mask	Enter the subnet mask for the LAN interface.
Enable IGMP Snooping	Enable by ticking the box. Standard Mode: In standard mode multicast traffic will broadcast to all bridge ports when no client subscribes to a multicast group. 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 broadcast to the bridge ports.
Enable LAN Side Firewall	The option to enable a firewall on the LAN side.
Disable DHCP Server	This option disables the DHCP server and should only be selected when using a Static IP address.
Enable DHCP Server	On selecting this field enter the start IP address and the end IP address as well as the lease time. With the DHCP server enabled the router automatically assigns the IP address, subnet mask , default gateway and DNS server addresses to all DHCP clients connecting to the router.
Enable DHCP Server Relay	Select this option to relay DHCP requests from a subnet with no DHCP server on it to a DHCP server on a different subnet. By default this option is disabled. To enable DHCP relay , first disable NAT and then press the Save button.
Configure the Second IP Address and Subnet Mask for LAN interface	Use this option to configure a second IP address for a second LAN interface. Enter the IP address and subnet mask of the secondary LAN connection.

Table 21: Advanced - LAN Settings

You can set a static DHCP address for a particular host by clicking the Add entries button and then entering the appropriate MAC and IP address for the nominated host. This effectively reserves an IP address for a particular LAN client.

# NAT

# 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.

NETCOMM GATEWAYTM SERIES Dual ADSL2+ / 3G Wireless N Gateway				NetCom	///	
Basic	3G Settings	Wireless	Management	Advanced	Status	
NAT Virtual S Virtual Server allov	•	rom the WAN side (identified	by Protocol and External port) to	the Internal server with priv	ate IP address on the LAN side. The Internal port i	z

Virtual Server allows you to direct incoming traffic from the WAN side (identified by Protocol and External port) to the Internal server with 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 32 entries can be configured.

Add Remove

Service Name External Port Start External Port End Protocol Internal Port Start Internal Port End Server IP Address WAN Interface Remove Edit

Figure 36: Advanced - NAT - Virtual Server

To add a Virtual Server, click the Add button. The following screen will display.

Basic	3G Settings	Wireless	Management	Advanced	Status
NAT Virtual :	Servers				
modified direct the same value		same value as "External			NOTE: The "Internal Port End" cann art", then "Internal Port End" will be
Use Interface	pppoe_0_8_35/pp	p0 💌			
Service Name:	nrice: Select One		-		
<ul> <li>Select a Ser</li> <li>Custom Se</li> </ul>					
	ess: 192.168.1.				
			Apply/Save		
External Port			t Start Internal Port End		
	ТС				
	TC				
	ТС	P 📕			
		Figure 37: Advar	nced - NAT - Add Virt	ual Server	

FIELD	DESCRIPTION
Select a Service or custom Server	Select a pre-configured port forwarding rule or choose custom server to create your own port forwarding rule.
Server IP Address	Enter the IP address of the local server.
External Port Start	Enter the starting external port number (when custom server is selected). When a service is connected this field will be completed automatically.
External Port End	Enter the ending external port number (when custom server is selected). When a service is connected this field will be completed automatically.
Protocol	Options include TCP, UDP or TCP/UDP.
Internal Port Start	Enter the starting internal port number (when custom server is selected). When a service is connected this field will be completed automatically.



Internal Port End

Enter the ending internal port number (when custom server is selected). When a service is connected this field will be completed automatically. *Table 22: Advanced - NAT - Add Virtual Server Settings* 

# 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.

	ateway™ series \DSL2+ / 3	G Wirele	ss N Ga	teway			NetGomm
Basic	3G Settings	Wireless	Manage	ment	Advanced	Status	
NAT Por	t Triggering Setup						
application or	tions require that specific ports in t the LAN initiates a TCP/UDP cor tion on the LAN side using the 'Op	nection to a remote party us	ing the 'Triggering Ports'.				
			Add Re	move			
	Ap	plication Name Protoco	Frigger I Port Range Start End Proto	Open col Port Range Start End	WAN Interface	Remove	

Figure 38: Advanced - NAT - Port Triggering

To add a Trigger Port, press the Add button. The following screen will be displayed.

Basic	3G Settings		Wireless	Man	agement	Adv	anced	Status	
NAT Port Tri	ggering								
configure the port	such as games, video conf settings from this screen by	selecting an e	xisting application o	ns and others requi r creating your ow	ire that specific p n (Custom appli	orts in the Roi ation)and click	iter's firewall be "Save/Apply"	opened for access by to add it.	the applications. You can
-	ber of entries that can								
Use Interface Application Name:		8_35/ppp0	•						
	application: Select On	e	•						
C Custom ap	plication:								
				Save	Apply				
Trigger Port S	tart Trigger Port End T			tart Open Port	-				
					TCP	-			
			1		TCP				
					TCP				
			- -		TCP TCP				
					TCP				
					TCP				
			<b>,</b>		TCP	-			
				Save	Apply				
		Fig	gure 39: Adv	anced - NA	T - Add Poi	rt Trigger			

FIELD	DESCRIPTION
Select an Application or Custom Application	A user can select a pre-configured application from the list or select the Custom Application option to create custom application settings.
Trigger Port Start	Enter the starting trigger port number (when you select Custom Application). When an application is selected the port range values are automatically entered.
Trigger Port End	Enter the ending trigger port number (when you select Custom Application). When an application is selected the port range values are automatically entered.
Trigger Protocol	Options include TCP, UDP or TCP/UDP.
Open Port Start	Enter the starting open port number (when you select Custom Application). When an application is selected the port range values are automatically entered.

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Open Port End	Enter the ending open port number (when you select Custom Application). When an application is selected the port range values are automatically entered.
Open Protocol	Options include TCP, UDP or TCP/UDP.

Table 23: Advanced - NAT - Add Port Trigger Settings



# DMZ Host

The 3G29WN2 will forward IP packets from the Wide Area Network (WAN) that does 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. To deactivate the DMZ Host function clear the IP address field and press the Save/Apply button.



Figure 40: Advanced - NAT - DMZ Host

# Security

#### **IP** Filtering

The IP Filtering function 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 for 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.

NETCOMM GATEWA		Wireless N	I Gate	eway			NetGomm
Basic	3G Settings	Wireless	Managemer	nt Advanced	d	Status	
Outgoing IP Filterin By default, all outgoing		l, but some IP traffic can be <b>BLOC</b> I	<b>KED</b> by setting u	p filters.			
	e to configure outgoing IP filte		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
	Filter Name Prot	ocol Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove Edi	τ
		1	Add Remov	e			

Figure 41: Advanced - Security - Outgoing IP Filter

To add an outgoing IP filtering rule, click the Add button. The following screen will be displayed.

NETCOMM CATEWAY <sup>TM</sup> SERIES Dual ADSL2+ / 3G Wireless N Gateway						Kel	<i>Comm</i>
	Basic	3G Settings	Wireless	Management	Advanced	Status	
	Add IP Filter Outgoin	g					
	The screen allows you to cre satisfied for the rule to take e	ate a filter rule to identi effect. Click 'Apply/Sav	fy outgoing IP traffic by spe e' to save and activate the l	cifying a new filter name and at le filter:	east one condition below. All	of the specified conditions in this filt	er rule must be
	Filter Name:						
	Protocol:		<b>•</b>				
	Source IP address:	ĺ .					
	Source Subnet Mask:						
	Source Port (port or port:port	):					
	Destination IP address:						
	Destination Subnet Mask:						
	Destination Port (port or port	:port):					

Apply/Save

Figure 42: Advanced - Security - Add Outgoing IP Filter

FIELD	DESCRIPTION			
Filter Name	The filter rule descriptive name.			
Protocol	Options include TCP, UDP, TCP/UDP or ICMP Source IP Address.			
Source IP Address	Enter the local source IP address from where the data originates.			
Source Subnet Mask	Enter the local source subnet mask.			
Source Port (port or port:port)	Enter the source port number or port range for the filter rule.			
Destination IP Address	Enter the destination IP address.			
Destination Subnet Mask	Enter the destination subnet mask			
Destination Port (port or port:port)	Enter the destination port number or port range for the filter rule.			

