# 5.8 - Internet Time

The M505 can synchronize its internal time with an Internet time server when available. To enable this function, check 揂 utomatically synchronize with Internet time servers? Select First and Second NTP time server from the pull down menu. Or select 搧 ther? and define your preferred NTP server. Choose the time zone from 揹 ime zone offset? Click on 揝 ave/Apply? to save the configuration.

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Figure 45. Advanced Setup - Internet Time

# 5.9 - Access Control Services

#### Services

The M505 browser management tool is protected by three categories: Services, IP addresses, and Passwords. All three must be matched (if configured) to gain access to the management tool.

All services are enabled from LAN side and disabled from WAN side by default.

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Figure 46. Advanced Setup - Access Control - Service

#### **IP**Addresses

The IP Address Access Control mode, if enabled, permits access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP addresses for incoming packets. The services are the system applications listed in the Service Control List.

Click 揂dd? to add an IP address to the Access Control List. To remove, mark the Remove option of the specified IP address, then click 揜emove? to remove the IP address from the Access Control List. Up to 16 hosts can be configured here.

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Figure 47. Advanced Setup - Access Control ? IP Addresses

#### **Passwords**

Access to your router is controlled through three user accounts: **admin**, **support**, and **user**.

admin: has unrestricted access to change and view the M505 configuration.

- **support**: is used to allow an ISP technician to access the M505 for maintenance and to run diagnostics.
- **user**: can access the M505 to view configuration settings and statistics, as well as, update the M505 software.

Use the fields below to enter up to 16 characters and click 揝ave/Apply? to change or create passwords.

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Vision	Nef				
<ul> <li>Advanced Setup</li> </ul>	Access Control – Passwords				
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LAN	The user name "admin" has unrestricted access to change and view configuration of your DSL Router.				
Routing	The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.				
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DSL	The first field below to extra a to 20 structure and did "first" to share a section second by the first first contrast a second				
Access Control Services	Ote the fields below to enter up to 10 characters and book lepty. To change of cheate passwords, note: Plassword Landot contain a space.				
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<ul> <li>Management Utilities</li> </ul>					
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· Diagnostics and Help					
Done		Internet			

Figure 48. Advanced Setup - Access Control ? Passwords

# 5.10 - IPSec

The M505 also have the ability to create a VPN (Virtual Private Network) tunnel using IPSec as the security measure. VPN allows user to remotely connect to a network using their Broadband connection. Please refer to your ISP and Network Administrator for detail settings regarding VPN IPSec.

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Figure 49. Advanced Setup ? IPSec

Click the 揂 dd? button create a new VPN connection

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ISL nternet Time	IP Address for VPN	0.0.0		
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Local Trusted CA	IP Address for VPN	0.0.0.0		
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Figure 50. Advanced Setup ? IPSec Add

# 5.11 - Certificate

This page allows user to authenticate their VPN session using certificate. Some VPN network requires this. There are two sections: Local and Trusted CA.

**LOCAL** option: A maximum of 4 certificates are supported. You can either import or send a request for certificates.



Figure	51.	Advanc	ed Setup	-	Certificates
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Figure 52. Advanced Setup ? Local ? Create Certificate

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Figure 53. Advance Setup ? Certificates ? Local Import

**Trusted CA** option: This is used to verify peer certificates. Please click on 捂mport Certificate? to proceed.

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Figure 54. Advanced Setup ? Certificates- Trusted CA

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Figure 55. Advanced Setup ? Certificates - Trusted CA ? Import Certificate

# 6. Wireless Setup

Some basic understanding of 802.11b/g wireless technology and terminology is useful when you are setting up the Router or any wireless access point. If you are not familiar with wireless networks please take a few minutes to learn the basics.

# Wireless client requirements

# **Radio Transmission**

Wireless LAN or WLAN devices use electromagnetic waves within a broad, unlicensed range of the radio spectrum to transmit and receive radio signals. When a wireless access point is present, it becomes a base station for the WLAN nodes in its broadcast range. WLAN nodes transmit digital data using FM (frequency modulation) radio signals. WLAN devices generate a carrier wave and modulate this signal using various techniques. Digital data is superimposed onto the carrier signal. This radio signal carries data to WLAN devices within range of the transmitting device. The antennae of WLAN devices listen for and receive the signal. The signal is demodulated and the transmitted data extracted. The transmission method used by the access point is called Direct Sequence Spread Spectrum (DSSS) and operates in a range of the radio spectrum between 2.4GHz and 2.5GHz for transmission.

