VDSL2/ADSL2+ Gateway

BEC 8800N

# **User Manual**

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APPENDIX D. SHIPPING LIST	

#### Caution

This device complies with Part15 of the FCC Rules.Operation is subject to the following conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation

#### **Related Documents**

#### **Definition & Acronyms**

VDSL	Very-High-Bit-Rate Digital Subscriber Loop
DHCP	Dynamic Host Configruration Protocol
FEXT	Far-end Cross Talk
HDSL	High-rate Digital Subscriber Line
POTS	Plain Old Telephone Service
PSTN	Public Switched Telephone Network
WINS	Windows® Internet Name Server
ADSL	Asymmetric Digital Subscriber Line
OAM	Operations, Administration And Maintenance
QAM	Quadrature Amplitude Modulation
DMT	Discrete Multitone
DSL	Digital Subscriber Line
FEC	Forward Error Correction
ATM	Asynchronous Transfer Mode
WAN	Wide Area Network
PRD	Pseudo-random Downstream
PRU	Pseudo-random Upstream
USB	Universal Serial Bus
LAN	Local Area Network
PVC	Permanent Virtual Circuit
SVC	Switched Virtual Circuit

PPP	Point to Point protocol
DNS	Domain Name Server
VPI	Virtual Path ID
VCI	Virtual Circuit ID
IP	Internet Protocol
CO	Central Office
EC	Echo Canceling

# **OVERVIEW**

# 1

# **1. OVERVIEW**

#### **1.1 ABOUT VDSL**

VDSL is a fast version of ADSL.VDSL MODEM is a broadband Internet access device, which utilizes the high frequency segment of the phone line to transmit high-speed data without interfering with the voice transmission. The frequency of VDSL signal is higher than that of voice, so voice and VDSL signal can coexist in one line by using a splitter to insulate each from the other. VDSL data transfer on the asymmetry way. The upload speed is up to 19.2Mbps and download speed is up to 55Mbps. It is an ideal device for broadband access.



# **1.2 DEVICE INTRODUCTION**

Figure 1.1

Interface introduction: ① Power Interface: 12V DC,1.25A.

(RFC1577)

- ② Power switch: To turn on or turn off the power.
- ③ Reset Key: Reset default configuration.
- (4) Ethernet Interface: To be connected to a PC network card by a network cable, also can use a crossover cable to connect to Hub, Switch or Router.
- ⑤ Line Interface: Connected with phone line or "VDSL" port of the splitter.

# **1.3 LED STATUS INDICATION**

Status	POWER (green)	LINK (green)	DATA (green)	USB(green)	WiFi (green)
Steady light	Power on	The modem is in good connection	PPP is on	USB line is connected	Wireless is connected
Flashing	/	No signal	/	USB port transmit or receive data	/
Fast flashing	/	In handshaking status	Transmitting or receiving data in PPP mode	/	/
Off	Power off	Power off	PPP is Off	USB line not connected properly	Wireless is not connected

#### **1.4 PROTOCOLS**

VDSL Modem supports the following protocols:

- 1. PPPoA (PPP over ATM ) LLC encapsulation or VCMUX encapsulation (RFC2364)
- 2. PPPoE (PPP over Ethernet) LLC encapsulation or VCMUX encapsulation (RFC2516)
- 3. 1483 bridge (1483 Bridged IP over ATM) LLC encapsulation or VCMUX encapsulation (RFC1483)
- 4. 1483 routing (1483 Routing IP over ATM) LLC encapsulation or VCMUX encapsulation (RFC1483)
- 5. Classical IP over ATM

#### **1.5 FEATURES**

1. Supports ANSI T1.413 ISSUE 2, ITU G.992.1(G.DMT), ITU G.992.2(G.LITE), ITU G.992.3, ITU G.992.5.

- 2. Web-based configuration and monitoring.
- 3. Supports up to 8 PVCs.
- 4. Routing function.
- 5. NAPT  $\$  DHCP function.
- 6. Software upgradeable.
- 7. ATM management function.

# HARDWARE INSTALLATION AND SOFTWARE CONFIGURATION

# 2. HARDWARE INSTALLATION AND SOFTWARE

# CONFIGURATION

#### **2.1 SYSTEM REQUIREMENT**

A computer with a USB interface or a network card with Ethernet interface.