Table 24: Advanced - Security - Add Outgoing IP Filter Settings



#### 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.



Figure 43: Advanced - Security - Incoming IP Filter

To add an incoming IP filtering rule, click the Add button. The following screen will display.

NETCOMM GATEW		i Wireless	s N Gatew	ay	NetGomm
Basic	3G Settings	Wireless	Management	Advanced	Status
Add IP Filter In	coming				
The screen allows you satisfied for the rule to	i to create a filter rule to identif take effect. Click 'Apply/Save	y incoming IP traffic by spec to save and activate the fil	ifying a new filter name and at ter.	least one condition below. All	of the specified conditions in this filter rule must be
Filter Name:					
Select one or more W	ii iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	elow to apply this rule.	led) and LAN Interfaces		
			Apply/Save		

Figure 44: Advanced - Security - Add Incoming IP Filter

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

### Parental Control

The Parental Control feature allows you to take advanced measures to ensure the computers connected to the LAN are used only when and how you decide.

#### Time Restriction

This Parental Control function allows you to restrict access from a Local Area Network (LAN) connected device to an outside network through the router on selected days and at certain times. Make sure to activate the Internet Time server synchronization as described in the SNTP section, so that the scheduled times match your local time.

NETCOMM GATE Dual AD	way™series )SL2+ / 3G	Wireles	s N Gatew	vay		NetGomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Access Time Re	estriction A maximum 16 o	entries can be configure	èd.			
	R	ule Name MAC Mon	Tue Wed Thu Fri Sat	Sun Start Stop Remo	ve	
			Add Remove			
		Figure 45: Adv	vanced - Parental Cont	trol - Time Restrictio	on	

To add a time restriction rule press the Add button. The following screen will appear.

series 2+ / 3G	i Wireless	N Gatewa	ау	NE	et <i>Comm</i>
3G Settings	Wireless	Management	Advanced	Status	
striction to a special LA N device, click the "Ot pconfig /all".	N device connected to the Ro her MAC Address" button an	outer. The 'Browser's MAC Addre d enter the MAC address of the o	ss' automatically displays the other LAN device. To find out	MAC address of the LAN devi the MAC address of a Windov	ce where the browser vs based PC, go to
00:0f:b0:fa:9	2:57				
Mon Tue W	ed Thu Fri Sat Sun				
		Apply/Save			
5 h F	2+/3G 3G Settings triction to a special LA 4 device, click the "Ot sconfig fall". 00:0f:b0:fa:9	2+ / 3G Wireless 3G Settings Wireless triction to a special LAN device connected to the R N device, click the "Other MAC Address" button an config fall".	2+ / 3G Wireless N Gatewa 35 Settings Wireless Management triction to a special LAN device connected to the Routes The 'Browser's MAC Addres v device, click the "Other MAC Address" button and enter the MAC address of the of config fail".	2+ / 3G Wireless N Gateway         35 Settings       Wireless         35 Settings       Wireless         Management       Advanced         triction to a special LAN device connected to the Router. The 'Browser's MAC Address' automatically displays the 'Other MAC Address' button and enter the MAC address of the other LAN device. To find out people fails.         Uniof-bolfa:92:57         MonTueWedThu Fri Sat Sun         Image: Sate Supervised Sate Sate Sate Sate Sate Sate Sate Sate	C+ / 3G Wireless N Gateway     Wireless     Wireless     Wireless     Management     Advanced     Status       triction to a special LAN device connected to the Router. The 'Browser's MAC Address' automatically displays the MAC address of the LAN devi     verify, click the "Other MAC Address" button and enter the MAC address of the other LAN device. To find out the MAC address of a Window     config fail".      Outor fue Wirele Fri Sat Sum     Outor fue Fri Sat Sum     Outor f

Figure 46: Advanced - Parental Control - Add Time Restriction

#### See the instructions below. Press the Apply/Save button to save a time restriction rule.

FIELD	DESCRIPTION					
Rule Name	A user defined name for the time restriction rule.					
Browser's MAC Address	Browser's MAC Address The MAC address of the network card of the computer running the browser.					
Other MAC Address	er MAC Address The MAC address of a second LAN device or network card.					
Days of the Week The days of the week for which the rules apply.						
Start Blocking Time	The time of day when the restriction starts.					
End blocking time	The time of day when the restriction ends.					

Table 25: Advanced - Parental Control - Add Time Restriction Settings



#### **URL** Filter

With the URL filter, you are able to add certain websites or URLs to a safe or blocked list. This will provide you added security to ensure any website you deem unsuitable will not be able to be seen by anyone who is accessing the Internet via the 3G29WN2. Select the 'To block' or 'To allow' option and then click Add to enter the URL you wish to add to the URL Filter list.



Figure 47: Advanced - Parental Control - URL Filter

Once you have chosen to add a URL to the list you will be prompted to enter the address. Simply type it in and select the Apply/Save button.

NETCOMM GATE	way™ series SL2+ / 3G	NetGomm				
Basic	3G Settings	Wireless	Management	Advanced	Status	
Parental Contro	l URL Filter Add					
Enter the URL addr	ess and port number then click "S	ave/Apply" to add the entry	/ to the URL filter.			
URL Address						
Port Number:		(Accepts 80 or 80	080 as Port Number,)			
			Save/Apply			

Figure 48: Advanced - Parental Control - Add URL Filter

## Quality of Service

Quality of Service offers a defined level of performance in a data communications system - for example the ability to guarantee that video traffic is given priority over other network traffic to ensure that video streaming is not disrupted by other network requirements. This means that should you be streaming video and someone else in the house starts downloading a large file, the download won't disrupt the flow of video data.



Figure 49: Advanced - QoS - QoS Management Configuration

To enable QoS select the Enable QoS checkbox and set the Default DSCP (Differentiated Services Code Point) Mark. Then press the Apply/Save button.

#### Queue Setup

ial ADS			3G W	ireles	s N Ga	atev	vay			NetComi
Basic		3G Settings	· · · ·	Wireless	Mana	gement		Advanced	Statu	5
<b>QoS Queue Setup</b> If you disable WMM fur	nction in	the Wireless P	age, queues rela	ed to wireless wil				1		
Name	Key	Interface	Precedence	DSL Latency	PTM Priority	Enable	Remove			
WMM Voice Priority	1	wl0	1			Enabled				
WMM Voice Priority	2	wl0	2			Enabled				
WMM Video Priority	3	wl0	3			Enabled				
WMM Video Priority	4	wl0	4			Enabled				
WMM Best Effort	5	wl0	5			Enabled				
WMM Background	6	wl0	6			Enabled				
WMM Background	7	wl0	7			Enabled				
WMM Best Effort	8	wl0	8			Enabled				
Add Enable	Remo	re						-		

Figure 50: Advanced -QoS - Queue Setup



Click Add to display the following screen.

comm catewaytms ual ADSL2			NetGomm		
Basic	3G Settings	Wireless	Management	Advanced	Status
QoS Queue Configuration					
The screen allows you to confi will be used by the classifier to 'Apply/Save' to save and activ	place ingress packets appr	nd assign it to a specific network ropriately. <b>Note: Lower intege</b>	interface. Each of the queues c r values for precedence ir	an be configured for a specific n <b>ply higher priority for t</b>	precedence. The queue entry configured here his queue relative to others Click
Name:	I	1			
Enable:	Enable 💌				
Interface:	ppp0(0_8_35) 💌	1			
Precedence:	1 💌				
DSL Latency:	Path0				
			Apply/Save		

Figure 51: Advanced - QoS - Add Queue Configuration

The above screen allows you to configure a QoS queue entry and assign it to a specific network interface. Each of the queues can be configured for a specific precedence. The queue entry configured here will be used by the classifier to place ingress packets appropriately.

