Contents

1	Introduction	troduction2		
	1.1 A	Application2		
	1.2 E	Environment Requirements2		
	1.3 S	ystem Requirements		
	1.4 S	afety Cautions		
	1.5 L	ED Status Description		
	1.5.1	Front Panel		
	1.5.2	Rear Panel5		
2	Hardware I	nstallation5		
	2.1 C	hoosing the Best Location for Wireless Operation 6		
	2.2 C	onnecting the ADSL Router		
3	Introduction	1 to Web Configuration7		
	3.1 L	ogging In to the Modem7		
	3.2 S	Summary of Device Information		
	3.3 A	Advanced Setup		
	3.3.1	Configuring PPPoE9		
	3.3.2	Bridge Configuration14		
	3.3.3	Wireless - Basic 16		
	3.3.4	Wireless – Security 17		
	3.4 M	Ianagement		
	3.4.1	Settings		
	3.4.2	System Log21		
	3.4.3	TR-069 Client		
	3.4.4	Access Control		
	3.4.5	Update Software		
	3.4.6	Save/Reboot		
4	Q&A			

i

Wireless ADSL Router

User Manual

1 Introduction

The Router is a highly ADSL2+ Integrated Access Device and can support ADSL link with downstream up to 24 Mbps and upstream up to 1 Mbps. It is designed to provide a simple and cost-effective ADSL Internet connection for a private Ethernet or 802.11g/802.11b wireless network. The Router combines high-speed ADSL Internet connection, IP routing for the LAN and wireless connectivity in one package. It is usually preferred to provide high access performance applications for the individual users, the SOHOs, and the small enterprises.

Network and Router management is done through the web-based management interface that can be accessed through the local Ethernet using any web browser. You may also enable remote management to enable configuration of the Router via the WAN interface.

1.1 Application

- Home gateway
- SOHOs
- Small enterprises
- TV over IP (IPTV)
- Higher data rate broadband sharing
- Shared broadband internet access
- Audio and video streaming and transfer
- PC file and application sharing
- Network and online gaming

1.2 Environment Requirements

- Operating temperature: 0°C~45°C
- Storage temperature: -10°C~55°C

Error! Style not defined.

- Operating humidity: 10%~95%, non-condensing
- Storage humidity: 5%~95%, non-condensing
- Power adapter input: 100V~240V AC, 50/60Hz
- Power adapter output: 12V DC, 0.8A

1.3 System Requirements

Recommended system requirements are as follows:

- Pentium 233 MHZ or above
- Memory: 64 Mbps or above
- 10M Base-T Ethernet or above
- Windows 9x, Windows 2000, Windows XP, Windows ME, Windows NT
- Ethernet network interface card

1.4 Safety Cautions

Follow the announcements below to protect the device from risks and damage caused by fire and electric power.

- Use volume labels to mark the type of power.
- Use the power adapter that is packed within the device package.
- Pay attention to the power load of the outlet or prolonged lines. An overburden power outlet or damaged lines and plugs may cause electric shock or fire accident. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat radiation is necessary to avoid any damage caused by overheating to the device. The holes are designed for heat radiation to ensure that the device works normally. Do not cover these heat radiant holes.
- Do not put this device close to a place where a heat source exits or high temperature occurs. Avoid the device from direct sunshine.
- Do not put this device close to a place where is over damp or watery. Do not spill any fluid on this device.
- Do not connect this device to any PC or electronic product, unless our customer engineer or your broadband provider

instructs you to do this, because any wrong connection may cause any power or fire risk.Do not place this device on an unstable surface or support.

1.5 LED Status Description

1.5.1 Front Panel

Indicator	Status	Description		
	Off	The power is off.		
	Graan	The power is on and the device operates		
	Green	normally.		
		The power is self-testing.		
Power		The device enters the console mode of		
1 Ower	Red	the boot loader.		
	100	The self-testing of the power fails if the		
		LED is always red.		
	DV 1 D 1			
	Blink Red	Upgrading software.		
	Off	No signal is detected.		
ADSI	Slow Blink Green	The DSL line is transferring.		
ADSL	Fast Blink Green	The DSL line is training.		
	Green	The DSL line connection is established.		
	Off	No PPPoA or PPPoE connection		
		The PPPoA or PPPoE connection is		
	Green	established. The users can access the		
		Internet.		
Internet		Device attempts to become IP		
		connected but fails (no DHCP response,		
	Red	no PPPoE response, PPPoE		
		authentication failed, no IP address		
		from IPCP, etc.)		
	Off	No Ethernet signal is detected.		
LAN1/2/3/4	Blink Green	The user data is passing through		
1/2/3/4	Dink Green	Ethernet port.		
	Green	Ethernet interface is ready to work		
WLAN	Off	No radio signal is detected.		

