Actiontec®

Wireless 11ac Bonded VDSL2 Modem Gateway with MoCA 2.0

Model # T3200M

User Guide

xxxx-xxxx-000 rev. 1

Table of Contents

Getting Started With the Gateway **4**
- Package Contents 5
- Minimum System Requirements 5
- Features 5
- Getting to Know the Gateway 6
- Connecting the Gateway 9

Accessing the Home Screen **11**
- Accessing the Home Screen 11
- Icon Bar 13
- Connection Status 13

Checking the Gateway's Status **14**
- Accessing the Status Screens 14
- Connection Status 15
- xDSL Status 16
- WAN Ethernet 17
- Routing Table 17
- Firewall Status 18
- NAT Table 19
- Wireless Status 19
- Modem Utilization 21
- LAN Status 22
- ARP Table 23
- Interface Statistics 23
- Multicast Statistics 24
- System Log 24

Configuring Wireless Settings **25**
- Accessing Wireless Settings 25
- Basic Settings 26
- Advanced Settings 27
- WPS 28
- MAC Address Control 29
- WDS 30

Configuring Firewall Settings **31**
Accessing Firewall Settings 31
Firewall 32
IPv6 Firewall 33
Port Forwarding 34
Applications 35
DMZ Hosting 36
IPv6 DMZ Hosting 37
UPnP 38
Advanced Settings **39**
Accessing the Advanced Setup Screens 39
Services Blocking 40
Website Blocking 41
Scheduling Access 41
WAN IP Addressing 42
IPv6 WAN Settings 43
LAN IP Settings 44
IPv6 LAN Settings 45
DHCP Reservation 45
Dynamic DNS 46
DNS Host Mapping 47
Port Bridging 47
Admin Password 48
Storage Device Info 48
Samba Configuration 49
Voice Advanced Setting 49
Voice Basic Setting 50
Voice Debug Setting 51
Reboot 51
Restore Defaults 52
Check for New Firmware 52
Speed Test 53
Ping Test 54
Tcpdump Debug 55
Iperf Test 56
IPv6 Ping Test 57
Traceroute 58

IPv6 Traceroute 58
Time Zone 59
Language Settings 59
DNS Cache 60
IGMP Setting 60
Upgrade History 61
SIP ALG 61
Tool Box 62
DLNA 62
xDSL Diagnostics 63
User's Manual 63
Specifications 64
General 64
Wireless Operating Range 65
LED Indicators 65
Environmental 65
Notices 66
Regulatory Compliance Notices 66
Modifications 66
GPL (General Public License) 67

Getting Started With the Gateway

1

Congratulations on purchasing the T3200M Wireless 11ac Bonded VDSL2 Modem Gateway with MoCA 2.0. The Gateway is a single platform device that supports universal WAN access, FTTN, FTTdp, FTTB, or FTTP. With support for advanced 802.11ac 4x4 WiFi and bonded MoCA 2.0, the Gateway enables blazing fast HD video streaming, with multi-channel HD video throughput. The Gateway also offers an unprecedented level of security, helping protect your network resources. It has also been designed to delver unparalleled WiFi performance, using dual-band WiFi supporting speeds up to 2.3 Gbps.

Package Contents

- Black Power adapter
- Yellow cable(Ethernet, 6ft.)
- White cable (Ethernet, 10ft.)
- Quick Start Guide
- Installation Guide
- Wall-mount template
- Vertical stand

Minimum System Requirements

- Active ADSL2+ service
- Computer with an 10 Mbps or 10/100/1000 Mbps Ethernet connection
- Microsoft Windows 10, 8, 7; Mac OS OS X+
- TCP/IP network protocol installed on each computer

Features

- ADSL2+, VDSL2, G.fast, and Fiber in a single CPE
- Dual Band WiFi delivering up to 2.3 Gbps with 802.11ac 4x4 5GHz and 802.11n 3x3 2.4GHz
- MoCA 2.0 with Channel Bonding and Turbo Mode
- Optimized for IPTV and Video over WiFi
- Integrated VoIP with 2 FXS Ports
- SFP cage for G.fast or EPON/GPON ONT modules

Getting to Know the Gateway

This section contains a quick description of the Gateway's lights, ports, and other features. The Gateway has several indicator lights (LEDs) and a button on its front panel, and a series of ports and switches on its rear panel.

Front Panel

The front panel of the Gateway features 2 LEDs (WAN and Wireless), and a WPS (Wireless Protected Setup) button.

WAN LED

The WAN LED illuminates when the Gateway is properly connected to a WAN Internet connection.

Wireless LED

The Wireless LED illuminates when the Gateway's wireless network is operating and properly configured.

WPS Button

The WPS button is used when connecting a wireless device to the Gateway's wireless network using WPS.

Rear Panel

The rear panel of the Gateway features 14 ports, and a Reset button.

Power Port

The Power port is used to connect the Power cord (Model No. NBS40C120300VU, made by NetBit, or Model No. CDS036-W120U, made by Actiontec) to the Gateway.

Reset Button

Depressing the Reset button for 10 seconds will restore the Gateway's factory default settings. The reset process will start after releasing the button.

Coax Port

The Coax port is used to connect the Gateway to a coaxial connection via coaxial (MoCA) cable.

SFP Cage

The SFP cage is used to connect the Gateway to a service provider connection via optical fiber cable.

WAN Ethernet Port

The WAN Ethernet port is used to connect the Gateway to a WAN connection via an Ethernet cable.

LAN Ethernet Ports (4)

The LAN Ethernet ports are used to connect computers to the Gateway via Ethernet cable. The Ethernet ports are 10/100/1000 Mbps auto-sensing ports, and either a straight-through or crossover Ethernet cable can be used when connecting to the ports.

USB Ports (2)

The USB ports are used to connect the Gateway to a USB device.

DSL Ports (2)

The DSL ports are used to connect the Gateway to a DSL wall outlet via DSL cable.

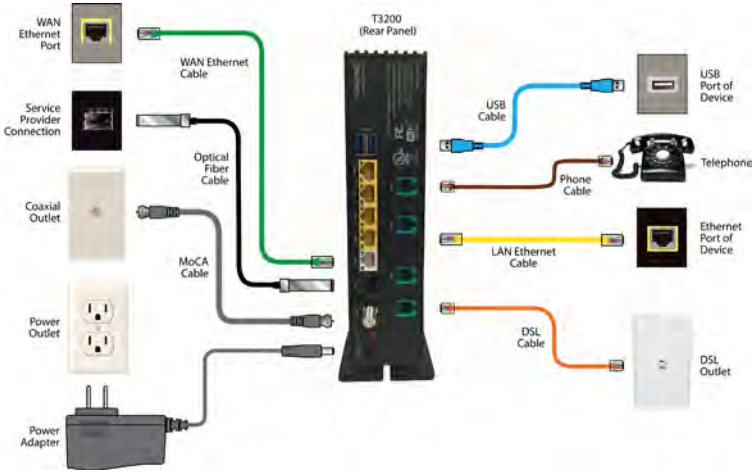
VoIP Ports (2)

The VoIP ports are used to connect the Gateway to a telephone or other communication device via phone cable.

WARNING! Do not unplug the Power cord from the Gateway during the reset process. Doing so may result in permanent damage to the Gateway.

Connecting the Gateway

There are many variables involved when connecting the Gateway, depending on the type of Internet service available. The figure below shows all of the possible connections available for the Gateway.



Connecting a Computer to the Gateway

To connect a computer to the Gateway to access the Gateway's graphical user interface (GUI):

1. Get the Gateway and black Power cord from the box.
2. Plug the black Power cord in the black port on the back of the Gateway and then into a power outlet.
3. Turn the Gateway on.
4. Plug the yellow Ethernet cable from the box into one of the four yellow Ethernet ports on the back of the Gateway.

5. Make sure the computer is powered on, then plug the other end of the yellow Ethernet cable into an Ethernet port on the computer.

6. Make sure at least the LED on the LAN port into which the Ethernet cable is plugged steadily green. This may take a few moments.

7. The computer should either be configured with a statically defined IP address and DNS address, or instructed to automatically obtain an IP address using the Network DHCP server. The Gateway is set up, by default, with an active DHCP server, and it is recommended to leave this setting as is.

Accessing the Home Screen

2

This chapter gives a short overview of the Home screen of the Gateway's graphical user interface (GUI).

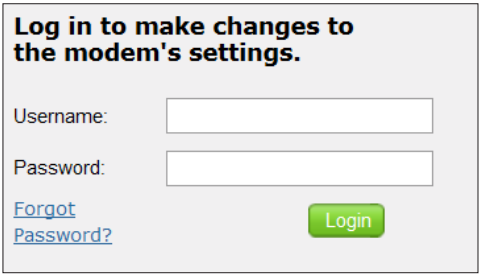
Accessing the Home Screen

To access the Home screen:

1. Open a Web browser on computer connected, via Ethernet cable, to one of the Gateway's LAN ports. In the *Address* text box, type:
   `http://192.168.1.254`
   then press **Enter** on the keyboard.

