

Atrie DB108-WL WIRELESS ADSL MODEM

USER MANUAL

(V3.0)



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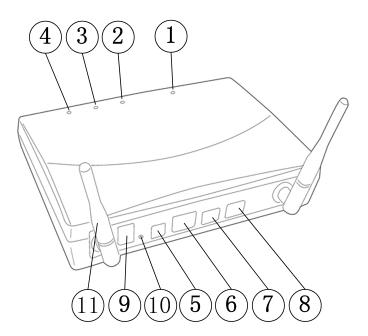
1. OVERVIEW

1.1 ABOUT ADSL

An ADSL MODEM is a broadband Internet access device, which utilizes the high frequency segment of the phone line to transmit high-speed data without affecting the voice transmission. The frequency of the ADSL signal is higher than that of voice, so voice and ADSL signal can coexist in the same line and can be insulated in user side with a splitter. ADSL data transfer adapts the asymmetry model. Its upload transmission speed is up to 1Mbps and download speed is up to 8 Mbps. ADSL is an ideal device for broadband access.

But the ADSL users are also limited by the cable and can't move freely. Wireless ADSL Modem is a new device that integrates WLAN and ADSL functions. User can slip the leash to visit Internet expediently as long as they install WLAN card into their computer. The device can be utilized in company, hotel, cafe, airport, station, and financial institution and home where there are many mobile users and the network infrastructures are difficult to establish. The wireless data rate varies among 1, 2, 5.5 and 11Mbps.

1.2 DEVICE INTRODUCTION



(1)Power Indicator (2)Link Indicator (3)PC Indicator (4)Data Indicator (5)Power Interface (6)Ethernet Interface (7)USB Interface (8)Line Interface (9)Power Switch (10)Reset button (11)Antenna

Figure 1.1

Interface introduction:

(2)Link Indicator (yellow): Shows ADSL connection status, flashing means connecting, steady means showtime.

(3)PC Indicator (green): Indicates connection status with network card. Steady means connection is OK.

(4) Data Indicator (green): Flashing means the Modem is transmitting or receiving data.



(5)Power Interface: 11VDC, 700mA. \oplus \bullet



(6)Ethernet Interface: With twisted cable connect to PC or HUB. Connect to PC through straight-through

network cable; connect to UP LINK port of HUB through the crossover cable.

(7)Usb Interface: Program upgrade.

(8)Line Interface: Connect with telephone line from CO (central office).

(10) Reset button: Reset the configuration to default.

1.3 PROTOCOLS

The device supports ADSL protocols as bellows:

PPPoA (PPP over ATM) LLC encapsulation or VCMUX encapsulation (RFC2364)

PPPoE (PPP over Ethernet) LLC encapsulation or VCMUX encapsulation (RFC2516)

1483 bridge (1483 Bridged IP over ATM) LLC encapsulation or VCMUX encapsulation (RFC1483)

4. 1483 routing (1483 Routed IP over ATM) LLC encapsulation or VCMUX encapsulation (RFC1483)

5. Classical IP over ATM (RFC1577)

1.4 FEATURES

- Support ANSI T1.413 ISSUE 2、 ITU G.992.1 (G.DMT)、ITU G.992.2 (G.LITE). 1.
- 2. Support data transportation among ADSL, Ethernet and WLAN
- 3. Web-based configuration and monitoring.
- Support up to 8 PVCs. 4.
- 5. Routing function.
- 6. NAPT, DHCP function.
- 7. Maximum upstream transmission rates of 1Mbps
- 8. Maximum downstream transmission rates of 8 Mbps
- 9. Software upgrade.
- 10. ADSL transmission distance is up to 5 km.
- 11. Wireless access distance is more than 100m
- 12. ATM management function.



2. HARDWARE INSTALLATION AND BASIC SOFTWARE CONFIGURATION

2.1 SYSTEM REQUIREMENT

- (1) Network card
- (2) Wireless network card (option)

2.2 HARDWARE INSTALLATION

2.2.1 BASIC CONNECTTION

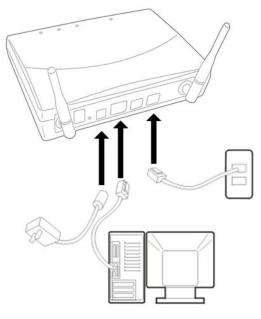


Figure 2.1

For using the **Splitter** to surf on the Internet and to make phone calls simultaneously, please refer to Appendix B: SPLITTER CONNECTION.

