

User's Manual



3G / 802.11n Wireless Portable Router with 3G HSUPA

►WNRT-320GS



www.PLANET.com.tw

Copyright

Copyright ©2012 by PLANET Technology Corp. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of PLANET.

PLANET makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties, merchantability or fitness for any particular purpose. Any software described in this manual is sold or licensed "as is". Should the programs prove defective following their purchase, the buyer (and not this company, its distributor, or its dealer) assumes the entire cost of all necessary servicing, repair, and any incidental or consequential damages resulting from any defect in the software. Further, this company reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

All brand and product names mentioned in this manual are trademarks and/or registered trademarks of their respective holders.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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:

- 1. Reorient or relocate the receiving antenna.
- 2. Increase the separation between the equipment and receiver.
- 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4. Consult the dealer or an experienced radio technician for help.

FCC Caution:

To assure continued compliance, (example-use only shielded interface cables when connecting to computer or peripheral devices) 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
- (2) This Device must accept any interference received, including interference that may cause undesired operation.

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

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

This is a class B device, in a domestic environment; this product may cause radio interference, in which case the user may be required to take adequate measures.

Energy Saving Note of the Device

This power required device does not support Stand by mode operation.

For energy saving, please remove the DC-plug or push the hardware Power Switch to OFF position to disconnect

the device from the power circuit.

Without remove the DC-plug or switch off the device, the device will still consuming power from the power circuit. In the view of Saving the Energy and reduce the unnecessary power consuming, it is strongly suggested to switch off or remove the DC-plug for the device if this device is not intended to be active.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

National Restrictions

This device is intended for home and office use in all EU countries (and other countries following the EU directive 1999/5/EC) without any limitation except for the countries mentioned below:

Country	Restriction	Reason/remark				
Bulgaria	None	General authorization required for outdoor use and public service				
	Outdoor use limited to 10	Military Radiolocation use. Refarming of the 2.4 GHz				
France	mW e.i.r.p. within the band	band has been ongoing in recent years to allow current				
	2454-2483.5 MHz	relaxed regulation. Full implementation planned 2012				

Italy	None	If used outside of own premises, general authorization is required
Luxembourg	None	General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation	None	Only for indoor applications

WEEE Regulation



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET 3G / 802.11n Wireless Portable Router with 3G HSUPA

Model: WNRT-320GS

Rev: 1.0 (March, 2012)

Part No. EM-WNRT320GSv1_v1.0 (2081-E50250-000)

CONTENTS

Chapter 1	. Product Introduction	1
	1.1. Package Contents	1
	1.2. Product Description	1
	1.3. Product Features	4
	1.4. Product Specification	5
Chapter 2	. Hardware Interface	8
	2.1. Overview	8
	2.2. LED Indications	9
Chapter 3	. Installation Guide	10
	3.1. System Requirements	10
	3.2. Typical Application	10
	3.2.1. Router Mode	10
	3.2.2. AP Mode	11
	3.3. Manual Network Setup - TCP/IP Configuration	11
	3.3.1. Obtain an IP Address Automatically	11
	3.3.2. Configure the IP address manually	14
	3.4. Hardware Installation	15
	3.5. Starting Setup in Web UI	18
Chapter 4	. Configuration in Web UI	20
	4.1. Login	20
	4.2. Setup Wizard	20
	4.3. Operation Mode	23
	4.4. Wireless	24
	4.4.1. Basic Settings	24
	4.4.2. Advanced Settings	27
	4.4.3. Security	29
	4.4.4 Access Control	30
	4.4.5. WDS Settings	31
	4.4.6. Site Survey	32
	4.4.7. WPS	
	4.4.7. WPS	32
	4.4.7. WPS	32 33 34
	4.4.7. WPS	32 33 34 34

4.6. Firewall	45
4.6.1. Port Filtering	45
4.6.2. IP Filtering	46
4.6.3. MAC Filtering	47
4.6.4. Port Forwarding	48
4.6.5. URL Filtering	49
4.6.6. DMZ	50
4.7. QoS	51
4.8. Route Setup	53
4.9. Management	53
4.9.1. Status	54
4.9.2. Statistics	54
4.9.3. DDNS	55
4.9.4. Time Zone Setting	56
4.9.5. Denial of Service	57
4.9.6. Log	58
4.9.7. Upgrade Firmware	59
4.9.8. Save/Reload Settings	60
4.9.9. Password	61
4.10. Logout	61
Chapter 5. Quick Connection to a Wireless Network	62
5.1. Windows XP (Wireless Zero Configuration)	62
5.2. Windows 7 (WLAN AutoConfig)	64
5.3. Mac OS X	66
5.4. iPhone / iPod Touch / iPad	70
Appendix	74

Chapter 1. Product Introduction

1.1. Package Contents

The following items should be contained in the package:

- WNRT-320GS Wireless Portable 3G Router
- Power Adapter
- USB Cable
- Ethernet Cable
- Li-ion Battery
- Quick Installation Guide
- CD-ROM (User's Manual included)

If there is any item missed or damaged, please contact the seller immediately.

1.2. Product Description





3G/3.5G Broadband Sharing

PLANET 3G Wireless Portable Router, WNRT-320GS, provides home and SOHO users a reliable and cost effective wireless solution by featuring 3G / WAN Internet access and high speed IEEE 802.11n wireless transmission. The WNRT-320GS is equipped with a built-in 3G module for the connection to WCDMA / HSDPA / HSUPA mobile network. Users can install their SIM card into the slot of the WNRT-320GS directly without any external 3G modem necessary any more. Furthermore, the WAN port on the WNRT-320GS is for wired Cable / xDSL service connection. The WNRT-320GS provides

more flexible and easier way for users to share an instant wireless network service via 3G modem wherever at Home, Hotspot, or in public places like transportation, outdoor events, and etc.

Multiple Wireless Network Technologies for Greater Access

PLANET Wireless Portable 3G Router, the WNRT-320GS features 802.11n radio with 1T1R antenna technology compliant with 802.11b/g/n standards. Compared with general wireless routers, the WNRT-320GS offers more powerful and flexible capability for business demands to access Internet with true mobility and range extension of wireless network.

More Flexibility and Mobility

With the tiny-sized and stylish design, the WNRT-320GS is easy to carry for true mobility. It can be operate in various environments by hardware switch with the **AP and Router modes**, which helps to immediately set up a wireless network without software configuration. The portable design and operation flexibility make the WNRT-320GS suitable for travelling, moving and outdoor applications.









Figure 1-2

Built-in High Capacity Battery

The WNRT-320GS has one built-in rechargeable lithium battery whose power is supplied through mini USB interface. The power can be directly charged via the computer's USB port which increases the convenience even when there is no power outlet available.

One-touch Secure Wireless Connection

In order to simplify security settings for home and SOHO network, the WNRT-320GS supports **W**i-Fi **P**rotected **S**etup (**WPS**) with configuration in PBC and PIN type. Just push the WPS button or key in the PIN code, the secure connection between the WNRT-320GS and the wireless clients can be established immediately, which offers users a convenient and fast method to construct a secure wireless connection.



Figure 1-3

Wide Range of Wireless Security Support

To secure the wireless communication, the WNRT-320GS supports most up-to-date encryptions including WPA/WPA2-PSK with TKIP/AES. Made to fulfill enterprise and various applications demand, the WNRT-320GS enhances security and management features such as multiple SSID support. It can create up to 5 virtual standalone AP with 5 different SSID according to individual security levels and encryption scheme of various wireless devices.

Advanced Firewall Security

In the Router mode, the WNRT-320GS supports NAT functions and allows multiple users to access Internet via only one single legal IP. It provides Port Forwarding and DMZ for LAN PC to act as an application server. Furthermore, the advanced firewall by the WNRT-320GS can protect your Intranet clients from unauthorized accesses and various DoS attacks from the Internet. In aspect of the firewall, the WNRT-320GS provides IP/ MAC/ Port/ URL filtering, and prevents possible hackers attack.

Easy Setup Anytime Anywhere

The WNRT-320GS provides a total solution for home and business users. With the High Speed 802.11n wireless technology, the WNRT-320GS is easy to integrate the wireless devices with your existing wired network.