2. The Gateway's Home screen appears.

3. Enter the username "admin" and the password found on the sticker on the back of the Gateway in the *Username* and *Password* text boxes at the top right side of the screen, then click **Login**.



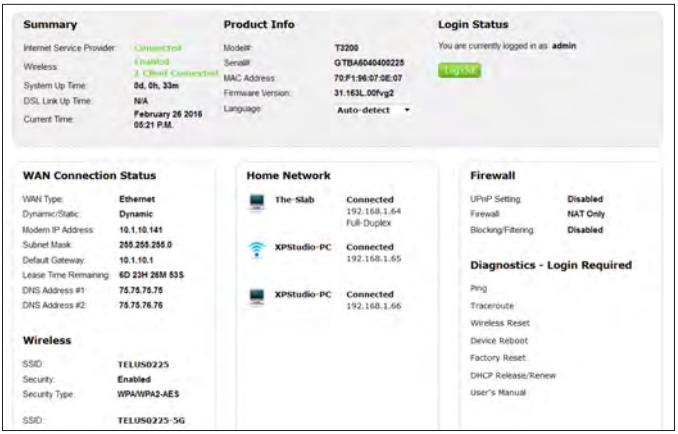
The Gateway's GUI is now accessible.

Icon Bar

At the top of the Home screen is the Icon Bar. Here, you can quickly access the other four main sections of the Gateway's GUI by clicking on the appropriate icon: Status (see chapter x for more details); Wireless Setup (see chapter x for more details); Firewall (see chapter x for more details); Advanced Setup(see chapter x for more details). Clicking Home in any other screen generates the Home screen.

Connection Status

The bottom of the Home screen consists of connection and device information relating to the Gateway. There are no configurable options here.



Checking the Gateway's Status

3

This chapter explains the options available on the Status screens, which display information about the Gateway's network connections.

Accessing the Status Screens

To access the Gateway's Status screens:

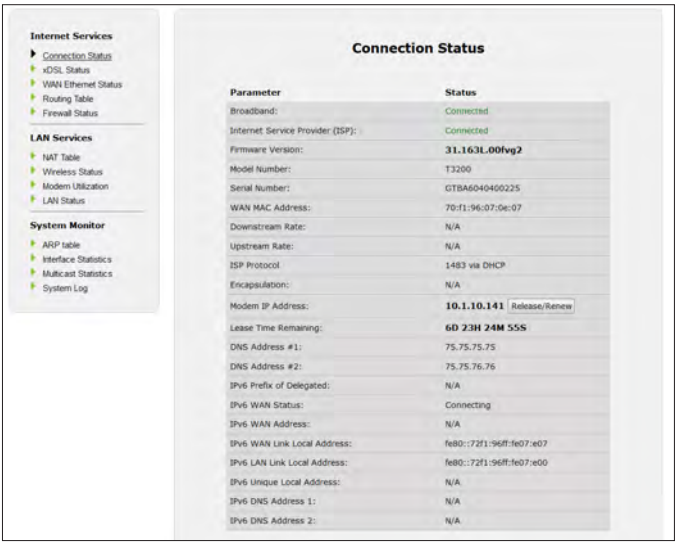
1. Open a Web browser. In the *Address* text box, type:

http://192.168.1.254

then press **Enter** on the keyboard.

2. The Gateway's Main screen appears. Click the *Status* icon.

3. The *Connection Status* screen appears.



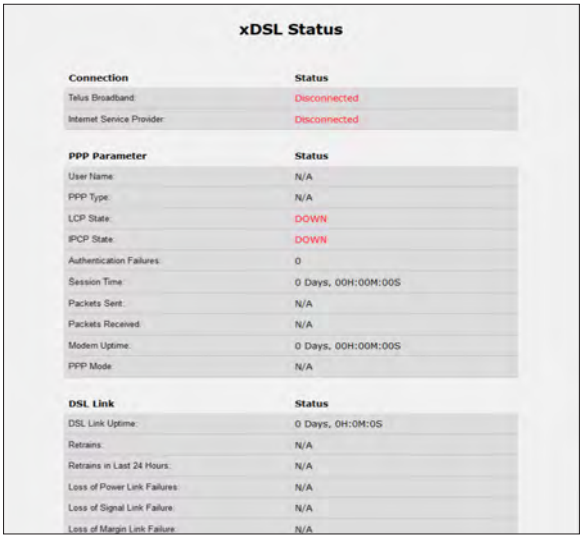
From here, all the Status screens can be accessed from the menu on the left.

Connection Status

Clicking Connection Status from any Status screen generates the *Connection Status* (see figure, above). Information concerning the devices connected to the Gateway's network, whether wired or wireless, is displayed here, along with the connected device's IP address, MAC address, and (if applicable) IPv6 address.

xDSL Status

Click **xDSL Status** from any Status screen to generate the *xDSL Status* screen. This screen displays the Gateway's DSL connection parameters.



xDSL Status

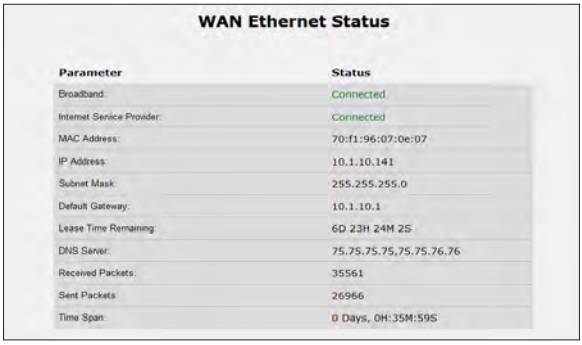
Connection	Status
Telus Broadband:	Disconnected
Internet Service Provider:	Disconnected

PPP Parameter	Status
User Name:	N/A
PPP Type:	N/A
LCP State:	DOWN
IPCP State:	DOWN
Authentication Failures:	0
Session Time:	0 Days, 00H:00M:00S
Packets Sent:	N/A
Packets Received:	N/A
Modem Uptime:	0 Days, 00H:00M:00S
PPP Mode:	N/A

DSL Link	Status
DSL Link Uptime:	0 Days, 0H:0M:0S
Retrains:	N/A
Retrains in Last 24 Hours:	N/A
Loss of Power Link Failures:	N/A
Loss of Signal Link Failure:	N/A
Loss of Margin Link Failure:	N/A

WAN Ethernet

Click **WAN Ethernet** from any Status screen to generate the *WAN Ethernet Status* screen. This screen displays the Gateway's WAN (wide access network) parameters.

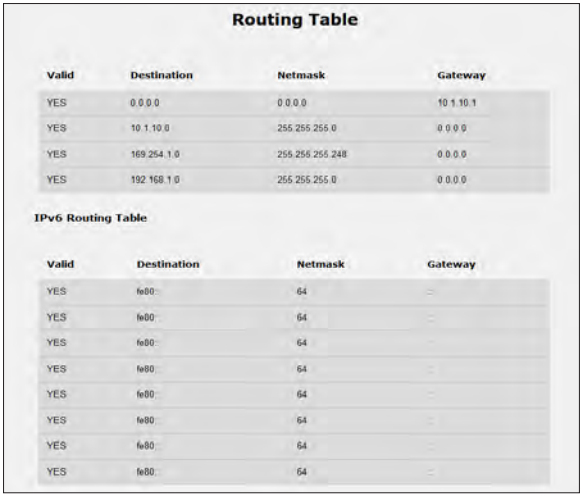


WAN Ethernet Status

Parameter	Status
Broadband:	Connected
Internet Service Provider:	Connected
MAC Address:	70:f1:96:07:0e:07
IP Address:	10.1.10.141
Subnet Mask:	255.255.255.0
Default Gateway:	10.1.10.1
Lease Time Remaining:	6D 23H 24M 2S
DNS Server:	75.75.75.75,75.75.76.76
Received Packets:	35561
Sent Packets:	26966
Time Span:	0 Days, 0H:35M:59S

Routing Table

Click **Routing Table** from any Status screen to generate the *Routing Table* screen. This screen displays the Gateway's routes.



Routing Table

Valid	Destination	Netmask	Gateway
YES	0.0.0.0	0.0.0.0	10.1.10.1
YES	10.1.10.0	255.255.255.0	0.0.0.0
YES	169.254.1.0	255.255.255.248	0.0.0.0
YES	192.168.1.0	255.255.255.0	0.0.0.0

IPv6 Routing Table

Valid	Destination	Netmask	Gateway
YES	fe80::	64	::
YES	fe80::	64	::
YES	fe80::	64	::
YES	fe80::	64	::
YES	fe80::	64	::
YES	fe80::	64	::
YES	fe80::	64	::
YES	fe80::	64	::

Firewall Status

Click **Firewall Status** from any Status screen to generate the *Firewall Status* screen. This screen displays parameters concerning the Gateway's firewall.

Firewall Status

The list below displays all firewall settings modified from the factory default settings.

Firewall Feature	LAN IP	Applied Rule
Applications	N/A	Default Feature Setting
Port Forwarding	N/A	Default Feature Setting
DMZ Hosting	N/A	Default Feature Setting
Firewall Settings	N/A	Default Feature Setting
NAT	N/A	NAT Enabled
UPnP	N/A	UPnP NAT Transversal Not Supported

NAT Table

Click **NAT Table** from any Status screen to generate the *NAT Table* screen. This screen displays the Gateway's WAN (wide access network) parameters.

