



# LTE 11N 300Mbps Wireless Router



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# **1** Introduction

Thank you for choosing our product. KASDA KW9621B LTE Wi-Fi ROUTER is perfect for you to stay connected to the Internet with fast data rates, low latency where Ethernet connection is not available. Using the latest 4G LTE technology, you can achieve downlink speeds of up to 150 Mbps and uplink speeds of up to 50 Mbps.

Simply insert an USIM card into this device and get Internet access anywhere you can receive LTE, 3G data signal. KW9621B also has one external antenna and one internal antenna for a Wi-Fi connection that is consistent and reliable.

300Mbps Wi-Fi speed makes lag free connection for notebooks and smart phones.

The KW9621B Wireless Router uses Broadcom's CPE solution that fully complies with IEEE802.11b/g/n standards. It will provide your SOHO with convenient Internet.

# **1.1 Main Features**

# 1.1.1 Wireless

- Fully IEEE 802.11b/g/n compatible.
- Wireless data rate up to 300 Mbps
- Operating in the unlicensed 2.4 GHz ISM band
- Supports 64/128 bits WEP, WPA, WPA2, WPA/WPA2-PSK, 802.1x

### 1.1.2 Network Protocol and Features

- Internet Control Message Protocol (ICMP)
- IP Static Routing
- Routing Information Protocol (RIP, RIPv2)
- Network Address Translation (NAT)
- Virtual Server, Port Forwarding
- Dynamic Host Configuration Protocol (DHCP)
- DDNS

- Simple Network Time Protocol (SNTP)
- Parent control

#### 1.1.3 Firewall

- Built-in NAT
- MAC Filtering
- Packet Filtering
- Stateful Packet Inspection (SPI)
- Denial of Service Prevention (DoS)
- DMZ

#### 1.1.4 Management Support

- Web Based GUI
- Upgrade or update via FTP/HTTP
- Command Line Interface via Telnet
- Diagnostic Test
- Firmware upgrade-able for future feature enhancement

# 1.1.5 Operating System Support

- WINDOWS 98/SE/ME/2000/XP/VISTA/7/8/10
- Macintosh
- LINUX

### 1.1.6 Environmental

- Operating temperature:0~40°C
- Storage temperature:-40~60°C
- Operating humidity: 10%-90% non-condensing
- Non-operating storage humidity: 5%-95% non-condensing

# **1.2** Packet Contents

The packet contents are as the following:

•	LTE ROUTER	x 1
•	Power Adapter	x 1
•	Ethernet Cable	x 1
•	Quick Installation Guide	x 1
•	Battery	x 1 (optional)

#### **1.3 System Requirements**

- Broadband Internet Access Service (DSL/Cable/Ethernet)
- One DSL/Cable Modem that has an RJ45 connector (which is not necessary if the Router is connected directly to the Ethernet)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors 2
- TCP/IP protocol on each PC
- Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari

#### **1.4 Factory Defaults**

The device is configured with the following factory defaults:

- IP Address: 192.168.1.1
- Admin account/password: admin/admin
- Subnet Mask: 255.255.255.0

# **1.5** Warnings and Cautions

- Never use the product near water.
- To prevent dangerous overloading of the power circuit, be careful about the designed maximum power load ratings. Not to follow the rating guideline could result in a dangerous situation.

# 2 Hardware Description

# **Front Panel**



LED	Color	Function
POWER	POWER Green Off: Power Not Supplied On: Power Supplied	
LAN1~4	Green	On: LAN link established and active via LAN port Blinking: Data activity occurs Off: No LAN link via LAN port
WIFI	Green	On: The wireless module is ready and idle Blinking: Data transmitting or receiving over WLAN Off: The wireless function is off
WPS	Green	On: WPS connection is established Blinking: Trying to establish a WPS connection Off: WPS function is off or no WPS connection
LTE	Green	On: The LTE has detected a link . Blinking: Data is being transmitted or received by the LTE Off: No LTE link via the SIM card.

# **Rear panel**



Port	Function
LAN1,2,3,4	Connect the device to your PC's Ethernet port, or to the uplink port on your hub/switch, using a RJ-45 cable
WiFI	Turn 2.4 G WiFI on or turn it off by this button
RESET	System reset or reset to factory defaults
WPS	A convenient way to set wireless security
ON/OFF	Switch it on or off
POWER	Connect to the supplied power adapter

## **Bottom Panel**



The SIM card and battery interface is positioned at the bottom of this router, and the SIM card slot is under the battery slot.

# **3** Hardware Installation

This chapter shows you how to connect Router. Meanwhile, it introduces the appropriate environment for the Router and installation instructions.

### **Installation Environment Requirements**

- The Router should not be located where it will be exposed to moisture or excessive heat.
- Keep the Router away from the strong electromagnetic radiation.
- Remember to put this router away from electrical devices that might cause potential interference, such as ceiling fans, microwaves, smart home devices.