2.2.2 INSTALLATION STEPS

- 1. Connect ADSL MODEM line port (8) with telephone socket with phone cord coming with the modem.
- 2. Connect ADSL MODEM Ethernet port (6) to 10BASE-T port on the computer with the network cable.
- 3. Plug in the power cord, turn on the power switch (9).



2.3 SOFTWARE CONFIGURATION

2.3.1 PREPARATION FOR SOFTWARE INSTALLATION

Before installation, please consult ADSL service provider for parameters. Table 2.1 shows all the information needed to configure according to different protocols.

Table 2.1

	VIRTUAL DIAL MODE		PRIVATE LINE MODE		
PROTOCOL	PPPoE	PPPoA	1483	1483	1577 PRIVATE
			BRIDGE	ROUTING	LINE
	VPI	VPI	VPI	VPI	VPI
	VCI	VCI	VCI	VCI	VCI
NECESSARY INFORMATI	LLC/VCMUX	LLC/VCMUX	LLC/VCMUX	LLC/VCMUX	LLC/VCMUX
ON	USER NAME	USER NAME		IP ADDRESS/ MASK	IP ADDRESS/ MASK
	PASSWORD	PASSWORD		GATEWAY	GATEWAY
INSTALLATI ON GUIDE	3. 3	3. 3	3. 1	3. 2	3. 2

2.3.2 COMPUTER CONFIGURATION

The default IP Address of the device is :192.168.1.1. Subnet Mask is :255.255.255.0.Users can configure it through an Internet browser. ADSL MODEM can be set as a gateway and a DNS server; users need to modify the computer's TCP/IP protocol property as following:

- 1. Set the computer's ip address at same Internet segment with ADSL MODEM.
- 2. Set the ADSL Modem's LAN IP address as the IP address of computer's gateway.
- 3. Set the ADSL Modem's LAN IP address or an effective DNS server IP address as computer's DNS server ip address.
- 4. Wireless configurations are set as 2.3.5.

2.3.3 DEVICE CONFIGURATION

Open the Internet browser; input http://192.168.1.1 in the address field. Press "Enter" key then the login dialog box will pop up as Figure 2.2, Input username: admin, and password: password to log in device. (Note that this is capital sensitive).



Figure 2.2

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2.3.4 ADSL MODEM WORKING MODE CONFIGURATION

1. According to the different protocols, Users set ADSL Modem as bellows:

Table 2.2

14010 2.	_					
PAGE	ITEM	PPPoE	PPPoA	1483 BRIDGE	1483	1577
				CONNECT	ROUTING	PRIVATE
						LINE
WAN	VPI/VCI	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
	STATIC IP	×	×	×	$\sqrt{}$	$\sqrt{}$
	ADDRESS					
	SUBNET MASK	×	×	×	$\sqrt{}$	$\sqrt{}$
	ENCAPSULATION	PPPoE	PPPoA	1483 Bridged IP	1483 Bridged IP	Classical IP
	FORMAT					over ATM
	BRIDGE	Disabled	Disabled	Enabled	Disabled	Disabled
	USERNAME	$\sqrt{}$	$\sqrt{}$	×	×	×
	PASSWORD	$\sqrt{}$	$\sqrt{}$	×	×	×
	DEFUALT	×	×	×	$\sqrt{}$	$\sqrt{}$
	GATEWAY					
NAT	NAT	NAPT	NAPT	Disabled	NAPT	NAPT
CHAPTER 3.3		3.3	3.1	3.2	3.2	
	_ ~					

NOTE: $\sqrt{}$ means to configure according to ADSL service provider's instructed value

 \times means that don't modify it .

PPPoE can also be realized via third party dial software.

- 2. Click "Submit" button on the bottom of page to save the parameters;
- 3. Click "Save setting" in the left frame to save configuration which is shown as Figure 2.3.