### **2.2 HARDWARE INSTALLATION**

#### 2.2.1 HARDWARE CONNECTION





To go online and make phone calls simultaneously, please refer to Appendix B: SPLITTER CONNECTION.

#### **2.2.2 INSTALLATION STEPS**

1. Connect line port of the VDSL MODEM to telephone jack with the telephone cord that comes with the

modem.

- 2. Connect Ethernet port of the VDSL MODEM to Ethernet port of the computer using the network cable that comes with the modem.
- 3. Connect USB port of the VDSL MODEM to USB port of the computer using the USB cable that comes with the modem.
- 4. Plug in the power cord , and turn on the power.

#### 2.3 SOFTWARE CONFIGURATION

#### 2.3.1 PREPARATION BEFORE SOFTWARE INSTALLATION

Before the installation, please confirm information below or consult with the VDSL service provider. Table 2.1 shows all the information needed to configure for different protocols.

Table 2.1

Protocol	Virtual Dial Mode		Private Line Mode
	PPPOE	PPPOA	1483 Bridged
Necessary Information	VPI	VPI	VPI
	VCI	VCI	VCI
	User name	User name	
	Password	Password	

#### **2.3.2 COMPUTER CONFIGURATION**

The default factory-set IP Address for the VDSL MODEM is: 192.168.1.1. The Subnet Mask is: 255.255.255.0. Users can configure VDSL MODEM through an Internet browser. VDSL MODEM can be used as a gateway and DNS server and users need to set the computer's TCP/IP protocol as follow:

- 1. Set the computer at same Internet segment with VDSL MODEM so as to enter VDSL MODEM configuration page through a browser.
- 2. Set the computer's gateway's IP address the same as the VDSL Modem's.
- 3. Set the computer's DNS server's IP address the same as the VDSL Modem's or that of an effective DNS server.

If the user has any question regarding the computer's TCP/IP protocol, please refer to APPENDIX C: TCP/IP PROTOCOL CONFIGURATION.

#### 2.3.3 VDSL MODEM CONFIGURATION

Open the browser; input <u>http://192.168.1.1</u> in the address column. Press "Enter" key then the entry dialog box will pop up as Figure 2.2, Input username: **admin**, and password: **admin** (Note that this is capital sensitive), then press "Enter". The VDSL MODEM configuration page will be shown.

连接到 192.16	8.1.1 ? 🔀
<b>R</b>	GR
DSL Router	
用户名(①):	🖸 admin 💌
密码(2):	*****
	<ul><li>记住我的密码 (8)</li><li>确定</li><li>取消</li></ul>

Figure 2.2

#### 2.3.4 VDSL MODEM WORK MODE CONFIGURATION

1. For different protocols, the users need to set VDSL Modem accordingly as listed below: Table 2.2

DDDoE	ATM VC	Protocol	Use DNS	User Name	Password
	$\checkmark$	PPPoE	Enable	$\checkmark$	$\checkmark$
ILLOY	$\checkmark$	PPPoA	Enable	$\checkmark$	$\checkmark$

1492 Pridged	Lower interface	Default route
1465 Dhugeu	$\checkmark$	Disable

Note:  $\checkmark$  means configure according to VDSL service provider's instructed value.

PPPoE can also be realized via third party dialup software.

User Manual	PPPoE	PPPoA	1483 Bridged
Reference Chapter	3.3	3.3	3.2

2. After getting through every page for parameters set-up, click "Apply" to save the value in VDSL MODEM

3. Click the "**Restore Default Settings**" on "**Management**" Tab to enter the saving configuration page as Figure 2.3. After the Modem reboot, The VDSL MODEM will work on the new parameters.

BEC	VDSL2 Broadband Router
Device Info Advanced Setup Wireless Diagnostics Management Settings Backup Update Update Restore Default System Log SNMP Agent TR-069 Client Access Control Update Software Reboot	Tools Restore Default Settings         Restore DSL router settings to the factory defaults.         Restore Default Settings
	Figure 2.3

PROTOCAL CONFIGURATION

# 3. PROTOCOL CONFIGURATION

If the configuration is bridge encapsulation, there is no need to configure any more parameters. Only need to use the third party dial-up software to connect the Internet.

Totally, this router supports: PPPoA, PPPoE, Bridging. For detail configuration information, please check the following configuration guide.

### **3.1 CONFIGURATION GUIDE**

Click "Advanced Setup" on the left page, enter into "DSL ATM Interface Configuration" page.