NAT Table

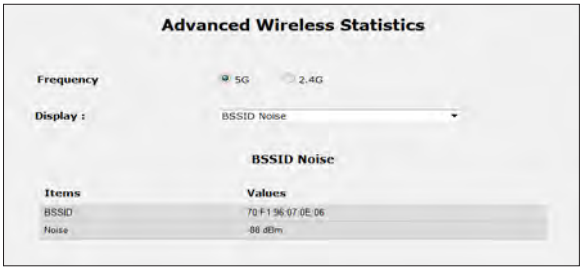
Protocol	Timeout	Source IP	Source Port	Destination IP	Destination Port
17	88	192.168.1.64	16403	24.130.151.160	16403
17	88	192.168.1.64	16403	17.156.127.223	16386
17	98	192.168.1.64	16403	17.156.127.222	16384
17	88	192.168.1.64	16403	17.156.127.222	16385
6	65	192.168.1.66	52090	205.206.163.40	80
6	74	192.168.1.66	52091	205.206.163.40	80
6	13	192.168.1.66	52081	205.206.163.40	80
6	13	192.168.1.66	52082	205.206.163.40	80

Wireless Status

Click **Wireless Status** from any Status screen to generate the *WAN Ethernet Status* screen. This screen displays the Gateway's wireless network parameters.

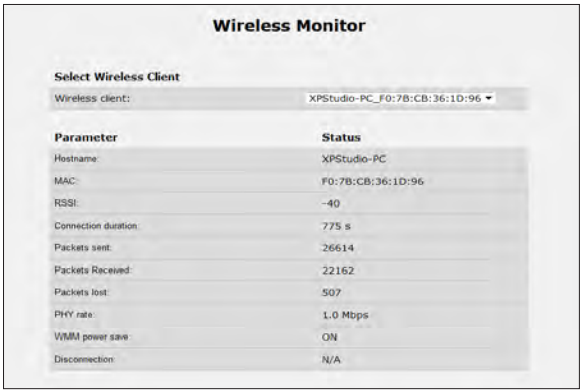
Wireless Status

Click **Advanced Wireless Statistics** from the bottom of the Wireless Status screen to generate the *Advanced Wireless Statistics* screen. This screen displays the Gateway's additional wireless network parameters.



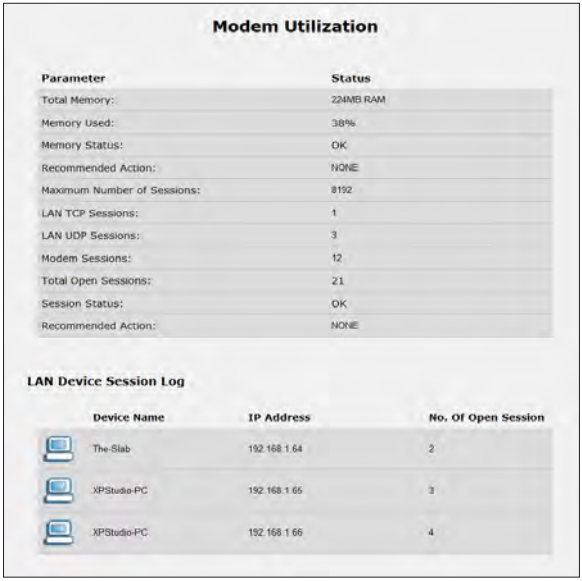
Wireless Monitor

Click **Modemstatus Wireless Monitor** from the bottom of the Wireless Status screen to generate the *Wireless Monitor* screen. This screen displays parameters for the clients connected to the Gateway's wireless network.



Modem Utilization

Click **Modem Utilization** from any Status screen to generate the *Modem Utilization* screen. This screen displays statistics related to the Gateway's modem operation.



Modem Utilization

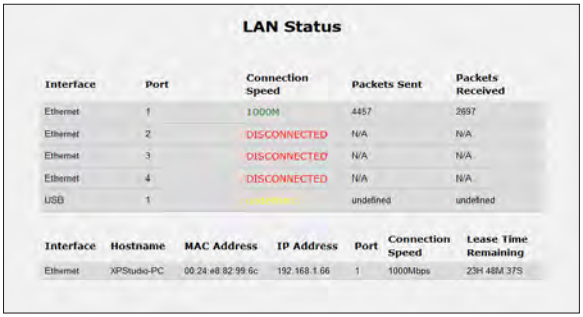
Parameter	Status
Total Memory:	224MB RAM
Memory Used:	38%
Memory Status:	OK
Recommended Action:	NONE
Maximum Number of Sessions:	8192
LAN TCP Sessions:	1
LAN UDP Sessions:	3
Modem Sessions:	12
Total Open Sessions:	21
Session Status:	OK
Recommended Action:	NONE

LAN Device Session Log

Device Name	IP Address	No. Of Open Session
The-Slab	192.168.1.64	2
XPStudio-PC	192.168.1.65	3
XPStudio-PC	192.168.1.66	4

LAN Status

Click **LAN Status** from any Status screen to generate the *LAN Status* screen. This screen displays the Gateway's LAN (local area network) parameters.



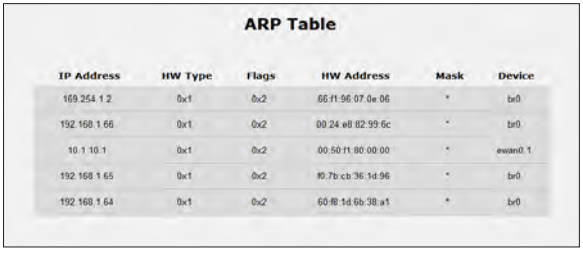
LAN Status

Interface	Port	Connection Speed	Packets Sent	Packets Received
Ethernet	1	1000M	4457	2697
Ethernet	2	DISCONNECTED	N/A	N/A
Ethernet	3	DISCONNECTED	N/A	N/A
Ethernet	4	DISCONNECTED	N/A	N/A
USB	1	undefined	undefined	undefined

Interface	Hostname	MAC Address	IP Address	Port	Connection Speed	Lease Time Remaining
Ethernet	XPStudio-PC	00:24:e8:82:99:6c	192.168.1.66	1	1000Mbps	23H 48M 37S

ARP Table

Click **ARP Table** from any Status screen to generate the *ARP Table* screen. This screen displays the Gateway's ARP (address resolution protocol) table.



ARP Table

IP Address	HW Type	Flags	HW Address	Mask	Device
169.254.1.2	0x1	0x2	66:f1:96:07:0e:06	*	br0
192.168.1.66	0x1	0x2	00:24:e8:82:99:6c	*	br0
10.1.10.1	0x1	0x2	00:50:f1:80:00:00	*	ewan0.1
192.168.1.65	0x1	0x2	f0:7b:cb:36:1d:96	*	br0
192.168.1.64	0x1	0x2	60:f8:1d:6b:38:a1	*	br0

Interface Statistics

Click **Interface Statistics** from any Status screen to generate the *Estimated Interface Statistics* screen. This screen displays various statistics and parameters relating to the Gateway's connection interfaces.

Estimated Interface Statistics

Interface	Connect Speed (Mbps)	Packets				Bytes (MB)			Bytes (MB) since Reset		
		Tx	Rx	Tx Errors	Rx Errors	Tx	Rx	dropped	Tx	Rx	dropped
EWAN	Auto	27002	35673	0	0	3086880	36800231	0	3086880	36800231	0
XDSL	Auto	27002	35673	0	0	3086880	36800231	0	3086880	36800231	0
Eth LAN#1	1000M	4549	2731	0	0	1584974	582367	0	1584974	582367	0
Eth LAN#2	Disconnected	63	143	0	0	4316	38740	0	4316	38740	0
Eth LAN#3	Disconnected	0	0	0	0	0	0	0	0	0	0
Eth LAN#4	Disconnected	0	0	0	0	0	0	0	0	0	0
WiFi - 2.4G	405M	26758	20279	0	0	25992001	2334276	0	25992001	2334276	0
WiFi - 5G	1733M	14140	7343	0	0	12429278	889567	0	12429278	889567	0

Multicast Statistics

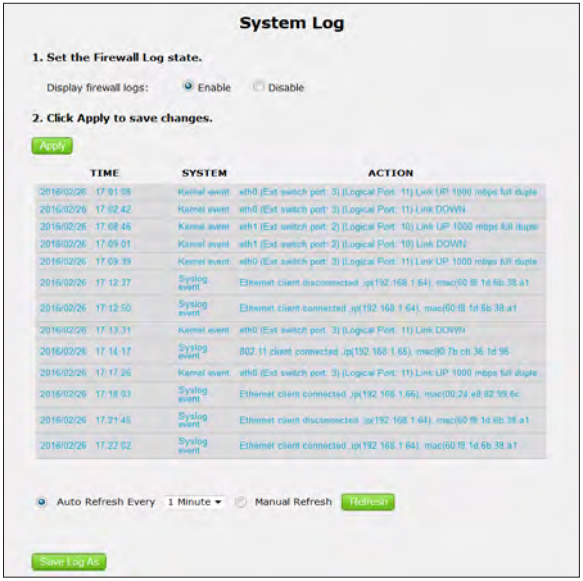
Click **Multicast Statistics** from any Status screen to generate the *Multicast Statistics* screen. This screen displays the Gateway's multicast statistics.