1.3. Product Features

3G / 3.75G Mobile Internet Connection

- Dual Network Interfaces: WAN port for cable or wired xDSL service + built-in 3G mobile connection
- Compatible with WCDMA / HSDPA / HSUPA Mobile Network

Industrial Compliant Wireless LAN & LAN

- Compliant with IEEE 802.11n wireless technology capable of up to 150Mbps data rate
- Backward compatible with 802.11b/g standard
- Equipped with one 10/100Mbps RJ-45 Ethernet port for LAN/WAN, Auto MDI/MDI-X supported

Wireless Network Range Extender

- Multiple Wireless Modes: AP, WDS, Repeater
- Support WMM (Wi-Fi Multimedia)
- Support IAPP (Inter Access Point Protocol), Wireless Roaming

Fixed-network Broadband Router

- Supported Internet types: Dynamic IP/ Static IP/ PPPoE/ L2TP/ PPTP
- Support Static & Dynamic (RIP1 and 2) Routing
- Support IP / MAC-based Bandwidth Control
- Support 802.1d STP & IGMP Proxy

Secure Network Connection

- Advanced security: 64/128-bit WEP, WPA-Enterprise/WPA2-Enterprise and WPA-PSK/WPA2-PSK with TKIP/AES Encryption, 802.1x Authentication
- Built-in NAT firewall features with Port/ IP/ MAC/ URL Filtering, and DoS protection.

Advanced Networking function for Specific Application

- Support multiple sessions IPSec, L2TP, PPTP, and IPv6 VPN pass-through
- Support Port Forwarding, DMZ, UPnP, QoS, and Dynamic DNS for various networking applications
- Support DHCP Server

Easy to install & Management

- Web-based UI and Setup Wizard for easy configuration
- System status monitoring includes DHCP Client, System Log

Flexible usage & Business-oriented design

- Portable and Pocket-sized design for true mobility
- Hardware switchable operation modes: Router / AP
- One-touch Wi-Fi Protected Setup (WPS)
- Built-in rechargeable Li-ion battery

1.4. Product Specification

Product	WNRT-320GS		
	3G / 802.11n Wireless Portable Router with 3G HSUPA		
Hardware Specification			
Interface	WAN/LAN	1 x 10/100Mbps Auto MDI/MDI-X RJ45 port	
Internace	1 x SIM card interface for plug SIM card		

	1 x mini USB port for charging battery			
	Gain	1 x Internal 2dBi Antenna		
Antenna	Orientation	Omni-directional		
	Rear nanel (fr	com left to right):		
	Power On/Off Switch			
	Mode Selection	on Switch (Router/AP)		
Button/Switch	Side panel [.]			
	WPS button			
	Reset button			
	*Push for abo	ve 5 seconds to reset to factory default settings		
LED Indicators	Power. Wire	less LAN, WPS, WAN/LAN, 3G		
Material	Plastic			
3G interface Specificat	ion			
Network Type	WCDMA / HS	DPA / HSUPA		
Transmit Rate		ad 7 2Mbps Inlink 5 76Mbps		
Frequency Range	2100MHz			
Wireless interface Sne	cification			
Standard				
Frequency Band	2 4~2 4835G			
Extend Frequency	DSSS	12		
Modulation Type				
	11n: Un to 150Mbps (Dynamic)			
Data Transmission	11g: Up to 54Mbps (Dynamic)			
Rates	11b: Up to 1	Mbps (Dynamic)		
Transmission	Indoor up to	100m		
Distance	outdoor up to	outdoor up to 300m (it is limited to the environment)		
	America/ FC0	2: 2.412~2.462GHz (11 Channels)		
Channel	Furone/ FTSI: 2 412~2 472GHz (13 Channels)			
	Japan/ TELEC: 2.412~2.484GHz (14 Channels)			
Max. RF Power	20 dBm (EIR	P)		
	135M: -68dF	3m@10% PER		
Receive Sensitivity	54M: -68dBm@10% PER			
,	11M: -85dBm@8% PER			
Software Features				
Operation Mode	Router			
	(by hardware	switch)		
Wireless Mode	AP, WDS, Re	epeater (WDS+AP)		
	WEP (64/128	B-bit) encryption security		
Encryption Security	WPA-Enterprise / WPA2-Enterprise (TKIP/AES)			
	WPA-Persona	al / WPA2-Personal (TKIP/AES)		
	802.1x Authe	ntication		

	Provide wireless LAN ACL (Access Control List) filtering			
Wireless Security	Wireless MAC address filtering			
	Support WPS (Wi-Fi Protected Setup)			
	Enable/Disable SSID Broadcast			
	WMM(Wi-Fi Multimedia): 802.11e Wireless QoS			
Wireless Advanced	IAPP(Inter Access Point Protocol): 802.11f Wireless Roaming			
	Provide Wireless Statistics			
	Shares data and Internet access for users, supporting following internet access:			
	■ 3G			
	■ PPPoE			
Internet Connection	■ Dynamic IP			
Туре	■ Static IP			
	■ PPTP			
	■ L2TP			
	NAT firewall with SPI (Stateful Packet Inspection)			
Electron II.	Built-in NAT server supporting Port Forwarding, and DMZ			
Firewall	Built-in firewall with IP address/ MAC address/ Port/ URL filtering			
	Support ICMP-FLOOD, UDP-FLOOD, TCP-SYN-FLOOD filter, DoS protection			
Routing Protocol	Static / Dynamic (RIP1 and 2) Routing			
VPN Pass-through	PPTP, L2TP, IPSec, IPv6			
	Built-in DHCP server supporting static IP address distributing			
	Support UPnP, Dynamic DNS			
LAN	Support IGMP Proxy			
	Support 802.1d STP (Spanning Tree)			
	IP / MAC-based Bandwidth Control			
	Web-based (HTTP) management interface			
Our fam. Management	SNTP time synchronize			
System Management	Easy firmware upgrade			
	System Log supports Remote Log			
Standards Conformance	ce			
	IEEE 802.11n (1T1R, up to 150Mbps)			
	IEEE 802.11g			
	IEEE 802.11b			
IEEE Standards	IEEE 802.11i			
	IEEE 802.3 10Base-T			
	IEEE 802.3u 100Base-TX			
	IEEE 802.3x Flow Control			
Others Protocols and				
Standards				

Chapter 2. Hardware Interface

2.1. Overview



Side Panel





Object	Description
ON/OFF	Power On/Off Switch
AP/RT	Mode Selection Switch, used to select Router or AP mode
WPS Button	Press the button for about 5 seconds to activate the WPS function.
Reset	Reset the WNRT-320GS to the factory default settings by pressing
	down the Reset button for about 5 seconds.

2.2. LED Indications

The LEDs on the top panel indicate the instant status of system power, wireless data activity, WPS, port links, battery, and help monitor and troubleshoot when needed. Figure 2-3 and Table 2-1 show the LED indications of the WNRT-320GS.



Figure 2-3 Top Panel

LED Definition

	LED	COLOR	STATE	FUNCTION		
		Green	On	Device power on		
ds			Off	Device power off		
0	Power / Battery		Flash	Low battery power		
		Red	On	Battery is being charged		
			Flash	The Wireless function is enabled.		
(ta	WLAN	Blue	Off	The Wireless function is disabled.		
-		Blue	On	WPS is activated		
T	WPS		Off	WPS is not activated		
		Blue	On	Link is established		
()	WAN/LAN		Off	No Ethernet device connected		
			Flash	Packets are transmitting or receiving		
			Flash	The Wireless function is enabled.		
3G 3G Connection		Blue	Off	The Wireless function is disabled.		

Table 2-1

Chapter 3. Installation Guide

3.1. System Requirements

- Broadband Internet Access Service (Cable / xDSL / Ethernet connection)
- One Cable/xDSL Modem that has an RJ-45 connector (not necessary if the WNRT-320GS is connected directly to the Ethernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ-45 connectors
- PC of subscribers running Windows 98/ME, NT4.0, 2000/XP, Windows Vista / Win 7, MAC OS 9 or later, Linux, UNIX or other platform compatible with TCP/IP protocols
- Above PC installed with WEB Browser



3.2. Typical Application

Please shift the hardware switch on the WNRT-320GS to change the operation mode.

3.2.1. Router Mode



AP/RT

In Router Mode, the NAT (Network Address Translation) function and DHCP server are both enabled in default, and all wireless clients will obtain a private IP address automatically by the DHCP server of WNRT-320GS and share the same public IP assigned by 3G mobile base station or local ISP through WAN port of the WNRT-320GS. The WAN port of WNRT-320GS is supposed to connect with the Cable / xDSL Modem by the Ethernet cable.



Figure 3-1

3.2.2. AP Mode



AP/RT

In AP Mode, the NAT (Network Address Translation) function and DHCP server are both disabled in default, and all wireless clients obtain the IP address from some other network device with DHCP server enabled in the same subnet of WNRT-320GS.Or users can assign a fixed IP address for client device as well in the Control Panel of Windows. The LAN port of WNRT-320GS is supposed to connect with the Ethernet directly by the Ethernet cable.





3.3. Manual Network Setup - TCP/IP Configuration

The default IP address of the WNRT-320GS is **192.168.1.1**, and the default Subnet Mask is **255.255.255.0**. These values can be changed as you desire in the web UI of the WNRT-320GS. In this section, we use all the default values for description.