NOTE: Precedence level 1 relates to higher priority while precedence level 3 relates to lower priority.

QoS Classification

	tcomm gateway™ series ual ADSL2+ / 3G Wireless N Gateway									NetGomm									
Basic			30	5 Settings		Wirel	ess			Manag	gement		Adva	anced		Sta	atus		
Choose /	Add or R	emove	to config	ure network	n 32 entrie traffic classe 'age, classific	s.	2		not ta	ake effe	ct								
					CLASS	IFICAT	ION CRI	TERIA						CLAS	SIFICAT	ION RES	SULTS		
Class Name	Order	Class Intf	Ether Type		DstMAC/ Mask		DstIP/ Mask	Proto	Src Port	Dst Port	DSCP Check	802.1P Check	Queue Key	DSCP Mark	802.1P Mark	¥lanID Tag	Rate Control(kbps)	Enable	Remove
								Ad		Enable		move							

Click the Add button to configure network traffic classes.

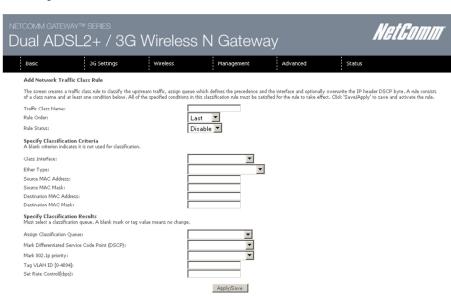


Figure 53: Advanced - QoS - Add Network Traffic Rule

The above screen creates a traffic class rule to classify the upstream traffic, assign queuing priority and optionally overwrite the IP header TOS (type of service) byte. A rule consists of a class name and at least one condition. All of the specified conditions in this classification rule must be satisfied for the rule to take effect.

Click the Apply/Save button to save and activate the rule.

# Routing

The Default Gateway, Static Route, Policy Routing and Dynamic Route settings can be found in the Routing option of the Advanced menu.

#### Default Gateway

Select your preferred WAN interface from the drop down box.



#### Static Route

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

NETCOMM GATE		Wireles	s N Gatew	ay	Net	Gomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Routing Static	Route (A maximum 32 entr	ies can be configured	1			
		Destination	Subnet Mask   Gateway   Inte	erface Remove		
			Add Remove			

Figure 55: Advanced - Routing - Static Route

Click the Add button to display the following screen.

NETCOMM GATEM		i Wireles	s N Gatew	ay	2	NetGomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Routing Static R	toute Add					
Enter the destination	network address, subnet mask,	gateway AND/OR availab	le WAN interface then click "Apply	r/Save" to add the entry to I	the routing table.	
Destination Network Subnet Mask:	Address:					
Use Interface	l/br0 💌					
Use Gateway IP Ad	dress					
			Apply/Save			

Figure 56: Advanced - Routing - Add Static Route

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



#### Policy Routing

This function allows you to add policy rules to certain situations.



Figure 57: Advanced - Routing - Policy Routing

#### Click Add to display the following screen.

NETCOMM GATE	way™ series SL2+ / 3G	Nel	t <i>Gomm</i>			
Basic	3G Settings	Wireless	Management	Advanced	Status	
Policy Routing S Enter the policy nan Note: If selected "N Policy Name: Physical LAN Port: Source IP:	ettup me. policies, and WAN inverface th MER" as WAN inverface, default g	nen dick "Save(Apply" to a ateway must be configured.	dd the entry to the policy routing	table.		
Use Interface ppp Gateway:	ooe_0_8_35/ppp0 💌					
			Save/Apply			

Figure 58: Advanced - Routing - Add Policy Route

#### Enter a, select the LAN port to be used, enter the source IP address

FIELD	DESCRIPTION						
Policy Name	A user defined name for the policy route.						
Physical LAN Port	nysical LAN Port The LAN port to be used for the policy.						
Source IP The IP address of the LAN device involved with the policy.							
Use Interface Select the Interface that the policy will employ.							
Gateway	Enter the gateway address.						

#### Dynamic Routing

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, and enter a check in the Enabled checkbox for that interface. Click Apply/Save to save the configuration and to start or stop dynamic routing.



Figure 59: Advanced - Routing - Dynamic Routing

# DNS

#### **DNS** Server

This page allows the user to enable automatic DNS settings detected from the Internet Service Provider or specify their own DNS server address manually.



igure 60: Advanced - DNS - DNS Server

#### 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.



Figure 61: Advanced - DNS - Dynamic DNS

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 the following screen will display.

ietcomm gate Dual AD		à Wireles	s N Gatew	ay	Nel	tGomm
Basic	3G Settings	Wireless	Management	Advanced	Status	
Add Dynamic DM	vs					
This page allows y	ou to add a Dynamic DNS addre:	s from DynDNS.org or TZC	o.			
D-DNS provider	DynDNS	org 💌				
Hostname Interface	pppoe_0	_8_35/ppp0 💌				
<b>DynDNS Setting:</b> Username Password	s admin					

Apply/Save

Figure 62: Advanced - DNS - Add Dynamic DNS

FIELD	DESCRIPTION
D-DNS Provider	Select the dynamic DNS provider from the list.
Host Name	The name of the dynamic DNS provider.
Interface	Select the interface from the list.
Username	Enter the Dynamic DNS account username.
Password	Enter the Dynamic DNS account password.

Table 26: Advanced - DNS - Add Dynamic DNS Settings



# DSL

This page allows the user to modify the DSL modulation settings on the unit. By changing the settings, the user can specify which DSL modulation that the modern will use.

	Gateway™ series ADSL2+ / 3G '	Wireless N	Gateway	/		NetComm
Basic	3G Settings	Wireless	Management	Advanced	Status	
DSL Setti	ngs					
	nodulation below. G.Dmt Enabled					
	G.lite Enabled					
V	T1.413 Enabled					
V	ADSL2 Enabled					
	AnnexL Enabled					
$\checkmark$	ADSL2+ Enabled					
	AnnexM Enabled					
	hone line pair below.					
	Inner pair					
0	Outer pair					
Capability						
	Bitswap Enable					
	SRA Enable					
		Apply/Sa	ve Advanced Settings			

Figure 63: Advanced - DSL Settings

For advanced DSL options press the Advanced Settings button.

NETCOMM GATEWA	Ne	tGomm				
Basic	3G Settings	Wireless	Management	Advanced	Status	
DSL Advanced Setti Select the test mode be	-					
© <sub>Normal</sub> O <sub>Reverb</sub>						
C Medley						
C No retrain C L3						
			Apply Tone Selection			
		Figure 64: Adv	vanced - DSL - Advance	d Settings		

The DSL advanced settings relate to test mode settings. The default selection is 'Normal'.

#### **ADSL** Tone Settings

For ADSL Tone Settings select the 'Tone Selection' button on the DSL Advanced Settings page.

The frequency band of ADSL is split up into 256 separate tones, each spaced 4.3125kHz apart. With each tone carrying separate data, the technique operates as if 256 separate routers were running in parallel. The tone range is from 0 to 31 for upstream traffic and from 32 to 255 for downstream traffic. Do not change these settings unless you are directed by your Internet Service Provider.

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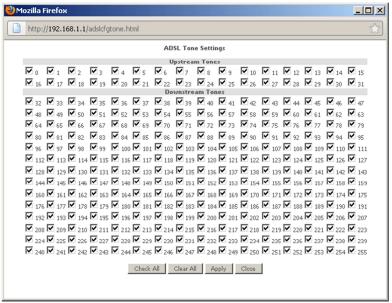


Figure 65: Advanced - DSL - Advanced settings - Tone Selectio

### UPnP

Universal Plug and Play (UPnP) is a set of networking protocols that can allow networked devices, such as computers, printers, WiFi access points and mobile phones to automatically detect each other's presence on the network and establish functional network services for data sharing, communications, and entertainment.