### Antennas

Direct the external antenna to allow optimization of the wireless link. If for example the antenna is erect, wireless links in the horizontal plane are favored. Please note that the antenna characteristics are influenced by the environment that is by reflections of the radio signal against walls or ceilings. It is advisable to use the received signal strength as indicated by the wireless client manager to optimize the antenna position for the link to a given client. Concrete walls weaken the radio signal and thus affect the connection.

# Wireless Range

Range should not be a problem in most homes or small offices. If you experience low or no signal strength in some areas, consider positioning the Router in a location between the WLAN devices that maintains a roughly equal straight-line distance to all devices that need to access the Router through the wireless interface. Adding more 802.11g access points to rooms where the signal is weak can improve signal strength. Read the section about placement of the Router titled Location in the next chapter, Hardware Installation, for more information.

#### SSID

Wireless networks use an SSID (Service Set Identifier) to allow wireless devices to roam within the range of the network. Wireless devices that wish to communicate with each other must use the same SSID. Several access points can be set up using the same SSID so that wireless stations can move from one location to another without losing connection to the wireless network. The M505 operates in Infrastructure mode. It controls network access on the wireless interface in its broadcast area. It will allow access to the wireless network to devices using the correct SSID after a negotiation process takes place.

#### **Radio channels**

The 802.11g standard allows several WLAN networks using different radio channels to be co-located. The M505 supports multiple radio channels and is able to select the best radio channel at each startup. You can choose to set the channels automatically or manually.

The different channels overlap. To avoid interference with another access point, make sure that the separation (in terms of frequency) is as high as possible. It is recommended to keep at least 3 channels between 2 different access points.

The M505 supports all channels allowed for wireless networking. However, depending on local regulations, the number of channels actually allowed to be used may be additionally restricted, as shown in the table below.

Regulatory Domain	Allowed Radio Channels
China	1 to 13
Europe	1 to 13
Israel	5 to 8
Japan	1 to 14
Jordan	10 to 13
Thailand	1 to 14
USA / Canada	1 to 11

# **Wireless Security**

Various security options are available on the M505 including open or WEP, 802.1x, WPA, WPA-PSK, WPA2 and WPA2-PSK. Authentication may use an open system or a shared key. For details on these methods and how to use them, please read the wireless LAN configuration information in Section 3.5.3 (Wireless Security Configuration).

### About 802.11g Wireless

802.11b is an IEEE standard, operating at 2.4 GHz at a speed of up to 11 Mb/s. 802.11g, a newer IEEE standard also operating at 2.4 GHz, gives you up to 54 Mb/s speed, more security and better performance.

Today's 11-megabits-per-second 802.11b wireless networks are fine for broadband Internet access (which typically tops out at about 1 mbps) but rather slow for large internal file transfers or streaming video. However, 54-mbps, corporate-oriented 802.11a is expensive and because its radio uses the 5-GHz band and 802.11b uses the 2.4-GHz band, upgrading to an 802.11a network means either scrapping 802.11b gear or buying even-pricier hardware that can support both standards. But 802.11g promises the same speed as 802.11a and the ability to coexist with 802.11b equipment on one network, since it too uses the 2.4-GHz band. 802.11g is an extension to 802.11b, the basis of many wireless LANs in existence today. 802.11g will broaden 802.11b's data rates to 54 Mbps within the 2.4 GHz band using OFDM (orthogonal frequency division multiplexing) technology. Because of backward compatibility, an 802.11b radio card will interface directly with an 802.11g access point (and vice versa) at 11 Mbps or lower depending on range.

6.1 - Basic

This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans (no broadcasting of your network name), set the wireless network name (also know as SSID), and restrict the channels based on nation requirements.

Check 揈nable Wireless? to enable wireless radio; or uncheck to disable.

揝SID? is the network name shared among all devices in a wireless network.

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· Advanced Setup	This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scar wireless network name (also known as SSID) and restrict the channel set based on country requirements. Click "Apply" to configure the basic wireless options.	u, set the
· Wireless	Enable Wireless	
Basic Security MAC Filter Wireless Bridge Advanced Station Info • Management Utilities • Connection Status • Diagnostics and Help	Hide Access Point  Store BiSacom BSSD: 02:10:18:01:00:05 Country: UNITED STATES  Enable Wireless Guest Network Guest SSD: Guest SSD: Guest SAVe/Acciv	
Done		) Internet

Figure 56. Wireless Setup - Basic

# 6.2 ? Security

Four types of wireless security are provided: Shared (WEP), 802.1x, WPA/WPA2, and WPA/WPA2-PSK.