4

Error! Style not defined.

Indicator Status Description		
	Blink Green	The user data is passing through WLAN port.
	Green	WLAN interface is ready to work.

1.5.2 Rear Panel



Interface	Description		
\bigcirc	Wireless antenna.		
Line	RJ-11 port, using the telephone line to connect the modem with the ADSL cable or splitter.		
LAN 1~4	RJ-45 port, connect the modem to a PC or other network device.		
Power	Power supplied port, plug in for power adapter that the power input is 12V DC, 1 A.		
Reset	To restore the factory default, keep the device powered on and push a needle into the hole. Press down the button about 3 seconds and then release.		
WLAN/WPS	 Press the button silently less than 1s to enable WLAN function. Press the button for more than 5s to enable to enable WPS function. 		
	• If you press the button between 1s and 5s, no function takes effective.		
On/Off	Power switch.		

5

2 Hardware Installation

2.1 Choosing the Best Location for Wireless Operation

- Keep the numbers of walls and ceilings to the minimum: The signal emitted from wireless LAN devices can penetrate through ceilings and walls. However, each wall or ceiling can reduce the range of wireless LAN devices from 1 ~ 30 miters. Position your wireless devices so that the number of walls or ceilings obstructing the signal path is minimized.
- Consider the direct line between access points and workstations: A wall that is 0.5 meters thick, at a 45-degree angle appears to be almost 1 meter thick. At a 2-degree angle, it appears over 14 meters thick. Be careful to position access points and client adapters so the signal can travel straight through (90° angle) a wall or ceiling for better reception.
- Building materials make difference: Buildings constructed using metal framing or doors can reduce effective range of the device. If possible, position wireless devices so that their signals can pass through drywall or open doorways. Avoid positioning them in the way that their signal must pass through metallic materials. Poured concrete walls are reinforced with steel while cinderblock walls generally have little or no structural steel.
- Position the antenna for best reception: Play around with the antenna position to see if signal strength improves. Some adapters or access points allow you to judge the strength of the signal.
- Keep your product away (at least 1~2 meters) from electrical devices:
- Keep wireless devices away from electrical devices that generate RF noise such as microwave ovens, monitors, electric motors, etc.

2.2 Connecting the ADSL Router

6

Error! Style not defined.

- See the following figure. Connect the Line port of the DSL Router with a telephone cable.
- Connect the LAN port of the DSL Router to the network card of the PC via an Ethernet cable.
- Plug one end of the power adapter to the wall outlet and connect the other end to the PWR port of the DSL Router.

The following figure displays the connection of the DSL Router, PC, and telephones.



3 Introduction to Web Configuration

3.1 Logging In to the Modem

- Step 1 Open a Web browser on your computer.
- Step 2 Enter http://192.168.1.1 (DSL router default IP address) in the address bar. The login page appears.
- Step 3 Enter a user name and the password. The default username and password of the super user are admin and admin. The username and password of the common user are user and user. You need not enter the username and password again if you select the option Remember my password. It is

recommended to change these default values after logging in to the DSL router for the first time.

Step 4 Click OK to log in or click Cancel to exit the login page.

49	44			
DSL Router				
User name:	🖸 admin 💌			
Password:	••••			
	Remember my password			

3.2 Summary of Device Information

BROADCOM.		_	_	_
K	Device Info			
Daudan Inda	Board ID:	96338L	-2M-8M	
Summary	Software Version:	3.121.0	01.A2p8023k.d20k_rc2	
WAN	Bootloader (CFE) Version: (before		e 1.0.37-3k.d20k_rc2	
Statistics	Wireless Driver Version:	4,174.6	.64.19.cpe1.0sd	
Route ARP DHCP	This information reflects the co	urrent st	latus of your D	SL connectio
Duick Setup	Line Rate - Upstream (Kbp	rs):		
Advanced Setup	Line Rate - Downstream (Kbps):		
Wireless	LAN IPv4 Address:		192.168.1.1	
Diagnostics	Default Gateway:	_		
Management	Primary DNS Server:		192.168.1.1	
	Secondary DNS Server:		192,168,1,1	



Error! Style not defined.

- **Default Gateway**: In the bridging mode there is no gateway. In other modes, it is the address of the uplink equipment, for example, PPPoE/PPPoA.
- **DNS Server**: In the PPPoE / PPPoA mode, it is obtained from the uplink equipment. In the bridging mode, there is no DNS Server address and you can manually enter the information.

3.3 Advanced Setup

Choose Advanced Setup > WAN, and the following page appears.

