

Alpha GIGABIT

Secure Wireless Router 8400



User Manual

ALPHA SHIELD[®]
SECURE NETWORKING

Alpha**GIGABIT** Secure Wireless Router 8400

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1. INTRODUCTION:

Congratulations on your purchase of the Alpha**GIGABIT** Secure Wireless Router 8400, and thank you for choosing AlphaShield for your networking and security needs. Your new router allows you to share files and printers on your network, and surf the Internet with the performance benefits of network optimization using StreamEngine Technology®, Gigabit Ethernet and Turbo Wireless-G and the built in security benefits of the AlphaShield firewall with AlphaGAP® technology. Soon, you will be able to have a secure and enjoyable Internet experience.

Your Alpha**GIGABIT** Secure Wireless Router 8400 has been designed for maximum duty uptime. The only time it requires you to take it offline is briefly during setup and occasionally to upgrade the firmware program inside the router. As an added security measure, you can instantly isolate your computer(s) from the Internet at the press of a button.

This manual will show you how to set your new router, and to get your computer(s) connected to the Internet. Once you are online, we invite you to visit the AlphaShield website www.alphashield.com to register your new product, check for firmware updates and activate any subscription-based services that have been bundled with your router. At the website, you will also find additional tips and knowledge based articles to assist you with getting the most out of your networking experience.

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2. CONTENTS:

1. Alpha**GIGABIT** Secure Wireless Router 8400
2. Cat5 Ethernet Cable
3. Power Adapter (6.8V, 2.5A)
4. Quick Installation Guide
5. CD-ROM with Manual
6. Vertical Stands

Note : Please contact your reseller if any of the above items are missing.

Important: Using a power supply other than that included with your router will result in the warranty of this product being declared void.

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3. SYSTEM REQUIREMENTS:

1. External xDSL or Cable Modem with Ethernet Ports.
2. PC or MAC with following minimum requirements:
 - ☒ 1.25 Ghz processor
 - ☒ 256MB Memory
 - ☒ CD-ROM Drive
 - ☒ Ethernet Adapter 10/100/1000 with TCP/IP Protocol Installed
 - ☒ Windows® XP/2000/Vista/ME or Mac® OS X v10.3/v10.2/v10.1 or Linux
 - ☒ Internet Explorer v6, Netscape® Navigator v7 or Firefox v1.5

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4.FEATURES:

Hardware Interface Features:

Router/Switch Hardware:

- ☛ Dedicated 250 MIPS High Speed core Network Processor
- ☛ Dedicated High Speed Multi-port Gigabit Switch & Co-Processor
- ☛ 5 x 10/100/1000 Auto-Sensing Gigabit Ethernet LAN Ports with MDI /MDI-X
- ☛ 1 x 10/100 Auto-Sensing Fast Ethernet WAN Port with MDI/MDI-X
- ☛ 4 Universal Serial Bus (USB) connections
- ☛ Atheros Chipset & 802.11 b/g transceiver with Super G 108 Mbps wireless throughput

Router Features:

- ☛ WAN and LAN USB Network Storage
- ☛ USB Print Server Capability
- ☛ Static and Dynamic Network Address Translation (NAT)
- ☛ Secure LAN and WAN HTTP Router management
- ☛ Static and Dynamic DHCP WAN Mode
- ☛ Supports Virtual Server Access
- ☛ Built-in DHCP Server
- ☛ Dynamic DNS and Port Forwarding
- ☛ StreamEngine Technology® for Packet prioritization of Real-Time Applications
- ☛ Supports IPSec VPN (Virtual Private Network)
- ☛ Ethernet speed and link status LED indicators
- ☛ One Click Configuration Setup Wizard

Wireless Features:

- ☛ 802.11 b/g and Super G Wireless Connectivity
- ☛ Configurable and Extended Range settings of up to 1500 feet
- ☛ Supports WEP 64 and 128 bit encryption keys
- ☛ Provides WPA and WPA2 - Personal and Enterprise Security
- ☛ High gain 7dBi omni-directional main antenna
- ☛ Dual Antenna Technology (DAT) with Polarization Diversity
- ☛ Supports Wireless Distribution System (WDS)
- ☛ Supports IEEE 802.11d Standard

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AlphaShield Firewall:

- ☒ AlphaGAP Logical Disconnection and Re-connection
- ☒ Full Stateful Packet Inspection (SPI)
- ☒ AlphaGAP Scheduler
- ☒ IP-Stealth technology
- ☒ Configurable DMZ Option
- ☒ Inclusion, Exclusion MAC and IP filtering
- ☒ Parental Web Access Control
- ☒ User Selectable Logging support
- ☒ LAN, WAN and Wireless Network Traffic Statistics