NETCOMM GATE Dual AD	l	NetComm				
Basic	3G Settings	Wireless	Management	Advanced	Status	
UPnP Configura	tion					
Enable UPnP	protocol.					
			Apply/Save			
		Figure 66: Adva	nced – UpnP			

# **DNS** Proxy

To enable DNS Proxy settings, tick the corresponding checkbox and then enter host and Domain name, as in the example shown below. Click Apply/Save to continue.



The Host Name and Domain name are combined to form a unique label that is mapped to the router IP address. This can be used to access the user interface of the router with a local name rather than by using the router IP address.



# **USB** Storage

This page allows you to enable or disable the USB port of the 3G29WN2 so it can be used as a mass storage server. Please see Appendix B for more details on setting up your router to work with Storage Server functionality.

NETCOMM GATE	way™ series )SL2+ / 30	N	et Comm			
Basic	3G Settings	Wireless	Management	Advanced	Status	
Advanced > US USB Status: not	B Storage settings t <mark>detected</mark>					
	you to enable USB storage .					
Enable USE	s storage.					
Netbios Name: Directory Name:	3G29WN2 USB-Storage					
			Save/Apply			
		Figure 68: Adva	nced - USB Storag	2		

### Print Server

This page allows you to enable or disable the USB port of the 3G29WN2 to be used as a print server. Please see Appendix A for more details on setting up your router to work with Print Server functionality.



#### Figure 69: Advanced - Print Server

# Interface Grouping

Interface grouping supports multiple ports to PVC and bridge groups. Each group performs as an independent network. To use this feature, you must create mapping groups with appropriate LAN and WA N interfaces using the Add button.

The Remove button removes mapping groups, returning the ungrouped interfaces to the default group. Only the default group has an IP interface.

commigat Jal AE			G Wire	less N	Gatewa	y		NetGomm
Basic		3G Settings	Wirele	s 1	Management	Advanced	Status	
Interface Grou	uping A	maximum 16 ent	ries can be config	jured				
Interface Groupin appropriate LAN interface	ig supports r and WAN in	nultiple ports to PVC terfaces using the A	C and bridging groups dd button. The Remo	. Each group will perfor we button will remove	m as an independent net the grouping and add the	vork. To support this feature, ungrouped interfaces to the E	you must create efault group. Onl	mapping groups with y the default group has IP
Group Name	Remove	WAN Interface	LAN Interfaces	DHCP Vendor IDs				
		ppp0	ENET(1-4)					
			wlan0					
Default			wl0_Guest1					
			wl0_Guest2					
			wl0_Guest3					
Add Rem	ove							

Figure 70: Advanced - Interface Grouping

To add an Interface Group, click the Add button. The following screen will appear. It lists the available and grouped interfaces. Follow the instructions shown below:

NETCOMM GATEWAY™ Dual ADSL2		Wireless I	N Gateway	1	NetGomm
Basic	3G Settings	Wireless	Management	Advanced	Status
Interface grouping Confi	guration				
To create a new interface grou 1. Enter the Group name and	ip: the group name must be	unique and select either 2. (dy	namic) or 3. (static) below:		
<ol> <li>If you like to automatically specified vendor ID (DHCP op</li> </ol>	add LAN clients to a WA stion 60) will be denied a	N Interface in the new group a n IP address from the local DH	add the DHCP vendor ID string, B CP serves	y configuring a DHCP vendor I	D string any DHCP client request with the
3.Select interfaces from the an obtain public IP addresse	vailable interface list and is	add it to the grouped interface	list using the arrow buttons to crea	te the required mapping of the	ports. Note that these clients may
4. Click Save/Apply button to	make the changes effect	tive immediately			
IMPORTANT If a vendor IP address.	ID is configured for	a specific client device, ple	ease REBOOT the client devic	e attached to the modem	to allow it to obtain an appropriate
Group Name:					
WAN Interface used in th	he grouping pppoe	0_8_35/ppp0 💌			
Grouped LAN Interfaces		Available LAN Interfaces			
K N	y e	ENET(1-4) wlan0 wl0_Guest1 wl0_Guest2 wl0_Guest3			
Automatically Add Clients With the following DHCP Vendor IDs					
		1	Apply/Save		

Figure 71: Advanced - Add Interface Grouping

Automatically Add Clients with the following DHCP Vendor IDs

Add support to automatically map LAN interfaces to PVC's using DHCP vendor ID (option 60). The local DHCP server will decline and send the requests to a remote DHCP server by mapping the appropriate LAN interface. This will be turned on when Interface Grouping is enabled.



# LAN Ports

Use this page to enable or disable the Virtual LAN Ports feature.

NETCOMM GATEW	M	et Gomm				
Basic	3G Settings	Wireless	Management	Advanced	Status	
LAN Ports Configu Use this page to enable ENET(1-4) Apply/Save LAN Port ENET(1-4) whan	ration Edisable the Virtual LAN Port	: feature.				

Figure 72: Advanced - LAN Ports

# Status

The Status menu has the following submenus:

- Diagnostics
- System Log
- 3G network
- Statistics
- Route
- ARP
- DHCP

#### 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 and follow the troubleshooting procedures in the Help screen that appears.
- 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, contact Technical Support.