### **Preparations**

- One PC and an Ethernet cable with RJ45 connectors or wireless client device.
- A web browser, such as Google Chrome, Mozilla Firefox or Apple Safari
- A horizontal surface where the Router can be connected to the various devices as well as to a power source

When you use it as a LTE router, follow the instructions below

- 1. Gently insert an active SIM card from your service provider into the SIM card slot on the bottom of the router.
- 2. Connect the LAN port of the router to a PC with network card, or a Hub LAN.
- 3. Connect the power cable to the POWER connector on router, then plug in the power adapter to the AC power outlet, and then press the on-off button.
- 4. If you use a wireless client, please search the KW9621B's SSID and connect it.
- Note: The SIM card is active with 4G/3G service, with PIN unlocked. Please note, in case you do not have SIM card, this Router can also work as a broadband Wireless router, when needed, please connect according to the instructions below.
- 1. Using an Ethernet Cable to connect the WAN port of the router to a cable or DSL modem. (need to configure a WAN port in the firmware)
- 2. Connect the LAN port of the Router to a PC with network card, or a Hub LAN.
- 3. Connect the power cable to the POWER connector on router, then plug in the power adapter to the AC power outlet, and then press the on-off button.

# **W** Note: Any LAN port (LAN1~ LAN4) can be configured as a WAN port.

# **\***Diagram



# **4** PC Configuration Guide

If your computer is set to a static or fixed IP address (this is uncommon), change it to obtain an IP address automatically from the router. You can set as below.

# 🖊 🛛 For windows 7

- 1) Click "Start -> Control Panel-> Network and Internet -> View networks status -> Change adapter settings"
- 2) Right-click Wireless Network Connection(or Local Area conncection), and then click Properties.
- 3) Select Internet Protocol Version 4 (TCP/IPv4), and then clcik Properties.
- 4) Select Obtain an IP address automatically and Obtain DNS Server address automatically. Then click OK.

# 🖊 🛛 For Windows 8

- 1) Move your mouse to the lower right corner and click the **Serch** icon in the popus.
- 2) Go to Apps, type Control Panel in the serche box and press enter.
- 3) Go to "Control Panel ->| View networks status-> Change adapter settings"
- 4) Right-click Ethernet, select Properties, then double-click internet protocol version 4( TCP/IPv4).
- 5) Select Otain an IP address automatically and Obtain DNS Server address automatically. Then click OK.

### 🖊 🛛 For windows XP

- 1) Click "Start" -> Control Panel -> Network and Internet Connection -> Network Connections"
- Right-click Wireless Networks Connection (or Local Area Connection), and then click Properties.
- 3) Select Internet Protocol (TCP/IP), and then click Properties.
- 4) Select Otain an IP address automatically and Obtain DNS Server address automatically. Then click OK.

# For Mac OS X

- 1) Click the **Apple** icon on the upper left corner of the screen.
- 2) Go to System Preference -> Network.
- Select Airport on the left menu bar, and then click Advanced for wireless configuration; or select Ethernet for wired configuration,
- 4) In the **Configure IPv4** box under TCP/IP, select **Using DHCP**.
- 5) Click **Apply** to save the settings.

# 5 Web-based Management Guide

In order to use the web-based management software it will be necessary to use a computer that occupies the same subnet as the Modem Router. The simplest way to do this for many users will be to use DHCP server that is enabled by default on the Modem Router.

# **5.1 Logon the Router**

Launch a web browser, such as Internet Explorer, and then use <u>http://192.168.1.1</u> to log on to the setting pages. Username and password are both admin, then click Login button to log in.

Username		Enter username ' <u>admin</u> '
Password		and password ' <u>admin'</u>
	J	
		I

# **5.2 Internet Access Configuration**

#### 5.2.1 LTE Setup

1. Click Quick Setup from the panel and then click Next.

Click OK

## Please select Wizard or Advanced mode

The Wizard setup walks you through the most common configuration settings. We suggest you use this mode if it is the first time you are setting up your router or if you need to make basic configuration changes.

Use Advanced mode if you need access to more advanced features not included in Wizard mode.

- Go to Wizard setup
- Go to Advanced setup

Click here to always start with the Advanced setup.

Apply Exit	Apply
------------	-------

2. You will see the following screen. Choose the connection type (3G or 4G) then click Next.



3. Change SSID known as your wireless name and set a wireless password by select Encryption, after input your wireless key click **Next**. If you want to disable your wireless network, click "Enable Wireless" and let it disabled.