Note: At most we can have eight connections. If you need to add a new connection, please delete or modify an existing connection

BEC	VDSL2 Broadband Rout	er		3	and a					
Device Info					DSI	ATM Inter	face Config	uration		
Laver2 Interface					Choose Add, a	r Remove to	configure D	SL ATM interfaces.		
WAN Service		Interface	Vpi	Vci	DSL Latency	Category	Link Type	Connection Mode	QoS	Remove
LAN Security		atryD	0	35	Pathū	UBR	EdA	DefaultMode	Disabled	
Parental Control						[and ]	Bratana			
Quality of Service Routing						MUU	Remove			
DSL.										
Upnp										
Dris Proxy										
Print Server										

Figure 3.1

Click on the next connection which you want add. Press "Add" button, enter the configure guide, as Figure

3.2

#### ATM PVC Configuration

This screen allows you to configure an ATM PVC identifier (VPI and VCI), select DSL latency, select a service categoryS. Otherwise choose an existing interface checkbox to enable it.

VPI: [0-255] 0
VCI: [32-65535] 35
Select DSL Latency
✓ Path0
Path1
Select DSL Link Type (EoA is for PPPoE, IPoE, and Bridge.) <ul> <li>EoA</li> <li>PPPoA</li> <li>IPoA</li> </ul>
Encapsulation Mode: LLC/SNAP-BRIDGING 🗸
Service Category: UBR Without PCR 🔽
Select Connection Mode
Oefault Mode - Single service over one connection
VLAN MUX Mode - Multiple Vlan service over one connection
MSC Mode - Multiple Service over one Connection
Enable Quality Of Service

Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Realtime VBR. QoS consumes therefore the number of PVCs will be reduced. Use Advanced Setup/Quality of Service to assign priorities for the applications.

Enable Quality Of Service.



Figure 3.2

The value for VPI/VCI is assigned by your ISP. After inputing the PVC value, press "Apply/Save" to save configuration. As Figure 3.3.

BEC	VDSL2 Broadband Router
Device Info	DSL Interface Configuration Error
Advanced Setup	Please double check your configuration information and
Layer2 Interface	riease double check your comigaration mation and
WAN Service	Click on "Back" button to give it an another try.
LAN	
Security	On
Parental Control	Click on "Reboot Router" button to reboot the DSL Router and try it again
Quality of Service	
Routing	
DSL	Back Reboot Router
Upnp	
Dns Proxy	
Print Server	
Interface Grouping	
IPSec	
Certificate	
Wireless	
Diagnostics	

Figure 3.3

The Modem supports five VDSL protocol modes. Choose the protocol which is appointed by ISP and PVC encapsulation.

• PPP over ATM (PPPoA) • PPP over Ethernet (PPPoE)

• Bridging

Some connection lines need to confirm the LLC or VC, if you can't confirm, please don't modify the default value or ask your ISP.

#### 3.2 RFC1483 BRIDGE CONFIGURATION

Click "Advanced Setup" on the left page, enter into "WAN Service Setup" page. As Figure 3.4.

Note: At most we can have eight connections. If you need to add a new connection, please delete or modify an existing connection

BEC	VDSL2 Broadband Router	and a second
Device Info		WAN Service Interface Configuration
Advanced Setup Layer2 Interface		Select a layer 2 interface for this service
ATM Interface		Note: For ATM interface, the descriptor string is (portId_vpi_vci) For PTM interface, the descriptor string is (portId_bidb_low)
ETH Interface		Where portId=0> DSL Latency PATHO
WAN Service		portId=1> DSL Latency PATH1 portId=4> DSL Latency PATH0&1
LAN		low =0> Low PTM Priority not set
Parental Control		high =0> High PTM Priority set high =0> High PTM Priority not set
Quality of Service		nigh = 1> High Privi Priority Set
DSL		ptm0/(0_0_1) 💌
Upnp		······································
Dns Proxy Print Server		Back Next
Interface Grouping		

#### Figure 3.4

#### Press "Next" button, enter the configure guide, as Figure 3.5

BEC	VDSL2 Broadband Router	uner and a second
Device Info Advanced Setup Layer2 Interface ATM Interface PTM Interface ETH Interface WAN Service LAN Security Parental Control Quality of Service Routing DSL Upnp Dns Proxy Print Server Interface Grouping IPSec	WAN Service Configuration Select WAN service type:  PPP over Ethernet (PPPoE)  IP over Ethernet  Pridging Enter Service Description: br_0_0_1	Back Next