W.	Wide Area Net	work (W	All) Setup								
Device Info Advanced Setup	Choose Add, Edit, or Remove to configure WAN interfaces. Choose Save/Reboot to apply the charges and reboot the system.										
WAN	Port/Vpi/Vci	Con. ID	Category	Service	Interface	Protocol	Ignp	Qaši	state	Remove	(d)
LAN Quality of Service Routing DSL Port Napping 195ec Certificate Wireless Diagnostics Management					ABI	(amove	Savel	laboo			

3.3.1 Configuring PPPoE

Step 1 Click **Add** and the following page appears. In this page, you can modify VPI/VCI, service categories, and QoS.

AMM PVC Configuration This science allowed on to configure an ATM PVC Electricity (PCRT and VPE and VCE) and object a service category. Otherwise thoose an autory refersion by salisizing the shedbox to enable it.
Politi (p.2) (p
VLAT Mun - Shates Multiple Protection Char a Single PVC T
Sarres Langery (BB Without FX 💌
Enable Quality Of Service
broking passes were up to a rank of the provide presence of were been content or appointers. Using provide the or and tracking with C (20) conserves system resources, therefore the number of PrCs will be indicated to a Advanced Setup (Tpailing of Service to a rough provides that the applications.
Instel Quality Of Servers 2
North Neural

- VPI: Virtual path between two points in an ATM network. Its valid value range is from 0 to 255.
- VCI: Virtual channel between two points in an ATM network. Its valid value range is from 32 to 65535 (1 to 31 are reserved for known protocols).
- Service Category: UBR Without PCR/UBR With PCR/CBR/Non Realtime VBR/Realtime VBR.
- Enable Quality Of Service: Enable or disable QoS.

After proper modifications, click **Next** and the following page appears.

Step 2 In this page, you can modify the Internet connection type and encapsulation type.



Change the connection type of PVC 0/35 to PPP over Ethernet (PPPoE) and set the Encapsulation Mode to LLC/SNAP-BRIDGING (according to the uplink equipment). Click **Next** and the following page appears.

Step 3 In this page, you can modify the PPP user name, PPP password, authentication method.



Error! Style not defined.

PPP Username and Password

FPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

P Usemarrie:		
P Password:		
PoE Service Name:		
uthentication Method:	AUTO	

Enable Fullcone NAT

г

Dial on demand (with idle timeout timer)

PPP IP extension	
Use Static IP Address	
Retry PPP password on authentication erro	x
Enable PPP Debug Mode	

P Bridge PPPoE Frames Between WAN and Local Ports (Default Enabled)

Back Next

PPP Username: The correct user name that your ISP provides to you.

PPP Password: The correct password that your ISP provides to you. **PPPoE Service Name:** If your ISP provides it to you, please enter it. If not, do not enter any information.

Authentication Method: The value can be AUTO, PAP, CHAP, or MSCHAP. Usually, you can select AUTO.

Dial on demand (with idle timeout timer): If this function is enabled, you need to enter the idle timeout time. Within the preset minutes, if the modem does not detect the flow of the user continuously, the modem automatically stops the PPPOE connection. Once it detects the flow (like access to a webpage), the modem restarts the PPPOE dialup.

If this function is disabled, the modem performs PPPOE dial-up all the time. The PPPOE connection does not stop, unless the modem is powered off and DSLAM or uplink equipment is abnormal.

PPP IP extension: If this function is enabled, the WAN IP address obtained by the modem through built-in dial-up can be directly assigned to the PC being attached to the modem (at this time, the modem connects to only one PC). From the aspect of the PC user, the PC dials up to obtain an IP addres. But actually, the dial-up is done by the modem.

If this function is disabled, the modem itself obtains the WAN IP address.

Use Static IP Address: If this function is disabled, the modem obtains an IP address assigned by an uplink equipment such as BAS, through PPPoE dial-up.If this function is enabled, the modem uses this IP address as the WAN IP address.

After entering the PPP user name and password, click **Next** and the following page appears.

In this page, you can modify the service name, and enable or disable the IGMP multicast and WAN service.

Enable IGMP Multicast, and WAN Service

Enable IGMP Multicast

Enable WAN Service 🛛 🔽

Service Name



Back	Next
------	------

Enable IGMP Multicast: IGMP proxy. For example, if you wish that the PPPoE mode supports IPTV, enable this function. **Enable WAN Service**: Enable it, unless you do not want to active the PVC.

Click Next and the following page appears.

12

Error! Style not defined.

This page shows all the configuration. You can view the default values of NAT enable and Firewall enable.

WAN Setup - Summary

Make sure that the settings below match the settings provided by your ISP.