No matter you want to configure the WNRT-320GS via wired or wireless connection, the PC need to be assigned an IP address first. Before you connect the local PC to the WNRT-320GS via wired or wireless connection, please configure the IP address for your PC in the following two ways first.

- Obtain an IP address automatically
- Configure the IP address manually

The following sections will introduce how to install and configure the TCP/IP correctly in **Windows 7**. First, make sure your Ethernet Adapter is working, and refer to the Ethernet adapter's manual if needed.

3.3.1. Obtain an IP Address Automatically

If you are sure the DHCP server of WNRT-320GS is enabled (the default setting of Router Mode), you can set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC. And then the WNRT-320GS built-in DHCP server will assign an IP address to the PC automatically.

- 1) On the Windows taskbar, click the **Start** button, point to **Control Panel**, and then click it.
- 2) Under the **Network and Internet** icon, click on the **View network status and tasks.** And then click **Change adapter settings**.

🕞 🕞 🗢 👯 « Network and I	ternet Network and Sharing Center
Control Panel Home Manage wireless networks <u>Change adapter settings</u> Change advans Settings	View your basic network information and set up connections View your basic network information and set up connections See full map FREEDOM-PC Network Internet View your active networks Connect or disconnect Network Access type: Internet
	Public network Connections: Local Area Connection Change your networking settings Set up a new connection or network Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point. Connect to a network Connect to a network Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
See also HomeGroup Internet Options Windows Firewall	 Choose homegroup and sharing options Access files and printers located on other network computers, or change sharing settings. Troubleshoot problems Diagnose and repair network problems, or get troubleshooting information.

Figure 3-3

3) Right-click on the **Wireless Network Connection**, and select Properties in the appearing window.



Figure 3-4

4) In the prompt window shown below, double click on the Internet Protocol Version 4 (TCP/IPv4).

Wireless Ne	twork Connection Proper	rties	x
Networking			
Connect using:			
Broadcor	n 802.11 Multiband Network Ada	apter	
		Configure	e
This connection	uses the following items:		
🗹 📑 Client	for Microsoft Networks		
🗹 🛃 AVG r	etwork filter driver		
🗹 📕 Qo S F	acket Scheduler		=
File ar	d Printer Sharing for Microsoft N	etworks	
🗹 📥 Interne	et Protocol Version 6 (TCP/IPv6)		
	et Protocol Version 4 (TCP/IPv4)		*
•	III		•
I <u>n</u> stall	<u>U</u> ninstall	Propertie	s
Description			
Transmission wide area ne across divers	Control Protocol/Internet Protoc twork protocol that provides com e interconnected networks.	ol. The defau munication	ılt

Figure 3-5

5) Choose **Obtain an IP address automatically**, and **Obtain DNS server address automatically** as shown in the figure below. Then click **OK** to save your settings.

Internet Protocol Version 4 (TCP/IPv4)	Propert	ties			9	X
General Alternate Configuration						
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	matically ask you	if yo r net	ur ne twork	twork : admin	support istrator	S
Obtain an IP address automatical	X					
Use the following IP address:						
IP address:						
S <u>u</u> bnet mask:						
Default gateway:		•				
Obtain DNS server address autom	atically					
OUSE the following DNS server add	resses:					
Preferred DNS server:						
Alternate DNS server:			4			
Validate settings upon exit				Ad	vanced.	
	(ОК		Ca	ncel

Figure 3-6

3.3.2. Configure the IP address manually

If the DHCP server of WNRT-320GS is disabled (the default setting of AP Mode), you need to configure a fixed IP address manually for your computer. The IP address of your PC should be 192.168.1.xxx (the same subnet of the IP address of WNRT-320GS, and "xxx" is any number from 2 to 254), Subnet Mask is 255.255.255.0, and the Gateway is 192.168.1.1 (The default IP address of WNRT-320GS)

- 1) Continue the settings from the last figure, select **Use the following IP address** radio button.
- If the LAN IP address of the WNRT-320GS is 192.168.1.1, enter IP address 192.168.1.x (x is from 2 to 254), and Subnet mask 255.255.255.0.
- Enter the LAN IP address of the WNRT-320GS (the default IP is 192.168.1.1) into the Default gateway field.
- Select Use the following DNS server addresses radio button. In the Preferred DNS Server field, you can enter the DNS server IP address provided by your local ISP. Then click OK to save your settings.

internet Protocol Version 4 (TCP/IPv4	4) Properties			
General				
You can get IP settings assigned aut this capability. Otherwise, you need for the appropriate IP settings.	comatically if your network supports to ask your network administrator			
Obtain an IP address automatica	ally			
Output In the second				
IP address:	192.168.1.200			
Subnet mask:	255.255.255.0			
Default gateway: 192.168.1.1				
Obtain DNS server address auto	matically			
• Use the following DNS server ad	ldresses:			
Preferred DNS server:	8.8.8.8			
<u>A</u> lternate DNS server:	8 . 8 . 4 . 4			
🔲 Vaļidate settings upon exit	Ad <u>v</u> anced			
	OK Cancel			

Figure 3-7

3.4. Hardware Installation

Please follow the instructions below to build the wireless network connection between WNRT-320GS and your computers.



Do not dispose of the battery in a fire or any other high-temperature place as it may explode. Before you start using the WNRT-320GS, please follow the procedures below to install and charge the battery first.







Before installing the WNRT-320GS, make sure your PC is able to surf the Internet through the broadband service successfully at this moment. If there is any problem, please contact your local ISP. After that, please install the WNRT-320GS according to the following steps.

Step 1. Please shift the hardware switch on the WNRT-320GS to the operation mode you want to use, and follow the figure below to install it for your network application.





Figure 3-9

Step 2. Please turn on the WNRT-320GS.





The procedures of hardware installation are finished. Please continuously follow the next section to start the setup in the web UI.



If you want to configure the WNRT-320GS via wireless connection, please use your PC to site survey the wireless signal of WNRT-320GS, and connect your PC with it wirelessly.

Default SSID: **default** Default Wireless Encryption: **WPA-PSK / WPA2-PSK** Default Password: **1234567890**

Not connected	4	•
Connections are available		
Wireless Network Connection		III
biafae	llee	
default	llee	
Connect automatically	nnect	
802.11bgn-SSID	lle	
PLANET_8F_Meeting_Room	llee	
CHT Wi-Fi(HiNet)	311	
hinet	201	Ŧ
Open Network and Sharing (Center	
EN 🔺 🏲 🍕 😻	4:55 PM 2/2/2012	2

Figure 3-11

3.5. Starting Setup in Web UI

It is easy to configure and manage the WNRT-320GS via web browser. To access the web UI of the WNRT-320GS, please open a web browser and enter the default IP address <u>http://192.168.1.1</u> in the address field of the browser.



Figure 3-12

After a moment, a login window will appear. Enter the User Name and Password. Then click the **OK** button.

Windows Security	X
The server 192 and password.	168.1.1 at Wireless Access Point requires a username
Warning: This s sent in an insec connection).	erver is requesting that your username and password be sure manner (basic authentication without a secure
	admin ••••• Remember my credentials
	OK Cancel

Figure 3-13 Login Window

Default Username: admin

Default Password: admin

If the screen above does not pop up, it may mean that your web-browser has been set to a proxy. Go to Tools menu>Internet Options>Connections>LAN Settings, in the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.

After you enter the username and password, the main screen appears as Figure 3-14



Figure 3-14 WNRT-320GS Web UI Screenshot

The next chapter will introduce the functions of the web UI.

Chapter 4. Configuration in Web UI

4.1. Login

After successfully logging into the web UI of the WNRT-320GS, you will see the main menus on the left side of the web-based utility. There are some different options appear as the operation mode changes. For example, the figure below is the menus of the Router Mode in the web UI.



Figure 4-1 The Menu of Router Mode in The Web UI

The details for the functions in each operation mode are listed in the following sections.

4.2. Setup Wizard

No matter what operation mode you switch to on the WNRT-320GS, the first screen you enter into the web UI is the Setup Wizard. It will guide the user to configure the WNRT-320GS easily and quickly. There are different procedures in different operation modes. According to the operation mode you switch to, please follow the instructions below to configure the WNRT-320GS via Setup Wizard.



Step 1. The figure below is the screen of the Setup Wizard in Router Mode. Please click the "Next>>" button to continue.

Setup Wizard	
The setup wizard will guide you to configure access point for first time. Please follow the s step by step.	setup wizard
Welcome to Setup Wizard.	
The Wizard will guide you the through following steps. Begin by clicking on Next. 1. WAN Interface Setup	
	Next>>

Figure 4-2

Step 2. Please select the corresponding WAN connection type of your Internet service, and fill the correct parameters in the blanks. Then click the "Finished" button to save the settings and reboot to take effect.

1. WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point.

WAN Access Type:	USB3G 🔹
USB 3G Modem:	USB3G DHCP Client
ISP:	PPPoE Static IP
User Name:	PPTP
Password:	
PIN:	
APN:	internet
Dial Number:	*99#
	Cancel < <back finished<="" th=""></back>

Figure 4-3

Next>>

AP Mode



Step 1. The figure below is the screen of the Setup Wizard in AP Mode. Please click the "Next>>" button to continue.

Setup Wizard

The setup wizard will guide you to configure access point for first time. Please follow the setup wizard step by step.

Welcome to Setup Wizard.

The Wizard will guide you the through following steps. Begin by clicking on Next.

- 1. Set Wireless Network Name
- 2. Select Wireless Security Mode

Fi	au	re	4-4	1
	yu			1

Step 2. Please enter the SSID for recognizing the wireless connection. The default value is "default". Then click the "Next>>" button to continue.

1. Set Wireless Network Name	
You can enter the Wireless Network Name of AP.	
Wireless Network Name(SSID):	default
	Cancel < <back next="">></back>

Figure 4-5

Step 3. Please select the wireless security mode, and setup the password for wireless connection. Then click the "Finished" button to save the settings and reboot to take effect.

2. Select Wireless Security Mode

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Encryption: WPA2 Mixed Pre-Shared K None	Passphrase
Pre-Shared K WPA WPA2 WPA2 Mixed	1234567890
	Cancel < <back finished<="" th=""></back>

Figure 4-6

4.3. Operation Mode

This page shows the current operation mode, but users can only change it by shifting the hardware switch on the WNRT-320GS.

	n Mode
Router:	When the Mode Selection Switch on the bottom of the Device is set to Router, the unit is in Router Mode. In this mode, the device is supposed to connect to internet via ADSL/Cable Modem. The NAT is enabled and all wireless client share the same IP to ISP through WAN port
O AP:	When the Mode Selection Switch on the front of the Device is set to AP, the unit is in Access Point Mode. In this mode, all ethernet ports and wireless interface are bridged together and NAT function is disabled. All the WAN related function and firewall are not supported.
Convright 2012 Planet	Technology corporation All rights reserved

Figure 4-7

4.4. Wireless

The Wireless menu contains submenus of the settings about wireless network. Please refer to the following sections for the details.



Figure 4-8

4.4.1. Basic Settings

Choose menu "Wireless \rightarrow Basic Settings", and you can configure the basic settings for the wireless network in this page. After the configuration, please click the "Apply Changes" button to save the settings.

Wireless Basic Settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

Disable Wireless LAN Interface	
Band:	2.4 GHz (B+G+N) 🗸
Mode:	AP 🗸 Multiple AP
Network Type:	Infrastructure 🗸
SSID:	default
Channel Width:	40MHz 🗸
Control Sideband:	Upper 🗸
Domain Region:	FCC 🗸
Channel Number:	Auto 🗸
Broadcast SSID:	Enabled 🗸
WMM:	Enabled 🗸
Data Rate:	Auto 🗸
Associated Clients:	Show Active Clients
Enable Mac Clone (Single Ethernet Client)	
Apply Changes Reset	
Copyright 2012 Planet Technology corporation, All rights reserved.	

rianet realitology asparation, Airlights reserved.

Figure 4-9 Wireless Basic Settings

Object	Description	
Disable Wireless LAN	Check the box to disable the wireless function.	
Interface		
	Select the desired mode. Default is "2.4GHz (B+G+N)". It is strongly	
	recommended that you set the Band to "2.4GHz (B+G+N)", and all of	
	802.11b, 802.11g, and 802.11n wireless stations can connect to the	
	WNRT-320GS.	
	2.4 GHz (B) : 802.11b mode, rate is up to 11 Mbps	
Band	2.4 GHz (G): 802.11g mode, rate is up to 54 Mbps	
	2.4 GHz (N) : 802.11n mode, rate is up to 150 Mbps(1T1R)	
	■ 2.4 GHz (B+G): 802.11b/g mode, rate is up to 11 Mbps or 54 Mbps	
	■ 2.4 GHz (G+N): 802.11g/n mode, rate is up to 54 Mbps or 150	
	Mbps	
	■ 2.4 GHz (B+G+N): 802.11b/g/n mode, rate is up to 11 Mbps,54	
	Mbps, or 150 Mbps	

Mode	There are AP, WDS, and AP+WDS three kinds of wireless mode selection. If you select WDS or AP+WDS, please click "WDS Settings" submenu for the related configuration. Furthermore, click the "Multiple AP" button to enable multiple SSID function. Multiple APS This page shows and updates the wireless setting for multiple APs. No. Enable Band SID Data Broadcast SSID WMM Access Active Client List API V 2.4 GHz (B+G+N) V default VAP Auto V Enabled V Enabled LAN+WAN V Show AP3 2.4 GHz (B+G+N) V default VAP Auto V Enabled V Enabled V LAN+WAN V Show AP3 2.4 GHz (B+G+N) V default VAP Auto V Enabled V Enabled V LAN+WAN V Show AP91 C 1.4 GHz (B+G+N) V default VAP Auto V Enabled V Enabled V LAN+WAN V Show AP91 C 1.4 GHz (B+G+N) V default VAP Auto V Enabled V Enabled V LAN+WAN V Show				
Network Type	In Infrastructure , the wireless LAN serves as a wireless station. And the user can use the PC equipped the WNRT-320GS to access the wireless network via other access point. In Ad hoc , the wireless LAN will use the Ad-hoc mode to operate. Default is " Infrastructure ".				
SSID	The ID of the wireless network and default is "default". User can access the wireless network through it only. However, if you switch to Client Mode, this field becomes the SSID of the AP you want to connect with.				
Channel Width	You can select 20MHz or 40MHz .				
Control Sideband	You can select Upper or Lower .				
	The Domain Region decides which channels are available for yo country. Please note that using the incorrect Domain Region is strict prohibited. If you live in United States, you must use the FCC Doma Region. If you live inside EU, you must use ETSI domain.				
		Domain Region	Country		
		FCC	USA		
Domain Region		IC	Canada	-	
		ETSI	Europe	-	
		SPAIN	Spain		
		FRANCE	France		
		МКК	Japan		
		ISRAEL	Israel		
	Default : FCC				

Channel Number	You can select the operating frequency of wireless network.
Broadcast SSID	If you enable "Broadcast SSID", every wireless station located within the coverage of the WNRT-320GS can discover its signal easily. If you are building a public wireless network, enabling this feature is recommended. In private network, disabling "Broadcast SSID" can provide better wireless network security. Default is " Enabled ".
WMM	WMM function can guarantee the packets with high-priority messages being transmitted preferentially. Default is "Enabled".
Data Rate	Default is " Auto" .
Associated Clients	Click the " Show Active Clients " button to show the status table of active wireless clients.
Enable Mac Clone (Single Ethernet Client)	Enable Mac Clone.

Table 4-1

4.4.2. Advanced Settings

Choose menu "Wireless → Advanced Settings", and you can configure the advanced settings for the wireless network in this page. After the configuration, please click the "Apply Changes" button to save the settings.

Wireless Advanced Settings

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Access Point.

Fragment Threshold:	2346	(256-2346)
RTS Threshold:	2347	(0-2347)
Beacon Interval:	100	(20-1024 ms)
Preamble Type:	Solution Long Pread Stress	mble O Short Preamble
IAPP:	Enabled	◯ Disabled
Protection:	C Enabled	 Disabled
Aggregation:	Enabled	◯ Disabled
Short GI:	Enabled	◯ Disabled
WLAN Partition:	C Enabled	 Disabled
RF Output Power:	100%)70% 🔿 50% 🔿 35% 🔿 15%
Apply Changes	Reset	

Figure 4-10 Wireless Advanced Settings

Object	Description
Fragment Threshold	You can specify the maximum size of packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in
	bad performance.
	Default is "2346".
RTS Threshold	When the packet size is smaller the RTS threshold, the access point will not use the RTS/CTS mechanism to send this packet. Default is "2347".
Beacon Interval	The interval of time that this access point broadcast a beacon. Beacon is used to synchronize the wireless network. Default is "100".
Preamble Type	Preamble type defines the length of CRC block in the frames during the wireless communication. "Short Preamble" is suitable for high traffic wireless network. "Long Preamble" can provide more reliable communication. Default is "Long Preamble".
IAPP	IAPP (Inter-Access Point Protocol) enabled is recommendation that describes an optional extension to IEEE 802.11 that provides wireless access-point communications among multivendor systems.
	Default is "Enabled".
Protection	It is recommended to enable the protection mechanism. This mechanism can decrease the rate of data collision between 802.11b and 802.11g wireless stations. When the protection mode is enabled, the throughput of the AP will be a little lower due to many of frame traffic should be transmitted.
	Default is "Disabled".
Aggregation	It is a function where the values of multiple rows are grouped together. Default is "Enabled"
Short GI	It is used to set the time that the receiver waits for RF reflections to settle out before sampling data.
	Default is "Enabled"
WLAN Partition	This feature also called "WLAN isolation" or "Block Relay". If this is enabled, wireless clients cannot exchange data through the WNRT-320GS.
	Default is "Disabled".
RF Output Power	Users can adjust the wireless output power here.
	Default is "100%".