Basic     3G Settings     Wreless     Management:     Advanced     Status       ppppe_0_9_8_35 Diagnosit     Journodem is capable of testing your connection. The individual tests are listed below. If a test displays a fail status, click "Rerun Diagnosit: Tests" at the bottom of this page to make sure the fail       Test the connection to your DCAI network:     Fail tests     Fail test contribute to fail.     FAIL     Help       Test the connection to your DSI. service provider     FAIL     Help     FAIL     Help       Test the connection to your Internet service provider     DISABLED     Help     Help       Test the connection to your Internet service provider     Test the connection to your Internet service provider     Test the connection to your Internet service provider       Test the connection to your Internet service provider     DISABLED     Help       Test the connection to your Internet service provider     PASS     Help       Test the connection to your Internet service provider     PASS     Help       Test the assigned ID address:     FAIL     Help       Ping default gateway:     FAIL     Help       Ping default gateway:     FAIL     Help	'COMM GATEWAY™ SERIES UAI ADSL2+ / 3	G Wire	eless	N Gatew	ay	NetGomm
Your modem is capable of testing your connection. The individual tests are listed below. If a test displays a fail status, click "Rerun Diagnostic Tests" at the bottom of this page to make sure the fail status, click "Rerun Diagnostic Tests" at the bottom of this page to make sure the fail test continues to fail, click "Halp" and follow the toubleshooting procedures.         Test the connection to your DSL service provider         Test xub connection to your Internet service provider         Test xub connection to your Internet service provider         Test the connection to your Internet service provider         Test at ATM OAM F5 sender to address:         PASL       Halp         Test at duration with TSP:       FAAL         Halp       Halp         Test duration with TSP:       FAAL         Halp       Halp         Test duration with TSP:       FAAL         Halp       Halp         Ping default gateway:       FAIL	Basic 3G Settings	Wirel	255	Management	Advanced	Status
Test the connection. If the test continues to Fail, click "Help" and follow the troubleshooting procedures.         Test your EVET[1-4] Connection:       PASS         Test your EVET[1-4] Connection:       PASS         Test your Wireless Connection:       FAIL         Test your Synchronization:       FAIL         Test AWD OAM FS end-to-end ping:       DISABLED         Test AWD OAM FS end-to-end ping:       DISABLED         Test AWD OAM FS end-to-end ping:       DISABLED         Test ATM OAM FS end-to-end ping:       DISABLED         Test ATM OAM FS end-to-end ping:       DISABLED         Test atmost on syour Internet service provider       FAIL         Test atmost on syour Internet service provider       FAIL         Test atmost on with ISP:       FAIL         Fait       Help         Ping default gateway:       FAIL	pppoe_0_8_35 Diagnostics					
Test your ENET(1-4) Connection:       PASS       Hale         Test your Wireless Connection:       FAIL       Hale         Test the connection to your DSL service provider       FAIL       Hale         Test XBL Synchronization:       FAIL       Hale         Test ATM OAM F5 segment ping:       DISABLED       Hale         Test ATM OAM F5 end-to-end ping:       DISABLED       Hale         Test ATM OAM F5 end-to-end ping:       DISABLED       Hale         Test ATM OAM F5 end-to-end ping:       DISABLED       Hale         Test the connection to your Internet service #       Test the service and the service #         Test the service and ping:       PASS       Hale         Test atmentication with ISP:       FAIL       Hale         Test the assigned IP address:       FAIL       Hale         Ping default gateway:       FAIL       Hale	Your modem is capable of testing your connection status is consistent. If the test continues to fail, or	n. The individual tes ick "Help" and follo	ts are listed below the troublesho	ow. If a test displays a fail sta ooting procedures.	itus, click "Rerun Diagnostic T	ests" at the bottom of this page to make sure the fail
Test xDSL Synchronization:     FAIL     Help       Test ATM OAM F5 segment ping:     DISABLED     Help       Test ATM OAM F5 ned-to-end ping:     DISABLED     Help       Test ATM OAM F5 end-to-end ping:     DISABLED     Help       Test ATM OAM F5 ned-to-end ping:     DISABLED     Help       Test ATM OAM F5 end-to-end ping:     DISABLED     Help       Test ATM OAM F5 ned-to-end ping:     PASS     Help       Test ATM OAM F5     FAIL     Help       Test authentication with SP:     FAIL     Help       Ping default gateway:     FAIL     Help	Test your ENET(1-4) Connection: PAS	8 Help				
Test ATM DAM FS segment ping:     DISABLED     Help       Test ATM DAM FS end-to-end ping:     DISABLED     Help       Test the connection to your Internet service = routler     Help       Test ATM DAM FS end-to-end ping:     PASS     Help       Test the connection to your Internet service = routler     PASS     Help       Test the assigned IP address:     FAIL     Help       Ping default gateway:     FAIL     Help	Test the connection to your DSL service	provider				
Test ATM DAM FS end-to-end ping:     DISABLED       Test the connection to your Internet service provider       Test PDP server connection:     PASS       Hale       Test authentication with ISP:     FAIL       Hale       Ping default gateway:     FAIL	Test xDSL Synchronization:	FAIL	Help			
Test the connection to your Internet service provider       Test DPD server connection:     PASS     Hdg       Test authentication with ISP:     FAIL     Hdg       Test the assigned IP address:     FAIL     Hdg       Ping default gateway:     FAIL     Hdg	Test ATM OAM F5 segment ping:	DISABLE	D Help			
Test PPP server connection:     PASS     Help       Test authentication with ISP:     FAIL     Help       Test the assigned IP address:     FAIL     Help       Ping default gateway:     FAIL     Help	Test ATM OAM F5 end-to-end ping:	DISABLE	D Help			
Test PPP server connection:     PASS     Help       Test authentication with ISP:     FAIL     Help       Test the assigned IP address:     FAIL     Help       Ping default gateway:     FAIL     Help	Test the connection to your Internet ser	vice provider				
Test the assigned IP address:     FAIL     Help       Ping default gateway:     FAIL     Help			Help			
Ping default gateway: FAIL Help	Test authentication with ISP:	FAIL	Help			
	Test the assigned IP address:	FAIL	Help			
Ping primary Domain Name Server: FAIL Help	Ping default gateway:	FAIL	Help			
	Ping primary Domain Name Server:	FAIL	Help			

Test Test With OAM F4

igure 73: Status - Diagnostics

FIELD	DESCRIPTION
ENET Connection	Pass: Indicates the Ethernet connection to your computer is connected to the LAN port of the router. Fail: Indicates that the router does not detect the Ethernet interface of your computer.
Test your Wireless Connection	Pass: Indicates that the wireless card is switched ON. Fail: Indicates that the wireless card is switched OFF.
Test the Assigned IP Address	Pass: Indicates that the modem has received a valid IP address from the PPP server. Fail: Indicates that the modem has not received a valid IP address from the PPP server.
Ping Primary Domain Name Server	Pass: Indicates that the router can communicate with the DNS server. Fail: Indicates that the router was unable to communicate with the primary Domain Name Server (DNS). This may not have an effect on your internet connection. Therefore if this test fails but you are still able to connect to the internet there is no need to troubleshoot this issue.

Table 27: Status - Diagnostics Fields



# 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.

NETCOMM GATEV	vay™ series SL2+ / 3G	Net	Gomm			
Basic	3G Settings	Wireless	Management	Advanced	Status	
System Log						
The System Log dial	og allows you to view the Syst	em Log and configure the Sy	rstern Log options.			
Click "View System	Log" to view the System Log.					
Click "Configure Sys	item Log" to configure the Syste	m Log options.				
		View	System Log Configure System	tem Log		

Figure 74: Status - System Log

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

Basic         3G Settings         Wireless         Management         Advanced         Status           System Log ~ Configuration         This height node is availed, the system will begin to big all the relevant severes. For the tog Level, all events above or equal to the safeted level will be logged, For the Diplay Level all logged reverses the severe avail to the safeted level will be logged. For the Diplay Level, all logged reverses will be severe avail to the safeted level will be logged. For the Diplay Level all logged reverses the severe avail to the safeted level will be logged. For the Diplay Level all logged reverses the severe avail to the safeted level will be severe avail to the safeted level will be logged. For the Diplay Level all logged reverses the severe avail to the safeted level will be sevel be severe availed to the s	ual ADS	ay™ series SL2+ / 3G	M	letGomm <sup>-</sup>			
The log mode is enabled, the system will begin to log all the selected events. For the Log Lavel, all events above or equal to the selected level will be logged. For the Display Level, all logged events above or equal to the selected mode is "Remote" or "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Logar" but is to card "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is the selected mode is "Both," events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is the	Basic	3G Settings	Wireless	Management	Advanced	Status	
events above or equal to the tasketed flowed will be diplayed. If the selected mode is 'Reminote' or 'Both,' events will be sent to the specified IP address and UDP port of the remote systog serves. If the selected mode is 'Local'' 'Both,' events will be conclusion in the local memory. Select the desired values and clic' 'Apply/Sixe' to configure the system log options. Log: C Disable © Enable Log Level: Display Level: Error	System Log Con	figuration					
Log: C Disable & Enoble Log Level: Debugging V Display Level: Error V	events above or equa	I to the selected level will be di	splayed. If the selected mod	e is 'Remote' or 'Both,' events v	ve or equal to the selected le vill be sent to the specified II	vel will be logged. For the Dis 9 address and UDP port of the	play Level, all logged remote syslog server. If
Log Level: Debugging  Display Level: Error	Select the desired val	ues and click 'Apply/Save' to co	onfigure the system log option	.20			
Display Level: Error	Log: C	Disable 🖸 Enable					
	Log Level:	Debugging 💌					
Mode: Local	Display Level:	Error					
	Mode:	Local 💌					

Apply/Save

Figure 75: Status - Configure System Log

FIELD	DESCRIPTION
Log	Indicates whether the system is currently recording events. System logging can be disabled or enabled. By default system logging is disabled.
Log Level	Allows you to configure the event level and filter out unwanted events below this level. The events range from the highest level "Emergency" down to the lowest "Debugging" level and are stored in the router's SDRAM memory. When the log buffer is full the newest event will wrap up to the top of the log buffer and overwrite the lowest 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 to the highest Emergency level will be recorded. If the log level is set to Error level only error level logs will be able to be viewed.
Display	Allows you to select the log events and displays in the View System Log window. For events from debugging level and above to the highest Emergency level.
Level	Allows you to select the logged events and display in the View system Log window, per log level.
	Allows you to specify whether events should be stored in local memory, be sent to a remote system log server or both simultaneously.
Mode	If remote mode is selected the view system log windows will not be able to display events saved to the remote system log server. When either Remote mode or both mode are selected you will be prompted for the system log server IP address and UDP port.