Additional Features:

- ☒ Network Time Protocol
- ☒ WAN Mode: Static, DHCP, PPPoE, PPTP, L2TP and Bigpond
- ☒ Other Protocols Support: RIP, IGMP, and DNS Relay
- ☒ Application Level Gateway Configuration for: MSN, FTP, NetMeeting, IPSec VPN, MMS, SIP, Wake On LAN, PPTP
- ☒ Pre-selectable and Configurable Port Rules for Gaming
- ☒ Internal Online Help Guide

Support:

- ☒ AlphaShield Limited Life-Time Warranty
- ☒ Automatic Firewall Upgrade Notification
- ☒ Free Online and Telephone Technical Support

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5. HARDWARE GUIDELINES:

5.1 Connections:

1. All Ethernet Ports (WAN and LAN) are auto MDI/MDIX, meaning you can either use a straight-through or a crossover Ethernet cable.
2. 5 **Auto MDI/MDIX LAN ports** automatically sense the cable type when connecting to Ethernet-enabled computers for both WAN and LAN.
3. The **Auto MDI/MDIX WAN port** is the connection for the Ethernet cable to the Cable or DSL modem.
4. Pressing the **Reset Button** will restart the Router.
5. Pressing the **AlphaGAP Button** will disconnect your computer from the Internet.
6. Receptor for the **Power Adapter**.

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5.2 LEDs:

5 LOCAL NETWORK LEDs:

The connection to an Ethernet-enabled computer on ports 1-5 is indicated by a solid light. When data is being transmitted, this LED will flash.

1 POWER LED:

A solid light indicates a proper connection to the power supply.

1 WAN LED:

A solid light indicates connection on the WAN port. When data is being transmitted, this LED will flash.

1 WLAN LED:

When there is activity on the wireless network, this LED will flash

1 AlphaGAP LED:

A Solid RED light will signify that the Router is in AlphaGAP Mode and Solid Green will signify that the Router is in Connected Mode.

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6. LOGIN:

The Configuration Interface can be accessed from your Web browser. Type <http://192.168.0.1> in the address window and press Enter.

The Login screen will appear.

- ☛ Select a **User Name**.
- ☛ By default, there is no password. Simply leave this window blank.
- ☛ Click **Log In** to proceed.



Login
Log in to the router:

User Name : Admin

Password :

Log In

7. SETUP:

7.1 Quick Start:

The Wizard screen contains two wizards:

- ☛ **Internet Connection Setup**
- ☛ **Wireless Setup**

Internet Connection Setup

The following Web-based Setup Wizard is designed to assist you in connecting your new AS8000 Router to the Internet. This Setup Wizard will guide you through step-by-step instructions on how to get your Internet connection up and running. Click the button below to begin.

[Launch Internet Connection Setup Wizard](#)

Note: Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

Wireless Setup

The following Web-based Setup Wizard is designed to assist you in your wireless network setup. This Setup Wizard will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.

[Launch Wireless Security Setup Wizard](#)

Note: Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the AS8000 Router.

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a) Launch Internet Connection Setup Wizard:

The following Web-based Setup Wizard will help you connect your new AlphaGIGABIT Router to the Internet. This Setup Wizard will guide you in a step-by-step manner to get your Internet connection up and running.

Before launching the Wizard, please make sure you have correctly followed all of the steps outlined in the Quick Installation Guide included in the package.

SETTING UP THE ROUTER:

- ☞ Click the **Launch Internet Connection Setup Wizard**.



Now you will see **Welcome To The AlphaShield Setup Wizard** screen.

- ☞ To continue click **Next**



Step 1: Set your Password

- ☞ Enter a Password of your choice
- ☞ To **Verify your Password**, re-enter it below
- ☞ To continue click **Next**



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Step 2: Select Your Time Zone

Select your local time zone from the pull-down menu.

☞ To continue click **Next**

Step 2: Select your Time Zone

Select the appropriate time zone for your location. This information is required to configure the time-based options for the router.

(GMT-08:00) Pacific Time (US/Canada), Tijuana

Prev | Next | Cancel

Step 3: Configure Your Internet Connection

From the pulldown menu, choose your Internet Service Provider (ISP).

If your ISP is not listed in the menu, or you do not know who your ISP is, simply select **Not Listed or Don't Know** from the menu.