Table 4-2

4.4.3. Security

Choose menu "Wireless \rightarrow Security", and you can configure the settings of wireless security for the wireless network in this page. After the configuration, please click the "Apply Changes" button to save the settings.

Wireless Security Setup		
This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.		
Select SSID: Root AP - default		
Encryption: Authentication Mode: WPA Cipher Suite: WPA2 Cipher Suite: Pre-Shared Key Format:	WPA-Mixed V Disable WEP (ADIUS) O Personal (Pre-Shared Key) WPA S WPA-Mixed S Passphrase V	
Pre-Shared Key:	•••••	
Apply Changes Reset		

Copyright 2012 Planet Technology corporation, All rights reserved.

Figure 4-11 Wireless Security

Object	Description
Select SSID	Select the SSID you want to configure the wireless security function,
	includes the root one and the client one.
Encryption	Disable:
	No security setup for wireless connection.
	WEP:
	It is based on the IEEE 802.11 standard. And the default setting of
	authentication is Automatic, which can select Open System or
	Shared Key authentication type automatically based on the wireless
	station's capability and request. Furthermore, you can select Key
	Length and enter 10 & 26 Hexadecimal digits (any combination of
	0-9, a-f, A-F, zero key is not promoted) or 5 & 13 ASCII characters in
	the Encryption Key field.

	WPA / WPA2 / WPA-Mixed:
	When you select the authentication mode based on Enterprise
	(Radius Server), please enter the IP Address, Port, and Password
	of the Radius Server. When you select the other authentication mode
	based on Personal (Pre-Shared Key), please enter at least 8 ASCII
	characters (Passphrase) or 64 Hexadecimal characters. All of the
	Cipher Suites support TKIP and AES .
802.1x Authentication	Enable 802.1x authentication function, then please enter the IP
	Address, Port, and Password of the Radius Server.

Table 4-3

4.4.4. Access Control

Choose menu "Wireless \rightarrow Access Control", you can choose to allow or deny the computer of specified MAC address to connect with the WNRT-320GS in this page. After the configuration, please click the "Apply Changes" button to save the settings.

Wireless Access Control If you choose 'Allowed Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect the Access Point.		
Apply Changes Reset		
Current Access Control List:		
MAC Address Comment Select		
Delete Selected Delete All Reset		



Object	Description
Wireless Access	You can choose to set the Allowed-List, Denied-List, or disable this
Control Mode	function.
MAC Address	Enter the MAC address you want to allow or deny to connect to the
	WNR I-320GS in the field.
Comment	You can make some comment for each MAC address on the list.
Current Access Control	You can select some MAC address, and click the "Delete Selected"
------------------------	--
List	button to delete it.

4.4.5. WDS Settings

Wireless Distribution System (WDS) uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

Choose menu "Wireless \rightarrow WDS Settings", and you can configure WDS to connect the WNRT-320GS with another AP in this page. After the configuration, please click the "Apply Changes" button to save the settings.

WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

✓ Enable WDS				
MAC Address:				
Data Rate:	Auto 🔽			
Comment: Apply Changes Current WDS AP Lis	Reset	Set Security	Show Statistics	
MAC Addre	ess	Tx Rate (Mbps)	Comment	Select
Delete Selected	Delete All	Reset		

Figure 4-13 WDS Settings

Object	Description
Enable WDS	Check the box to enable the WDS function. Please select WDS or AP+WDS in the Mode of Wireless Basic Settings before you enable WDS in this page.
MAC Address	You can enter the MAC address of the AP you want to connect with.
Data Rate	Default is " Auto" .
Comment	You can make some comment for each MAC address on the list.
Set Security	Click the "Set Security" button, then configure the wireless security

	parameters of the AP you want to connect via WDS.		
Show Statics	Click the "Show Statics" button to show the WDS AP.		
Current WDS AP List	You can select some MAC address of the AP, and click the "Delete Selected" button to delete it.		

4.4.6. Site Survey

Choose menu "Wireless \rightarrow Site Survey" to scan the available local AP. If any Access Point is found, you could choose any one to connect with manually when the Client Mode is enabled.

Site Survey					
SSID	BSSID	Channel	Туре	Encrypt	Signal
biafae	6c:fd:b9:20:f3:cc	1 (B+G+N)	AP	WPA2- PSK	68
live	00:4f:81:00:5c:9c	6 (B+G+N)	AP	no	36
AP01	06:1a:50:00:56:84	7 (B+G)	AP	WEP	20
AP04	12:1a:50:00:56:84	7 (B+G+N)	AP	WPA- PSK	20
AP03	0e:1a:50:00:56:84	7 (B+G)	AP	WPA- PSK	20
live-2	06:4f:68:50:1c:11	1 (B+G+N)	AP	no	18

Figure 4-14 Wireless Site Survey

4.4.7. WPS

Choose menu "Wireless \rightarrow WPS", and you can configure the setting for WPS (Wi-Fi Protected Setup). After the configuration, please click the "Apply Changes" button to save the settings.

Wi-Fi Protected Setup			
This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automically syncronize its setting and connect to the Access Point in a minute without any hassle.			
Disable WPS			
Apply Changes Reset			
WPS Status:	O Configured		
	Reset to UnConfigured		
Self-PIN Number:	19305240		
Push Button Configuration:	Start PBC		
Client PIN Number:	Start PIN		

Figure 4-15 WPS (Wi-Fi Protected Setup)

Object	Description
Disable WPS	You can check the box to disable the WPS function.
WPS Status	Here you can check if the connection via WPS is established or not.
Self-PIN Number	It is the PIN number of the WNRT-320GS here.
Push Button	Click the "Start PBC", and then activate WPS as well in the client
Configuration	device within 2 minutes.
Client PIN Number	In addition to the PBC method, you can also use the PIN method to
	activate the WPS. Just enter the PIN number of the client device in the
	field, and click the "Start PIN" button.

4.4.8. Schedule

Choose menu "Wireless \rightarrow Schedule", and you can configure the schedule rule of enabling wireless function. After the configuration, please click the "Apply Changes" button to save the settings.

Wireless Schedule		
This page allows you setup the wireless schedule rule. Please do not forget to configure system time before enable this feature.		
✓ Enable Wireless Schedule		
Days: □ Everyday □ Sun ☑ Mon ☑ Tue ☑ Wed ☑ Thu ☑ Fri □ Sat		
Time : ○ 24 Hours ● From 08 ♥ : 30 ♥ To 18 ♥ : 00 ♥		
Apply Changes Reset		

Figure 4-16 Wireless Schedule

4.5. TCP/IP Settings

The TCP/IP Settings menu contains submenus of the settings about LAN and WAN. Please refer to the following sections for the details.



Figure 4-17

4.5.1. LAN Interface

Choose menu "**TCP/IP Settings** \rightarrow **LAN Interface**", and you can configure the parameters for LAN (Local Area Network). After the configuration, please click the "Apply Changes" button to save the settings.

LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP addresss, subnet mask, DHCP, etc..

IP Address:	192.168.1.1
Subnet Mask:	255. 255. 255. 0
Default Gateway:	0.0.0
DHCP:	Server 🐱
DHCP Client Range:	192.168.1.100 - 192.168.1.200 Show Client
Static DHCP:	Set Static DHCP
Domain Name:	Router
802.1d Spanning Tree:	Disabled 🐱
Clone MAC Address:	0000000000
Apply Changes Rese	ət

Figure 4-18 LAN Interface

Object	Description
IP Address	The LAN IP address of the WNRT-320GS, and default is 192.168.1.1 . You can change it according to your request.
Subnet Mask	Default is 255.255.255.0 . You can change it according to your request.
Default Gateway	Default is 0.0.0.0 . You can change it according to your request.
DHCP	You can select one of Disable , Client , and Server . Default is Server , that the WNRT-320GS can assign IP addresses to the computers automatically.
DHCP Client Range	For the Server mode, you must enter the DHCP client IP address range in the field. And you can click the " Show Client " button to show the Active DHCP Client Table.
Static DHCP	Click the " Set Static DHCP " button, and you can reserve some IP addresses for those network devices with the specified MAC addresses anytime when they request IP addresses.
Domain Name	Default is Router .
802.1d Spanning Tree	You can enable or disable the spanning tree function.
Clone MAC Address	You can input a MAC address here for using clone function.