Wireless   Bit Paable Wireless   Give your network a name. You will search for this name from your wireless clients.   Network Name(SSID)   WLAND19BE9   Give your network a name. You will search for this name from your wireless clients.   Channel Selection:   Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel   Encryption:   Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PSK   Pre-Shared Key   1234567890   (example:1234567890)   WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.	Wireless LAN				
<ul> <li>Enable Wireless</li> <li>Give your network a name. You will search for this name from your wireless clients.</li> <li>Network Name(SSID)</li> <li>WLAND19BE9</li> <li>Give your network a name. You will search for this name from your wireless clients.</li> <li>Channel Selection:</li> <li>Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel</li> <li>Encryption:</li> <li>Manually assign a WPA2-PSK key </li> <li>Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PSK</li> <li>Pre-Shared Key</li> <li>MPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.</li> </ul>		Wireless Parameters for Lan Access			
Give your network a name. You will search for this name from your wireless clients.   Network Name(SSID)   Give your network a name. You will search for this name from your wireless clients.   Channel Selection:   Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel   Encryption:   Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PSK   Pre-Shared Key   WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.		Enable Wireless			
Network Name(SSID) WLAND19BE9   Give your network a name. You will search for this name from your wireless clients.   Channel Selection:   Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel   Encryption:   Manually assign a WPA2-PSK key    Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PS   Pre-Shared Key   WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.		Give your network a name. You will search for this name from your wireless clients.			
Give your network a name. You will search for this name from your wireless clients.         Channel Selection:       Auto          Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel         Encryption:       Manually assign a WPA2-PSK key          Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PS         Pre-Shared Key       1234567890         WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.		Network Name(SSID)	WLAND19BE9		
Channel Selection:       Auto         Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel         Encryption:       Manually assign a WPA2-PSK key         Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PS         Pre-Shared Key       1234567890         WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.         WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.		Give your network a name. You will search for this name from your wireless clients.			
Your router can use one of several channels. You should use the default channel unless other wireless networks nearby use the same channel Encryption: Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PS Pre-Shared Key 1234567890 (example:1234567890) WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.		Channel Selection:	Auto 💌		
Encryption:       Manually assign a WPA2-PSK key         Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PSK         Pre-Shared Key       1234567890       (example:1234567890)         WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.       Next >       Exit		Your router can use one of several channels. You should use the default channel unless of	ther wireless networks nearby use the same channel.		
Use this option if you would prefer to create your own key, WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PS Pre-Shared Key I234567890 (example:1234567890) WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits. <a href="https://www.example.com">www.example.com</a> Compatible with WPA2-PSK is stronger than WEP but not all devices are compatible with WPA2-PSK Pre-Shared Key (example:1234567890) WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits. <a href="https://www.example.com">www.example.com</a> Compatible with WPA2-PSK Compatible with WPA2-PSK Compatible with WPA2-PSK Compatible with WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.		Encryption:	Manually assign a WPA2-PSK key 💌		
Pre-Shared Key       1234567890       (example:1234567890)         WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits.       (example:1234567890)		Use this option if you would prefer to create your own key, WPA2-PSK is stronger than $\ensuremath{W}$	EP but not all devices are compatible with WPA2-PSK.		
WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hexadecimal digits. <back< td="">         Next &gt;         Exit</back<>		Pre-Shared Key	1234567890 (example:1234567890)		
<pre><back next=""></back></pre> Exit		WPA2-PSK Encryption: WPA Key should be between 8 and 63 ASCII characters or 64 hex	adecimal digits.		
			<back next=""> Exit</back>		

4. You will see the following screen. Confirm your settings and click Apply/Save.

### CONGRATULATIONS

The Internet/Wireless Setup configuration is complete. Here are your current settings.

Internet Settings	
Interface Type:	3G/4G
Wireless LAN Settings	
Network Name(SSID):	BrcmAP0
Channel Selection:	1
Network Key(WPA/WEP Key):	1234567890

- 1. Return to Wizard Main Page
- 2. Go to Advanced Setup Page

<back< th=""><th>Apply/Save &gt;</th></back<>	Apply/Save >
---	--------------

5. Then you will see the following screen at Device Info. If your SIM card is well and can be detected you will be able to connect to the Internet by LTE.

WAN Information	
- WAN Type:	
- WAN service type:	
- IP Address:	
- Primary DNS server:	
- Secondary DNS server:	
- Default Gateway:	
- Default IPv6 Gateway:	
LAN Information	
- LAN IPv4 Address:	192.168.1.1
- IPv4 Subnet Mask:	255.255.255.0
- LAN IPv6 ULA Address:	
Wireless Information	
- Status:	Enabled
- SSID:	WLAND19BE9
- Chanel:	Auto(Current: 1)
- Security:	WPA2 -PSK
- WPS:	Disabled

Notes: Quick setup is only available for users who access the Internet SIM card. If you want to access the Internet by Ethernet line, please see **IPoE/PPPoE Setup.** 

6. You will see the following screen at **LTE Management.** You can check your SIM card status to see whether your SIM card works well.

Device Info Advanced Setup Wireless Diagnostics	LTE Status SIM Status		
Management LTE Management Status Information Internet Settings	SIM: LTE Patameters	READY	
	Connection Status:	Disconnected	
	RSSI:	NA dbm	
	SINR:	Bad(<3)	
	IP Address:	0.0.0.0	
	Subnet Mask:	255.255.255.0	
	Default Gateway:	0.0.0.0	
	DNS 1:	0.0.0.0	
:	DNS 2:	0.0.0.0	

#### 5.2.2 IPoE Setup

1. From Advanced Setup, click Layer2 Interface and select ETH Interface.



Select a layer 2 interface for this service

eth0/et	h0	•	
Back	Ne	xt	

3. Select a ETH port as you will. You can select ENET1, ENET2, ENET3 or ENET4 port as the WAN interface.

eth0/eth0	*
eth0/eth0	
eth1/eth1	
eth2/eth2	
eth3/eth3	

4. Click **Apply/Save** and you'll see the following screen.

#### **ETH WAN Interface Configuration**

Choose Add, or Remove to configure ETH WAN interfaces. Allow one ETH as layer 2 wan interface.

Interface/(Name)	Connection Mode	Remove
eth1/eth1	VlanMuxMode	

#### Remove

5. From **Advanced Setup**, click **WAN Service** to configure a WAN service over the interface you selected.

#### Wide Area Network (WAN) Service Setup

Choose Add, Remove or Edit to configure a WAN service over a selected interface.

	Interface	Description	Туре	Vlan8021p	VlanMuxId	Igmp	NAT	Firewall	Remove	Edit
				Add	Remove					
6	5. Click <b>Add</b> and you'll see the following screen.									
	WAN Service Interface Configuration									
	Select a layer 2 interface for this service									
	eth1/eth1 💌									
						1				
				B	ack	ļ				

7. Click **Next** and you'll see the following screen. Select **IP over Ethernet** as WAN service type for example. Click **Next**.