Multicast Statistics

Channel	Joined Clients		Time Out Value			
	Host	IP	Days	Hour(s)	Minutes	Seconds
No Entries Defined						

System Log

Click **System Log** from any Status screen to generate the *System Log* screen. This screen displays the Gateway's system log, which keeps track of all events that occur on the Gateway.



Configuring Wireless Settings

4

This chapter explains the options provided in the *Wireless Settings* section of the Gateway's firmware, including basic and advanced settings, and WPS.

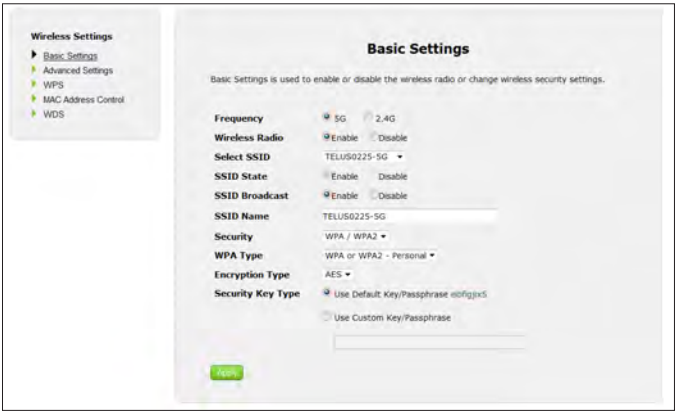
Accessing Wireless Settings

To access the Wireless Settings screens:

1. Open a Web browser. In the *Address* text box, type:
   http://192.168.1.254
   then press **Enter** on the keyboard.

2. The Gateway's Main screen appears. Enter the user name and password, then click **Wireless Settings** from the row of icons at the top of the screen.

3. The *Wireless Status* screen appears, with a menu of other wireless options listed on the left side of the screen.

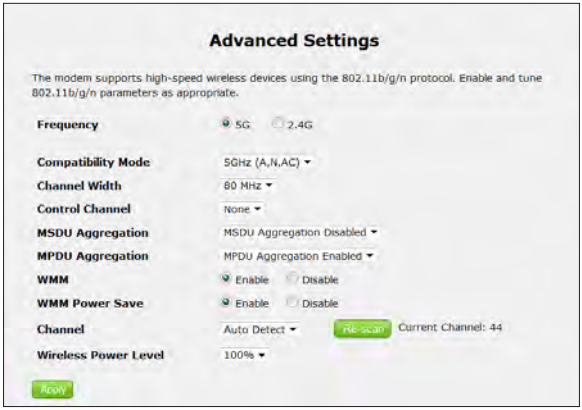


Basic Settings

Click **Basic Settings** from any Wireless Settings screen to generate the *Basic Settings* screen, as shown in the figure above. This screen displays a series of settings relating to the basic functionality of the Gateway's wireless network, including SSID (network name), frequency, and security.

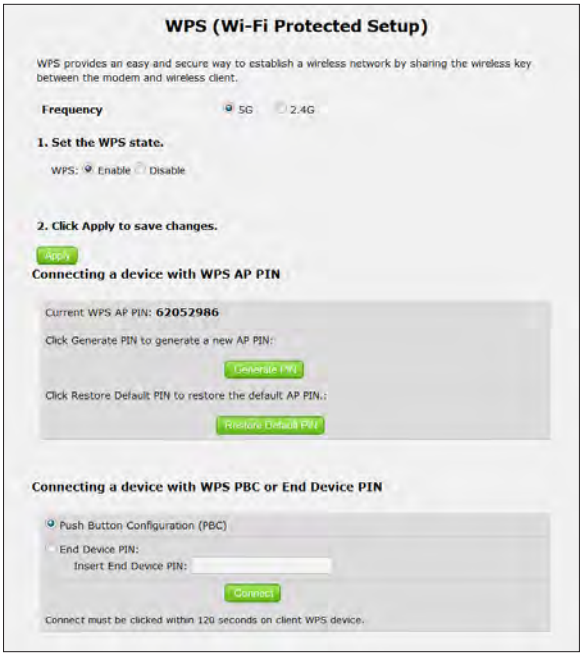
Advanced Settings

Click **Advanced Settings** from any Wireless Settings screen to generate the *Advanced Settings* screen. This screen displays a series of settings relating to the advanced capabilities of the Gateway's wireless network, including compatibility mode, channel width, and WMM power save.



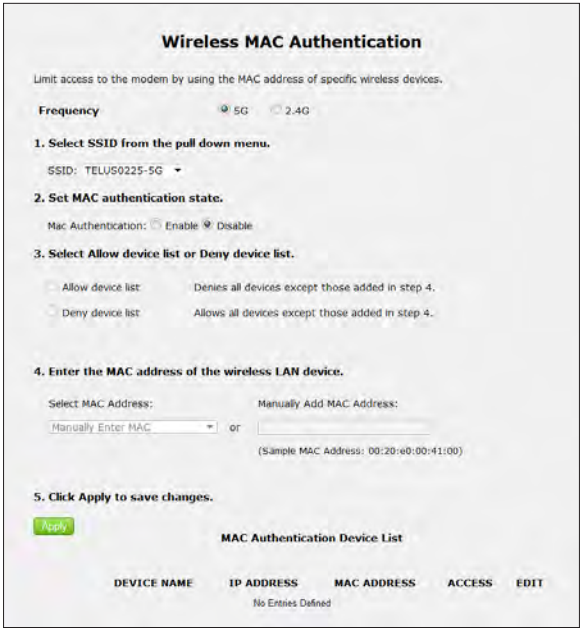
WPS

Click **WPS** from any Wireless Settings screen to generate the *WPS (Wi-Fi Protected Setup)* screen, which allows the user to configure WPS by following the onscreen instructions.



MAC Address Control

Click **MAC Address Control** from any Wireless Settings screen to generate the *Wireless MAC Authentication* screen, which allows the user to configure allow or deny access to the Gateway's wireless network using the MAC address of the wireless device. Follow the onscreen instructions to configure.



WDS

Click **WDS** from any Wireless Settings screen to generate the *WDS Wireless Distribution System* screen, which allows the user to configure the Gateway to allow wireless connections between access points. Follow the onscreen instructions to configure.

Configuring Firewall Settings

5

This chapter explains the options provided in the *Firewall* section of the Gateway's firmware, including setting up port forwarding and static NAT.

Accessing Firewall Settings

To access the Firewall screens:

1. Open a Web browser. In the *Address* text box, type:
   http://192.168.1.254
   then press **Enter** on the keyboard.

The Gateway's Home screen appears. Click the *Firewall* icon.

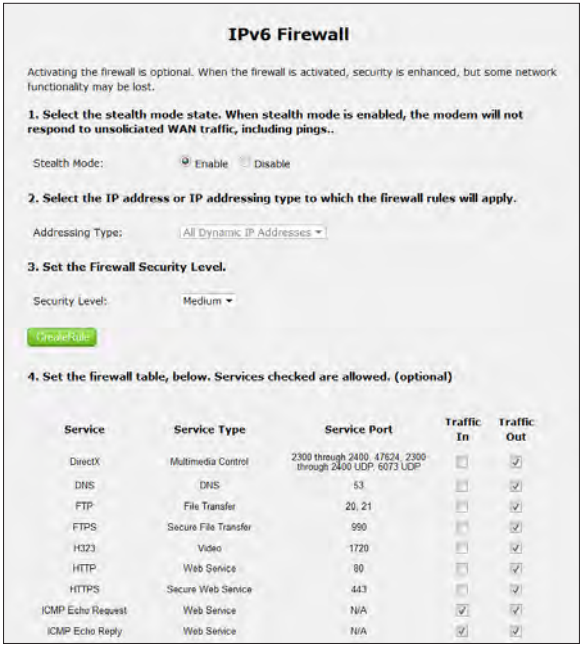
2. The *Firewall* screen appears, with a menu of other wireless options listed on the left side of the screen.

Firewall

Click **General** from any Firewall Settings screen to generate the *Firewall* screen, as shown in the figure above. To set up, follow the onscreen instructions.

IPv6 Firewall

Click **IPv6 Firewall** from any Firewall Settings screen to generate the *IPv6 Firewall* screen. To set up, follow the onscreen instructions.



IPv6 Firewall

Activating the firewall is optional. When the firewall is activated, security is enhanced, but some network functionality may be lost.

1. Select the stealth mode state. When stealth mode is enabled, the modem will not respond to unsoliciated WAN traffic, including pings..