#### Figure 3.5

Press "Next" button, enter the configure guide, as Figure 3.6

BEC	VDSL2 Broadba	and Route
Device Info Advanced Setup Layer2 Interface	WAN Setup - Summa Make sure that the set	a <b>ry</b> ttings below mat
ATM Interface	PORT / VPI / VCI:	0/0/1
PTM Interface	Connection Type:	Bridge
WAN Service	Service Name:	br_0_0_1
LAN	Service Category:	UBR
Security	IP Address:	Not Applicable
Parental Control	Service State:	Enabled
Quality of Service	NAT:	Disabled
Routing	Full Cone NAT:	Disabled
Unnn	Firewall:	Disabled
Dns Proxy	IGMP Multicast:	Not Applicable
Print Server	Quality Of Service:	Disabled
Interface Grouping		
IPSec	Click "Apply/Save" to h	nave this interfac
Certificate		
Wireless		
Management		

Figure 3.6

Press "Apple/Save" to save your configuration, and you will see as following Figure 3.7.

BEC	VDSL2 Broadband Rou	iter			- TANA						
Device Info Advanced Setup Layer2 Interface ATM Interface			Choose A	<b>v</b> idd, or R	fide Anea Ne emove to con ETH and PTM	tw <mark>ork (WA</mark> A figure a wan WATM service	() Servio service o can not c	e Setup var a selei oexist.	cted interf	ace.	
ETH Interface		Interface	Description	Type	vlan8021p	VianMuxId	Connild	igmp	NAT	Firewall	Remove
WAN Service		atm0	br_0_0_35	Bridge	N4/4	NI/A	N/A	Disabled	Disabled	Disabled	
LAN Security		ptmQ	br_0_0_1	Bridge	N/A	N/A	N/A	Disabled	Disabled	Disabled	
Parental Control Quality of Service Routing DSL					[	Add Rema	(B				



#### **3.3 PPPOA AND PPPOE CONFIGURATION**

PPPoE is also known as RFC 2516. It is a method of encapsulating PPP packets over Ethernet.

PPPoA is also known as RFC2364 and named as Peer to Peer Protocol over ATM. As PPPoE, it also has all the features of PPP. Although it's based on ATM protocol, the setting of all the other parameters is similar with PPPoE. So we only introduce PPPoE in detail here.

Click "Advanced Setup" on the left page, enter into "WAN Service Setup" page.

Note: At most we can have eight connections. If you need to add a new connection, please delete or modify

#### an existing connection

	VDSL2 Broadband Router	and a state of the
Device Info Advanced Setup Layer2 Interface WAN Service LAN Security Parental Control Quality of Service Routing DSL Upnp Dns Proxy Print Server Interface Grouping		WAN Service Interface Configuration Select a layer 2 interface for this service Note: For ATM interface, the descriptor string is (portId_vpi_vci) For PTM interface, the descriptor string is (portId_high_low) Where portId=0> DSL Latency PATH0 portId=1> DSL Latency PATH1 portId=4> DSL Latency PATH0&1 low =0> Low PTM Priority not set low =1> Low PTM Priority set high =0> High PTM Priority set Migh =1> High PTM Priority set
IPSec Certificate Wireless		Back) [Next]



Press "Next" button, enter the configure guide, as Figure 3.9

BEC	VDSL2 Broadband Router
Device Info Advanced Setup Layer2 Interface WAN Service LAN Security Parental Control Quality of Service Routing DSL Upnp Dns Proxy Print Server Interface Grouping IPSec certificate	WAN Service Configuration Select WAN service type: PPP over Ethernet (PPPoE) To ver Ethernet Bridging Enter Service Description: pppoe_0_0_1 Back Next
	Figure 3.9

The value for VPI/VCI is assigned by your ISP.Press "Next" button, enter the configure guide, as Figure 3.10.

BEC	VDSL2 Broadband Router
Device Info Advanced Setup Layer2 Interface WAN Service LAN Security Parental Control Quality of Service Routing DSL Upnp Dns Proxy Dist Common	PPP Username and Password         PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name you.         PPP Username:         PPP P Username:         PPP Password:         PPP CS Service Name:         Authentication Method:         AUTO         Image: Image
Interface Grouping IPSec Certificate	Dial on demand (with idle timeout timer)
Wireless	PPP IP extension
Management	Advanced DMZ         Non DMZ IP Address:       192.168.2.1         Non DMZ Net Mask:       255.255.255.0         Use Static IPv4 Address

Figure 3.10

Ealble "Fullcone NAT "press "Next" to continue. As Figure 3.11.