#### WAN Service Configuration

Select WAN service type:
<ul> <li>PPP over Ethernet (PPPoE)</li> </ul>
IP over Ethernet
Enter Service Description: pppoe_eth1
Back Next

#### 8. Select Obtain IP address automatically or Use the following Static IP address.

- If you choose **Obtain IP address automatically**, click Next.
- If you choose Use the following Static IP address, type in your IP address, subnet mask and default gateway at WAN IP address, WAN Subnet Mask and WAN default gateway address then click Next. It is necessary to connect to the Internet for static IP address type.

#### WAN IP Settings

Enter information provided to you by your ISP to configure the WAN IP settings. Notice: If "Obtain an IP address automatically" is chosen, DHCP will be enabled for PVC in IPoE mode. If "Use the following Static IP address" is chosen, enter the WAN IP address, subnet mask and interface gateway.
<ul> <li>Obtain an IP address automatically</li> <li>Use the following Static IP address:</li> </ul>
WAN IP Address:
WAN Subnet Mask:
WAN gateway IP Address:
Back Next

9. Enabled NAT then click **Next.** We suggest you'd better don't take any other change at this page.

#### Network Address Translation Settings

Network Address Translation (NAT) allows you to share one Wide Area Network (WAN) IP address for multiple computers on your Local Area Network (LAN).

		Ena	ble	NAT
--	--	-----	-----	-----

Enable Firewall

#### **IGMP Multicast**

- Enable IGMP Multicast
- No Multicast VLAN Filter

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

# 10. Select WAN interface as the system default gateway. Click Next.



11. Get DNS server information from the selected WAN interface or enter static DNS server IP addresses. Click **Next**.

Select DNS Serve	r Interface from a	vailable WAN ir	terfaces:
Selected DNS Server Interfaces		Available WAN 1	Interfaces
ppp0.1	->		*
~	<-		*
© Use the following	Static DNS IP ad	dress:	
Primary DNS server:			
Secondary DNS server:			

# 12. Make sure that the settings below match the settings provided by your ISP. Click on the **Apply/Save** button to save your configurations and reboot the GPON router.

#### WAN Setup - Summary

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

Connection Type:	PPPoE
NAT:	Enabled
Full Cone NAT:	Enabled
Firewall:	Enabled
IGMP Multicast Proxy:	Disabled
IGMP Multicast Source Enabled:	Disabled
MLD Multicast Proxy:	Disabled
MLD Multicast Source Enabled:	Disabled
Quality Of Service:	Disabled

Click "Apply/Save" to have this interface to be effective. Click "Back" to make any modifications.

Back Apply/Save

#### 5.2.3 PPPoE Setup

 From Advanced Setup, Delete all the WAN Services and click Layer2 Interface and select ETH Interface. Before you configure ETH WAN interface, you'd better remove all PVC settings from ATM, PTM interface.

Interface/(Name)	С	onnection	Mode	Remove
Add	ון	Remove		

2. Click Add and you'll see the following screen.

ETH WAN Configuration This screen allows you to configure a ETH port .



3. Select a ETH port as you will. You can select ENET1, ENET2, ENET3 or ENET4 port as the WAN interface and Default mode as connection mode.

eth1/eth1	-
eth1/eth1	
eth2/eth2	
eth3/eth3	
eth0/eth0	

4. Click **Apply/Save** and you'll see the following screen.

#### **ETH WAN Interface Configuration**

Choose Add, or Remove to configure ETH WAN interfaces. Allow one ETH as layer 2 wan interface.

Interface/(Name)	Connection Mode	Remove
eth0/eth0	VlanMuxMode	

	-	1000	-	100
ĸ	е		01	10
	~		~ .	

5. From **Advanced Setup**, click **WAN Service** to configure a WAN service over the interface you selected.

6.

	Interface	Description	Туре	Vlan8021p	VlanMuxId	Igmp	NAT	Firewall	IPv6	Mld	Remove	Edit
					Add Remo	ove						
Click	<b>Add</b> and y	ou'll see the	e follo	wing scree	n.							
			WAI	Service Ir	nterface Co	onfigu	ratio	n				
			Sele	ct a layer 2	interface fo	or this s	servic	e				
		Note: For For PTM	ATM ir I interf Whe po po lov hig ł	nterface, the re portId=0 ortId=1> rtId=4> I v =0> Lo low =1> Hi h =0> Hi nigh =1>	e descriptor scriptor strir DSL Laten DSL Laten DSL Laten W PTM Prio Low PTM Prio gh PTM Prio High PTM P	r string ng is (p tency cy PAT / PATH rity not riority s prity no riority s	is (p portId PATH TH1 10&1 t set set ot set set	ortId_vpi I_high_lo 10	_vci) w)			
				eth	n3/LAN4 💌							
				Ba	ck Next							

 Choose the correct layer2 interface and click Next. You'll see the following screen. Select PPPoE as WAN service type then click Next.

WAN Service Configuration	
Select WAN service type: <ul> <li>PPP over Ethernet (PPPoE)</li> <li>IP over Ethernet</li> <li>Bridging</li> </ul>	
Enter Service Description: pppoe_eth2	
For tagged service, enter valid 802.1P Priority and 802.1Q VLAN ID. For untagged service, set -1 to both 802.1P Priority and 802.1Q VLAN ID.	
Enter 802.1P Priority [0-7]:	-1
Enter 802.1Q VLAN ID [0-4094]:	-1
Network Protocal Selection:(IPV6 Only not support)	

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

8. Enter the user name and password that your ISP has provided to you. Click **Next**.

PPP	Username:			
PPP	Password:			
PPPc	oE Service Name:			
Auth	hentication Method: AUTO			~
	Enable Fullcone NAT			
	Dial on demand (with idle ti	meout timer)		
	PPP IP extension			
	Use Static IPv4 Address			
	Enable PPP Debug Mode			
	Bridge PPPoE Frames Betwe	en WAN and Loc	al Ports	
Mult	lticast Proxy			
	Enable IGMP Multicast Proxy	1		

No Multicast VLAN Filter

**PPPoE service name** can be blank unless your Internet Service Provider gives you a value to enter. It is necessary if you want to connect to the Internet.