### WEP

WEP (Wired Equivalent Privacy) provides security by encrypting data over radio waves when data is transmitted from one end point to another. WEP is the weakest security method but the easiest one to configure. To enable WEP, select the following items step by step:

Network Authentication: Shared

Data Encryption: Enabled

Encryption Strength: 128-bit (recommended for better security) or 64-bit

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Click 揝et Encryption Key? to enter your WEP keys.

Figure 57. Wireless Setup ? Security ? WEP

Four keys for both encryption strengths can be stored here. Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys. Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys. Select which key  $(1 \sim 4)$  to use from 揅 urrent Network Key? Click 揝ave/Apply? to save the configuration.

### 802.1X

802.1X addresses the WEP weakness by adding user authentication, via RADIUS server. So you need to have your RADIUS server up and running before using 802.1X. To enable 802.1X, select ? 02.1X? in 揘 etwork Authentication? Enter your RADIUS server IP address, port number (default: **1812**), and key. Follow the WEP security section to configure your WEP key and select 揝ave/Apply? to save your configuration.

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* Advanced Setup	This page allows you to config network key is required to au Click "Apply" to configure the	are security features of the wreless LAN interface. You can sets the network authentication method, select henticate to this wreless network and specify the encryption strength. wreless security options.	ting data encryption, specify whether a
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tation Info	RADBUS Key:		
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• Diagnostics and Help	Network Key 1: Network Key 2:		
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Figure 58. Wireless Setup ? Security ? 802.1X

### WPA/WPA2

WPA (Wi-Fi Protected Access) is the strongest wireless security provided by the M505. Like 802.1X, WPA must co-work with RADIUS server as well. To enable WPA, select the following items step by step:

Network Authentication: WPA/WPA2

WPA Group Rekey Interval: in seconds. Default: 0 (no re-keying).

RADIUS Server IP Address/Port/Key: must match your RADIUS server.

WPA Encryption: TKIP (select AES or TKIP+AES for WPA2).

Check your supplicant capability before you decide which one to use.



Figure 59. Wireless Setup ? Security ? WPA

### WPA/WPA2-PSK

WPA-PSK lets you take advantage of WPA without the hassle of setting up your own RADIUS server. To enable WPA-PSK, select 揥 PA-PSK? in 揘 etwork Authentication? Enter 8 to 63 ASCII codes or 64 hexadecimal (0~9, A~F) digits in 揥 PA Pre-Shared Key? Click 揝ave/Apply? to save the configuration.

\*Note ? You must also input the WPA Pre-Shared Key on the client side (i.e. Wireless Laptop, Desktop, Game Consoles, etc.) to be able to connect to the modem. Please contact the manufacturer of your device for more information.



Figure 60. Wireless Setup ? Security ? WPA-PSK

### 6.3 ? MAC Filter

Wireless MAC filter allows you to implement access control based on device 担 MAC address.

When you select 揂 llow? in 揗 AC Restrict Mode? only data from devices with matching MAC addresses in filter table can access the M505. If you select 揇 eny? in 揗 AC Restrict Mode? every device can access the M505 except those which have matching MAC addresses in the filter table. To add filter entry, click on 揂 dd? and enter the MAC address of the M505. Click 揝ave/Apply? to save the configuration. To 揹elete? the entry, select the entry and click 揜 emove?



Figure 61. Wireless Setup ? MAC Filter

#### 6.4 ? Wireless Bridge

Wireless Bridge (also known as Wireless Distribution System) can bridge data between two APs, which is particularly useful while wired cabling is not available.

Note: only APs in same channel can be bridged.

AP Mode: Wireless Bridge- listens and answers other APs only

Access Point- Wireless Bridge also with AP functionality

Bridge Restrict: Disabled- any AP will be granted access

Enabled- only selected APs (Max. 4) with specified MAC address will be granted access

Enabled (Scan)- as above, but the M505 will scan available AP for you to select.

Refresh: re-scan the available AP

Save/Apply: save the configuration

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Figure 62. Wireless ? Wireless Bridge

# 6.5 - Advanced

System In most cases, M505 work well with wireless default settings. Modification is not recommended unless you are very familiar with these parameters.

- **Channel**: Select the appropriate channel from the provided list to correspond with your network settings. All devices in your wireless network must use the same channel in order to function correctly. Default: **11**.
- **Rate:** The range is from 1 to 54Mbps. The data transmission rate should be set according to the speed of your wireless network. You can set one transmission speed, or

keep the default setting 揂 uto? to have the router automatically detect the fastest possible data rate.