PORT / VPI / VCI:	0/8/35
Connection Type:	PPPoE
Service Name:	pppoe_0_8_35_1
Service Category:	UBR
IP Address:	Automatically Assigned
Service State:	Enabled
NAT:	Enabled
Firewall:	Enabled
IGMP Multicast:	Disabled
Quality Of Service:	Enabled

Click "Save" to save these settings. Click "Back" to make any modifications. NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.



To save the settings, click **Save**. To make any modifications, click **Back**. After you click **Save**, the following page appears.

Note: You need to reboot the modem to activate this WAN interface and further configure services in this interface.

Wide Area Network (WAN) Setup

Choose Add, Edit, or Remove to configure WAN interfaces. Choose Save,Reboot to apply the changes and reboot the system.

Port/Vpl/Vcl	VLAN Mux	Con. ID	Category	Service	Interface	Protocol	Ignip	QoS	State	Remove	Edit
0/0/35	off	1	UBR	br_0_0_35	nas_0_0_35	Bridge	N/A	Disabled	Enabled	•	Edit
0.41/35	Off	1	UBR	pppoe_0_0_35_1	ppp_0_0_35_1	PPPOE	Disabled	Enabled	Enabled	•	Edit

Add Remove Save,Reboot



3.3.2 Bridge Configuration

This section describes the procedure for adding PVC 0/35 (IPoA mode).

Click Add, and the following page appears. In this page, you can

modify VPI/VCIs, service categories, and QoS.

ATM PVC Configuration

This screen allows you to configure an ATM PVC identifier (PORT and VPI and VPI) and select a service category. Otherwise choose an existing interface by selecting the checkbox to enable it.

POR	r:[0-3]	1
/PI:	[0-255]	8
ACI:	[32-65535]	35

VLAN Mux - Enable Multiple Protocols Over a Single PVC

Service Category: UBR Without PCR 💌

Enable Quality Of Service

Enabling packet level QoS for a PMC improves performance for selected classes of applications. QoS cannot be set for CBR and Reahlme VRR. Cold consumes system resources; therefore the number of PMCs will be reduced. Use Advanced Settuy(Quality of Service to assign priorities for the applications.

Enable Quality Of Service 😿

Back Next

In this example, PVC 0/35 is to be modified and the default values of service category remain. In actual applications, you can modify them as required.

After proper modifications, click **Next** and the following page appears.

In this page, you can modify the Internet connection type and encapsulation type.

14

Error! Style not defined.

Connection Type

Select the type of network protocol for IP over Ethernet as WAN interface

O PPP over ATM (PPPoA)

C PPP over Ethernet (PPPoE)

C MAC Encapsulation Routing (MER)

C IP over ATM (IPoA)

Sridging

Encapsulation Mode



Click Next and the following page appears.

In this page, you can modify the service name.

Unselect the check box below to disable this WAN service

br_1_8_35

Enable Bridge Service: 🔽

Service Name:



Enable Bridge Service: Enable it, unless you do not want to active the PVC.

Click **Next** and the following page appears. This page shows all the configuration.

WAN Setup - Summary

Make sure that the settings below match the settings provided by your ISP.

PORT / VPI / VCI:	1/8/35
Connection Type:	Bridge
Service Name:	br_1_8_35
Service Category:	UBR
IP Address:	Not Applicable
Service State:	Enabled
NAT:	Disabled
Firewall:	Disabled
IGMP Multicast:	Not Applicable
Quality Of Service:	Enabled

Click "Save" to save these settings. Click 'Back" to make any modifications. NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.

Back Save

To save the settings, click **Save**. To make any modifications, click **Back**. After you click **Save**, the following page appears.

Note: You need to reboot the modem to activate this WAN interface and further configure services in this interface.