Figure 2.3

5. Click "Submit" button to save the parameters, then device will restart automatically and run on the new parameters.

2.3.5 Wireless working mode configuration

1. Click the "Wireless" anchor in the left frame. Wireless configuration page will be popped up as figure 2.4.

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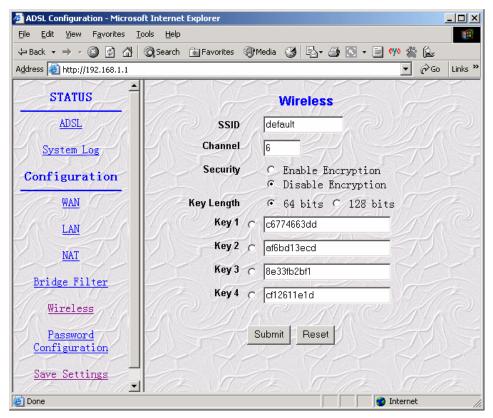


Figure 2.4

- 2. **SSID** (Service Set Identifier): the mobile users cannot access WLAN until setting their SSID as the same value of the modem. The SSID value of the modem is "default"
- 3. **Channel:** to denote the different frequency of wireless signals whose value is from 1 to 13. The default value is "6". If there are more than one APs located in the same area, each of them must works at different channels to reduce interference. For Example: Three APs are install in the same place, the AP's channel should be 1,6 and 11 respectively.
- 4. **Security:** to enable or disable WEP Encryption.
 - **Key length:** 64 bits or 128 bits;
 - **Key1-4:** up to four keys that are in form of hex digitals could be set. Mobile users can't access the AP if they haven't set the same key as AP when WEP encryption mode is enabled.
- 5. After all parameters are successfully set, click the "submit" button on the bottom of the page.
- 6. Then click "Save setting" in the left frame and click "Submit" button in the new page to save the parameters which is shown as Figure 2.3. The modern will restart automatically with the new parameters.

2.3.6 DEFAULT CONFIGURATION

The device have pre-configuration VPI / VCI which is shown as table 1:

Table 1

	VPI	VCI
PVC 0	0	32
PVC 1	8	35
PVC 2	0	35
PVC 3	8	81

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PVC 4	14	24
PVC 5	0	100

The default configuration is "1483 Bridged LLC" encapsulation, If you only want this mode, there is no need to modify it. But if you want the routed mode (for example PPPoE, PPPoA, 1483routed), the other PVC must be closed in advance. Otherwise you must set the "NAT" to "**Dynamic NAPT**" to realize the same function (Refer to 3.2 for detail.).

Steps are shown as following (close the PVC1):

- 1. click "wan", select the "Virtual Circuit 1" on the right frame
- 2. click "Submit".
- 3. Set the "enabled" item to "No" on the top.
- 4. click "Submit" again to activate the setting. The result is shown as Figure 2.5
- 5. Closing the rest is the similar.
- 6. Click "Save Settings" anchor in the left frame. Click "Submit" to save all settings. Device will restart automatically and run with new parameters.

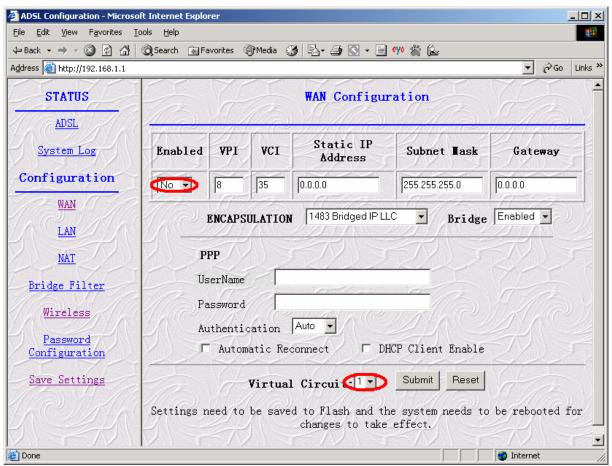


Figure 2.5

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3. PROTOCOL CONFIGURATION

Different protocols can be set in "WAN", "LAN", "NAT" page. Click on the relevant anchor to enter the right page.