Basic Rate Set: Select the basic rate that wireless clients must support.

- **Fragmentation:** This value should remain at its default setting of **2346**. The range is 256-2346 bytes. This value specifies the maximum packet size before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly lower the Fragmentation value. Setting the Fragmentation too low may result in poor network performance. Only slight adjustment of this value is recommended.
- **RTS Threshold:** This value should remain at its default setting of **2347.** The range is 0-2347 bytes. Should you encounter inconsistent data flow, only slight adjustment of this value is recommended. If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. M505 sends Request to Send (RTS) frames to a particular receiving station and negotiates the transmission of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.
- **DTIM Interval:** This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM interval is a countdown field which is used to inform clients about the next window for listening to broadcast and multicast messages. When M505 has buffered broadcast or multicast for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast message. Default: **3**.
- **Beacon Interval:** Enter a value between 1 and 65535 milliseconds. The Beacon Interval indicates the frequency interval of the beacon. A beacon is a packet broadcast by M505 to synchronize the wireless network. Default: **100**.
- 54g Mode: There are 3 selections. Select 54g Auto for the widest compatibility. Select 54gPerformance for the fastest performance. Select 54g LRS if you are experiencing difficulty with legacy 802.11b equipment.
- **54g protection:** In **Auto** mode, M505 will use RTS/CTS to improve 802.11g performance in mixed 802.11g/802.11b network. Turn **off** protection to maximize 802.11g throughput under most conditions.



Figure 63. Wireless Setup ? Advanced

# 6.6? Station Info

This page shows authenticated wireless stations and their status.

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# 7. Management Utilities

# 7.1 - Backup Settings

System Administrator can do the M505 settings backup, update, and restore default here. The settings can be saved from M505 to PC. The saved setting file can also be loaded from PC to M505. These 2 functions can help the system administrator to manage large amount of M505 efficiently. Restore Default would set the M505 with the factory default configuration.

To backup the current configurations, click on 揃ackup Settings? and a File Download window will pop up.



Figure 64. Management Utilities ? Backup Settings

Click on 揝ave? and select the destination of the backup file (backupsettings.cfg) in your local PC. Click on 揝ave? again to save your backup file.

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Do	u want to save this file? Name: backupsettings.conf Type: Unknown File Type From: 192.168.1.1
	From: 192.168.1.1

Figure 65. Management Utilities ? Backup Settings ? File Download

# 7.2 - Update Backup Settings

To update the configuration, click on 揃rowse? and a Choose-File-window will pop up. Locate the saved file and click on 揢 pdate Backup Settings? The M505 will modify its settings based on the update file.

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Figure 66. Management Utilities ? Update Settings

# 7.3 - Restore Settings

To restore the router to its factory default settings, click on 揜estore Default Settings?



Figure 67. Management Utilities? Restore Default Settings

### 7.4 - Update Firmware

The new software could be updated from the Local PC connected to M505 via Ethernet cable. Click on 揃rowse? to locate the new software image file in the PC. And then Click on 揢 pdate Software? to proceed with the software update.

Note: The update process takes about 2 minutes to complete, and your M505 will reboot automatically.

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Figure 68. Management Utilities ? Update Software

### 7.5 - TR069 Server

This feature allows your Internet Service Provider HACS (Auto Configuration Server) to provision your M505 remotely. Actions such as configuring the modem settings, diagnostic, and collecting data can be accomplish with this feature. The information for the settings to be entered in the fields must be provided by your Internet Service Provider.

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Figure 69. Management Utilities ? TR069 Server

# 7.6 - Save/Reboot

Click 揜 eboot Router? to reboot M505. The M505 would automatically save the configuration before reboot, so that modified settings would take effect after reboot.

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Figure 70. Management Utilities ? Save / Reboot

# 7.7 - System Log

This allows System Administrator to view the System Log and configure the System Log options.



Figure 71. Management Utilities ? System Log

Click on 揅 onfigure System Log? to configure the log options. There are 8 events of 揕og Level? and 揇 isplay Level? **Emergency**, **Alert**, **Critical**, **Error**, **Warning**, **Notice**, **Informational**, and **Debugging**. If the log mode is enabled, the system will begin to log all the selected events. For the Log Level, all events above or equal to the selected level will be logged. For the Display Level, all logged events above or equal to the selected level will be displayed.