Authentication method is default to Auto. It is recommended that you leave the Authentication method in Auto, however, you may select PAP or CHAP if necessary. The default value for MTU (Maximum Transmission Unit) is **1500** for PPPoA and **1492** for PPPoE. Do not change these values unless your ISP asks you to.

**Enable Full Cone NAT:** In full cone NAT, all requests from the same private IP address and port are mapped to the same public source IP address and port. Someone on the Internet only needs to know the mapping scheme in order to send packets to a device behind the Device.

The gateway can be configured to disconnect if there is no activity for a specific period of time by selecting the **Dial on demand** check box and entering the **Inactivity timeout**. The entered value must be between 1 minute and 4320 minutes.

**Use Static IPv4 address:** If the ISP gave you a static (fixed) IP address, select this option and enter it in the IP Address field. If the ISP did not give you a static IP address, clear the Use Static IP Address option. The ISP automatically assigns the WAN connection an IP address when it connects.

Enable PPP Debug Mode: Select this to turn on the debug mode for the PPP connection.

**Bridge PPPoE Frames Between WAN and Local Ports:** In addition to the device's built-in PPPoE client, you can enable this to pass PPPoE through in order to allow LAN hosts to use PPPoE client software on their computers to connect to the ISP via the device. Each host can have a separate account and a public WAN IP address. PPPoE pass through is an alternative to NAT for applications where NAT is not appropriate. Disable PPPoE pass through if you do not need to allow hosts on the LAN to use PPPoE client software on their computers to connect to the ISP.

The **PPP IP Extension** is a special feature deployed by some service providers. Unless your service provider specifically requires this setup, do not select it. If you need to select it, the PPP IP Extension supports the following conditions:

- It allows only one computer on the LAN.
- The public IP address assigned by the remote using the PPP/IPCP protocol is actually not used on the WAN PPP interface. Instead, it is forwarded to the computer's LAN interface through DHCP. Only one system on the LAN can be connected to the remote, since the DHCP server within the gateway has only a single IP address to assign to a LAN device.
- NAPT and firewall are disabled when this option is selected.

- The gateway becomes the default gateway and DNS server to the computer through DHCP using the LAN interface IP address.
- The gateway extends the IP subnet at the remote service provider to the LAN computer. That is, the PC becomes a host belonging to the same IP subnet.
- The gateway bridges the IP packets between WAN and LAN ports, unless the packet is addressed to the gateway's LAN IP address.
- 9. Select WAN interface as the system default gateway. Click Next.

 Selected Default
 Available Routed WAN

 Gateway Interfaces
 Interfaces

10. Get DNS server information from the selected WAN interface or enter static DNS server IP addresses. Click **Next**.

Select DNS Server	Interface from available WAN interfaces:
Selected DNS Server	Available WAN Interfaces
Interfaces	
ppp0. 1	
	->
	<-
O Use the following	Static DNS IP address:
Primary DNS server:	
Secondary DNS server:	

11. Make sure that the settings below match the settings provided by your ISP. Click on the **Apply/Save** button to save your configurations and reboot the router.

Connection Type:	PPPoE
NAT:	Enabled
Full Cone NAT:	Disabled
Firewall:	Enabled
IGMP Multicast:	Disabled
Quality Of Service:	Enabled

12. Then you will see the following screen at **Device Info**.

WAN Information	
- WAN Type:	
- WAN service type:	
- IP Address:	
- Primary DNS server:	
- Secondary DNS server:	
- Default Gateway:	
- Default IPv6 Gateway:	
LAN Information	
- LAN IPv4 Address:	192.168.1.1
- IPv4 Subnet Mask:	255.255.255.0
- LAN IPv6 ULA Address:	
Wireless Information	
- Status:	Enabled
- SSID:	WLAND19BE9
- Chanel:	Auto(Current: 1)
- Security:	WPA2 -PSK
- WPS:	Disabled

### 5.2.4 LAN Settings

From LAN, Configure the router's IP Address and Subnet Mask for LAN interface. In this page, you can use DHCP (Dynamic Host Configuration Protocol) to control the assignment of IP addresses on your local network (LAN only).

Local Area Network (LAN) Setup
Configure the Broadband Router IP Address and Subnet Mask for LAN interface. GroupName Default 🔻
IP Address: 192.168.1.1 Subnet Mask: 255.255.0
<ul> <li>Standard Mode</li> <li>Blocking Mode</li> <li>Enable LAN side firewall</li> <li>Disable DHCP Server</li> <li>Enable DHCP Server</li> </ul>
Start IP Address:       192.168.1.33         End IP Address:       192.168.1.64         Leased Time (hour):       24         Static IP Lease List: (A maximum 32 entries can be configured)         MAC Address       IP Address         Add Entries       Remove Entries
■ Configure the second IP Address and Subnet Mask for LAN interface

Apply/Save

ltem	Description
IP address	This is the IP address that other devices on your local network will use to connect to the modem.
Subnet mask	This defines the size of your network. The default is <b>255.255.255.0</b> .
Enable IGMP snooping	IGMP Snooping is a method that actually "snoops" or inspects IGMP traffic on a switch. When enabled, the switch will watch for IGMP messages passed between a host and a router, and will add the necessary ports to its multicast table, ensuring that only the ports that require a given multicast stream actually receive it.
Disable / Enable DHCP server	The DHCP server assigns an IP addresses from a pre-set pool of addresses upon request from DHCP client (e.g. your computer). Do not disable the DHCP server unless you wish to let another device handle IP address issuance on the local network.