3.1 RFC1483 BRIDGED CONFIGURATION

1. WAN SETTINGS

- Click "Wan" anchor in the left frame and select the virtual circuit in the left frame. Click "submit" button.
- Set "Enabled" to "Yes" on the top of the page;
- Input values of **VPI** and **VCI** (For example VPI=0/VCI=32);
- Select "1483 Bridged IP LLC" or "1483 Bridged IP VC—MUX" in "encapsulation" (some data need to be provided by DSL service provider);
- Select "Enabled" in "BRIDGE" item;
- Click "Submit" on the bottom of the page to save the parameters.
- The result is shown as figure 3.1.

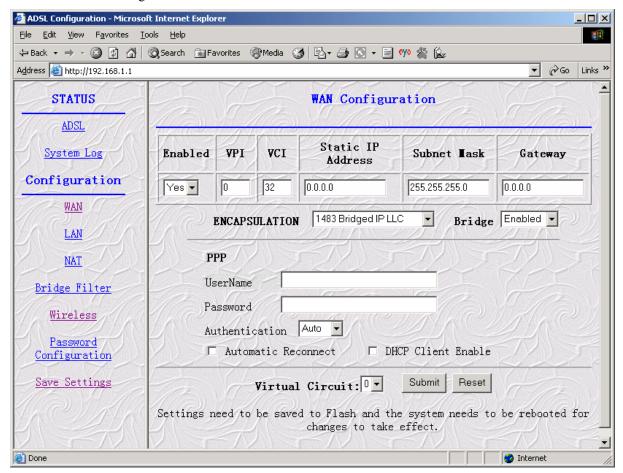


Figure 3.1

2. LAN SETTINGS

Keep the default configuration.

3. NAT SETTINGS



Click "NAT" anchor in the left frame and Set "NAT" item to "Disabled" in the right frame. Finally click "Submit" to save the configuration, which is shown as Figure 3.2.

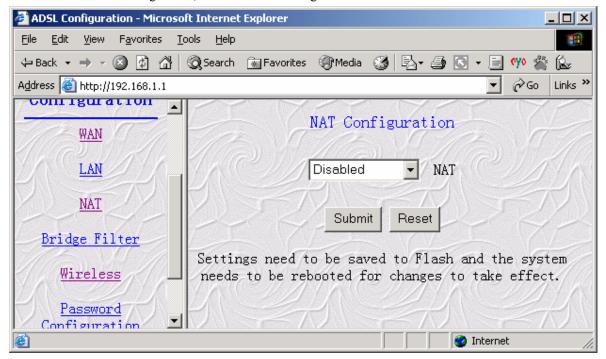


Figure 3.2

Click "Save Settings" button in the left frame and Click "Submit" in the right frame to save all above settings, which is shown as Figure 2.3. Then modem will restart automatically and run with new parameters.

3.2 STATIC ROUTING CONFIGURATION (RFC1483ROUTING/RFC1577)

1. WAN SETTINGS

- Click "Wan" anchor in the left frame and select the virtual circuit in the left frame. Click "submit" button.
- Set "Enabled" to "Yes";
- Input the value of **VPI and VCI** (For example VPI=0/VCI=32);
- Set "Static IP Address" and "Subnet Mask" (For example set IP Address to 202.1.136.254 and set Subnet Mask to 255.255.255.0)
- To 1483 routed mode, select "1483 Bridged IP LLC" or "1483 Bridged IP VC—MUX" in "encapsulation" item (certain value need to be provided by DSL provider);
- To 1577 private line mode, select "Classical IP over ATM" in "encapsulation";
- Select "Disabled" in "Bridge" item;
- Input gateway IP Address in "default gateway" filed (For example set 202.1.136.1 as gateway address)
- Click "Submit" button on the bottom of the page to save the parameters.
- The result is shown as figure 3.3.



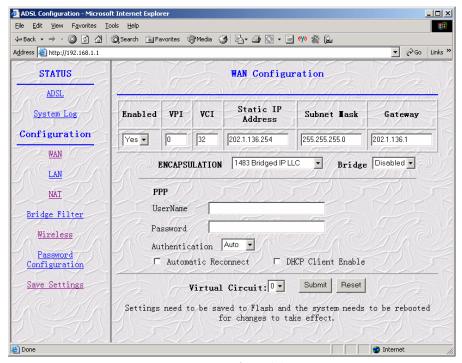


Figure 3.3

2. LAN SETTINGS

Keep the configuration as default.