If the selected mode is 揜 emote? or 揃 oth? events will be sent to the specified IP address and UDP port of the remote syslog server. If the selected mode is 揕ocal? or 揃 oth? events will be recorded in the local memory. Click on 揝ave/Apply? to save the configuration.



Figure 72. Management Utilities ? System Log Configuration

Click on 揤iew System Log? to see the router log based on your configuration

# 8. Connection Status

# 8.1 - LAN

This page displays the status of packets transmitted and received on the M505 LAN interfaces.



Figure 73. Connection Status ? LAN

# 8.2 - WAN

# The WAN Connection Status is broken into 2 parts:

- Connection ? Information concerning the WAN protocol currently in used by the M505 to connect to the Internet. In the figure below: The modem is currently in PPPoE mode, IGMP option is disabled, No Quality of Service is used, the PPPoE connection is Up and the WAN IP address that the modem receives from the Internet Service Provider Equipment.
- 2. Status 朓nformation concerning Packets Received and Transmitted on the WAN side based on the Protocol used by the M505 (example shows PPPoE connection).

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Figure 74. Connection Status ? WAN Connection



Figure 75. Connection Status ? WAN Status

# 8.3 - ATM

This page displays the statistics of M505 ATM interface (including AAL5).



Figure 76. Connection Status ? ATM

# 8.4 - ADSL

This page displays the M505 ADSL connection information and status, such as Rate (Kbps), SNR, ES (Error Second)卐 tc. This information is useful when there are problems with your ADSL connection (The M505 DSL LED light does not stay solid for example)

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Figure 77. Connection Status ? ADSL

# 8.5 - Route

This page displays the M505 routing table.

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Figure 78. Connection Status ? Route

8.6 - ARP (Address Resolution Protocol)

This page displays the M505 ARP table.



Figure 79. Connection Status ? ARP

# 8.7 - DHCP

This page displays the lease time for PC 担 or devices connected to the router



Figure 80. Connection Status - DHCP

# 8.8 - Summary

This page displays the summary of the M505 hardware, software and connection information. Line Rate shows the speed that you are currently connected to your ISP. In the figure below the M511 is currently connected at a Download speed of 3000 Kbps or 3 Mbps with an Upload speed of 512 Kbps or 0.5 Mbps. MAC address and LAN IP address of the M505. Gateway and DNS information is also shown.



Figure 81. Connection Status - Summary

# 9. Diagnostics and Help

This page allows users to test the Ethernet port connection, DSL port connection, and connection to the Internet Service Provider. If a test displays a fail status, click 揜 eturn Diagnostic Tests? at the bottom of the page to make sure the fail status is consistent. If the test continues to show fail, click 揌 elp? to go to through the troubleshooting procedures.



Figure 82. Diagnostics and Help

# 10. Appendix A ? Specifications

#### A1. Hardware Specifications

- Local Interface
  - Four 10/100BaseT Ethernet port (IEEE 802.3, RJ-45 connector)
  - One USB 1.1 port (M505 only)
  - Wireless Antenna (Supports both B/G mode)

#### WAN ADSL Line Interface

- Complies with G.dmt (G.992.1) Annex A
- Complies with G lite (G.992.2) and T1.413
- Complies with ADSL2 (G.992.3)
- Complies with ADSL2+ (G.992.5)
- Connector: RJ-11
- OAM&P
  - Remote: Telnet or Web browser
- Environment
  - Operation Temperature: 0<sup>-,</sup>C ~ 40<sup>-,</sup>C
  - Operation Humidity: 10% ~ 95%
  - Storage Temperature: -20 ~ 70°C
  - Storage Humidity: 5%~95%
- Power
  - AC Adapter :Input 100-240V AC50/60Hz; Output 12VDC 2A
- Certificates
  - FCC Part 68 and 15 Class B, UL

#### A2. Software Specifications

- ATM
  - ATM Cell over ADSL, AAL5
  - Supports UBR, CBR & VBR-nrt
  - VPI Range (0-255) and VCI range (1-65535)
  - Supports up to 8 PVCs
  - Supports OAM F4/F5, and loop back cells
  - Payload Encapsulation --
    - RFC2684 (RFC1483), multi-protocol over ATM
    - RFC2364, PPP over ATM (CHAP and PAP supported)
    - RFC2516, PPPoE (PPP over Ethernet) over ATM
- Bridging
  - Transparent Bridging (IEEE 802.1D)
  - RFC2684 (RFC1483) Bridged
  - Spanning Tree Protocol (IEEE 802.1D)
  - Bridge Filtering
- Routing
  - IP Address Forwarding
  - MAC Encapsulated Routing
  - Routing Information Protocol (RIP) v1, v2
  - DHCP Client (to the DSL network)
  - DHCP relay agent
  - NAT/PAT ? RFC1631 (basic Firewall support)
  - Support Point-to-Point Protocol (PPP)
  - PAP for user authentication