If you require details, please contact your Internet Service Provider. If you selected **Not Listed or Don't Know** from the menu, choose one of the five connection options which best applies to your Internet service.

☞ To continue click **Next**

Step 3: Configure your Internet Connection

Your Internet Connection could not be detected, please select your Internet Service Provider (ISP) from the list below. If your ISP is not listed; select the "Not Listed or Don't Know" option to manually configure your connection.

Not Listed or Don't Know

If your Internet Service Provider was not listed or you don't know who it is, please select the Internet connection type below:

DHCP Connection (Dynamic IP Address)

Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.

Username / Password Connection (PPPoE)

Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.

Username / Password Connection (PPTP)

Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.

Username / Password Connection (L2TP)

Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.

Static IP Address Connection

Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.

Prev | Next | Cancel

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Step 3: Configure Your Internet Connection

DHCP CONNECTION (Dynamic IP Address)

A **MAC Address** is a unique hardware address for devices on a Local Area Network.

Enter the **MAC Address** of the computer that was originally connected to your broadband modem.

If the computer you are using was the initial system connected to your broadband modem, simply select **Clone your PC's MAC Address** and the MAC Address will automatically appear.

- ☛ Enter a **Host Name** (If your ISP requires one).
- ☛ To continue click **Next**

DHCP Connection (Dynamic IP Address)

To set up this connection, please make sure that you are connected to the AS8000 Router with the PC that was originally connected to your broadband connection. If you are, then click the **Clone MAC** button to copy your computer's MAC Address to the AS8000 Router.

MAC Address : (optional)

Host Name :

Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP.

Step 3: Configure Your Internet Connection

Set Username and Password Connection (PPPoE)

- ☛ Enter your **Username**
- ☛ Enter your **Password**
- ☛ To verify your **Password**, re-enter it below
- ☛ Enter a **Service Name** (if your ISP requires one)
- ☛ To continue click **Next**

Set Username and Password Connection (PPPoE)

To set up this connection you will need to have a **Username** and **Password** from your Internet Service Provider. If you do not have this information, please contact your ISP.

Address Mode : Dynamic IP Static IP

IP Address :

User Name :

Password :

Verify Password :

Service Name : (optional)

Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.

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Step 3: Configure Your Internet Connection

At the Set Username and Password Connection (PPTP) Enter:

- ☛ **PPTP IP Address**
- ☛ **PPTP Subnet Mask**
- ☛ **PPTP Gateway IP Address**
- ☛ **PPTP Server IP Address**
- ☛ **Your Username**
- ☛ **Your Password.**
- ☛ To verify your **Password**, Re-enter it below
- ☛ To continue click **Next**

SET USERNAME AND PASSWORD CONNECTION (PPTP)

To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need PPTP IP address. If you do not have this information, please contact your ISP.

Address Mode : Dynamic IP Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

PPTP Server IP Address (may be same as gateway) :

User Name :

Password :

Verify Password :

At the Set Username and Password Connection (L2TP) screen enter:

- ☛ **L2TP IP Address**
- ☛ **L2TP Subnet Mask**
- ☛ **L2TP Gateway IP Address**
- ☛ **L2TP Server IP Address**
- ☛ **Your Username**
- ☛ **Your Password.**
- ☛ To verify your **Password**, re-enter it below
- ☛ To continue click **Next**

Set Username and Password Connection (L2TP)

To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need L2TP IP address. If you do not have this information, please contact your ISP.

Address Mode : Dynamic IP Static IP

L2TP IP Address :

L2TP Subnet Mask :

L2TP Gateway IP Address :

L2TP Server IP Address (may be same as gateway) :

User Name :

Password :

Verify Password :

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At the Set Static IP Address Connection

Enter:

- ☛ **IP address**
- ☛ **Subnet Mask**
- ☛ **Gateway Address**
- ☛ **Primary and Secondary DNS Addresses**
- ☛ To continue click **Next**

Set Static IP Address Connection

To set up this connection you will need to have a complete list of IP information provided by your Internet Service Provider. If you have a Static IP connection and do not have this information, please contact your ISP.

IP Address :	0.0.0
Subnet Mask :	255.255.255.0
Gateway Address :	0.0.0
Primary DNS Address :	0.0.0
Secondary DNS Address :	0.0.0

[Prev](#) [Next](#) [Cancel](#)

Setup Complete

- ☛ Click **Connect**. This will save your settings and reboot the router

Setup Complete!

The Setup Wizard has completed. Click the Connect button to save your settings and reboot the router.