wate Anea hetmost (WAK) setup Coolea Add. (Eds. Remonts to configure WAN interfaces. Choose Saws/Reboot to apply the changes and reboot the system.										
Off	1	UBR	br_0_0_35	nas_0_0_35	Bridge	14/A.	Disabled	Enabled		Edit
off	1	UBR	br_1_8_35	nas_1_8_35	Bridge	N/A	Enabled	Enabled		Edit
	VLAN Off Off	vork (WAN) Set , or Remove to co boot to apply the d VLAN Don. Mux ID Off 1 Off 1	c or Remove to configure WAN c, or Remove to configure WAN boot to apply the changes and r MUAN DON. Com. Category Off 1 UBR Off 1 UBR	View (www.) Setup , of Remote to configure WAN interfaces. , or Remote the system of the sy	Vital Centry Service Device Device <thdevice< th=""> <thdevice< th=""> <thdevice< td="" th<=""><td>WAR Con- type Category and reboot the system. VAA Con- base Con- cont to apply the charges and reboot the system. VAA Con- base Category Service Interface Postocol Off 1 UBR tr,0,0,78 nal_0,0,76 Bridge (nal_1,0,78) Bridge (nal_1,0,78) Off 1 UBR tr,1,2,78 nal_1,0,75 Bridge</td><td>VMAR Conf. Name Conf. Conf. <thconf.< th=""> Conf.<td>Vital Cent Category Service Interface Postor ggp Cent VAN Max Con Category Service Interface Postor ggp Cent 01 -06R Ir_0,0,05 nai,0,0,5 Brdgo Nai, 0 Service Interface Postor Nai, 0 Service Interface Nai, 0 Service Interface Nai, 0 Service Interface Postor Interface Nai, 0 Service Service Service Interface Nai, 0 Service Se</td><td>Vital Cons. Cons. Cons. Environ Development Interface Protocol Environ Cons. Environ State 0101 1 088 br_0,0,0,5 Interface Bridge 14.0 Envalued Envalued<td>Variable interfaces Conference into colspan="3">Variable interfaces VARA Nate: Conf. 201 Category in directory is even by the interface Pertocol Rem Gal State Remove Remove 011 018 tr, 0, 0, 78 nei, 1, 25 Brdg N/A Duble Image: Colspan="3">Colspan="3">Colspan="3">Colspan="3">Colspan="3"</td></td></thconf.<></td></thdevice<></thdevice<></thdevice<>	WAR Con- type Category and reboot the system. VAA Con- base Con- cont to apply the charges and reboot the system. VAA Con- base Category Service Interface Postocol Off 1 UBR tr,0,0,78 nal_0,0,76 Bridge (nal_1,0,78) Bridge (nal_1,0,78) Off 1 UBR tr,1,2,78 nal_1,0,75 Bridge	VMAR Conf. Name Conf. Conf. Conf. Conf. <thconf.< th=""> Conf.<td>Vital Cent Category Service Interface Postor ggp Cent VAN Max Con Category Service Interface Postor ggp Cent 01 -06R Ir_0,0,05 nai,0,0,5 Brdgo Nai, 0 Service Interface Postor Nai, 0 Service Interface Nai, 0 Service Interface Nai, 0 Service Interface Postor Interface Nai, 0 Service Service Service Interface Nai, 0 Service Se</td><td>Vital Cons. Cons. Cons. Environ Development Interface Protocol Environ Cons. Environ State 0101 1 088 br_0,0,0,5 Interface Bridge 14.0 Envalued Envalued<td>Variable interfaces Conference into colspan="3">Variable interfaces VARA Nate: Conf. 201 Category in directory is even by the interface Pertocol Rem Gal State Remove Remove 011 018 tr, 0, 0, 78 nei, 1, 25 Brdg N/A Duble Image: Colspan="3">Colspan="3">Colspan="3">Colspan="3">Colspan="3"</td></td></thconf.<>	Vital Cent Category Service Interface Postor ggp Cent VAN Max Con Category Service Interface Postor ggp Cent 01 -06R Ir_0,0,05 nai,0,0,5 Brdgo Nai, 0 Service Interface Postor Nai, 0 Service Interface Nai, 0 Service Interface Nai, 0 Service Interface Postor Interface Nai, 0 Service Service Service Interface Nai, 0 Service Se	Vital Cons. Cons. Cons. Environ Development Interface Protocol Environ Cons. Environ State 0101 1 088 br_0,0,0,5 Interface Bridge 14.0 Envalued Envalued <td>Variable interfaces Conference into colspan="3">Variable interfaces VARA Nate: Conf. 201 Category in directory is even by the interface Pertocol Rem Gal State Remove Remove 011 018 tr, 0, 0, 78 nei, 1, 25 Brdg N/A Duble Image: Colspan="3">Colspan="3">Colspan="3">Colspan="3">Colspan="3"</td>	Variable interfaces Conference into colspan="3">Variable interfaces VARA Nate: Conf. 201 Category in directory is even by the interface Pertocol Rem Gal State Remove Remove 011 018 tr, 0, 0, 78 nei, 1, 25 Brdg N/A Duble Image: Colspan="3">Colspan="3">Colspan="3">Colspan="3">Colspan="3"

Add Remove Save/Reboot

3.3.3 Wireless - Basic

- Enable Wireless: If you want to make wireless be available, you have to check this box first. Otherwise, the Hide Access Point SSID, Country, Enable Wireless Guest Network, and Guest SSID box will not be displayed.
- Hide Access Point: Check this box if you want to hide any

16

Error! Style not defined.

access point for your router, so a station cannot obtain the SSID through passive scanning.