### 3G Network

Select this option for detailed status information on your router's 3G connection.

	ietcomm cateway™ series Dual ADSL2+ / 3G Wireless N Gateway									
Basic	3G Settings	Wireless	Management	Advanced	Status					
Device Info 3G										
Manufacturer Ericsso Model F5521 FW Rev R3801 IMEI 356219										
IMSI 53024010117151	1									
WCDMA band: WCDMA channel: 104	CDMA 2100 813									
Signal level(RSSI)	17									
Network Registration										
Network Name Country Code	2degrees 530									
Network Code	24									
Cell ID	00013C63									
Data Session Status	Disconnected									

Figure 76: Status - 3G Network

STATUS	DESCRIPTION
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 IMEI (International mobile Equipment Identity) is a 15 digit number that is used to identify a mobile device on a network.
IMSI	The IMSI (International Mobile Subscriber Identity) is a unique 15 digit number that is used to identify an individual user on a UMTS or GSM network.
WCDMA Band	A 3G radio frequency which supports tri-band UMTS/HSDPA/HSUPA frequencies (850/1900/2100MHz), IMT2000 is 2100MHz. WCDMA800 is 850 MHz, WCDMA1900 is 1900 MHz.
WCDMA Channel	The 3G channel.
Signal Level(RSSI)	3G Radio Signal Strength Index.
Network Registration Status	This filed should display as registered with a valid unlocked SIM card.
Network Name	The 3G Internet Service Provider.
Country and Network Code	Each country and network has a unique code.
Cell ID	The network information for the serving cell ID.
Data Session Status	This field displays whether the 3G module is connected or disconnected to the 3g network.

Figure 77: Status - 3G Network Settings



# Statistics

These screens provide detailed information for:

- Local Area Network (LAN), Wide Area Network (WAN), ATM and ADSL
- 3G Interfaces

NOTE: These statistics page refresh every 15 seconds.

#### LAN

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

	NETCOMM GATEWAY <sup>TM</sup> SERIES Dual ADSL2+ / 3G Wireless N Gateway										NetComm	
Basic			ЗG	Setting	<u>js</u>		Win	eless	Management	Advanced	Status	
Statistics -	- LAN											
Interface		Rece	ived		Т	ransn	nitted					
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops				
eth0	510793	3905	0	0	1957165	4260	0	0				
wl0	0	0	0	0	0	0	0	0				

Reset Statistics

Figure 78: Status - Statistics - LAN

DESCRIPTION				
Bytes	Rx/Tx (receive/transmit) packets in bytes.			
Pkts	Rx/Tx (receive/transmit) packets.			
Errs	Rx/Tx (receive/transmit) packets with errors.			
Drops	Rx/Tx (receive/transmit) packets with drops.			
	Pkts Errs			

Table 28: Status - Statistics - LAN Fields

#### **3G Network**

This page displays the inbound and outbound statistics of the 3G network.

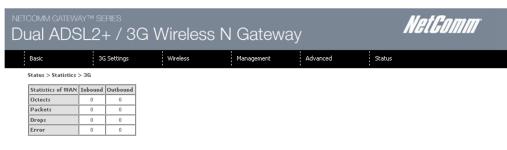


Figure 79: Status - Statistics - 3G

#### WAN

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



Figure 80: Status - Statistics - WAN

INTERFACE	DESCRIPTION				
	Bytes	Rx/Tx (receive/transmit) packets in bytes.			
	Pkts	Rx/Tx (receive/transmit) packets.			
Received/Transmitted	Errs	Rx/Tx (receive/transmit) packets with errors.			
	Drops	Rx/Tx (receive/transmit) packets with drops.			

Table 29: Status - Statistics – WAN Fields

#### ATM

The ATM statistics page shows the details of the ATM interface.

netcomm gateway™ series Dual ADSL2+ / 3	M	et Comm								
Basic 3G Settings	Wireless	Management	Advanced	Status						
Interface Statistics										
Port Number In Octets Out Octet	In Packets Out Packets	In OAM Cells Out OAM Cells	In ASM Cells	Out ASM Cells In Packet Errors	In Cell Errors					

#### Reset

Figure 81: Status - Statistics – ATM

FIELD	DESCRIPTION
In Octets	The number of data packets in octets received over the ATM interface.
Out Octets	The number of data packets in octets transmitted over the ATM interface.
In Errors	The number of data packets dropped due to uncorrectable HEC errors.
In Unknown	The number of cells discarded during cell header validation, including cells with unrecognisable VPI/VCI values and cells with invalid cell header patterns. If cells with undefined PTI values are discarded they are also counted here.
In HEC Errors	The number of cells received with an ATM Cell Header HEX Error
In Invalid VPI VCI Errors	The number of cells with an unregistered VCC address.
In Port not Enable Errors	The number of cells received on a port that has not been enabled.
In PTI Errors	The number of cells received with an ATM Header Payload Type Indicator (PTI) error.
In Idle Cells	The number of idle cells received.
In Circuit Type Errors	The number of cells received with an illegal circuit type.
In OAM RM CRC Errors	The number of OAM and RM cells received with CRC errors.
In GFC Errors	The number of cells received with non-zero GFC.

Table 30: Status - Statistics - ATM Fields



#### ADSL

The following graphic shows the ADSL Network Statistics screen. The Reset button (located at the bottom of the screen) can be used to reset statistics. The bit error rate can be tested by clicking the ADSL BER Test button.

oomm gateway™ s Jal ADSL2		3G Wir	eless l	N Gatew	ay		NetGomm
Basic	3G Settings	Wire	less	Management	Advanced	Status	
Statistics xDSL		i		•	•	i	
statistics XDSL							
Mode:							
Traffic Type:							
Status:		Disabled					
Link Power State:		Disabled					
	Downstream	Upstream					
Line Coding(Trellis):							
SNR Margin (0.1 dB):							
Attenuation (0.1 dB):							
Output Power (0.1 dBm):							
Attainable Rate (Kbps):							
Rate (Kbps):							
Super Frames:							
Super Frame Errors:							
RS Words:							
RS Correctable Errors:	<u> </u>						
RS Uncorrectable Errors:							
k3 oncorrectable Errors.	1	<u> </u>					
HEC Errors:							
OCD Errors:							
LCD Errors:							
Total Cells:							
Data Cells:							
Bit Errors:	i						
Total ES:							
Total SES:							
Total UAS:							
xDSL BER Test Reset S	atistics	aw Tone Graph					

Figure 82: Status - Statistics – ADSL

## Route

Select Route to display the paths the Router has found.



# ARP

Click ARP to display the ARP information.

This option can be used to determine which IP address / MAC address is assigned to a particular host. This can be useful when setting up URL filtering, Time of Day filtering or Static DHCP addressing.



Figure 84: Status - ARP

# DHCP

Click DHCP to display the DHCP information.

commigates Jal AD			Wireless N	Gatewa	ау	Na	et <i>Comi</i>
Basic	3G Set	ings	Wireless	Management	Advanced	Status	
Device Info DF	10D 1						
Device Turo DF	1CP Leases						
Hostname	MAC Address	IP Address	Expires In	1			

You can use this to determine when a specific DHCP lease will expire, or to assist you with setting up Static DHCP addressing.