[Prev](#) [Cancel](#) [Connect](#)

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b) Launch Wireless Security Setup Wizard:

The next step is to set up your wireless network. This Wizard will help you set it up and make it secure. Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the AlphaGIGABIT Route:

Wireless Setup:

- ☞ Click **Launch Wireless Security Setup Wizard** to begin.

Wireless Setup

The following Web-based Setup Wizard is designed to assist you in your wireless network setup. This Setup Wizard will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.

[Launch Wireless Security Setup Wizard](#)

Note: Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the AS8000 Router.

Welcome To The AlphaGIGABIT Wireless Security Setup Wizard:

- ☞ Click **Next** to continue.

Welcome to the AlphaShield Wireless Security Setup Wizard

This wizard will guide you through a step-by-step process to setup your wireless network and make it secure.

- Step 1: Name your Wireless Network
- Step 2: Secure your Wireless Network
- Step 3: Set your Wireless Security Password

[Next](#) [Cancel](#)

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Step 1: Name Your Wireless Network

- ☛ Choose a Name for your Wireless Network
- ☛ Do not choose the default name for security reasons
- ☛ To continue click **Next**.

Step 1: Name your Wireless Network

Your wireless network needs a name so it can be easily recognized by wireless clients. For security purposes, it is highly recommended to change the pre-configured network name of [default].

Wireless Network Name (SSID) :

[Prev](#) [Next](#) [Cancel](#)

Step 2: Secure Your Wireless Network

- ☛ Choose a security option to protect your network from unauthorized users.
- ☛ To continue click **Next**

Step 2: Secure your Wireless Network

In order to protect your network from hackers and unauthorized users, it is highly recommended you choose one of the following wireless network security settings.

There are three levels of wireless security -Good Security, Better Security, or Best Security. The level you choose depends on the security features your wireless adapters support.

BEST Select this option if your wireless adapters SUPPORT WPA2
BETTER Select this option if your wireless adapters SUPPORT WPA
GOOD Select this option if your wireless adapters DO NOT SUPPORT WPA
NONE Select this option if you do not want to activate any security features

For information on which security features your wireless adapters support, please refer to the adapters' documentation.

Note: All AlphaShield wireless adapters currently support WPA.

[Prev](#) [Next](#) [Cancel](#)

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Step 3: Set you Wireless Security Password

- ☞ Select a Security Password between 2 and 20 characters
- ☞ To continue click **Next**

Step 3: Set your Wireless Security Password

Once you have selected your security level - you will need to set a wireless security password. With this password, a unique security key will be generated.

Wireless Security Password :

(2 to 20 characters)

Note: You will need to enter the unique security key generated into your wireless clients enable proper wireless communication - not the password you provided to create the security key.

[Prev](#) [Next](#) [Cancel](#)

Setup Complete!

The setup Page will give you a detailed summary of the settings, based on what you have selected in the previous steps.

- ☞ Click **Save** to continue

Setup Complete!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) :

AlphaShield

Encryption : WPA-PSK/TKIP (also known as WPA Personal)

Pre-Shared Key : MsUz123NWRo

[Prev](#) [Cancel](#) [Save](#)

This screen will only appear if you selected **BEST** security

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This screen will only appear if you selected BETTER security

This screen will only appear if you selected GOOD security

This screen will only appear if you selected NONE security

Setup Complete!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) : AlphaShield

Encryption : WPA-PSK/TKIP (also known as WPA Personal)

Pre-Shared Key : X1Iq123hu9o

[Prev](#) [Cancel](#) [Save](#)

Setup Complete!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) : AlphaShield

Wep Key Length : 128 bits

Default WEP Key to Use : 1

Authentication : Open

Wep Key : 7E434 032B8 15950 62A6A 4A1E0 8

[Prev](#) [Cancel](#) [Save](#)

Setup Complete!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) : AlphaShield

[Prev](#) [Cancel](#) [Save](#)

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7.2 WAN:

The WAN section will help you choose one of 6 connection types: Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. If you are using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers. If you have any questions about your connection, please contact your Internet Service Provider (ISP).

a) Modes:

- Choose one of 6 modes of connection for the router.
- If you are unsure of your connection settings, contact your Internet Service Provider (ISP).

WAN
Internet Connection Settings

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. If you are unsure of your connection method, please contact your Internet Service Provider.

Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Modes

Choose the mode to be used by the router to connect to the Internet.