3. NAT SETTINGS

Select "Dynamic NAPT" or "NAPT" as Figure 3.4, then click "Submit" to save the settings_o Note: If you select "NAPT" you must close other PVCs. Refer to 2.3.6 for details.

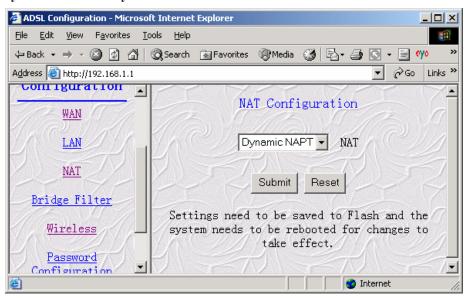


Figure 3.4

4. Click "Save Settings" button in the left frame and Click "Submit" in the right frame to save all above settings, which is shown as Figure 2.3. Then modem will restart automatically and run with new parameters.



3.3 PPPoE/PPPoA CONFIGURATION

There are two ways for PPPoE configuration: 1483 bridge plus third-party dial-up software and internal virtual dial-up.

1483 bridge plus third-party dialing software:

- Set 1483 BRIDGE mode.
- Install "dial-up software" such as Enternet300, WinPoet and RasPPPoE. For more details please contact the DSL provider.
- Use the "dial-up software" to dial up.

Internal virtual Dial-up function

1. WAN SETTING

- Click "Wan" anchor in the left frame and select the virtual circuit in the left frame. Click "submit" button.
- Set "Enabled" to "Yes";
- Input the value of **VPI** and **VCI** (For example VPI=0/VCI=32);
- To PPPoE mode, select "PPPoE LLC" or "PPPoE VC—MUX" in "ENCAPSULATION" item (some values need to be provided by DSL provider);
- To PPPoA mode, select "PPPoA LLC" or "PPPoA VC—MUX" in "ENCAPSULATION" item (some value need to be provided by DSL provider)
- Select "Disabled" in "BRIDGE" item;
- Input appropriate username and password. (some value need to be provided by DSL provider, here we use "adsl" as an example) in PPP "User Name" field and "Password" field;
- Results are shown as Figure 3.5.

Note:

- The selection of "Automatic Reconnect "will make ADSL MODEM to dial-up automatically once the CO disconnected the PPP connection.
- Authentication can be set either "PAP "or " CHAP ". Consult with DSL provider for details or keep it as default.



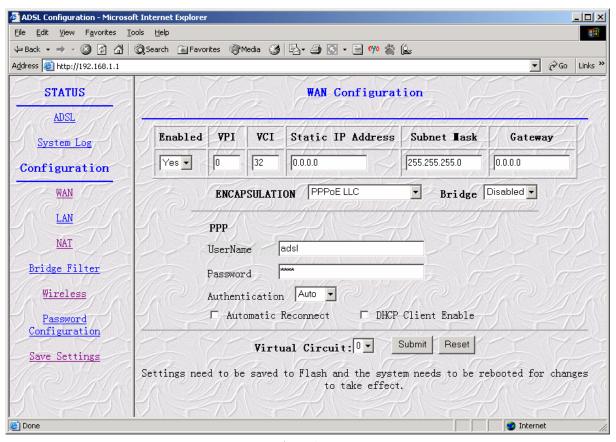


Figure 3.5

2. LAN SETTINGS

Keep the default configuration.

3. NAT SETTINGS

Set "NAT" to "Dynamic NAPT" or "NAPT" which is shown as Figure 3.4 ,then click "Submit" to save the settings_o

Note: If you select "NAPT" you must close other PVC. Refer to 2.3.6 for details.

4. Click "Save Settings" button in the left frame and Click "Submit" in the right frame to save all above settings, which is shown as Figure 2.3. Then modem will restart automatically and run with new parameters.



4. DHCP FUNCTION

Not only can be used as an ADSL Modem, it also has routing and DHCP features, which are especially appropriate for small LAN such as cyber cafes or small companies.