## PING

NETCOMM GATE	way™ series SL2+ / 3G	NetComm				
Basic	3G Settings	Wireless	Management	Advanced	Status	
Diagnostics > PI	NG					
Please type in a ho	st name or an IP Address. Click	Submit to check the connect	ion automatically.			
Host Name or IP A	ddress:					
	Submit					
		Figure 86: Statu	s - PING			

You can use this to verify your internet connection is active or to test whether a website is currently available or not. For example: www.google.com



# Additional Product Information

### Establishing a 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 listed on your included wireless security card and click Connect.
- 4. Enter the network key (refer to the included wireless security card for the default wireless network key).
- 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 listed on your included wireless security card and click Connect.
- 5. Enter the network key (refer to the included wireless security card for the default wireless network key).
- 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 listed on your included wireless security card and click Connect.
- 5. Enter the network key (refer to the included wireless security card for the default wireless network key).
- 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 3G29WN2 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 listed on your included wireless security card and click Connect.
- 3. On the new window, select "Show Password", type in the network key (refer to the included wireless security card for the default wireless 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.



# 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	CORRECTIVE ACTION
1	Make sure that the 3G29WN2 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 3G29WN2 and the power source are both turned on and device is receiving sufficient power.
3	Turn the 3G29WN2 off and on.
4	If the error persists, you may have a hardware problem. In this case, you should contact technical support.

#### Web Configuration

#### I cannot access the web configuration pages.

STEP	CORRECTIVE ACTION
1	Make sure you are using the correct IP address of the 3G29WN2. 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 3G29WN2'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	CORRECTIVE 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	CORRECTIVE ACTION
1	Press the Reset button for ten seconds, and then release it. When the Power LED begins to blink, the defaults have been restored and the 3G29WN2 restarts.
	You can now login with the factory default username and 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 3G29WN2 from the WLAN or ping any computer on the WLAN.

STEP	CORRECT ACTION
1	If you are using a static IP address for the WLAN connection, make sure that the IP address and the subnet mask of the 3G29WN2 and your computer(s) are on the same subnet. You can check the routers configuration from the Network Setup page.



# Technical Data

The following table lists the hardware specifications of the 3G29WN2.

MODEL	3G29WN2
CPU	BCM5325
Wireless LAN	IEEE 802.11n. Backwards compatible with IEEE 802.11b/g
Ethernet WAN/LAN port	1 x WAN/LAN port (10/100Mbps)
Connectivity	1 x USB 2.0, 1 x 10/100Mbps WAN/LAN, WLAN
LED Indicators	Power, WWW
Operating Temperature	Operating temperature: 0°C - 40°C, Humidity: 10%-90% non-condensing Storage temperature: -10°C - 70°C, Humidity: 0%-95% non-condensing
Power Input	12V DC – 1.5A
Dimensions & Weight	215 mm (W) x 37 mm (H) x 145 mm (D)
Regulatory Compliance	C-Tick

# **Electrical Specifications**

It is recommended that the 3G29WN2 be powered by the supplied 12V DC, 1.5A power supply. A replacement power supply is available from the NetComm Online shop.

# Environmental Specifications / Tolerances

The 3G29WN2 housing enables it to operate over a wide variety of temperatures from 0°C - 40°C (operating temperature).

# Appendix A: Print Server

These steps explain the procedure for enabling the Print Server.

- 1. Enable Print Server from the Advanced menu in the Web User Interface of the router.
- 2. Select Enable on-board print server checkbox and enter the 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.

3. Press the Apply/Save button to save the new settings.

NETCOMM CATEWAY <sup>TM</sup> SERIES Dual ADSL2+ / 3G Wireless N Gateway					Nett	<i>Comm</i>
Basic	3G Settings	Wireless	Management	Advanced	Status	
Print Server sett	ings					
This page allows yo	u to enable printer support.					
Enable on-boar	d print server.					
Printer name Make and model						
			Apply/Save			

#### For Windows Vista/7

These steps explain the procedure for enabling the Printer Server.

1. Enable Print Server from Web User Interface.

#### Select Enable on-board print server checkbox and enter the 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.

NETCOMM GATEWAY™ SERIES Dual ADSL2+ / 3G Wireless N Gateway				NetComm	
Basic	3G Settings	Wireless	Management	Advanced	Status
Print Server sett	ings				
This page allows yo	u to enable printer support.				
🗹 Enable on-boar	rd print server.				
Printer name Make and model					
			Apply/Save		



- 2. Go to the control panel, and select 'Printers' if you are using Windows Vista or select "Devices and Printers" if you are using Windows 7.
- 3. Once in the 'Printers' page, click the 'Add a printer' button as shown below.



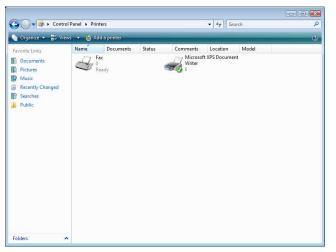


Figure 89: Windows 7 - Control Panel – Printers

4. Select the 'Add a network, wireless or bluetooth printer' option.

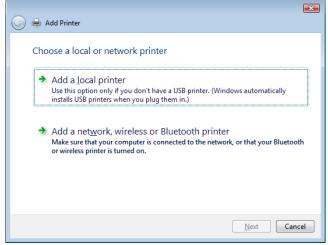


Figure 90: Windows 7 - Add Printer

5. Click on the radio-button labelled 'Select a shared printer by name', and type

"http://192.168.1.1:631/printers/Printer\_Name" in the box below. Ensure the printer name is the name you entered in step 1 Click 'Next'.

NOTE: The PrinterName must be the same as the printer name entered into the Printer section of Dual-3G29WN2.

Find a printer	r by name or TCP/IP address	
Find a printer	in the directory, based on location or feature	
Select a shared	d printer by name	
http://192	2.168.1.1:631/printers/samsung	Browse.
	\computername\printername or nputername/printers/printername/.printer	
O Add a printer	using a TCP/IP address or hostname	

Figure 91: Windows 7 - Add Shared Printer Nam

6. 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.

Add Printer Wizard	? 💌					
an installation disk, cli	er and model of your printer. If your printer came with ck Have Disk. If your printer is not listed, consult your for a compatible printer.					
Manufacturer	Printers					
Apollo	Apollo P-1200					
Brother	Apollo P2100/P2300U					
Canon	Apollo P2200					
Citizen						
This driver is digitally signed	Dell     This driver is digitally signed.       Tell me why driver signing is important     Have Disk					
OK Cancel						

Figure 92: Add Printer Drivers

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

Add Print	ler
Type a print	er name
Printer name:	samsung
	Set as the default printer
	een installed with the Samsung ML-1740 Series driver.

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



#### For MAC OSX

These steps explain the procedure for enabling the Printer Server and setting up a printer for the Mac OSX operating system.

#### 1. Enable Print Server from Web User Interface.

Select Enable on-board print server checkbox and enter the 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.

NETCOMM GATEWAY™ SERIES ADSL2+/ HSPA+ 21 Mbps Wi-Fi Modem Router					t <i>Comm</i>	
Basic	3G Settings	Wireless	Management	Advanced	Status	
Print Server sett This page allows yo I Enable on-bo Printer name Make and model	ou to enable printer support.					
			Apply/Save			

2. To set up your printer, check the Apple menu and select the "System Preferences" option. In the System Preferences menu click on the "Print & Fax" option.