- **SSID**: The SSID (Service Set Identification) is the unique name shared among all devices in a wireless network. The SSID must be identical for all devices in the wireless network.
- **Country**: The channel will adjust according to nations to adapt to each nation's frequency provision.
- Guest SSID: The SSID (Service Set Identification) is the unique name shared among all devices in a guest wireless network. The SSID must be identical for all devices in the guest wireless network.

Device Infe Advanced Setup Wireless	based on Cleb. "Appr	country requirements. In configure the basic we	when options					
Bink	P 11	dim Wyeller)						
Security	E: +42	94 Accans Poert						
Wireless Bridge	E O	erts Diciation						
Advanced	17 Da	able WARA Advertise						
Station Info	900	Proston						
and the second se								
Diagnostica Management	80520	00.90-40 CS.00-46						
Diagnovitics Management	Milito Country Mar Cher	00.90-40 05.00-48 [JPAI8 for [25			Ð			
Diagnostics Management	MildD: Country: Mari Cher Wireless	10 00-40 05 00-46	vántu:		Э			
Diagnoutics Management	eristo Country Mar Cher Wretens Fradded	00.90-+C C5.00-46 [9439 fe: [25] Gaest/Virtual Access F 9930	viets:	Isolate	Disable whith Advertise	Man Clevita	85580	
Gagrootice Management	BIND Country Mar Cher Werdens Enabled	01 00 +C (5 00 +6) (9 A38 10 (01) 0 arest, Vertual Access P Soan (2 arest	vjints:	Isolate Clients	Disable With Advertise	Nan Clevis	105000 70%	
Diagnootics Management	Millio Country Mar Cher Werdens Enabled E	00 00 +C (5 00 +6) [PA38 n: [n] Daest, Virtual Access F State Sam Sam Sam Sam	viets:	Dodate Clients C	Disable weet Advertise E	Nan Clents	89580 70%	

3.3.4 Wireless - Security

- Select SSID: Select the wireless LAN of SSID to configure security features.
- No Encryption: Please refer to below for details of configuration
- Network Authentication: Select the authentication mode for the selected wireless LAN of SSID to be open.
- WEP Encryption: Disable WEP Encryption.

The data is not en	crypted when it is transferred from the device to
the client station.	This is the default option.

V.	Wireless Security		
Device Info Advanced Setup Wireless	This page allows you to co You may setup configuratio Manual Setup AP	nfigure security feature n manually	s of the wireless LAN interface.
Security	You can set the network au	thentication method, is	electing data encryption,
MAC Filter Wireless Bridge Advanced	the encryption strength, Click "Save/Apply" when do Select SSID:	ne. Droadcoa 💌	опсае о то истеро ненок, ако врес
Diagnostics	Network Authentication:	Open	
- anagenerit	WEP Encryption:	Dirabled .	
		Save/Apply	

64-bit WEP

- Network Authentication: Select the authentication mode for the selected wireless LAN of SSID to be open or shared.
- WEP Encryption: Enable WEP Encryption.
- Encryption Strength: click the desired Data Security level to be • 64-bit.
- Current Network Key: Select one of network key that you set on the Key boxes as default one.
- Network Key 1 to 4: Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys to fill out WEP keys box. The system allows you to type in 4 kinds of the WEP key.

Click Save/Apply to save the wireless security options and make the modification effect.

	Error! Style not defined.
Wireless Security	
This page allows you to cor You may setup configurate	rigure security features of the wreless LMs interface. In manually
Manual Setup AP	
You can set the network as specify whether a network Click "Save/Apply" when do	divertication method, selecting data encryption, key is inquiesd to authenticate to this wreakes methods and specify the encryption strength me.
Select SSID:	Breadcon .
Network Authentication:	Shared
WEP Encryption: Encryption Strength: Current Network Key: Network Key 1	[Backing w [Generation]
Network Key 2:	
Network Key 3:	
Setwork Key 4:	Briter 13 x8CE characters or 26 heiadeonial digts for 128-bit encryston keys. Enter 5 x8CE characters or 30 heiadeonial digts for 64-bit encryston keys.

128-bit WEP

- Encryption Strength: Click the desired Data Security level to be 128-bit.
- Current Network Key: Select one of network key that you set on the Key boxes as default one.
- Network Key 1 to 4: Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys to fill out WEP keys box. The system allows you to type in 4 kinds of the WEP key.

The authentication modes are as follows: 802.1X, WPA, WPA-PSK, WPA2, WPA2 -PSK, Mixed WPA2/WPA, Mixed WPA2/WPA-PSK.

After proper configuration, click Save/Apply to save the wireless security options and make the modification effect.