Start / end IP address	This is the beginning and ending range for the DHCP server addresses.
Lease time	The amount of time before the IP address is refreshed by the DHCP server.
Enable DHCP server relay	If NAT is disabled and the PVC is the IPoA or static MER type, this item allows you to inform the router of another DHCP server on your LAN. To do this, disable the DHCP server on the gateway. Then input the IP address of the current DHCP server. Click <b>Apply</b> and restart the gateway.
Configure the second IP address and	Use this feature to create a public network on your local LAN, accessible from the Internet. By assigning an address to this interface and then statically setting your LAN clients to the same network, the LAN clients are accessible from the public network (e.g. FTP or HTTP servers).

♣ Note: If you want to cancel all modification that you do on the Router, please select from "Management⇔Setting⇔Restore Default Settings" to restore factory default settings.

# **5.3 Wireless setting**

# 5.3.1 Basic

Wireless -- Basic

Enable Wireless		
Hide Acc	ess Point	
Clients Is	olation	
Disable V	/MM Advertise	
<ul> <li>Enable Wireless Multicast Forwarding (WMF)</li> </ul>		
SSID:	WLAND19BE9	
BSSID:	00:0E:F4:D1:9B:EA	
Country:	FRENCH SOUTHERN TERRITORIES	
Max Clients:	16	

Wireless - Guest/Virtual Access Points:

Enabled	SSID	Hidden	Isolate Clients	Disable WMM Advertise	Enable WMF	Max Clients	BSSID
8	wl0_Guest1	0	0	0	0	16	N/A
0	wl0_Guest2	0	0	0	0	16	N/A
0	wl0_Guest3	0	0	0	0	16	N/A

Apply/Save

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Option	Description
Enable wireless	A checkbox that enables or disables the wireless LAN interfaces. The default is to enable wireless communications.
Hide Access	Select Hide Access Point to protect the route access point from detection by wireless active scans. If you do not want the access point to be automatically detected by a wireless station, this checkbox should be deselected. The station will not discover this access point. To connect a station to the access point, the station must manually add this access point name in it's wireless.
Point	configuration. In Windows XP, go to the Network>Properties function to view all of the available access points. You can also use other software programs such as NetStumbler to view available access points.
Clients isolation	Enable this item if you don't want your wireless clients to communicate with each other.
Network name (SSID)	Enter a name for user's wireless network here. SSID stands for Service Set Identifier. This name must be between 1 and 32 characters long. The default name

	is <b>WLAN</b> .
	All wireless clients must either detect the gateway or be configured with the correct SSID to access the Internet.
BSSID	Displays the gateway's wireless MAC address. (User may need this address if user is using WDS or multiple gateways.) Click <b>Apply</b> to save changes.
Country	Drop-down menu that allows selection of specific channel.

### 5.3.2 Security

This page allows you to configure security features of the wireless LAN interface. You may set up configuration manually or through WiFi Protected Setup(WPS)

1. Click **Security** of **Wireless** item and you'll see the following page.

Wireless Security		
This page allows you to configure security features of the wireless LAN interface. You may setup configuration manually OR through WiFI Protcted Setup(WPS) Note: When both STA PIN and Authorized MAC are empty, PBC is used. If Hide Access Point enabled or Mac filter list is empty with "allow" chosen, WPS2 will be disabled		
WPS Setup		
Enable WPS	Disabled <b>•</b>	
Manual Setup AP		
You can set the network authent specify whether a network key is Click "Apply/Save" when done.	tication method, selecting data encryption, s required to authenticate to this wireless network and specify the encryption strength.	
Select SSID:	true_homewifi_1234 V	
Network Authentication:	Open •	
WEP Encryption:	Disabled •	
	Apply/Save	

2. Configure WPA Pre-shared key as below and click Apply/Save.

#### Manual Setup AP

You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply/Save" when done.

Select SSID:	true_homewifi_1234 •	]
Network Authentication:	WPA2 -PSK	•
WPA/WAPI passphrase:	•••••	Click here to display
WPA Group Rekey Interval:	0	]
WPA/WAPI Encryption:	AES 🔻	
WEP Encryption:	Disabled <b>v</b>	
	Apply/Save	

#### 3. Enable WPS as below and click **Save/Apply**.

WF	S Setup	
	Enable <b>WPS</b>	Enabled •
	Add Client (This feature is a	available only when WPA-PSK(WPS1), WPA2 PSK or OPEN mode is configured) Center STA PIN Use AP PIN Add Enrollee
	Set WPS AP Mode	Configured •
	Setup AP (Configure all secu	urity settings with an external registar)
	Device PIN	12279180 <u>Help</u>
		Config AP

- 4. Now you can use a wireless adaptor with WPS function and the WPS button to connect KW9621B to access the Internet.
- 5. To configure security features for the Wireless interface, please open Security item from Wireless menu. This web page offers nine authentication protocols for user to secure user's data while connecting to networks. There are four selections including Open, Shared, 802.1X,WPA, WPA-PSK, WPA2, WPA2-PSK, Mixed WPA-WPA2, Mixed WPA-WPA2-PSK. Different item leads different web page settings. Please read the following information carefully.