Table 4-7

4.5.2. WAN Interface

Choose menu "**TCP/IP Settings** \rightarrow **WAN Interface**", and you can configure the parameters for the Internet network. After the configuration, please click the "Apply Changes" button to save the settings.

WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to USB3G, DHCP, PPPoE, static IP, PPTP or L2TP by click the item value of WAN Access type.

WAN Access Type:	USB3G			
USB 3G Modem:	WCDMA 🗸			
ISP:	×			
User Name:				
Password:				
PIN:				
APN:	internet			
Dial Number:	*99#			
Connection Type:	Continuous Connect Disconnect			
Idle Time:	5 (1-1000 minutes)			
MTU Size:	1490 (1420-1490 bytes)			
Attain DNS Automatically Set DNS Manually				
DNS 1:				
DNS 2:				
DNS 3:				
Clone MAC Address:	0000000000			
Enable uPNP				
Enable IGMP Proxy				
Enable Ping Access on WAN				
Enable Web Server Access on WAN				
Enable IPsec pass through on VPN connection				
Enable PPTP pass through on VPN connection				
Enable L2TP pass throug	gh on VPN connection			
Enable IPv6 pass through on VPN connection				
Apply Changes Reset				

Copyright 2012 Planet Technology corporation, All rights reserved.

Object	Description		
	USB3G	The connection that requires the correct parameters to obtain an IP address from 3G mobile network.	
WAN Access Type	DHCP Client	The connection which uses the dynamic IP address assignment.	
	PPPoE	The connection that requires a username and password.	
	Static IP	The connection which uses the static IP address assignment.	
	PPTP	The connection which uses a Point-to-Point Tunneling Protocol (PPTP) connection.	
	L2TP	The connection which uses a Layer2 Tunneling Protocol (L2TP) connection.	
Attain DNS Automatically	Choose to attain DNS automatically from your ISP.		
Set DNS Manually	Choose to specify your preferred DNS Server IP address. The DNS 2 and DNS 3 are optional. You can enter the IP addresses of the secondary and the third DNS Servers as alternatives of DNS 1.		
Clone MAC Address	You can input a MAC address here for using clone function.		
Enable uPNP	Check the box to enable the uPNP function. The uPNP devices can be automatically discovered by the uPNP service application on the LAN.		
Enable IGMP Proxy	Check the box to enable the IGMP Proxy function.		
Enable Ping Access on WAN	Check the box to enable Ping access from the Internet Network.		
Enable Web Server Access on WAN	Check the box to enable the web server access of the WNRT-320GS from the Internet network.		
Enable IPsec pass through on VPN connection	Check the box to enable IPsec pass through function on VPN connection.		
Enable PPTP pass through on VPN connection	Check the box to enable PPTP pass through function on VPN connection.		
Enable L2TP pass through on VPN connection	Check the box connection.	to enable L2TP pass through function on VPN	
Enable IPv6 pass through on VPN connection	Check the box to enable IPv6 pass through function on VPN connection.		

USB3G

Please select **USB3G** when you want to surf the Internet via 3G mobile Internet service. The WNRT-320GS will automatically obtain a public IP address from your mobile ISP. Please refer to the instructions below to configure the correct parameters.



Before installing the SIM card to WNRT-320GS, please configure all the parameters provided by your ISP correctly first, especially the PIN code, to prevent the lockup of the SIM card.

WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to USB3G, DHCP, PPPoE, static IP, PPTP or L2TP by click the item value of WAN Access type.

WAN Access Type:	USB3G
USB 3G Modem:	WCDMA 🗸
ISP:	×
User Name:	
Password:	
PIN:	
APN:	internet
Dial Number:	*99#
Connection Type:	Continuous Connect Disconnect
Idle Time:	5 (1-1000 minutes)
MTU Size:	1490 (1420-1490 bytes)

Figure 4-20 WAN Access Type -USB 3G

Object	Description
User Name	Enter the User Name provided by your ISP. This field is case-sensitive.
Password	Enter the Password provided by your ISP. This field is case-sensitive.
PIN	Enter the PIN code if your 3G dongle is protected by it.
APN	Enter the APN (Access Point Name) provided by your ISP.
Dial Number	Enter the Dial Number provided by your ISP.
Connection Type	Select the connection type Continuous, Connect on Demand or
	Manual from the drop-down menu. If selecting Manual, the user can

	click Connect button to make a connection.
Idle Time	It represents that the device will idle after the minutes you set. The time must be set between 1~1000 minutes. Default value of idle time is 5 minutes. This function will be available when the Connection Type is selected to Connect on Demand .
MTU Size	The default MTU (Maximum Transmission Unit) value is 1490 Bytes. It is not recommended that you change the default MTU Size unless required by your ISP.

There are already many kinds of 3G USB modem embedded in the router. The USB modem parameters will be set automatically if it is supported by the Router. If your USB modem inserted is supported by the Router, then in the **Management\Status** web page, it will be shown "**USB3G Connected**" in the **Attain IP Protocol** field. Otherwise, "Unknown Modem" will be shown instead. Please visit our website to get the latest USB modems compatibility list.

Access Point Status

This page shows the current status and some basic settings of the device.

System			
Uptime	0day:0h:43m:20s		
Firmware Version	v2.3		
Build Time	Tue Aug 30 23:01:25 CST 2011		
Wireless Configuration			
Mode	AP		
Band	2.4 GHz (B+G+N)		
SSID	default		
Channel Number	11		
incryption	WPA2 Mixed		
BSSID	03:03:03:03:03:03		
Associated Clients	U		
WAN Configuration			
Attain IP Protocol	USB3G Connected		
IP Address	115.83.166.56		
Subnet Mask	255.255.255.255		
Default Gateway	10.64.64.64		
MAC Address			



PPPoE

If your ISP provides a PPPoE connection, please select **PPPoE** option. The user has to setup the user name and password provided by your ISP. Please refer to the instructions below

WAN Interfac	e Setup	
This page is used to config port of your Access Point. PPPoE, static IP, PPTP o	jure the parame Here you may r L2TP by click	eters for Internet network which connects to the WAN change the access method to USB3G, DHCP, the item value of WAN Access type.
WAN Access Type:	PPPoE	✓
User Name:		
Password:		
Service Name:		
Connection Type:	Continue	ous 🗸 Connect Disconnect
Idle Time:	5	(1-1000 minutes)
MTU Size:	1452	(1360-1492 bytes)

Figure 4-22 WAN Access Type - PPPoE

Object	Description
User Name	Enter the User Name provided by your ISP. This field is case-sensitive.
Password	Enter the Password provided by your ISP. This field is case-sensitive.
Service Name	Enter the Internet service provider name in this field.
	Select the connection type Continuous, Connect on Demand or
Connection Type	Manual from the drop-down menu. If selecting Manual, the user can
	click Connect button to make a connection.
	It represents that the device will idle after the minutes you set. The
Idlo Timo	time must be set between 1~1000 minutes. Default value of idle time is
	5 minutes. This function will be available when the Connection Type is
	selected to Connect on Demand.
MTU Size	The default MTU (Maximum Transmission Unit) value is 1452 Bytes. It
	is not recommended that you change the default MTU Size unless
	required by your ISP.

Static IP

If your ISP provides a static IP address, please select **Static IP** and setup the related parameters manually. Please refer to the instructions below

WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to USB3G, DHCP, PPPoE, static IP, PPTP or L2TP by click the item value of WAN Access type.

WAN Access Type:	Static IP 🔽
IP Address:	172. 1. 1. 1
Subnet Mask:	255. 255. 255. 0
Default Gateway:	172. 1. 1. 254
MTU Size:	1500 (1400-1500 bytes)

Figure 4-23 WAN Access Type – Static IP

Object	Description
IP Address	Enter the IP address in dotted-decimal notation provided by your ISP.
Subnet Mask	Enter the subnet mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
Default Gateway	(Optional) Enter the gateway IP address in dotted-decimal notation provided by your ISP.
MTU Size	The normal MTU (Maximum Transmission Unit) value for most Ethernet networks is 1500 Bytes. It is not recommended that you change the default MTU Size unless required by your ISP.
DNS 1	Enter the DNS server IP address provided by your ISP, or you can specify your preferred DNS server IP address.
DNS 2 & DNS 3	(Optional) You can enter the IP address of another DNS server as a backup. DNS 2 and 3 servers will be used when the DNS 1 server fails.

Table 4-11

ΡΡΤΡ

If your ISP provides PPTP connection, please select **PPTP** option and enter the correct parameters.

Please refer to the instructions below

WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to USB3G, DHCP, PPPoE, static IP, PPTP or L2TP by click the item value of WAN Access type.