3.4 Management

3.4.1 Settings

3.4.1.1 Settings Backup Click Backup Settings to back up the DSL router configuration.

19



3.4.1.2 Settings Update

Click **Browser** and select the correct update configure settings file. Then, click **Update Settings** to update the modem settings.

	Tools — Update Settings
	Update DSL router settings. You may update your router settings using your saved file
Device Info	
Advanced Setup	Settings File Name: Browse.
Wireless	
Diagnostics	Update Settings
Management	
Settings	
Backup	
Update	
Restore Default	
System Log	
TR-069 Client	
Internet Time	
Access Control	
Update Software	
Save/Reboot	

3.4.1.3 Settings Restore Default

Click **Restore Default Settings** to restore DSL router settings to the factory defaults.

Hore	Tools Restore Default Settings					
	Restore DSL router settings to the factory defaults.					
Device Info						
Advanced Setup						
Wireless	Restore Default Settings					
Diagnostics						
Management						
Settings						
Backup						
Update						
Restore Default						

3.4.2 System Log

Click **System Log** to show the following interface. The system log dialog allows you to view the system log and configure the system log options.

Error! Style not defined.

System Log
The System Log dialog allows you to view the System Log and configure the System Log options.
Click "View System Log" to view the System Log.
Click "Configure System Log" to configure the System Log options.
View System Log Configure System Log

Click **Configure System Log** to show the following interface. You can enable or disable the system log and then select the log level, display level and mode, and click **Apply** to end your configurations.

	лө юд п	IOUR IS I	snacieu,	the system	L WHILDER	giri us ic	தவாம	e seert	en eve	nos, nor	ALE LOG	Level,	elli
2776	ents abo	ve or ea	jual to th	e selected	level wi	II be log	ged. Fi	or the D	isplay L	evel, al	llogged	events	above
n.	equal to	the seli	acted lev	el will be d	lisplayed	I. If the	selecte	d mode	is 'Ren	note' or	'Both,'	events v	will be
er	nt to the	specifie	id IP add	ress and U	DP port	of the r	emote	syslog s	erver. 1	If the se	lected i	node is	Local
21	'Both,' e	vents w	ill be rec	orded in th	e local r	nemory							

Select the desired	values and click 'Save/Apply' to configure the system log option
Log: 👁 D	isable 🗢 Enable
Log Level: Display Level: Mode:	Brror V Error V Local V

Save/Apply

Both the log level and display level have eight choices. The default log level is **Debugging** and the default display level is **Error**.

The mode options are Local, Remote, and Both. The default is Local.

System Log -- Configuration

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 Remote' or Both, 'events will be sent to the specified IP address and UCP port of the remote syslog server. If the selected mode is 'Local' or "Both,' events will be arcorded in the local memory.

Select the desired values and click 'Save/Apply' to configure the system log options.

Lug:	Disable C Enable	
Log Level:	Debugging	
Display Level:	Error	
Mode:	Emergency Alert Critical]
	Warning Notice Informational Debugging	Save/Apply

If you select **Remote** or **Both**, all events are transmitted to the specified UDP port of the specified log server.

System Log -- Configuration

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 "Remote'or "both," events will be sent to the spacified IP address and UOP port of the remote syslog server. If the selected mode is "Concoled in the local memory.

Select the desired	values and click	'Save/Apply'	to configure	the system	log options.

Log: © Dis	sable C Enable	
Log Level:	Debugging 💌	
Display Level:	Error	
Mode:	Renote 💌	
Server IP Address:	0.0.0.0	
Server UDP Port:	514	
		Save/Apply

After operations under **Configure System Log**, click **View System Log** to query the system logs. In this example, the **View System Log** is the default.

Note: The log and display of the system events are above the set level. If you intend to record all information, you need to set the levels as Debugging.

22

Error!	Style	not	defined.
LIIUI.	DUJIC	not	ucinicu.

System Log

Date/Time	Facility	Severity	Message
Jan 1 00:00:25	syslog	emerg	BCM96345 started: BusyBox v1.00 (2008.08.28-00:02+0000)
Jan 1 00:00:25	user	crit	kernel: eth0 Link UP.

Refresh Close

Click **Refresh** to refresh the system event logs or click **Close** to exit from this interface.