WAN Mode : Static DHCP PPPoE PPTP L2TP

Static WAN Mode:

- Enter the **IP Address** from your router configuration settings provided by your ISP or network administrator.
- Enter the **Subnet Mask** from your router configuration settings provided by your ISP or network administrator.
- Enter the **Default Gateway** address from your router configuration settings provided by your ISP or network administrator.

Static WAN Mode

Enter the static address information provided by your Internet Service Provider (ISP).

IP Address :	<input type="text" value="0.0.0.0"/>
Subnet Mask :	<input type="text" value="255.255.255.0"/>
Default Gateway :	<input type="text" value="0.0.0.0"/>

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DHCP WAN Mode:

- ☞ Enter a **Host Name** to identify your system to the ISP's server

DHCP WAN Mode

Host Name :
Use Unicasting : (compatibility for some DHCP Servers)

PPPoE WAN Mode:

- ☞ Enter the **Username** and **Password** you use to gain access to the Internet.
- ☞ To verify your **Password**, re-enter it below
- ☞ Enter a **Service Name** (If your ISP requires it).

Reconnect Mode

- ☞ **Always on:** The Internet connection is always maintained.
- ☞ **On Demand:** The Internet connection is made when the user chooses to log on.
- ☞ **Manual:** The user must push the button **Manually** to connect to the Internet.

(PPPoE WAN connections are not necessarily always online).

PPPoE WAN Mode

Enter the information provided by your Internet Service Provider (ISP).

Address Mode : Dynamic IP Static IP
IP Address :
Username :
Password :
Verify Password :
Service Name : (optional)
Reconnect Mode : Always on On demand Manual
Maximum Idle Time : (minutes, 0=infinite)

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PPTP WAN Mode:

- ☛ Enter the **PPTP IP Address** provided by your ISP.
- ☛ Enter the **PPTP Subnet Mask** provided by your ISP.
- ☛ Enter the **PPTP Gateway IP Address** provided by your ISP.
- ☛ Enter the **PPTP Server IP Address** you are connecting to, also provided by your ISP.
- ☛ **Enter the Username and Password** you use to gain access to the Internet.
- ☛ To verify your **Password**, re-enter it below.
- ☛ Select the **Maximum Idle Time** before the PPTP connection is disconnected.

PPTP WAN Mode

Enter the information provided by your Internet Service Provider (ISP).

Address Mode :	<input type="radio"/> Dynamic IP <input checked="" type="radio"/> Static IP
PPTP IP Address :	0.0.0.0
PPTP Subnet Mask :	255.255.255.0
PPTP Gateway IP Address :	0.0.0.0
PPTP Server IP Address :	0.0.0.0
Username :	username
Password :	password
Verify Password :	password
Reconnect Mode :	<input type="radio"/> Always on <input checked="" type="radio"/> On demand <input type="radio"/> Manual
Maximum Idle Time :	20 (minutes, 0=infinite)

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L2TP WAN Mode:

Enter:

- ☞ The **L2TP IP Address** provided by your ISP.
- ☞ The **L2TP Subnet Mask** provided by your ISP.
- ☞ The **L2TP Gateway IP Address** provided by your ISP.
- ☞ The **L2TP Server IP Address** provided by your ISP.
- ☞ **Enter the Username and Password** you use to gain access to the Internet.
- ☞ To verify your **Password**, re-enter it below.
- ☞ Select the **Maximum Idle Time** before the L2TP connection is disconnected.

L2TP WAN Mode

Enter the information provided by your Internet Service Provider (ISP).

Address Mode :	<input type="radio"/> Dynamic IP <input checked="" type="radio"/> Static IP
L2TP IP Address :	0.0.0
L2TP Subnet Mask :	255.255.255.0
L2TP Gateway IP Address :	0.0.0
L2TP Server IP Address :	0.0.0
Username :	
Password :	password
Verify Password :	password
Reconnect Mode :	<input type="radio"/> Always on <input checked="" type="radio"/> On demand <input type="radio"/> Manual
Maximum Idle Time :	20 (minutes, 0=infinite)

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DNS And Advanced Settings:

These Options may be used on all WAN Modes:

- ☛ If you have the DNS servers provided to you by the ISP, please select the **Use these DNS Servers**
- ☛ Please enter the **Primary DNS Server** provided by your ISP
- ☛ Please enter the **Secondary DNS Server** provided by your ISP
- ☛ **Use the Default MTU** is enabled by default
- ☛ **MTU**(Maximum Transmission Unit) determines The largest packet size (in bytes) that the router will send to the WAN. The MTU must be set to match the MTU settings of your ISP connection. If the router's MTU is set too high or low network performance can suffer. For an Ethernet connection, values are 1500 bytes and 1492 bytes for a PPPoE connection. The Router will use the default value assigned in the **MTU** window.
- ☛ **WAN Port Speed** is set to Auto by default. You can select the connection type (10 or 100Mbps) if you have trouble connecting the WAN port.
- ☛ **Respond to WAN Ping** is disabled by default. The Router will not respond to requests from a ping command received via the Internet. Hackers commonly Use WAN Ping IP addresses to test whether your WAN IP address is valid.
- ☛ **MAC Cloning Enabled**. When this box is checked, The **MAC address** does not need to be entered manually in the next window. The WAN port will use the MACAddress of the network adapter in the computer that you are using to access the router.

The screenshot shows the 'DNS And Advanced Settings' configuration window. It includes fields for Primary and Secondary DNS servers (both set to 0.0.0.0), an 'Advanced' button, and checkboxes for MTU (1500 bytes), Link Drop Delay (120 seconds), WAN Port Speed (Auto), Respond to WAN Ping (disabled), WAN Ping Inbound Filter (Allow All), MAC Cloning Enabled (disabled), and MAC Address (00:00:00:00:00:00). A 'Clone Your PC's MAC Address' button is also visible.

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7.3 LAN Settings:

- ☞ **IP Address:** Enter the IP Address of the router on the local area network. The local network settings are based on the address assigned here.
- ☞ **Subnet Mask:** Use the of your router on the local area network.
- ☞ **RIP Announcement** is used with multiple routers to broadcast routing information.
- ☞ **Gateway Metric** is only used if you have multiple routers.

LAN
Network Settings

Use this section to configure the internal network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

LAN Settings

IP Address : Subnet Mask :

RIP (Routing Information Protocol)

Enable RIP :

IGMP (Internet Group Management Protocol)

Enable IGMP :

DNS Relay

Enable DNS Relay :

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7.4 DHCP:

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

DHCP Settings:

To connect to the LAN and Internet the DHCP Server function will assign your network devices the necessary information and you do not have to manually configure each device on your network with IP settings. The devices on your network must have TCP/IP bound to the Ethernet connection with the "DHCP" or "Obtain an IP address automatically" option enabled.

 **DHCP IP Address Range** defines the range of addresses available for the Router to assign to your internal network.

Note: If you have any devices using static IP addresses, be sure the addresses do not fall within the range defined in the **DHCP IP Address Range** field. A Static IP address is one that is entered in manually on the device.

 **DHCP Lease Time** determines the amount of time a computer may have an IP address before it is required to renew the lease. The initial lease designates the amount of time before the lease expires. If the tenant wishes to retain the address when the lease expires then a new lease is established. If the lease expires and the address is no longer needed, and then another tenant may use the address.

DHCP
DHCP Server

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable

Enable DHCP Server :

DHCP Settings

DHCP IP Address Range : 192.168.0.100 to 192.168.0.199 (addresses within the LAN subnet)

DHCP Lease Time : 1440 (minutes)

Always broadcast : (compatibility for some DHCP Clients)

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Number of Dynamic DHCP Clients:

- ☞ This is used to automatically assign IP addresses from a predetermined pool of addresses to computers or devices that request them. It shows the number of clients that are receiving an IP address from the router and LAN devices those are leasing IP addresses.
- ☞ The **Computer Name**, **MAC Address**, and **IP Address** assigned to each computer are displayed here as well. With the **Revoke** option you can cancel a leased IP address. This feature is useful for freeing up addresses when the client table is full or nearly full.

Number of Dynamic DHCP Clients : 1			
Computer Name	MAC Address	IP Address	
dev	00:15:f2:08:16:37	192.168.0.170	Revoke Reserve

Add DHCP Reservation

Enable : IP Address : << Select Machine

MAC Address :

Computer Name :

DHCP Reservations List			
Enable	Computer Name	MAC Address	IP Address

Add DHCP Reservation:

MAC address:

- ☞ Enter the **MAC address** manually or connect to the AlphaShield Router's Web-Management interface from the system and click **Copy Your PC's MAC Address**.

Note: If you replace the Ethernet adapter in a computer that is using Static DHCP, you will need to Copy the PC's MAC Address again because every Ethernet adapter has a unique MAC address. The same goes for any network device. If you replace a network device such as a print server, you will need to input the MAC address of the new print server into the Static DHCP configuration. If your network device is a computer and the network card is already located inside the computer, you can use the **Copy Your PC's MAC Address** option to enter the **MAC address**.