BEC	VDSL2 Broadband Router
Device Info	Routing Default Gateway
Advanced Setup	
Layer2 Interface	Select a preferred wan interface as the system default gateway,
WAN Service	
LAN	Selected WAN Interface pppoe_0_0_1/ppp0 🗸
Security	
Parental Control	
Quality of Service	
Routing	
DSL	
Upnp	
Dns Proxy	
Print Server	Back
Interface Grouping	
IPSec	
Certificate	

Figure 3.11

Press "Next" to continue. As Figure 3.12

Device Info       DNS Server Configuration         Advanced Setup       Get DNS server information from the selected WAN interface OR enter static DNS server IP addresses. If only a single P enter static DNS server IP addresses.         Layer2 Interface       WAN Service         LAN       Image: Obtain DNS info from a WAN interface:         Security       Obtain DNS info from a WAN interface:         Parental Control       Image: Obtain DNS info from a WAN interface	BEC	VDSL2 Broadband Router
Quality of Service       Image: Display building static DNS IP address:         Routing       Primary DNS server:         Dsl.       Secondary DNS server:         Upnp       Secondary DNS server:         Dns Proxy       Print Server         Interface Grouping       IPSec         Certificate       Wireless         Diagnostics       Management	Device Info Advanced Setup Layer2 Interface WAN Service LAN Security Parental Control Quality of Service Routing DSL Upnp Dns Proxy Print Server Interface Grouping IPSec Certificate Wireless Diagnostics Management	DVS Server Configuration         Get DNS server information from the selected WAN interface OR enter static DNS server IP addresses. If only a single PV enter static DNS inform a WAN interface:         WAN Interface selected:       pppe01/ppp0 v         Image: DNS server:       image: DNS server:         Secondary DNS server:       image: DNS server:

. Figure 3.12 Configure your DNS info and press "Next" to save your configuration, and you will see as following Figure 3.13.

.

Device Info	WAN Setup - Summ	ary	
Advanced Setup Layer2 Interface	Make sure that the set	ttings below match the set	tings provided by your ISP.
WAN Service	PORT / VPI / VCI:	0/0/1	
LAN	Connection Type:	PPPoE	
Parental Control	Service Name:	pppoe_0_0_1	
Quality of Service	Service Category:	UBR	
Routing	IP Address:	Automatically Assigned	
DSL	Service State:	Enabled	
Upnp	NAT:	Enabled	
Dns Proxy	Full Cone NAT:	Enabled	
Interface Grouping	Firewall:	Enabled	
IPSec	IGMP Multicast:	Disabled	
Certificate	Quality Of Service:	Disabled	
Vireless Diagnostics Nanagement	Click "Apply/Save" to P	nave this interface to be e	fective. Click "Back" to make any modifications. Back Apply/Save

#### Figure 3.13

#### Press "Apply/Save" to save your configuration. As Figure 3.14.

BEC	VDSL2 Broadband Router			TERIO						
Device Info Advanced Setup Layer2 Interface WAN Service		Choose A	W .dd, or R	ride Area Ne remove to con ETH and PTM	twork (WAN figure e WAN /ATM service	i) Servio service o can not c	e Setup ver a selec oexist.	cbecl interfi	icit.	
Security	Interfa	Description	Type	Vlan8021p	VlanModid	Connid	Ignp	NAT	Firewall	Remove
Parental Control	Ombs	br_0_0_35	Bridge	N/A	N/A	N/A	Disabled	Disabled	Disabled	
Quality of Service Routing	Dqqq	pppoe_0_0_1	FFFOE	N/A	N/4.	N/A	Disabled	Enabled	Enabled	
DSL Upnp Dns Proxy Print Server	Laure de la la			[	Add Remov	e				

Figure 3.14

# **4.1 TCP/IP PROTOCOL CONFIGURATION**

- 1. Set IP address as "192.168.1.1";
- 2. Set netmask as"255.255.255.0";