The wireless security page allows user to configure the security features of user's wireless network.

Select SSID:	true_homewifi_1234 ▼
Network Authentication:	Open •
WEP Encryption:	Disabled <b>•</b>
	Apply/Save

There are several security methods to choose from, depending on user's needs and the capabilities of user's wireless machines.

Open 🗸
Open
Shared
802.1X
WPA
WPA-PSK
WPA2
WPA2 -PSK
Mixed WPA2/WPA
Mixed WPA2/WPA -PSK

• WEP open and WEP shared —WEP is an encryption scheme that is used to protect user's wireless data communications. WEP uses a combination of 64-bit keys or 128-bit keys to provide access control to user's network and encryption security for every data transmission. To decode a data transmission, each wireless client on the network must use an identical 64-bit or 128-bit key. WEP is an older wireless encryption method that is not as hard to break as the more-recent WPA.

- 802.1x In 802.1x (also known as RADIUS), a separate machine called an authentication server receives a user ID and password. It grants or denies access based on whether the ID and password match any entries in its account list. User can optionally enable WEP encryption with this option. Because it requires a separate machine acting as the authentication server, 802.1x is most often used in business environments.
- WPA WPA is a more recent encryption method that addresses many of the weaknesses in WEP. Any client capable of WPA encryption should use it instead of WEP.
- WPA (PSK) This is WPA encryption combined with a pre-shared key (PSK), which is a text string known only to the gateway and authorized wireless clients. The

gateway rejects the login if the client's PSK does not match.

- WPA2 WPA2 is a more advanced encryption method than WPA. Because it is a more recent standard, some of user's wireless devices might not be able to use it.
- WPA2 (PSK) This option uses WPA2 with a pre-shared key.
- WPA2 and WPA This option supports WPA2/WPA encryption for devices capable of one or the other standard. The gateway automatically detects whether a particular device can use WPA2 or WPA.
- WPA2 AND WPA (PSK) This has WPA2 or WPA encryption based on client abilities, as well as a pre-shared key.

After making changes, click **Apply** to save.

#### 5.4 Management

#### 5.4.1 TR069

WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Select **TR-069 client** from **Management**.

<b>B</b> roadbar Gatewa	S nd Router & y	
Device Info Quick Setup Advanced Setup Wireless	TR-069 client - Configuration WAN Management Protocol (TR-069) allov Select the desired values and click "Apply/	vs a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Save" to configure the TR-069 client options.
Voice Diagnostics Management Settings	Inform Inform Interval:	Disable     Enable
System Log Security Log SNMP Agent TR-069 Client	ACS URL: ACS User Name: ACS Password:	admin
Internet Time Access Control Update Software Reboot	WAN Interface used by TR-069 client: Display SOAP messages on serial console	Any_WAN
Reboot	<ul> <li>Connection Request Authentication</li> <li>Connection Request User Name:</li> </ul>	admin
	Connection Request Password: Connection Request URL:	http://192.168.10.189:30005/

**Inform**: Whether or not the CPE must periodically send CPE information to Server using the Inform method call.

**Inform Interval**: The duration in seconds of the interval for which the CPE MUST attempt to connect with the ACS and call the Inform method if Inform is enabled.

**ACS URL**: URL for the CPE to connect to the ACS using the CPE WAN Management Protocol. And through ACS (Auto-Configuration Server) you can perform auto-configuration, provision, collection, and diagnostics to this router.

**ACS User Name**: Username used to authenticate an ACS making a Connection Request to the CPE.

**ACS Password**: Password used to authenticate an ACS making a Connection Request to the CPE. When read, this parameter returns an empty string, regardless of the actual value.

**WAN Interface used by TR-069 client**: Remember to choose the interface of PVC used for TR069.

**Connection Request User Name**: Username used to authenticate the CPE when making a connection to the ACS using the CPE WAN Management Protocol. This username is used only for authentication of the CPE.

**Connection Request Password**: Password used to authenticate the CPE when making a connection to the ACS using the CPE WAN Management Protocol. This password is used only for authentication of the CPE.

**GetRPC Methods**: Used by a CPE or ACS to discover the set of methods supported by the ACS or CPE it is in communicate with.

Note: If you want to cancel all modification that you do on the Router, please select from "Management Setting Restore Default Settings" to restore factory default settings.

#### 5.4.2 Access Control

Access Control will let you change the password that you need to login in the router's setting page.

1. Select Passwords from Management->Access Control.

Device Info	Access Control Passwords
Wireless	Access to your broadband router is controlled through three user accounts: admin, support, and user.
Voice	The user name "admin" has unrestricted access to change and view configuration of your Broadband Router.
Diagnostics	
Management	The user name "support" is used to allow an ISP technician to access your Broadband Router for maintenance and to run diagnostics.
Settings	The user name "user" can accore the Breadhard Bauter, view configuration optimize and statistics, as well as update the router's officiare
System Log	The user hame user can access the broadband houter, view computation settings and statistics, as well as, update the router's sortware.
Security Log	Use the fields below to enter up to 16 characters and click "Apply/Save" to change or create passwords. Note: Password cannot contain a space
SNMP Agent	
TR-069 Client	User Name:
Internet Time	Old Password:
Access Control	New Personal I
Passwords	New Password:
Remote Access	Confirm Password:
Update Software	
Reboot	Apply/Save

- 2. Type the user name in the **User Name**. There are 3 user name has different power to manage the router. Each of them has been shown in the screen;
- 3. Type in the **Old Password**;
- Type in the New Password and Confirm Password. These two blanks should be typed in the same words;
- 5. Click Apply/Save;
- 6. You will see the following screen.