DHCP Reservations List:

- ☞ **Enable** checkbox
- ☞ When checked, the **DHCP Reservation List** can be enabled or disabled. To edit the entries click on the pencil icon. To delete the entries click on the trash can icon. If you have made some changes or deletions click **Save Settings** button at the top of the page.
- ☞ If your configuration settings are complete then click **Reboot the Device** otherwise click **Continue**. Your router must reboot before new settings will take effect.

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7.5 Wireless:

Use this section to configure your wireless settings .

Your AlphaGIGABIT Router supports three wireless security modes including: WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard; WPA provides a higher level of security; and WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Basic Wireless Settings:

Enable Wireless Radio

Check to enable this option

Wireless Network Name also referred, as the SSID will appear in the list when you are browsing for available wireless networks.

Visibility Status allows you to choose to make your wireless network to be Visible or Invisible. When this option is set to Visible, your wireless network name is broadcast to anyone within the range of your signal.

If you're not using encryption then they could connect to your network. When invisible mode is enabled, you must enter the Wireless Network Name (SSID) manually to connect to the network.

Auto Channel Select allows the router to automatically choose the best channel.

Channel from the drop-down list, with select the one with the clearest signal.

Transmission Rate By default the fastest rate will be automatically selected. You can select the speed from the drop-down list.

Note: If all of your devices can connect in **802.11g Mode** then leave the setting at 802.11g only. If you have some devices that are 802.11b/g then you can change the mode to Mixed.

Setting	Value	Description
Wireless Network Name	AlphaShield	(Also called the SSID)
Visibility Status	Visible	Visible (radio button selected)
Auto Channel Select	checked	
Channel	2.437 GHz - CH 6	
Transmission Rate	Best (automatic)	(Mbit/s)
802.11 Mode	Mixed 802.11g and 802.11b	
Super G Mode	Super G with Dynamic Turbo	

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- ☛ **Super G Mode** : Super G Turbo Modes must use channel 6 for transmission and 802.11 Mode must be set to 802.11g.
- ☛ **Super G without Turbo**: Performance enhancing features such as Packet Bursting, Fast Frames, and Compression.
- ☛ **Super G with Static Turbo**: Mode is not backwards compatible with non-Turbo (legacy) devices. Static turbo enabled mode is always on and is only enabled when all devices on the wireless network are Super G with Static Turbo enabled.
- ☛ **Super G with Dynamic Turbo**: Mode is backwards compatible with non-Turbo (legacy) devices. Dynamic Turbo mode is only enabled when all devices on the wireless network are Super G with Dynamic Turbo.

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Wireless Security Mode:

Configure the wireless security features to protect your privacy. Your AlphaShield Router supports three wireless security features; WEP, WPA-Personal and WPA-Enterprise wireless security modes.

The WPA-Enterprise option does require a RADIUS authentication server.

WEP

☞ WEP is the Wireless Encryption Standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.

☞ You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.

Wireless Security Mode

Security Mode : None WEP WPA-Personal WPA-Enterprise

WEP

WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.

You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.

WEP Key Length : (length applies to all keys)

WEP Key 1 :

WEP Key 2 :

WEP Key 3 :

WEP Key 4 :

Default WEP Key :

Authentication :

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WPA-Personal:

- WPA requires stations to use high-grade encryption and authentication. WDS will not function with WPA security.
- Select the **WPA Mode** from drop-down list:
- Cipher Type** is entered as a pass-phrase and used to generate session keys that are unique for each wireless client. It cannot be less than 8 characters and no more than 63 characters in ASCII format at both ends of the wireless connection. The pass-phrase cannot be shorter than 8 characters.
- Group Key Update Interval** secures the data communication. TKIP (Temporal Key Integrity Protocol) provides per packet key generation and is based on WEP. AES (Advanced Encryption Standard) is a very secure block based encryption.
- The amount of time before the group key used for broadcast and multicast data is changed.
- Pre-Shared Key** uses Wi-Fi Protected Access.

WPA

WPA requires stations to use high grade encryption and authentication. NOTE: WDS will not function with WPA security.