When it is used in LAN, the connection can be set as Figure 4.1:

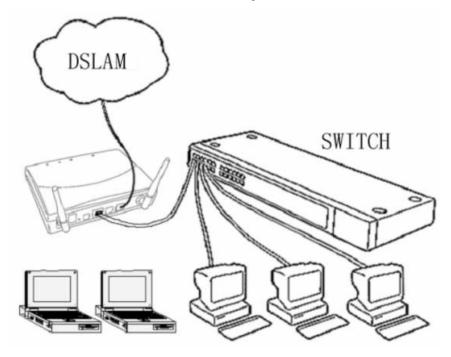


Figure 4.1

Router and proxy server are not always necessary in the LAN. You can use this device as the router and DHCP server.

4.1 COMPUTER TCP/IP PROTOCOL CONFIGURATION

- 1. Set IP address to "Automatically obtain IP address"
- 1. Set ADSL's LAN IP address as gateway.
- 2. Set ADSL's LAN IP address or a valid DNS address as DNS address.

4.2 DEVICE SETTINGS

- 1. Refer to chapter 3 for protocol settings;
- 2. DHCP server settings:

Note: This device can dynamically manage 253 IP addresses.

- Click "LAN" in the left frame and select "DHCP SERVER" in the right frame;
- Set "DHCP address pool selection" to "user defined" (The "system allocated" option can only allocate twelve addresses)
- Define the "User defined start address" and the "User defined end address". (For example, from 192.168.1.2 to 192.168.1.254).
- Click "**Submit**" to save the configuration. Result is shown as the Figure 4.2.



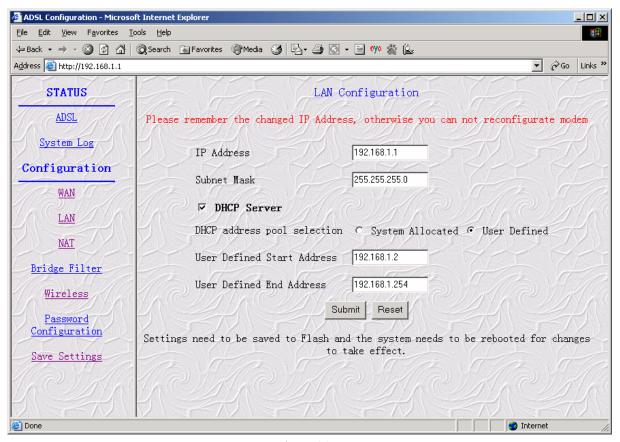


Figure 4.2

Click "Save Settings" button in the left frame and Click "Submit" in the right frame to save all above settings, which is shown as Figure 2.3. Then modem will restart automatically and run with new parameters.

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5. OTHER FUNCTIONS AND CONFIGURATION

5.1 BRIDGE FILTER

- 1. This function can block any MAC addresses through the modem.
 - Steps: (1) Click "Bridge Filter" in the left frame and Set the "Enable Bridge filtering" to Yes.
 - (2) Input "Source MAC address" that should be filtered.
 - (3) Click the "Add" button



Figure 5.1

2. Users can modify or delete the MAC addresses that have been inputted which is shown as Figure 5.2.

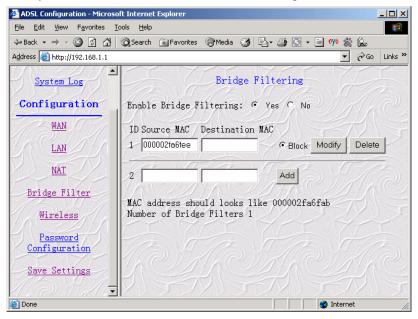


Figure 5.2

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Note: The maximum addresses you can be blocked is four. Input MAC address in source MAC field means blocking the MAC address to connect another device or the device. Input MAC address in destination MAC field means blocking the MAC address to respond connection from other MAC address. Input source MAC and Destination MAC concurrently will be ignored

5.2 STATUS

1. ADSL

Click "ADSL" in the left frame, the line status of ADSL, elapsed time, connection speed, signal noise ratio and the line attenuation will be shown in the right frame. The result is shown as figure 5.3