# **4.2 MODEM CONFIGURATION**

1. Click "Advanced Setup" on the left page, enter into "Url Filter" page, shown as Figure 4.1.

BEC	VDSL2 Broadband Router
Device Info Advanced Setup Layer2 Interface WAN Service LAN Security Parental Control Time Restriction Url Filter Quality of Service Routing DSL Upnp Dns Proxy Print Server	URL Filter Please select the list type first then configure the list entries. Maximum 100 entries can be configured. URL List Type: <ul> <li>Exclude</li> <li>Include</li> </ul> <li>Address Port Remove</li> <li>Add</li> <li>Remove</li>
	Figure 4.1

2. URL FILTER settings:

- a) Choose Exclude or Include, then press "add" to add the url you want to configration.
- b) Fill in the url and press Apply/Save to save your configration, shown as Figure 4.2

BEC	VDSL2 Broadba	and Router	ure
Device Info Advanced Setup Layer2 Interface WAN Service	Parental Control I	URL Filter Add and port number then click "A	pply/Save" to add the entry to the URL filter.
LAN	URL Address:	www.sohu.com	
Security Parental Control Time Restriction Url Filter Quality of Service Routing DSL Upnp Dns Proxy Print Server	Port Number:	80	(Default 80 will be applied if leave blank.) Apply/Save
		Figure 4.2	

# OTHER FUNCTIONS AND CONFIGURATION

5

# **5. OTHER FUNCTIONS AND CONFIGURATION**

# **5.1 STATUS CHECKING**

The working status of VDSL MODEM can be monitored by some pages.

#### 1. Overview of Device Information

As shown in Figure 5.1, the information of hardware version, software version, DSL link status, link speed and LAN interface can be viewed on this page.

	Device Info		
ummary VAN	Board ID:	96368MVWG	
tatistics	Software Version:	090522_1633-4.02L.03.A2	pvC009.d21j2
oute	Bootloader (CFE) Version:	1.0.37-102.9	10 - 10 -
RP	Wireless Driver Version:	5.10.85.0.cpe4.402.0	
nagement	Line Rate - Upstream (Kbp	os):	
nagement	Line Rate - Upstream (Kbp	)s):	
	Line Rate - Downstream (	Kopsj:	
	LAN IPv4 Address:	192.168.1.1	
	MAC Address:	00-1e-40-ed-9e-a9	9
		nnnO	
	Default Gateway:	IPPPo	
	Default Gateway: Primary DNS Server:	pppo	

Figure 5.1

#### **5.2 CONFIGURATION OF MODEM'S IP ADDRESS AND PASSWORD**

#### 1. CONFIGURATION OF MODEM'S IP ADDRESS

As a network device, VDSL Modem has its own IP address and MAC address. The factory sets the VDSL Modem at a default IP address of **192.168.1.1** and subnet mask of **255.255.255.0**. The user can configure these addresses through the Local Network page as shown in Figure 5.2

BEC TEOHNOLOGIES	VDSL2 Broad	Iband Router
Device Info Advanced Setup Layer2 Interface WAN Service	Local Area Networ Configure the DSL Ro	prk (LAN) Setup Router IP Address and Subnet Mask for LAN interface. GroupName Default V
LAN	Subnet Mask	255 255 255 0
Security	Cabrict Markin	200/200/200/0
Parental Control Quality of Service	Enable IGMP Sn	incoping
Routing DSL		
Upnp Dns Proxy	Enable LAN side	de firewall
Print Server Interface Grouping		
IPSec Certificate		
118-1		



#### 2. Configuration of administrator's password and user's password

When logging on the setting page of VDSL Modem, the system requires user name and password to verify for permission. The default administrator's account is "admin" and the default password for this account is "admin". The user, through the user configuration tab on page Management, can change the passwords. (Attention: please remember the password after changing otherwise you will not be able to change configuration after saving.)

# **RESET TO DEFAULT SETTING**

6

## 6. RESET TO DEFAULT SETTING

If you are experiencing difficulty logging on to the configuration page (For example: you forget the password), you can reset the VDSL MODEM to the default configuration. Then you will be able to log on with the default username and password.

#### Method:

Turn on the VDSL MODEM, put a pin into the eyelet, and press only once.



# USAGE OF USB INTERFACE

#### 7. USAGE OF USB INTERFACE

The Combo DSL Gateway is a device with both Ethernet Interface and USB Interface, which is independent, you may use either of them to connect to the different computers, in this way the two computers can connect to the network at one time. The Gateway can be seen as a simple two-port HUB. So, do not connect both the Ethernet Interface and USB Interface to a same computer.