WAN Access Type:	PPTP 💌	
Server IP Address:	172. 1. 1. 1	
User Name:		
Password:		
Wan Type:	static 🖌	
IP Address:	172.1.1.2	
Subnet Mask:	255. 255. 255. 0	
Gateway:	0.0.0	
DNS1:	0.0.0	
DN S2 :	0.0.0	
Connection Type:	Continuous Connect Disconnect	
Idle Time:	5 (1-1000 minutes)	
MTU Size:	1460 (1400-1460 bytes)	
Request MPPE Encryption Request MPPC Compression		

Figure 4-24 WAN Access Type – PPTP

Object	Description		
	Enter the PPTP Server IP address in dotted-decimal notation provided		
Server IP Address	by your ISP.		
User Name	Enter the User Nar	ne provided by your ISP. This field is case-sensitive.	
Password	Enter the Password provided by your ISP. This field is case-sensitive.		
	Select the corresponding method to obtain an IP address from your		
wan Type	ISP.		
	IP Address	Enter the IP address in dotted-decimal notation	
		provided by your ISP.	
	Subnet Mask	Enter the subnet mask in dotted-decimal notation	
		provided by your ISP.	
	Gateway	Enter the gateway IP address in dotted-decimal	
		notation provided by your ISP.	

	DNS1	Enter the DNS server IP address provided by your
		ISP, or you can specify your preferred DNS server
		IP address.
	DNS2	You can enter the IP address of another DNS
		server as a backup. DNS 2 server will be used
		when the DNS 1 server fails.
	Select the connection type Continuous, Connect on Demand or	
Connection Type	Manual from the drop-down menu. If selecting Manual, the user can	
	click Connect button to make a connection.	
	It represents that	the device will idle after the minutes you set. The
Idlo Timo	time must be set between 1~1000 minutes. Default value of idle time is	
	5 minutes. This function will be available when the Connection Type is	
	selected to Connect on Demand.	
MTU Size	The default MTU (Maximum Transmission Unit) value is 1460 Bytes. It	
	is not recommended that you change the default MTU Size unless	
	required by your IS	SP.

L2TP

If your ISP provides L2TP connection, please select **L2TP** option and enter the correct parameters. Please refer to the instructions below

WAN Interface Setup

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you may change the access method to USB3G, DHCP, PPPoE, static IP, PPTP or L2TP by click the item value of WAN Access type.

WAN Access Type:	L2TP 🗸
Server IP Address:	172. 1. 1. 1
User Name:	
Password:	
Wan Type:	static 🗸
IP Address:	172.1.1.2
Subnet Mask:	255. 255. 255. 0
Gateway:	0.0.0
DNS1:	0.0.0
DN S2 :	0.0.0
Connection Type:	Continuous Connect Disconnect
Idle Time:	5 (1-1000 minutes)
MTU Size:	1460 (1400-1460 bytes)

Figure 4-25 WAN Access Type – L2TP

Object	Description			
Server IP Address	Enter the L2TP Server IP address in dotted-decimal notation provided by your ISP.			
User Name	Enter the User N	ame provided by your ISP. This field is case-sensitive.		
Password	Enter the Passw	ord provided by your ISP. This field is case-sensitive.		
	Select the corres	ponding method to obtain an IP address from your ISP.		
	IP Address	Enter the IP address in dotted-decimal notation provided by your ISP.		
	Subnet MaskEnter the subnet mask in dotted-decimal notation provided by your ISP.GatewayEnter the gateway IP address in dotted-decimal notation provided by your ISP.			
Wan Type				
	DNS1	Enter the DNS server IP address provided by your ISP, or you can specify your preferred DNS server IP address.		
	DNS2	You can enter the IP address of another DNS server as a backup. DNS 2 server will be used when the DNS 1 server fails.		
Connection Type	Select the connection type Continuous , Connect on Demand or Manual from the drop-down menu. If selecting Manual , the user can click Connect button to make a connection.			
Idle Time	It represents that the device will idle after the minutes you set. The time must be set between 1~1000 minutes. Default value of idle time is 5 minutes. This function will be available when the Connection Type is selected to Connect on Demand .			
MTU Size	The default MTU (Maximum Transmission Unit) value is 1460 Bytes. It is not recommended that you change the default MTU Size unless required by your ISP.			

Table 4-13

DHCP Client

If your ISP provides the DHCP service, please select **DHCP Client** type, and the WNRT-320GS will automatically obtain IP parameters from your ISP. Please refer to the instructions below

WAN Interfac	e Setup
This page is used to confi port of your Access Point PPPoE, static IP, PPTP o	gure the parameters for Internet network which connects to the WAN Here you may change the access method to USB3G, DHCP, or L2TP by click the item value of WAN Access type.
WAN Access Type:	DHCP Client 🗸
Host Name:	Router
MTU Size:	1492 (1400-1492 bytes)

Figure 4-26 WAN Access Type – DHCP Client

Object	Description		
Host Name	This option specifies the Host Name of the Router.		
MTU Size	The default MTU (Maximum Transmission Unit) value is 1492 Bytes. It is not recommended that you change the default MTU Size unless required by your ISP.		

Table 4-14

4.6. Firewall

The Firewall menu contains submenus of the settings about firewall and access filtering. Please refer to the following sections for the details.



Figure 4-27

4.6.1. Port Filtering

Choose menu "Firewall \rightarrow Port Filtering", and you can configure which port range and protocol to be restricted. After the configuration, please click the "Apply Changes" button to save the settings.

Port Filtering			
Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.			
Enable Port Filtering			
Port Range:	Protocol: Both 🗸 Co	mment:	
Apply Changes Reset			
Current Filter Table:			
Port Range	Protocol	Comment	Select
100-200	TCP+UDP	test	
Delete Selected Delete All Reset			

Figure 4-28 Port Filtering

Object	Description		
Enable Port Filtering	Enable port filtering		
Port Range	Add ports you want to control		
Protocol	Select the port number protocol type (TCP, UDP or both). If you are		
	unsure, then leave it to the default both protocol		
Comment	The description of this setting		

Check the "Select" box of which rule you want to delete, then click the "Delete Selected" button to delete it.

4.6.2. IP Filtering

Choose menu "Firewall \rightarrow IP Filtering", and you can configure which IP address and protocol to be restricted. After the configuration, please click the "Apply Changes" button to save the settings.

IP Filtering			
Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.			
Enable IP Filtering			
Loal IP Address:	Protocol: Both 🗸	Comment:	
Apply Changes Reset UDP			
Current Filter Table:			
Local IP Address	Protocol	Comment	Select
192.168.1.100	TCP+UDP	test	
Delete Selected Delete All Reset			

Figure 4-29 IP Filtering

Object	Description		
Enable IP Filtering	Enable IP filtering		
Local IP Address	Add LAN IP address you want to control		
Protocol	Select the port number protocol type (TCP, UDP or both). If you are		
	unsure, then leave it to the default both protocol		
Comment	The description of this setting		

Check the "Select" box of which rule you want to delete, and then click the "Delete Selected" button to delete it.

4.6.3. MAC Filtering

Choose menu "Firewall \rightarrow MAC Filtering", and you can configure which computer of the specified MAC address to be restricted. After the configuration, please click the "Apply Changes" button to save the settings.

MAC Filtering			
Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.			
✓ Enable MAC Filtering			
MAC Address: Comment:			
Apply Changes Reset			
MAC Address	Comment	Select	
01:02:03:04:05:06	test		
Delete Selected Delete All	Reset		

Figure 4-30 MAC Filtering

Object	Description		
Enable MAC Filtering	Enable MAC filtering		
MAC Address	Add MAC address you want to control		
Comment	The description of this setting		

Check the "Select" box of which rule you want to delete, and then click the "Delete Selected" button to delete it.

4.6.4. Port Forwarding

Choose menu "Firewall \rightarrow Port Forwarding", and you can configure to re-direct a particular range of service port numbers from the Internet network to a particular LAN IP address. It helps users to host some servers behind the firewall. After the configuration, please click the "Apply Changes" button to save the settings.

Port Forwarding				
Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your Gateway's NAT firewall.				
Enable Port Forwa	rding			
IP Address:	Protocol: Both	Y Port Range:	- Comment	:
Apply Changes Reset UDP				
Current Port Forwarding Table:				
Local IP Address	Protocol	Port Range	Comment	Select
192.168.1.100	TCP+UDP	100-101	test	
Delete Selected	Delete All	Reset		

Figure 4-31 Port Forwarding

Object	Description
Enable Port Forwarding	Enable Port Forwarding function
IP Address	Add LAN IP address of specified host or server on the private local
II Address	network
Drotocol	Select the port number protocol type (TCP, UDP or both). If you are
Protocol	unsure, then leave it to the default both protocol
	Add ports you want to control. For TCP and UDP Services, enter the
Dort Dongo	beginning of the range of port numbers used by the service. If the
Port Kange	service uses a single port number, enter it in both the start and finish
	fields.
Comment	The description of this setting

Check the "Select" box of which rule you want to delete, and then click the "Delete Selected" button to delete it.