Stealth Mode: Enable Disable

2. Select the IP address or IP addressing type to which the firewall rules will apply.

Addressing Type: All Dynamic IP Addresses

3. Set the Firewall Security Level.

Security Level: Medium

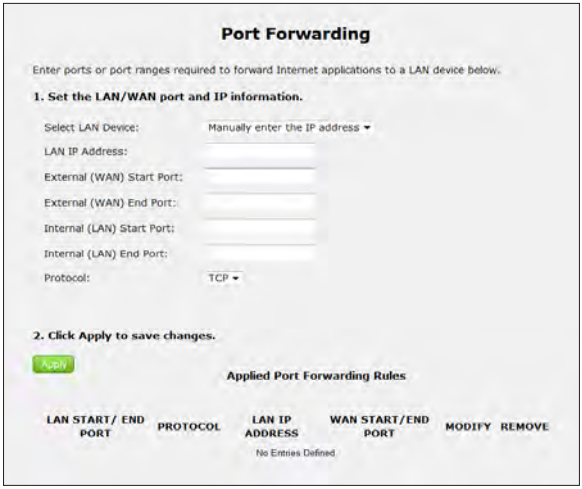
CreateRule

4. Set the firewall table, below. Services checked are allowed. (optional)

Service	Service Type	Service Port	Traffic In	Traffic Out
DirectX	Multimedia Control	2300 through 2400, 47624, 2300 through 2400 UDP, 6073 UDP	☐	☑
DNS	DNS	53	☐	☑
FTP	File Transfer	20, 21	☐	☑
FTPS	Secure File Transfer	990	☐	☑
H323	Video	1720	☐	☑
HTTP	Web Service	80	☐	☑
HTTPS	Secure Web Service	443	☐	☑
ICMP Echo Request	Web Service	N/A	☑	☑
ICMP Echo Reply	Web Service	N/A	☑	☑

Port Forwarding

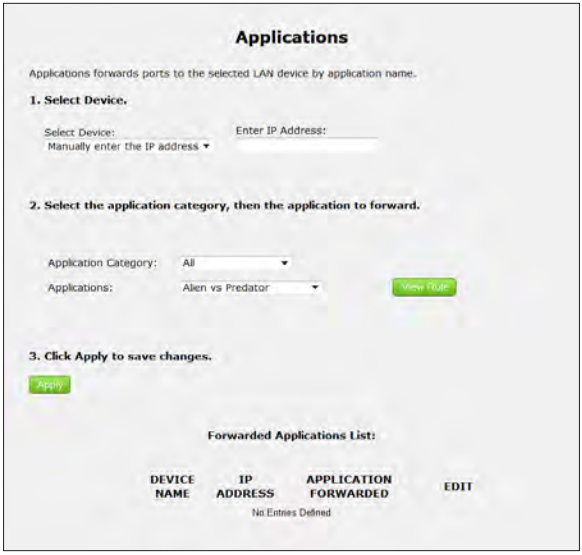
Click **Port Forwarding** from any Firewall screen to generate the *Port Forwarding* screen. Activating port forwarding allows the network to be exposed to the Internet in certain limited and controlled ways, enabling some applications to work from the local network (game, voice, and chat applications, for example), as well as allowing Internet access to servers in the local network. This screen allows you to configure the port forwarding settings of the Gateway. If changes are made in this screen, click **Apply** at the bottom of the screen to save them.



Port forwarding settings should only be adjusted by experienced technical users who are extremely familiar with wireless networking concepts.

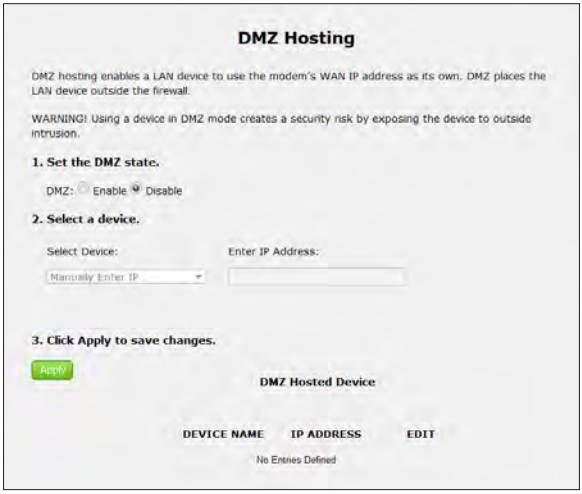
Applications

Click **Applications** from any Firewall screen to generate the *Applications* screen. This screen allows the user to designate certain applications to be forwarded, circumventing the usual firewall security settings. If changes are made in this screen, click **Apply** at the bottom of the screen to save them.



DMZ Hosting

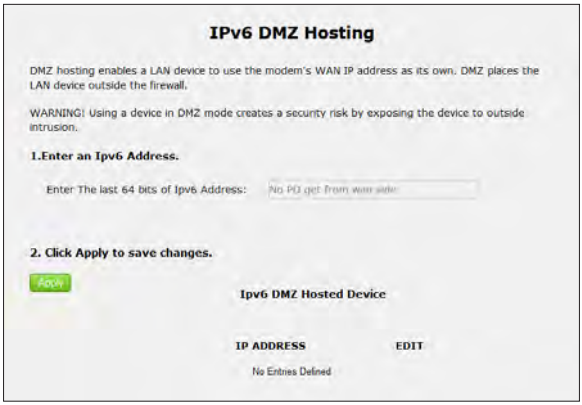
Click **DMZ Hosting** from any Firewall screen to generate the *DMZ Hosting* screen. The DMZ host feature allows one device on the network to operate outside the firewall to use an Internet service that otherwise would be blocked, or to expose a networked device to all services without restriction or security. To activate, click in the *Enable* radio button, then enter the device's IP address in the appropriate text boxes.



Caution! A DMZ host is not protected by the firewall and may be vulnerable to attack. Designating a DMZ host may also put other computers in the local network at risk. When designating a DMZ host, consider the security implications and protect it if necessary.

IPv6 DMZ Hosting

Click **IPv6 DMZ Hosting** from any Firewall screen to generate the *IPv6 DMZ Hosting* screen. The DMZ host feature allows one device on the network to operate outside the firewall to use an Internet service that otherwise would be blocked, or to expose a networked device to all services without restriction or security. To activate, follow the onscreen instructions.



Caution! A DMZ host is not protected by the firewall and may be vulnerable to attack. Designating a DMZ host may also put other computers in the local network at risk. When designating a DMZ host, consider the security implications and protect it if necessary.

UPnP

Click **UPnP** from any Firewall screen to generate the *UPnP* screen, which activates UPnP (Universal Plug and Play). To activated, click in the *Enable* radio button, then click **Apply**.

Advanced Settings

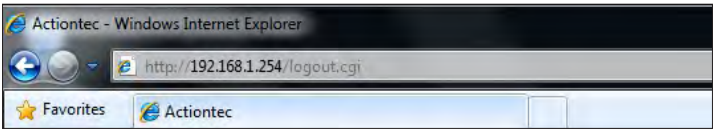
6

This chapter explains the options available with the Advanced Setup screens, which configure some of the more complex settings on the Gateway.

Accessing the Advanced Setup Screens

To access the Gateway's Advanced Setup screens:

1. Open a Web browser. In the *Address* text box, type:
   http://192.168.1.254
   then press **Enter** on the keyboard.



2. The Gateway's Main screen appears. Click the *Advanced Setup* icon.

3. The *Services Blocking* screen appears.

From here, all the Advanced Setup screens can be accessed from the menu on the left.

Services Blocking

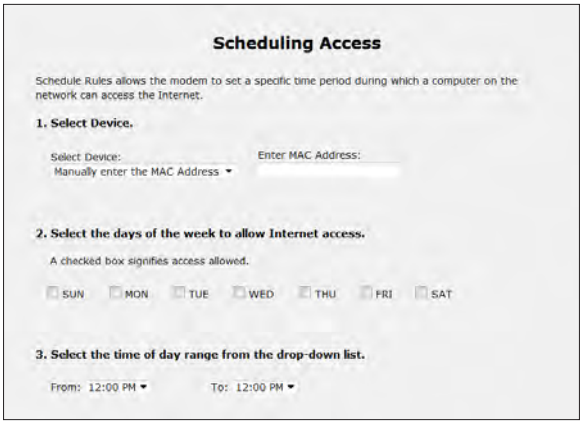
Click **Services Blocking** from any Advanced Setup screen to generate the *Services Blocking* screen (see the figure, above). This feature allows the user to block certain services from accessing the Gateway's network(s). Follow the onscreen instructions to configure.

Website Blocking

Click **Website Blocking** from any Advanced Setup screen to generate the *Website Blocking* screen. This feature allows the user to block certain websites from accessing the Gateway's network(s). Follow the onscreen instructions to configure.