Message

Password change successful

Note: If you want to cancel all modification that you do on the Router, please select from "Management Setting Restore Default Settings" to restore factory default settings.

#### 5.4.3 Backup

- You can choose Backup in the Management->Settings. Click Backup Settings to storage your settings at present.
- 2. Choose the path where your settings want to set in.



# Note: If you want to cancel all modification that you do on the Router, please select from "Management Setting Restore Default Settings" to restore factory default settings.

#### 5.4.4 Restore Default.

- 1. You can release the ball-point after about 5 seconds.
- 2. You can go to Restore Default at Management and click Restore Default Settings and wait until the router reboot it again.



Note: After you have then completed the full-reset. Your router will now have its factory default settings. IP address will be 192.168.1.1 and the subnet mask will be 255.255.255.0. User name will be admin and password will be admin.

#### 5.4.5 Update

1. You can update your firmware at Update in Management.

Device Info	Tools Update Settings
Wireless	Update Broadband Router settings. You may update your router settings using your saved files.
Voice	Sattings File Names <b>进场</b> 文件 主连级文件
Diagnostics	Security frie name: 234×11 A234×11
Management	
Settings	Update Settings
Backup	
Update	
Restore Default	
System Log	
Security Log	
SNMP Agent	
TR-069 Client	
Internet Time	
Access Control	
Update Software	
Reboot	

Note: Be sure that the firmware you want to update is the same product model as yours. Do not turn off the power when the updating is not finished! When it finished, you can't turn back to the default version unless you have the previous firmware!

# Appendix: Frequent Asked Questions

This chapter offers some suggestions to solve problems you might encounter. The potential problems are divided into 3 categories: Power, Hardware Connections, and LEDs; Device Access and Login; Internet Access.

# 1. Power, Hardware Connections, and LEDs

#### None of the LEDs are on when power on the router.

Please make sure what you use is the power adaptor attached with the router package and checks the connection between the AC power and router.

LAN LED does not turn on after connect Ethernet cable.

Please make sure Ethernet cable is connected hub/PC and router correctly. Then please make sure the PC/hub have been power on.

Please make sure that you use parallel network cable to connect UpLink port of hub, or use parallel network cable to connect PC. If connect normal port of hub (not UpLink port), you must use cross-cable. Please make sure that your network cables meet the networking requirements above.

#### 2. Device Access and Login

I forgot the IP address for the router.

- 1. The default IP address is 192.168.1.1.
- 2. If you changed the IP address and have forgotten it, you might get the IP address of the router by looking up the IP address of the default gatewayyou're your computer. To do this in most Windows computers, click Start > Run, enter cmd, and then enter ipconfig. The IP address of the Default Gateway might be the IP address of the router (it depends on the network), so enter this IP address in your Internet browser.
- 3. If this does not work, you have to reset the device to its factory defaults.

#### I forgot the password.

- 1. The default password is **admin**.
- 2. If this does not work, you have to reset the device to its factory defaults.

#### I cannot see or access the Login screen in the web configuration.

- 1. Make sure you are using the correct IP address.
  - The default IP address is **192.168.1.1**.
  - If you changed the IP address, use the new IP address.
  - If you changed the IP address and have forgotten it, see the Frequent Asked Questions for I forgot the IP address for the router.
  - Make sure you are using the correct IP address.
- Check the hardware connections, and make sure the LEDs are behaving as expected.
- 3. Make sure your Internet browser does not block pop-up windows.
- 4. Make sure your computer is in the same subnet as the router.
  - If there is a DHCP server on your network, make sure your computer is using a dynamic IP address.
  - If there is no DHCP server on your network, make sure your computer's IP address is in the same subnet as the router.
- 5. Reset the device to its factory defaults and reboot it again.

#### My PC is unable to connect to the wireless connection.

Please make sure that all devices communicating with the device must use the same channel (and use the same SSID). Otherwise your PC will not find the wireless Router.

## 3. Internet Access

#### My PC cannot access the Internet

First check whether PC can ping the interface Ethernet IP address of this product successfully (default value is 192.168.1.1) by using ping application. If ping application fails, please check the connection of Ethernet cable and check whether the states of LEDs are in gear.

If the PC uses private IP address that is set manually (non-registered legal IP address), please check:

- 1. Whether IP address of the PC gateway is legal IP address. Otherwise please use the right gateway, or set the PC to Obtain an IP address automatically.
- 2. Please confirm the validity of DNS server appointed to the PC with operator. Otherwise please use the right DNS, or set the PC to Obtain an IP address automatically.
- 3. Please make sure you have set the NAT rules and convert private IP address to legal IP address. IP address range of the PC that you specify should meet the setting range in NAT rules.
- 4. Central Office equipment may have problem.
- 5. The country or the wireless network type you selected is wrong.

My PC cannot browse Internet web page.

Please make sure DNS server appointed to the PC is correct. You can use ping application program to test whether the PC can connect to the DNS server of the operator.

### If the cause is not given above, please contact your local service provider!