When using USB Interface, you must install the drivers. After installation, a virtual network card, "USB Remote NDIS Network Device", will be added into the computer. It has all the functions of a real network card, and it makes installation more easily.

#### NOTES:

The following shows the steps for Windows®2000, the installation, configuration and uninstallation of Windows®98 or Windows®XP are similar to this.

#### 7.1 DRIVER INSTALLATION

1. Open the Modem, and connect the USB port. Then double click "Setup.exe" in "G:\Driver\". You will enter the **DSL MODEM Setup Wizard** as figure 7.1.1, click "Next".



Figure 7.1.1

2. A new dialog box will show you a figure 7.1.2. Click "Accept" to continue.



Figure 7.1.2

3. A new box will show whether you want to reboot the computer. Choose "No, I will reboot the computer later", then click "close" button to finish the installing.



Figure 7.1.3

### 7.2 UNINSTILL DRIVER

1.Click "Start" à "Programs" à "DSL Two Ports MODEM" à "Uninstall". As shown figure 7.2.1.

	-	Windows Update							
		Set Program Access and Defaults		L					
		Office							
		Office							
2		Programs	5		Accessories	×			
5					Startup	•			
2		Documents	1	N	Microsoft Excel				
ĕ	Fh	Settings	4	W	Microsoft Word				
2	YAAN .	Seconds			NetIQ Qcheck	•			
e.		Search	•		NetIQ Chariot	•			
g				$\odot$	Windows Media Player				
S 2	2	Help		1	DSL Two Ports Modem	•	2	Uninstall	
gow	<u></u>	<u>R</u> un			¥		Ĩ	Readme	
Min		Shut Down							
-	Start	] 🖸 🏉 🛱 📀 🗍							

Figure 7.2.1

2. It will ask you to click "Yes" to confirm deletion. As shown figure 7.2.2.



Figure 7.2.2

3. Choose "Yes, reboot the computer now". As shown figure 7.2.3.

🚰 DSL Modem Setup Wiz	ard	×
Reboot		
<b>DSL</b> Modem	The DSL Modem Setup Wizard now requires that you reboot your computer to complete the uninstallation. Would you like to reboot now or later? Yes, reboot the computer now. No, I will reboot the computer later.	
	Close	_

Figure 7.2.3

# 7.3 CONFIGURATION OF "USB IAD LAN MODEM"

As a virtual network card, "USB IAD LAN MODEM " can be configured as a normal network card.

Set the computer IP address at same segment of VDSL MODEM, such as set the IP address of the network card to one of the "192.168.1.3"  $\sim$  "192.168.1.254".

User can also change its configuration for special reason.

Local Area Connection 37 Properties	Internet Protocol (TCP/IP) Properties	<u>? ×</u>
General Sharing	General	
Connect using:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	
Components checked are used by this connection:	Dtain an IP address automatically     O Use the following IP address:	
Elient for Microsoft Networks      Elie and Printer Sharing for Microsoft Networks      FIP over Ethernet Đ-Đé      Finternet Protocol (TCP/IP)	IP address:	
Install Uninstall Properties	Obtain DNS server address automatically      O Use the following DNS server addresses:	
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Preferred DNS server:            Alternate DNS server:	
☐ Sho <u>w</u> icon in taskbar when connected	Ad <u>v</u> anced	
OK Cancel	OK Cano	el

Figure 7.3.1

# SPECIFICATION

# 8

# 8. SPECIFICATION

#### **8.1 POWER SUPPLY**

- I Exterior power adapter
- I Input: 220VAC, 50Hz
- I Output: 12VDC.

I Polarity: ⊕ **⊙** ⊖

# 8.2 STANDARDS

- EMI/Immunity: FCC Part 15 Class B, CE Mark (EN55022 Class B/EN50082)
- Safety Standard: UL, EN60950, 3C
- Communication: FCC Part 68, CYR21
- I Electromagnetic: in accordance with FCC, ETSI and CISPR standard

# **8.3 ENVIRONMENT REQUIREMENTS**

- I Temperature:  $5^{\circ}C 40^{\circ}C(41F 104F)$
- Relative humidity:30% –90%
- I Electromagnetic disturbance: FCC PART15&68