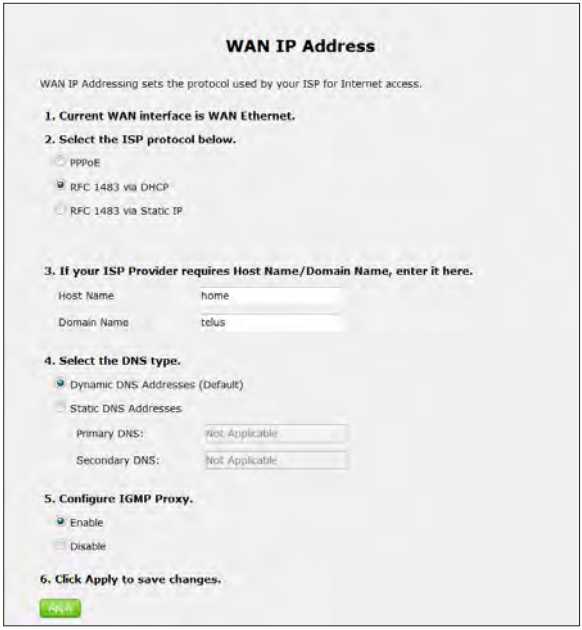
Scheduling Access

Click **Scheduling Access** from any Advanced Setup screen to generate the *Scheduling Access* screen. This feature allows the user to schedule access to the Gateway's network(s) for certain devices. Follow the onscreen instructions to configure.



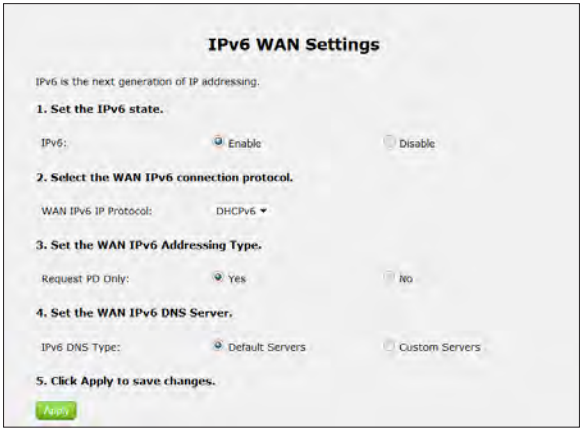
WAN IP Addressing

Click **WAN IP Addressing** from any Advanced Setup screen to generate the *WAN IP Address* screen. This feature allows the user to set the protocol used by the ISP for Internet access. Follow the onscreen instructions to configure.



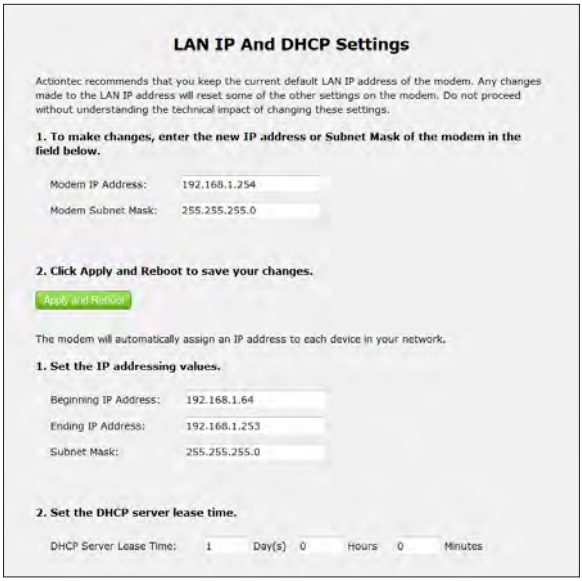
IPv6 WAN Settings

Click **IPv6 WAN Settings** from any Advanced Setup screen to generate the *IPv6 WAN Settings* screen. This feature allows the user to set the IPv6 protocol used by the ISP for Internet access. Follow the onscreen instructions to configure.



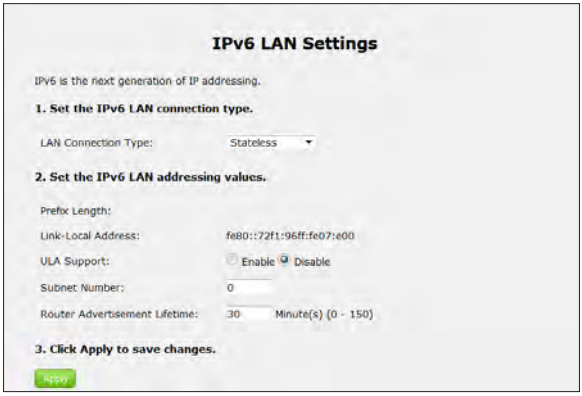
LAN IP Settings

Click **LAN IP Settings** from any Advanced Setup screen to generate the *LAN IP and DHCP Settings* screen. This feature allows the user to set LAN IP and DHCP server settings on the Gateway. Follow the onscreen instructions to configure.



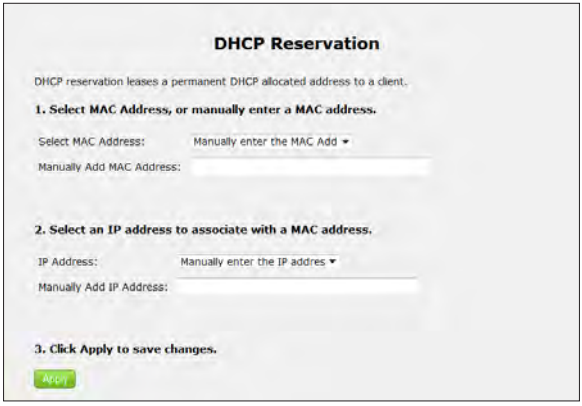
IPv6 LAN Settings

Click **IPv6 LAN Settings** from any Advanced Setup screen to generate the *IPv6 LAN Settings* screen. This feature allows the user to set the IPv6 LAN IP settings on the Gateway. Follow the onscreen instructions to configure.



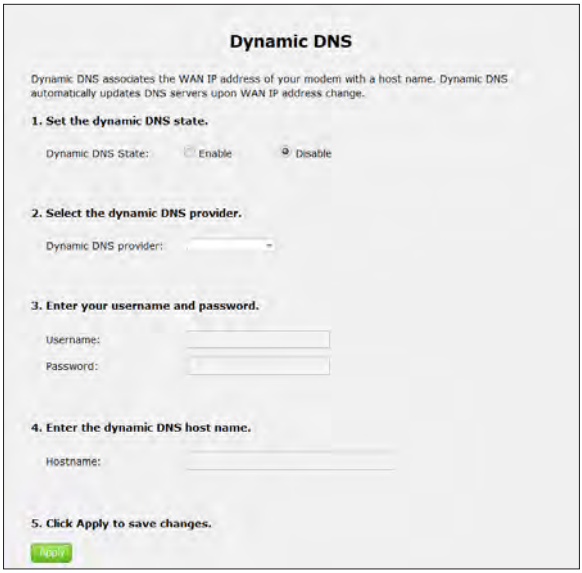
DHCP Reservation

Click **DHCP Reservation** from any Advanced Setup screen to generate the *DHCP Reservation* screen. This feature allows the user to lease a permanent DHCP-allocated address to a client on the Gateway's network. Follow the onscreen instructions to configure.



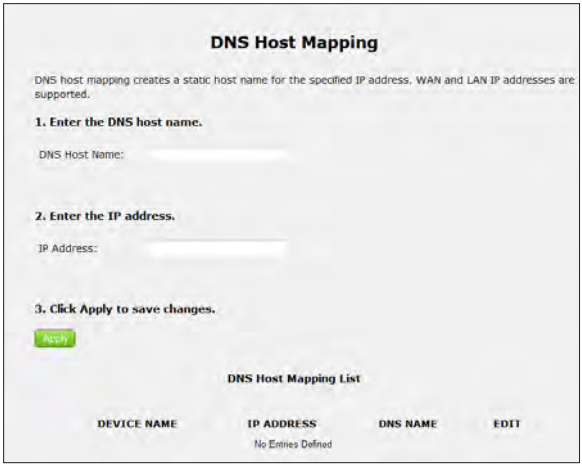
Dynamic DNS

Click **Dynamic DNS** from any Advanced Setup screen to generate the *Dynamic DNS* screen. This feature allows the user to associate the WAN IP address of the Gateway with a host name. Follow the onscreen instructions to configure.



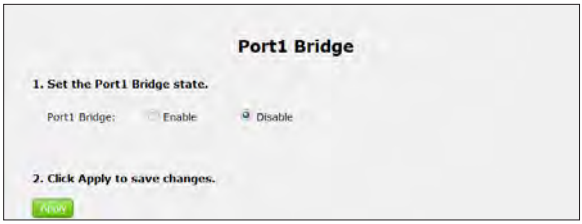
DNS Host Mapping

Click **DNS Host Mapping** from any Advanced Setup screen to generate the *Dynamic DNS* screen. This feature allows the user to create a static host name for a specified IP address. Follow the onscreen instructions to configure.



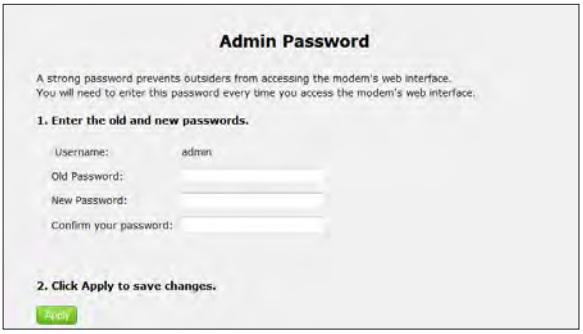
Port Bridging

Click **Port Bridging** from any Advanced Setup screen to generate the *Port Bridging* screen. This feature allows the user to create a port bridge on the Gateway. Follow the onscreen instructions to configure.