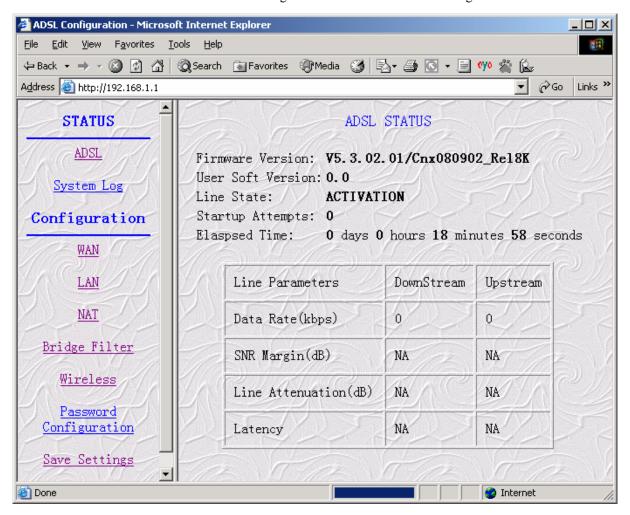


Figure 5.3

2. SYSTEM LOG

Click "System Log" in the left frame. The system working record will be shown in the right frame. User can save it for later diagnosis. The result is shown as Figure 5.4

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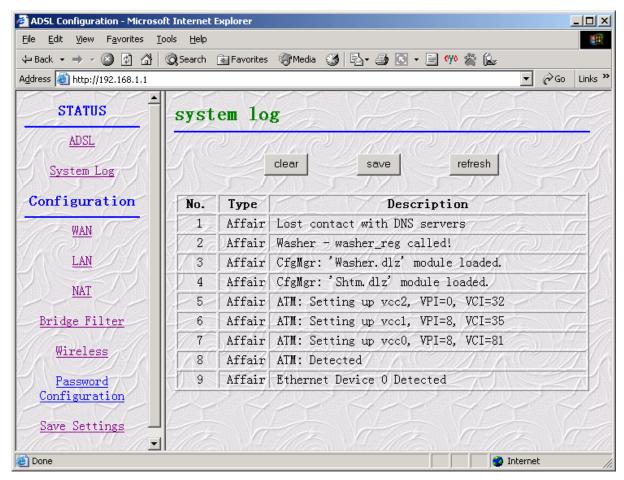


Figure 5.4

5.3 IP ADDRESS AND PASSWORD

1. CONFIGURATION OF IP

As a network device, it has its IP address and MAC address. The factory IP address is **192.168.1.1** and subnet mask is **255.255.0**.User can modify these addresses in "LAN" Configuration page_o

2. CONFIGURATION OF ADMINISTRATOR'S PASSWORD

When login the setting page, the system request user to input username and password to validate access permission. The default account is "admin" and the default password for this account is "password". User can change the password in "Password Configuration" page. (Note: please remember the password after changing, otherwise you will not be able to login configuration page later.)

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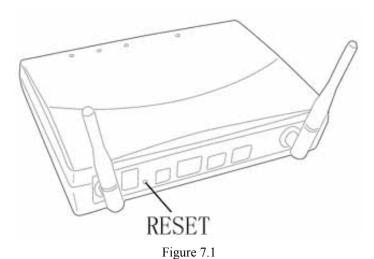
6. SOFTWARE UPGRADE

This device supports software upgrade. To get detailed information, please ask the associated manufacturer or agents.

7. RESET TO DEFAULT SETTING

If you cannot log in configuration page (for example: you forget the password), you can use this method to reset the ADSL MODEM to the default configuration, Then you can log in with the default username and $password_{\circ}$

Press the reset button that is shown as Figure 7.1, then the modem's configuration is set to default settings.





8. SPECIFICATION

8.1 POWER SUPPLY

• Exterior power adapter

• Input: 220VAC, 50Hz

• Output: 12VDC, 700mA_o

• Polarity : ⊕ • • •

Consumption: MAX 5W

8.2 DIMENSION

• 184mm (Length) x145mm (Width) x41mm (Height)

8.3 WEIGHT

• Weight: 270 gram

8.4 STANDARDS

• EMI/Immunity: FCC Part 15 Class B, CE Mark (EN55022 Class B/EN50082)

• Safety Standard: UL, EN60950

• Communication: FCC Part 68, CYR21

• Electromagnetic: in accordance with FCC, ETSI and CISPR standard

• IEEE 802.11b standard.