# APPENDIX

# APPENDIX

# **APPENDIX A. TROUBLESHOOTING**

Phenomena	Solution
The indicator of power supply is not on	<ol> <li>Make sure the connection of power supply is good.</li> <li>Make sure the switch of power supply is turned on.</li> <li>Make sure the output of power supply is correct.</li> </ol>
The indicator of PC is not on	<ol> <li>Check the connection between the cable and the network card.</li> <li>Make sure that the correct cable is used.</li> <li>Make sure the cable works fine by pinging the host IP address.</li> </ol>
Can not access Internet or remote networks	<ol> <li>Make sure the problems listed above are eliminated.</li> <li>Make sure the software configuration of the VDSL Modem is correct.</li> <li>Make sure you have restarted the VDSL Modem after configuration change.</li> <li>Check IP connection using ping command.</li> <li>Make sure the DNS of the computer is correct.</li> </ol>
Can't access some web server	<ol> <li>The MTU of operating system might be too large.</li> <li>Some operating systems might need to be patched.</li> </ol>
Can not log on to the configuration page	<ol> <li>Make sure the PC indicator is on.</li> <li>Make sure the configuration of TCP/IP is correct.</li> <li>Make sure the data indicator of Modem is on when using Ping command.</li> <li>Make sure the user name and password is correct.</li> <li>Reset the device.</li> </ol>

## **APPENDIX B. SPLITTER CONNECTION**

1. Splitter



#### 2. Connection

Firstly, use a telephone cord to connect the LINE port of the splitter and the RJ-11 port (the phone jack) on the wall. Then use another telephone cord to connect the VDSL port of the splitter and the LINE port of the VDSL Modem. Finally, use another telephone cord to connect the telephone set and the PHONE port of the splitter.



#### **APPENDIX C. CONFIGURATION OF TCP/IP PROTOCOL**

Here we will explain the configuration which using Windows 2000 operation system as an example. For other operation systems the process is similar.

1. Right click on the "**Local Area Connection**", click "**Properties**" on the pop up menu, as shown in Figure C.1.





2. The dialog box of networks is shown in Figure C.2. On the "General" property page select "Internet **Protocol(TCP/IP)**", and then click the "**Properties**" button.

ocal Area Connection Properties	? ×					
General Sharing						
Connect using:						
3Com 3C920 Integrated Fast Ethernet Controller (3C905C-						
	<u>C</u> onfigure					
Components checked are used by this connection:						
Internet Protocol (TCP/IP)						
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.						
✓ Show icon in taskbar when connected						
<u>ок</u>	Cancel					

Figure C.2

3. The "Internet Protocol (TCP/IP) properties" pop up window is shown as Figure C.3. Select "Use the following IP address". Input the following IP address: 192.168.1.11 and subnet mask: 255.255.255.0 (These addresses and subnet mask are similar with the factory default setting. The user can set different IP address and subnet mask whenever necessary). Select "Gateway", input the default IP address of the gateway: 192.168.1.1 and IP address of Preferred DNS server: 202.96.209.133 (you can use your ISP's address), IP address of Alternate DNS server: 202.96.209.5(you can use your ISP's address). The result is shown in Figure C.3.

Internet Protocol (TCP/IP) Propertie	es <mark>?</mark> X					
General						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
C Obtain an IP address automatica	lly					
■ Use the following IP address: —						
IP address:	192.168.1.11					
S <u>u</u> bnet mask:	255.255.255.0					
Default gateway:	192.168.1.1					
C Obtain DNS server address auto	matically					
• Us <u>e</u> the following DNS server ad	dresses:					
Preferred DNS server:	202 . 96 . 209 . 133					
Alternate DNS server:	202 . 96 . 209 . 5					
Advanced						
	OK Cancel					

Figure C.3

- 4. Click "OK" button to return to the "Local Area Connection Property" dialog box.
- 5. Click "OK" button to close the Network property dialog box.

# **APPENDIX D. SHIPPING LIST**

Make sure the following items are included in the box. If any one of them is missing, please contact the vendor immediately.

VDSL MODEM	$\times 1$
User Manual	$\times 1$
Telephone Line(RJ-11)	$\times 2$
Power Adapter	$\times 1$
USB Line	$\times 1$
Cable Cat5 RJ45	$\times 1$
User CD	$\times 1$
Splitter	$\times 1$

# FCC INFORMATION

This equipment complies with CFR 47, Part 15.19 of the FCC rules. Operation of the equipment is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

# 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.