Admin Password

Click **Admin Password** from any Advanced Setup screen to generate the *Admin Password* screen. This feature allows the user to change the password for accessing the Gateway's graphical user interface. Follow the onscreen instructions to configure.

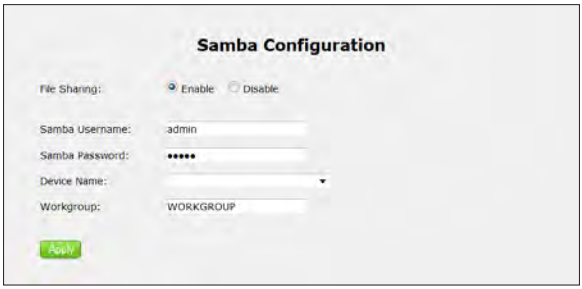


Storage Device Info

Click **Storage Device Info** from any Advanced Setup screen to generate the *Storage Service* screen. This feature allows storage devices connected to the Gateway to be easily accessed. Any storage devices connected to the Gateway will be listed in the table at the bottom of the screen.

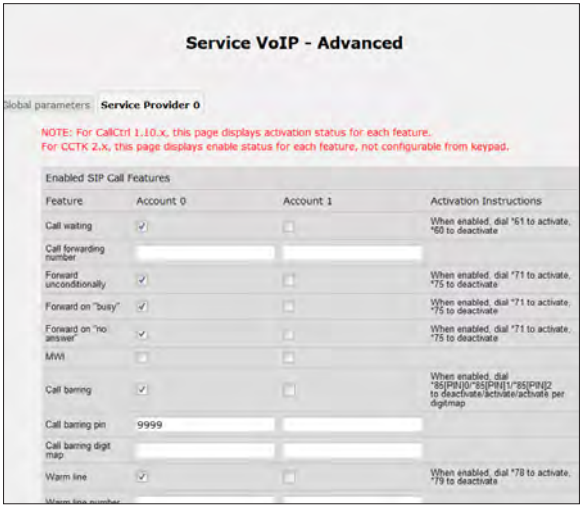
Samba Configuration

Click **Samba Configuration** from any Advanced Setup screen to generate the *Samba Configuration* screen. This feature allows the user to set up a Samba environment. Follow the onscreen instructions to configure.



Voice Advanced Setting

Click **Voice Advanced Setting** from any Advanced Setup screen to generate the *Service VoIP - Advanced* screen. This feature allows the user to configure advanced VoIP settings on the Gateway. Follow the onscreen instructions to configure.



Voice Basic Setting

Click **Voice Basic Setting** from any Advanced Setup screen to generate the *Service VoIP - Basic* screen. This feature allows the user to configure basic VoIP settings on the Gateway. Follow the onscreen instructions to configure.

Voice Debug Setting

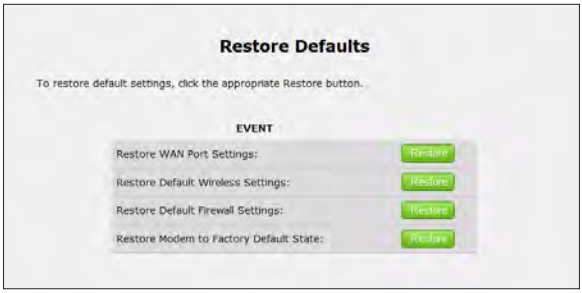
Click **Voice Debug Setting** from any Advanced Setup screen to generate the *Service VoIP - Debug* screen. This feature allows the user to configure VoIP debug settings on the Gateway. Follow the onscreen instructions to configure.

Reboot

Click **Reboot** from any Advanced Setup screen to generate the *Reboot* screen. Reboot the Gateway by clicking **Reboot**.

Restore Defaults

Click **Restore Defaults** from any Advanced Setup screen to generate the *Restore Defaults* screen. To restore certain settings on the Gateway, click the appropriate *Restore* button.

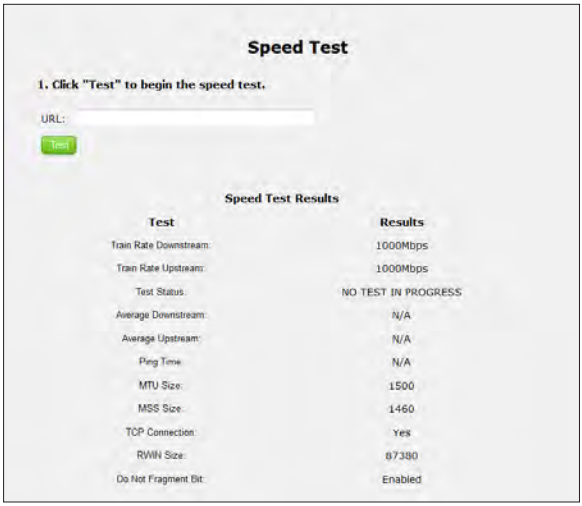


Check for New Firmware

Click **Check for New Firmware Link** from any Advanced Setup screen to generate the *Upgrade Firmware from Internet* screen. Follow the onscreen instructions to upgrade the firmware on the Gateway.

Speed Test

Click **Speed Test** from any Advanced Setup screen to generate the *Speed Test* screen. This screen allows the user to perform a speed test on the Gateway's Internet (or WAN) connection. Enter the URL for a speed test site, then click **Test**.

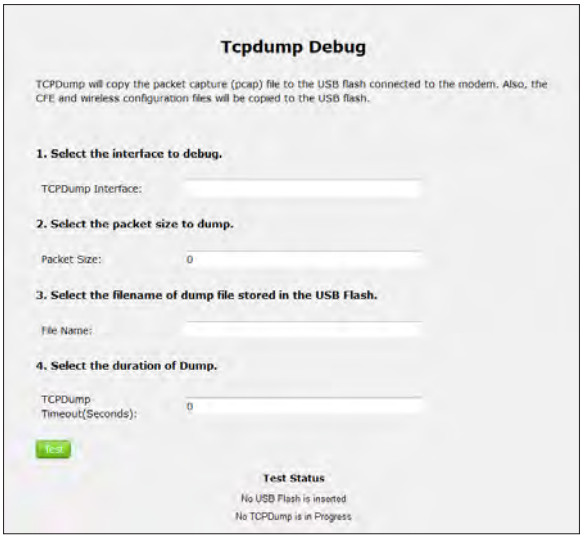


Ping Test

Click **Ping Test** from any Advanced Setup screen to generate the *Ping Test* screen. To perform a ping test on the Gateway, follow the onscreen instructions.

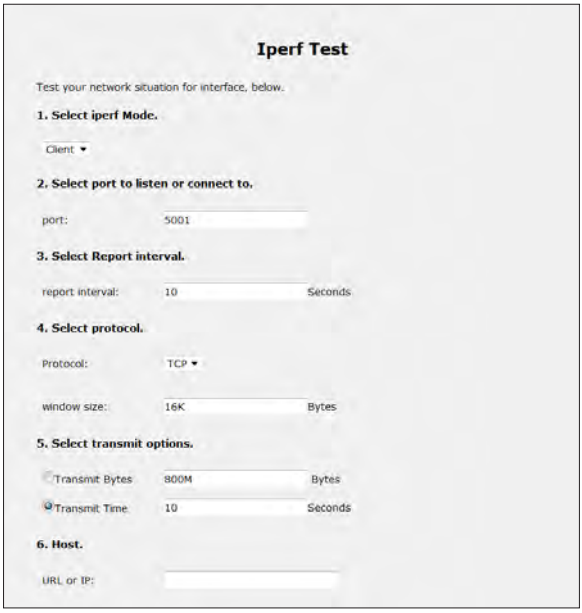
Tcpdump Debug

Click **Tcpdump Debug** from any Advanced Setup screen to generate the *Tcpdump Debug* screen. To perform a tcpdump debug on the Gateway, follow the onscreen instructions.



Iperf Test

Click **Iperf Test** from any Advanced Setup screen to generate the *Iperf Test* screen. To perform an iperf test on the Gateway, follow the onscreen instructions.



IPv6 Ping Test

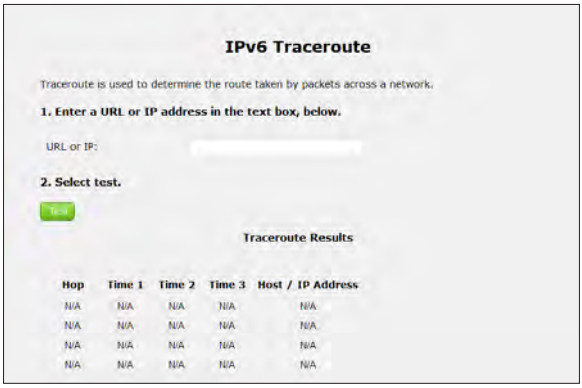
Click **IPv6 Ping Test** from any Advanced Setup screen to generate the *IPv6 PingTest* screen. To perform an IPv6 ping test on the Gateway, follow the onscreen instructions.