- RFC2684 (RFC1483) Routed
- DNS relay
- UPnP
- IGMP-Proxy
- Configuration and Network Management
  - DHCP server for IP management
  - HTTP (Web Server) for configuration and firmware upgrade
    TFTP Server

  - FTP Server
- Firewall
  - NAT ALGs
  - IPSEC pass-through
  - Ping of Death
  - SYN Flood LAND
  - Protection against IP and MAC address spoofing
  - Packet Filtering
  - Stateful Packet Inspection (SPI)
  - UPnP NAT Traversal

# 11. Appendix B ? Warranties

#### B1. Limited Warranty

This guarantee is not transferable and does not include service, repair, or replacement to correct any damage caused by improper installation or maintenance, improper connection with any peripheral, external electrical fault, accident, disaster, misuse, abuse, or modifications to the DSL modem not approved in writing by DQ Technology.

For a period of two (2) years from the date of purchase, DQ Technology guarantees that all VisionNet DSL Customer Premises Equipment products are free from defective material and workmanship, and during the guaranty period, subject to the conditions set forth below, agrees to repair or replace any part of a product that proves defective by reason of improper workmanship or materials without charge for parts and labor. Repair parts or replacement products will be furnished on an exchange basis and will be either new or refurbished to be functionally equivalent to new.

Refunds are not offered for any product.

In no event will DQ Technology Illiability exceed the price paid for the product from consequential, incidental direct, indirect or special damages arising from the purchase, use, or inability to use this product or accompanying software and documentation, even if DQ Technology has been advised of the possibility of such damages.

You must call DQ Technology <sup>#</sup>Customer support center to receive an RMA number prior to returning the product. The product should be shipped to a service center location provided by your customer support representative along with a copy of your sales slip, the product serial number, and a detailed description of the problem(s) you are experiencing.

DQ Technology makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation, accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose.

DQ Technology reserves the right to modify its products, software, or documentation without obligation to notify any individual or entity.

For more information on return procedures, please visit: www.dqusa.com

If you experience any difficulty during installation or subsequent use of Products, please contact your service provider or DQ Technology祖Support Center at 1-866-286-XDSL or email <u>techctr@dqusa.com.</u>

# 12. Appendix C – Regulations

#### C1. FCC Part 15 Notice

This device must not be co-located or operating in conjunction with any other antenna or transmitter NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

#### Federal Communications Commission (FCC) Requirements, Part 15

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 to correct the interference by one or more of the following measures:

---Reorient or relocate the receiving antenna.

- ---Increase the separation between the equipment and receiver.
- ---Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ---Consult the dealer or an experienced radio/TV technician for help.

#### **Regulatory information / Disclaimers**

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government

# CAUTION: To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

#### MPE Statement (Safety Information)

Your device contains a low power transmitter. When device is transmitted it sends out Radio Frequency (RF) signal.

#### Safety Information

In order to maintain compliance with the FCC RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use only with supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

#### C2. UL Safety Regulations

- Disconnect TNV circuit connector or before removing cover or equivalent.
- Disconnect TNV circuit connector(s) before disconnecting power.
- Do not use this product near water for example, near a bathtub, washbowl, and kitchen sink or laundry tub, in a wet basement, or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightening.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord batteries indicated in this manual. Do not dispose of batteries in a fire, as they may explode. Check with local codes for possible special disposal instructions.

No. 26 AWG Telephone Line Cord shall either be provided with the equipment or shall be described in the safety instruction. If fuse (F1) is not present, see the caution statement listed below:

**CAUTION:** To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord.

# **Contact Information**

You can help us to serve you better by sending us your comments and feedback. Listed below are the addresses, and telephone and fax numbers of our offices. You can also visit us on the World Wide Web at <u>www.dqusa.com</u> for more information. We look forward to hearing from you!

#### World Headquarters 5111 Johnson Dr. Pleasanton, CA 94588 Tel: (925) 730-3940 Fax: (925) 730-3950 info@dqusa.com

# **Technical Support**

(866) 286-xDSL (9375) <a href="mailto:support@dqusa.com">support@dqusa.com</a>