WPA Mode :

Cipher Type :

Group Key Update Interval :

Pre-Shared Key

Pre-Shared Key :

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WPA-Enterprise:

The RADIUS server works with WPA-Enterprise to authenticate wireless clients. The Server may need to be configured in order to do so. The necessary credentials should have been established by wireless clients before attempting to authenticate to the Server through the Gateway

- ☛ Select the pre-shared key **Cipher Type**.
- ☛ **Group Key Update Interval:** Enter the **Amount of time** before the group key used for broadcast and multicast data is changed.
- ☛ **Authentication Timeout:** Enter the time before a client is required to re-authenticate.
- ☛ Enter **RADIUS Server IP Address** i.e. address of the authentication server.
- ☛ Enter **RADIUS Server Port** the port number used to connect to the authentication server.
- ☛ Enter **RADIUS Server Shared Secret** is a pass phrase that must match with the authentication server.
- ☛ If **MAC Address Authentication** is selected then the user will need to connect from the same computer whenever logging into the wireless network.

WPA

WPA requires stations to use high grade encryption and authentication. NOTE: WDS will not function with WPA security.

WPA Mode :

Cipher Type :

Group Key Update Interval : (seconds)

EAP (802.1x)

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout : (minutes)

RADIUS server IP Address :

RADIUS server Port :

RADIUS server Shared Secret :

MAC Address Authentication :

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8. ADVANCED:

Advanced Options allows you to configure a number of advanced features including ports, application priority, Internet access, filters, and advanced wireless settings.

8.1 Virtual Server:

The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

- ☞ **Name:** Select a Virtual Server Rule (ex. Web Server) or select it from the drop down menu.
- ☞ **IP Address:** Enter the **IP Address** of the machine on your LAN 192.168.0.50 or you can select it from the dropdown menu.
- ☞ **Protocol:** Select the Protocol used by the service.
- ☞ **Private Port:** Enter the port that will be used on your internal network.
- ☞ **Public Port:** Enter the port that will be accessed from the Internet.
- ☞ **Schedule:** Select a time for when this rule is in effect. If you do not see the schedule you need in the list of schedules, go to the Tools -> Schedules screen and create a new schedule.
- ☞ **Save Settings:** click to save this information and continue

Virtual Server

The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Add Virtual Server

Enable :	<input checked="" type="checkbox"/>	
Name :	<input type="text"/>	<< <input type="button" value="Select Virtual Server"/>
IP Address :	<input type="text" value="0.0.0.0"/>	<< <input type="button" value="Select Machine"/>
Protocol :	<input type="button" value="TCP"/>	
Private Port :	<input type="text" value="0"/>	
Public Port :	<input type="text" value="0"/>	
Inbound Filter :	<input type="button" value="Allow All"/>	
Schedule :	<input type="button" value="Always"/>	
<input type="button" value="Add"/> <input type="button" value="Clear"/>		

Virtual Servers List

Enable Name IP Address Protocol Private Port/Public Port Inbound Filter Schedule

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8.2 Special Applications:

The Special Application section is used to open single or multiple ports on your router when the router senses data sent to the Internet on a 'trigger' port or port range. Special Applications rules apply to all computers on your internal network.

Application Level Gateway (ALG) Configurations:

Application Level Gateway (ALG) Configurations, also **known as ALG's** provide special handling for a specific protocol or application. By default, maximum ALG's for common applications are enabled, but this will allow you to enable or disable ALG's.

- ☛ **PPTP:** To check this box to allow multiple machines on the LAN and to connect to the corporate network.
- ☛ **IPSec VPN:** multiple VPN clients can connect to their corporate network. Some VPN clients support traversal of IPSec through NAT. This ALG may interfere with the operation of such VPN clients. If you are having trouble connecting with your corporate network, try turning this ALG off.
- ☛ **RTSP:** **When enabled, this allows** applications that use Real Time Streaming Protocol (RTSP) to receive streaming media from the Internet.
- ☛ **FTP:** **When this is enabled,** FTP clients and servers are allowed to transfer data across NAT.
- ☛ **NetMeeting:** **When enabled,** it allows Microsoft NetMeeting clients to communicate across NAT.
- ☛ **SIP:** This allows devices and applications using VoIP (Voice over IP) to communicate across NAT.
- ☛ **MMS:** Microsoft Media Services (MMS) allows Windows Media® Player, using MMS protocol, to receive streaming media from the Internet.
- ☛ **L2TP:** This allows multiple machines on the LAN to connect to their corporate network using the L2TP protocol.
- ☛ **Windows Messenger®:** This configuration allows all of the Windows Messenger® functions to work properly through the router.

Special Applications

The Special Application option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a "trigger" port or port range. Special Applications rules apply to all computers on your internal network.

Application Level Gateway (ALG) Configuration

PPTP : IPSec VPN : RTSP : Windows Messenger :
FTP : NetMeeting : SIP : Wake-On-LAN :
MMS :