Traceroute

Click **Traceroute** from any Advanced Setup screen to generate the *Traceroute* screen. To perform an route trace on the Gateway, follow the onscreen instructions.

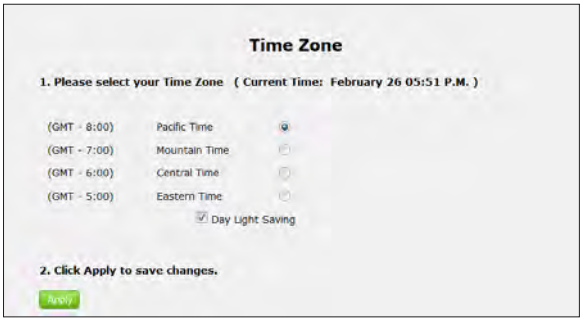
IPv6 Traceroute

Click **IPv6 Traceroute** from any Advanced Setup screen to generate the *IPv6 Traceroute* screen. To perform an IPv6 route trace on the Gateway, follow the onscreen instructions.



Time Zone

Click **Time Zone** from any Advanced Setup screen to generate the *Time Zone* screen. Use this screen to set the time zone on the Gateway.

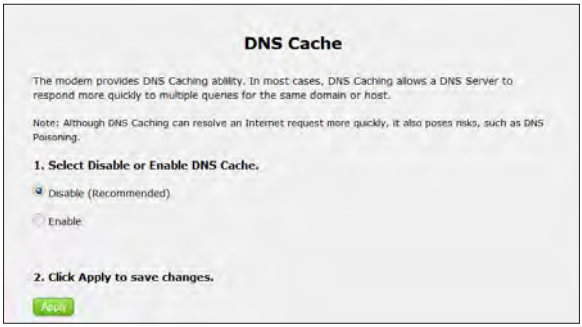


Language Settings

Click **Language Settings** from any Advanced Setup screen to generate the *Language Settings* screen. Use this screen to set the language on the Gateway's graphical user interface.

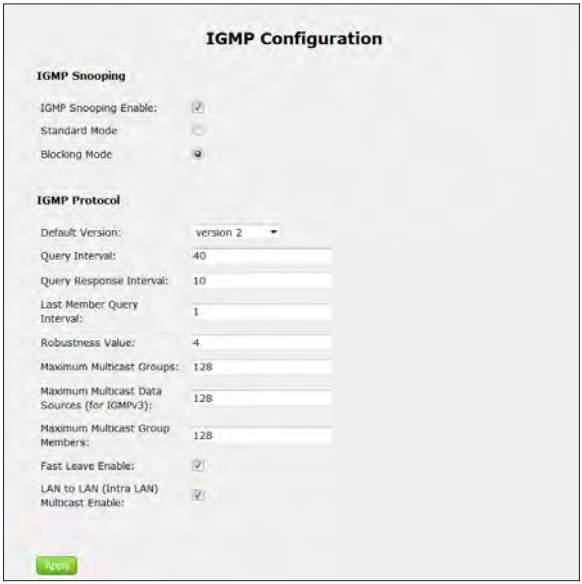
DNS Cache

Click **DNS Cache** from any Advanced Setup screen to generate the *DNS Cache* screen. Use this screen to set up a DNS cache on the Gateway.



IGMP Setting

Click **IGMP Setting** from any Advanced Setup screen to generate the *IGMP Setting* screen. Use this screen to set up IGMP processes on the Gateway.

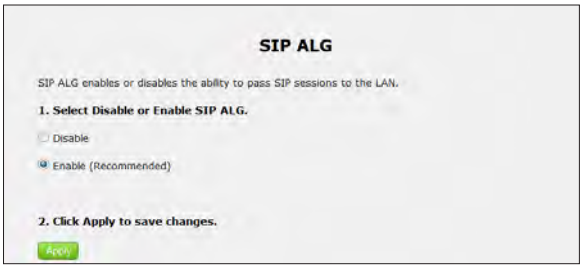


Upgrade History

Click **Upgrade History** from any Advanced Setup screen to generate the *Upgrade History* screen. This screen displays a list of firmware upgrades applied to the Gateway.

SIP ALG

Click **SIP ALG** from any Advanced Setup screen to generate the *SIP ALG* screen. This screen allows the user to configure SIP ALG on the Gateway.

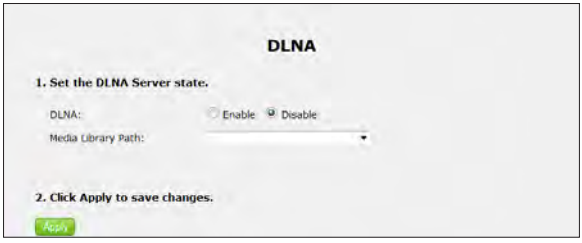


Tool Box

Click **Tool Box** from any Advanced Setup screen to generate the *Tool Box* screen. This screen allows the user to configure traffic and port mirroring on the Gateway.

DLNA

Click **DLNA** from any Advanced Setup screen to generate the *DLNA* screen. This screen allows the user to configure DLNA settings on the Gateway.



xDSL Diagnostics

Click **xDSL diagnostics** from any Advanced Setup screen to generate the *DLNA* screen. This screen allows the user to select a type of diagnostics on the Gateway.

User's Manual

Click **xDSL diagnostics** from any Advanced Setup screen to view the Gateway's user manual.

Specifications

A

General

Model Number(s)

T3200M (Wireless 11ac Bonded VDSL2 Modem Gateway with MoCA 2.0)

Standards

IEEE 802.3 (10BaseT)
IEEE 802.3u (100BaseTX)
IEEE 802.11 b, g, n (Wireless)
G.dmt
G.lite
t1.413
RFC 1483, 2364, 2516

Protocol

LAN - CSMA/CD
WAN - PPP, DHCP, Static IP

WAN

VDSL2 interface

LAN

10/100/1000 RJ-45 switched ports

Speed

LAN Ethernet: 10/100/1000 Mbps auto-sensing
Wireless: 802.11n 300 Mbps optimal (see Wireless Operating Range for details)

Cabling Type

Ethernet 10BaseT: UTP/STP Category 3 or 5
Ethernet100BaseTX: UTP/STP Category 5

Wireless Operating Range

Indoors

Up to 91M (300 ft.) @ 300 Mbps

Outdoors

Up to 457M (1500 ft.) @ 300 Mbps

Topology

Star (Ethernet)

LED Indicators

WAN, Wireless, and WPS Push Button

Power Adapter

This device is supplied with one of two power adapters:

Adapter 1
Model No. - NBS40C120300VU
Input - 100-240V~, 50/60Hz, 1.0A
Output - 12.0V === 3.0A
Manufacturer - NetBit

Adapter 2
Model No. - CDS036-W120U
Input - 100-240V~, 50/60Hz, 1.0A
Output - 12.0V === 3.0A
Manufacturer - Actiontec

Environmental

Power

External, 12V DC, 3 A

Certifications

FCC Class B, FCC Class C (part 15, 68), CE Mark Commercial, UL

Operating Temperature

0° C to 45° C (32°F to 113°F)

Storage Temperature

-20°C to 70°C (-4°F to 158°F)

Operating Humidity

10% to 85% non-condensing

Storage Humidity

5% to 90% non-condensing

Notices

Warranty

This product has a one-year Limited Hardware Warranty and 90-day free software updates from date of purchase.

Local Law

This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights, which vary from state to state in the United States, and from country to country elsewhere in the world.

To the extent that this Limited Warranty Statement is inconsistent with local law, this Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer.

Go to **http://www.actiontec.com/products/warranty.php** for more information.

Important Safety Instructions

Basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and personal injury, including the following:

- Do not use this product near water – for example, near a bathtub, kitchen sink, laundry tub, or swimming pool, or in a wet basement; only clean with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus including amplifiers that produce heat.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord indicated in this manual.

Coaxial Cable

If applicable, the coaxial cable screen shield needs to be connected to the Earth at the building entrance per ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, “Grounding of Outer Conductive Shield of a Coaxial Cable,” or in accordance with local regulation.

FCC Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by implementing one or more of the following measures:

- Reorient or relocate the device;
- Increase the separation between the equipment and receiver;
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Actiontec Electronics, Inc, may void the user’s authority to operate the equipment.

Declaration of Conformity for Products Marked With the FCC Logo

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

1. This device may not cause harmful interference;
2. This device must accept any interference received, including interference that may cause undesired operation of the device.

Important Note on Wi-Fi

If applicable, this equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The radio has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091, 15.247 (b) (4),15.407 addressing RF Exposure from radio frequency devices as defined in Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields. The equipment should be installed more than 30 cm (~12 in.) from your body or nearby persons.

For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

The maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comp with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

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

Contact Info

For questions regarding your product or the FCC declaration, contact:

Actiontec Electronics, Inc
760 North Mary Avenue, Sunnyvale, CA 94085, United States
Tel: (408) 752-7700
Fax: (408) 541-9003