8.5 ENVIRONMENT REQUIREMENTS

• Temperature: 0° C -40° C

• Relative humidity: 0% – 95%

• Electromagnetic disturbance : FCC PART15&68



A. Troubleshooting

Phenomena	Solution
The indicator of power supply is not on	 Make sure the connection of power supply is correct. Make sure the switch of power supply is turned on. Make sure the output of power supply is correct.
The indicator of PC is not on	 Check the connection of cable and network adapter. Make sure that the correct cable is used. Make sure the cable works fine by pinging the host IP address.
Can not access Internet or remote networks	 Make sure the problems list above are all eliminated. Make sure the software configuration of the ADSL Modem is correct. Make sure you have restarted the ADSL Modem after configuration change. Check IP connection using ping command. Make sure the DNS address of computer is correct.
Can't access some WEB server	 The MTU of operating system might be too large Update the operating system with patches.
Can not log on to the configuration page	 Make sure the PC indicator is on. Make sure the configuration of TCP/IP is correct. Make sure the data indicator of Modem is on when using Ping command. Make sure the user name and password is correct. Reset the device. Rewrite the software to flash memory through USB cable.

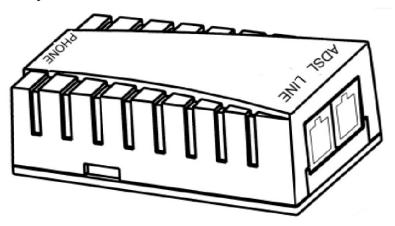


	1. Make sure the problems list above are all eliminated;				
	2. Make sure the WLAN card in computer works well. Check				
	wireless mode is "infrastructure";				
Wireless mode can't work	3. Make sure that "wireless" is shown on the configuration page of				
	the modem. Otherwise there should be hardware error for the				
	modem. Please ask manufacturer to change a new modem.				
	4. Make sure the WLAN card of the computer has the same SSID				
	as that of the modem;				
	5. Check the Security mode. If the encryption is on , make sure the				
	keys is correct. To avoid the possible problems for				
	encryption setting, please don't set the WEP mode with				
	wireless PC card.				
Bridge Filtering is invalid	Cleanup the temp files of browser.				



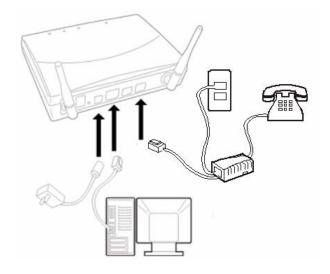
B. SPLITTER CONNECTION

1. Splitter



2. Connection

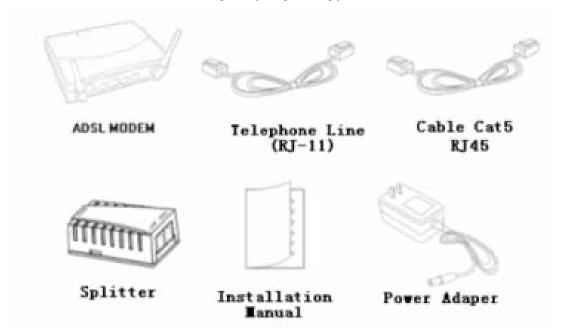
Firstly, use a telephone cord to connect the LINE port of Splitter and the RJ-11 port on the wall. Then with another telephone cord connect the ADSL port of Splitter and the LINE port of ADSL Modem another telephone cord. Finally, with one more telephone cord to connect the telephone set and the phone port of the Splitter. $_{\circ}$





C. SHIPPING LIST

Check the list of device as the following, if anything missing you should contact franchiser.





Atrie Technology Pvt. Ltd.

Corporate office: Atrie House, # 591,3rd Block, Koramangala, Bangalore -560 034 India

Registered office: #B-121, Ground Floor, Kalkaji, New Delhi – 110019

Regional office (West): #C/312,3rd Floor, Gokul Arcade, Vile Parle(E) Subhash Road,Mumbai - 400057

Web: http://www.atrieindia.com Email: contacts@atrieindia.com





Please use the factory- recommended power supply.