3.4.3 TR-069 Client

Select the desired values and click **Save/Apply** to configure the TR-069 client options.

www.Management/Producol (TID-088) and diagnostics to this device. Select the desceed values and click "A bifures inform Interval:	alten a Acto-Configura cols ⁴ to configura the Th IP Datable ^{Ch} itmath	an Server (ACS) b 068 client options	i perfern altorox-figeral	tan, provision, collect
laviert the decend values and click "A Inform Inform Interval:	eols" to configure the 19 If Double P Invest	065 clarit options.		
informi	Rouge Cares			
belgren Inform Internal:	Rosels Circle			
inform linterval:				
infories Interval:				
	100			
ACE URL:				
ACS User Name	1000			
ACS Password				
Deplay SOAP messages on secial cor	icie # Druble C Initia			
P Correction Request Authenticate	0			
Convection Request User Name	adren	_		
Corrector-Regard Password	*****			
	CIII Lear Name: LCII Password: Inspire SC-IP messages on serial cor PC connectors Register Live Name: Connectors Register Live Name: Connectors Register Research	CO Mar Name: Contract: Contract	Ch Une Name Prinn Ch Tanandal Prinn Park Ch Passage on anni Arabia Park Ch Pagast Anterna Arabia Park Ch Pagast Anterna Streetich Pagast Name Park	Ch Une Name Pare

3.4.4 Access Control

3.4.4.1 Access Control - Services

Click Access Control > Services to show the following interface. In the interface, you can enable or disable HTTP, ICMP, SSH, TELNET and TFTP services. And the LAN side and WAN side can have different configurations.



Note: If the connection is PPPoE PVC, you can view the information of WAN side.

3.4.4.2 Access Control – Passwords

Click Access Control > Passwords to show the following interface. In the interface, you can modify the accounts passwords.

K.	Access Control Passwords
	Access to your DSL router is controlled through three user accounts: admin, support, and user.
Quick Setup	The user name "admin" has unrestricted access to change and view configuration of your DSL Router.
Advanced Setup Wireless	The user nerve "support" is used to allow an ISP technician to access your DSL Router for meintenance and to n diagnostics.
Management Settings	The user name "same" can access the DSL Router, view configuration settings and statistics, as well as, spdate t router's software.
System Log TR-069 Client	Use the fields below to enter up to 16 characters and click "Apply" to charage or create parewords. Ante: Research cannot create a structure
Internet Time	
Access Control	Username:
Services	Old Password
IP Addresses	New Password.
Passwords	Confirm Exempted
Update Software	
Save/Reboot	Sam/Apply

3.4.5 Update Software

Click Update Firmware to show the following interface. In this interface, you can update the modem firmware. Click Browse to find the right version file and click Update Firmware to update.

24

	Error! Style not defined.
K	Tools — Update Software
Desice Info	Sitep 1: Obtain an updated software image file from your 15P.
Quick Setup Advanced Setup	Step 2: Enter the path to the image file location in the box below or click the "Entwise" button to locate the image file.
Wireless Diagnostics	Step 3: Clck the "Update Software" button once to upload the new image file.
Management	NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot.
Settings System Log IR-069 Client Internet Time	Software File Namer Broese Update Software

Note: Do not turn off your modem during firmware updates. When the update is finished, the modem reboots automatically. Do not turn off your modem either before the reboot is over. You must guarantee the update software is right and accurate. It is strictly forbidden to use other software for updates.

After update software, it is suggested to restore the modem to the factory defaults and configure it again.

3.4.6 Save/Reboot

Update Software

Click Save/Reboot to show the following interface. Click Save/Reboot to save and reboot the router.



\sim	~	
2	J	

4 Q&A

(1) Q: Why all LED indicators are off?

A:

- Check the connection between the power adaptor and the power socket.
- Check the power switch is on or not.
- (2) **Q**: Why LAN LED is not lighting?

A:

- Check the connection between the ADSL modem and your computer, hub, or switch.
- Check the running status of your PC, hub, or switch, and ensure that they are working normally.
- (3) **Q**: Why ADSL LED is not lighting?
 - A: Check the connection between the ADSL "Line" port and the wall jack.
- (4) **Q**: Why cannot visit Internet with ADSL LED is on?
 - **A:** Ensure that the following information is correctly entered.
 - VPI/VCI
 - Username/password.
- (5) Q: Why cannot open the Modem Web configuration page?
 - A: Follow below steps to check the communication between the computer and modem.
 - Choose **Start** > **Run** from the desktop, and ping *192.168.1.1* (the IP address of the modem).
 - If the modem cannot be reached, please check following configuration:
 - Type of the network cable
 - Connection between the modem and computer
 - TCP/IP configuration of you computer
- (6) **Q**: How to load the default setting after incorrect configuration?
 - A:

Error! Style not defined.

- To restore the factory default, keep the device powered on and push a needle into the hole. Press down the button about one second and then release.
- The default IP address and subnet mask of the modem are *192.168.1.1* and *255.255.255.0* respectively.
- The Username and password are **admin** and **admin** respectively.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for a uncontrolled environment .This equipment should be installed and operated with minimum distance 20 cm between the radiator& your body.

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

Note: 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.