Figure 94: Enable Print Server

00			System	Preferences			
	Show All					٩	
Personal							
New			H	100	Ó		
Appearance	Desktop & Screen Saver	Dock	Exposé & Spaces	International	Security	Spotlight	
Hardware				I	-	1	
	6		$\bigcirc$	9		•	
Bluetooth	CDs & DVDs	Displays	Energy Saver	Keyboard & Mouse	Print & Fax	Sound	
Internet &	Network						
		0					
MobileMe	Network	QuickTime	Sharing				
System							
11	P	1 the	(0)	4	2	0	$\bigcirc$
Accounts	Date & Time	Parental Controls	Software Update	Speech	Startup Disk	Time Machine	Universal Access
	Figur	e 95: Syste	m Prefere	ences			

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



Figure 96: Print & Fax Menu

4. Mouse over to the Protocol drop down list and select Internet Printing Protocol - IPP.

	◎ 🖴 🚯 差 🚔 🔍	
It Fax	IP Windows Bluetooth AppleTalk More Printers	Search
Durtana		
Protoco	✓ Internet Printing Protocol – IPP Line Printer Daemon – LPD	
Address	HP Jetdirect – Socket	
	Enter host name or IP address.	
	citter nost name of ir address.	
Queue:		

5. Input the Address field with "192.168.1.1:631" and the Queue with "/printers/PrinterName"

P Windows Bluetooth AppleTalk More Printers	Search
Internet Printing Protocol – IPP	
Valid and complete address.	
/printers/samsung Leave blank for default queue.	
	IP Windows Bluetooth AppleTalk More Printers Internet Printing Protocol – IPP 192.168.1.1:361 Valid and complete address. //printers/samsung

Figure 98: Add Printer Path

NOTE: The Printer Name must be the same as the printer name entered into the Printer section of Dual-3G29WN2.

6. From the "Print Using" drop down list and select your corresponding printer driver.

Location:	unknown	
Print Using:	Select a driver to use	
	٩	)
	3300 Series	
	350 Series	
	4300 Series	
	5200 Series	
	5400 Series	
	6200 Series	

Figure 99: Add Printer Driver

7. Click Add and check the printer status.



Figure 100: Check Printer Status



# Appendix B: Samba Server

#### For Windows Vista/7

- 1. Open a web-browser (such as internet Explorer, Firefox or Safari).
- 2. Type in the address \\ "NetbiosName" \ "DirectoryName" \ (eg \\ntc-cpe\ntc-cpe).

🔾 🔍 🐙 \\ntc-cpe\n	The second s		✓ 4y Search	\$
File Edit View Tools 🌒 Organize 🕶 🏢 Views	Help Burn			0
Favorite Links	Name	Date modified	Туре	
Documents	퉳 usb1_1		File Folder	

Figure 101: Access USB Drive

Note: There are 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.

#### For MAC OSX

- 1. Click the finder icon in the Dock.
- 2. Choose Connect to Server from the Go menu.
- 3. In the address field of the Connect to Server dialog, type in the URL Smb:// "NetbiosName"/"DirectioryName" (eg smb://ntccpe/ntc-cpe).



4. Select the Connect button to connect your USB driver.

# Legal & Regulatory Information

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# Customer Information

The Australian Communications & Media Authority (ACMA) requires you to be aware of the following information and warnings:

- 1. This unit may be connected to the Telecommunication Network through a line cord which meets the requirements of the AS/CA S008-2011 Standard.
- 2. This equipment has been tested and found to comply with the Standards for C-Tick and or A-Tick as set by the ACMA. These standards are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio noise and, if not installed and used in accordance with the instructions detailed within this manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur with the installation of this product in your home or office. If this equipment does cause some degree of interference to radio or television reception, which can be determined by turning the equipment off and on, we encourage the user to try to correct the interference by one or more of the following measures:
  - Change the direction or relocate the receiving antenna.
  - Increase the separation between this equipment and the receiver.
  - Connect the equipment to an alternate power outlet on a different power circuit from that to which the receiver/TV is connected.
  - Consult an experienced radio/TV technician for help.
- 3. The power supply that is provided with this unit is only intended for use with this product. Do not use this power supply with any other product or do not use any other power supply that is not approved for use with this product by NetComm. Failure to do so may cause damage to this product, fire or result in personal injury.

# Consumer Protection Laws

Australian and New Zealand consumer law in certain circumstances implies mandatory guarantees, conditions and warranties which cannot be excluded by NetComm and legislation of another country's Government may have a similar effect (together these are the **Consumer Protection Laws**). Any warranty or representation provided by NetComm is in addition to, and not in replacement of, your rights under such Consumer Protection Laws.

If you purchased our goods in Australia and you are a consumer, you are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. If you purchased our goods in New Zealand and are a consumer you will also be entitled to similar statutory guarantees.



# Product Warranty

All NetComm products have a standard one (1) year warranty from date of purchase, however, some products have an extended warranty option (refer to packaging and the warranty card) (each a **Product Warranty**). To be eligible for the extended warranty option you must supply the requested warranty information to NetComm within 30 days of the original purchase by registering online via the NetComm web site at <u>www.netcomm.com.au</u>. For all Product Warranty claims you will require proof of purchase. All Product Warranties are in addition to your rights and remedies under applicable Consumer Protection Laws which cannot be excluded (see Section 3 above).

Subject to your rights and remedies under applicable Consumer Protection Laws which cannot be excluded (see Section 3 above), the Product Warranty is granted on the following conditions:

- 1. the Product Warranty extends to the original purchaser (you / the customer) and is not transferable;
- 2. the Product Warranty shall not apply to software programs, batteries, power supplies, cables or other accessories supplied in or with the product;
- 3. the customer complies with all of the terms of any relevant agreement with NetComm and any other reasonable requirements of NetComm including producing such evidence of purchase as NetComm may require;
- 4. the cost of transporting product to and from NetComm's nominated premises is your responsibility;
- 5. NetComm does not have any liability or responsibility under the Product Warranty where any cost, loss, injury or damage of any kind, whether direct, indirect, consequential, incidental or otherwise arises out of events beyond NetComm's reasonable control. This includes but is not limited to: acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, electricity outages, lightning, power surges, or shortages of materials or labour; and
- 6. the customer is responsible for the security of their computer and network at all times. Security features may be disabled within the factory default settings. NetComm recommends that you enable these features to enhance your security.

Subject to your rights and remedies under applicable Consumer Protection Laws which cannot be excluded (see Section 3 above), the Product Warranty is automatically voided if:

- 1. you, or someone else, use the product, or attempt to use it, other than as specified by NetComm;
- 1. the fault or defect in your product is the result of a voltage surge subjected to the product either by the way of power supply or communication line, whether caused by thunderstorm activity or any other cause(s);
- 2. the fault is the result of accidental damage or damage in transit, including but not limited to liquid spillage;
- 3. your product has been used for any purposes other than that for which it is sold, or in any way other than in strict accordance with the user manual supplied;
- 4. your product has been repaired or modified or attempted to be repaired or modified, other than by a qualified person at a service centre authorised by NetComm; or
- 5. the serial number has been defaced or altered in any way or if the serial number plate has been removed.

# Limitation of Liability

This clause does not apply to New Zealand consumers.

Subject to your rights and remedies under applicable Consumer Protection Laws which cannot be excluded (see Section 3 above), NetComm accepts no liability or responsibility, for consequences arising from the use of this product. NetComm reserves the right to change the specifications and operating details of this product without notice.

If any law implies a guarantee, condition or warranty in respect of goods or services supplied, and NetComm's liability for breach of that condition or warranty may not be excluded but may be limited, then subject to your rights and remedies under any applicable Consumer Protection Laws which cannot be excluded, NetComm's liability for any breach of that guarantee, condition or warranty is limited to: (i) in the case of a supply of goods, NetComm doing any one or more of the following: replacing the goods or supplying equivalent goods; repairing the goods; paying the cost of replacing the goods or of acquiring equivalent goods; or paying the cost of a supply of services, NetComm doing either or both of the following: supplying the services again; or paying the cost of having the services supplied again.

To the extent NetComm is unable to limit its liability as set out above, NetComm limits its liability to the extent such liability is lawfully able to be limited.

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