4.6.5. URL Filtering

Choose menu "Firewall \rightarrow URL Filtering", and you can configure which URL addresses to be blocked. After the configuration, please click the "Apply Changes" button to save the settings.

URL Filtering			
URL filter is used to deny LAN users from accessing the internet. Block those URLs which contain keywords listed below.			
✓ Enable URL Filtering			
URL Address:			
Apply Changes Reset			
Current Filter Table:			
URL Address	Select		
google.com			
Delete Selected Delete All Reset			



Check the "Select" box of which rule you want to delete, and then click the "Delete Selected" button to delete it.

4.6.6. DMZ

This page allows you to set a **De-militarized Zone (DMZ)** to separate internal network and Internet.

Choose menu "**Firewall** \rightarrow **DMZ**", and you can configure the private IP address of DMZ. The DMZ feature allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or video conferencing. After the configuration, please click the "Apply Changes" button to save the settings.

DMZ				
A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.				
Enable DMZ				
DMZ Host IP Address:				
Apply Changes Reset				

Figure 4-33 DMZ

Object	Description	
	Check the box to enable DMZ function. If the DMZ Host Function is	
Enchlo DM7	enabled, it means that you set up DMZ host at a particular computer to	
	be exposed to the Internet so that some applications/software,	
	especially Internet / online game can have two way connections.	
	Enter the IP address of a particular host in your LAN which will receive	
DMZ Host IP Address	all the packets originally going to the WAN port / Public IP address	
	above.	



4.7. QoS

The QoS (Quality of Service) function will improve the network performance of the specified computer by ensuring that its network traffic is prioritized over others'. After the configuration, please click the "Apply Changes" button to save the settings.

QoS				
Entries in this table improve your online gaming experience by ensuring that your game traffic is prioritized over other network traffic, such as FTP or Web.				
Enable QoS Automatic Unlink Speed				
Manual Uplink Speed (Kbps): 512				
Automatic Downlink Speed				
Manual Downlink Speed (Kbps): 012				
QoS Rule Setting:				
Address Type:				
Local IP Address:				
MAC Address:				
Mode:	Guaranteed minimum bandwidth 😒			
Uplink Bandwidth (Kbps):				
Downlink Bandwidth (Kbps):				
Comment:				
Apply Changes Reset				
Current QoS Rules Table:	Unlink Downlink			
Local IP Address MAC Address	Mode Bandwidth Bandwidth Comment Select			
Delete Selected Delete All	Reset			

Figure 4-34 QoS

Object	Description		
Enable QoS	Check the box to enable the QoS function.		
Automatic Uplink Speed	Check the box to adjust the uplink speed automatically by the WNRT-320GS. Or enter the uplink data rate manually in the field below.		
Automatic Downlink Speed	Check the box to adjust the downlink speed automatically by the WNRT-320GS. Or enter the downlink data rate manually in the field below.		

QoS Rule Setting	To set the priority rule, you can appoint the computer by IP address
	or MAC address, and enter it in the correct field. Select minimum or
	maximum bandwidth, and then fill the uplink and downlink data
	rate into the field.

Table 4-20

4.8. Route Setup

The page is used to setup dynamic routing protocol or edit static route entry. After the configuration, please click the "Apply Changes" button to save the settings.

Routing Setup					
ited ing ootup					
This page is used to setup dy	namic routing prof	cocol or edit static route	e entry.		
Enable Dynamic Poute					
NAT:	Enabled	ODisabled			
Transmit	Disabled				
Receive:	Disabled Disabled				
Apply Changes Re:	set				
Enable Static Route					
IP Address:					
Subnet Mask:					
Gateway:					
Metric:					
Interface:	LAN 🗸				
Apply Changes Re:	set Show I	Route Table			
Static Route Table:					
Destination IP Address	Netmask	Gateway	Metric	Interface	Select
Delete Selected	Delete All	Reset			
	Figure 4-3	5 Routing Setup			

4.9. Management

The Management menu contains submenus of the general settings of the WNRT-320GS. Please refer to the following sections for the details.



Figure 4-36

4.9.1. Status

Choose menu "Management \rightarrow Status" to show the current status and some basic settings of the WNRT-320GS.

Access Point Status

This page shows the current status and some basic settings of the device.

System	
Uptime	0day:0h:3m:32s
Firmware Version	v2.3
Build Time	Thu May 24 17:10:22 CST 2011
Wireless Configuration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	default
Channel Number	6
Encryption	Disabled
BSSID	00:30:4f:11:22:33
Associated Clients	1
WAN Configuration	
Attain IP Protocol	Getting IP from DHCP server
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Default Gateway	0.0.0.0
MAC Address	00:30:4f:44:55:66

Figure 4-37 Status

4.9.2. Statistics

Choose menu "Management → Statistics" to show the packet counters for transmission and reception regarding to wireless and Ethernet network.

Statistics

This page shows the packet counters for transmission and reception regarding to wireless and Ethernet networks.

	Sent Packets	2812
WITEIESS LAW	Received Packets	8226
Ethernet WAN	Sent Packets	150
	Received Packets	0

Refresh

Figure 4-38 Statistics

ltem	Description
Wireless LAN	It shows the statistic count of sent packets on the wireless LAN interface.
Sent Packets	
Wireless LAN	It shows the statistic count of received packets on the wireless LAN interface.
Received Packets	
Ethernet WAN	It shows the statistic count of sent packets on the Ethernet WAN interface.
Sent Packets	
Ethernet WAN	It shows the statistic count of received packets on the Ethernet WAN
Received Packets	interface.
Refresh	Click the refresh the statistic counters on the screen.



4.9.3. DDNS

Choose menu "**Management** \rightarrow **DDNS**" to configure the settings about Dynamic DNS. Dynamic DNS is a kind of service that provides users with a valid, unchanging internet domain name (an URL) to go with that (possibly ever changing) IP address. After the configuration, please click the "Apply Changes" button to save the settings.

Dynamic DNS Setting

Dynamic DNS is a service, that provides you with a valid, unchanging, internet domain name (an URL) to go with that (possibly everchanging) IP-address.

_			
Enable DDNS			
Service Provider :	DynDNS 🗸		
Domain Name :	DynDNS TZO IS. org		
User Name/Email:			
Password/Key:			
Note: For TZO, you can have a 30 days free trial <u>here</u> or manage your TZO account in <u>control panel</u> For DynDNS, you can create your DynDNS account <u>here</u> Apply Change Reset			

Figure 4-39 DDNS

Object	Description
Enable DDNS	Check the box to enable the Dynamic DNS function.
Service Provider	Select the DDNS service provider.
Domain Name	Enter the domain name you have registered from the DDNS service provider.
User Name/Email	Enter the user name you have registered from the DDNS service provider.
Password/Key	Enter the password you have registered from the DDNS service provider.

Table 4-22

4.9.4. Time Zone Setting

Choose menu "Management \rightarrow Time Zone Setting" to configure the system time. You can also maintain the system time by synchronizing with a public time server over the Internet. After the configuration, please click the "Apply Changes" button to save the settings.

Time Zone Setting				
You can maintain the sy	stem time by synchronizing with a public time server over the Internet.			
Current Time :	Yr 2011 Mon 5 Day 19 Hr 23 Mn 48 Sec 29 Copy Computer Time			
Time Zone Select :	(GMT+08:00)Taipei	*		
Enable NTP client update Automatically Adjust Daylight Saying				
NTP server :	(○ 192.5.41.41 - North America			
Apply Change	(Manual IP Setting) Reset Refresh			

Figure 4-40 Time Zone Setting

Object	Description	
Time Zone Select	Input current time manually.	
Time Zone Select	Select the time zone of the country you are currently in. The router will	
Time Zone Select	set its time based on your selection.	
Enable NTP client	Check to enable NTP update. Once this function is enabled, Router will	
update	automatically update current time from NTP server.	
NTP Server	User may select prefer NTP sever or input address of NTP server	
	manually.	



4.9.5. Denial of Service

A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

Choose menu "**Management** \rightarrow **Denial of Service**" to configure the settings of DoS attack prevention. After the configuration, please click the "Apply Changes" button to save the settings.

Denial	of Service	

A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

Enable DoS Prevention		-
Whole System Flood: SYN	0	Packets/Second
Whole System Flood: FIN	0	Packets/Second
Whole System Flood: UDP	0	Packets/Second
Whole System Flood: ICMP	0	Packets/Second
Per-Source IP Flood: SYN	0	Packets/Second
Per-Source IP Flood: FIN	0	Packets/Second
Per-Source IP Flood: UDP	0	Packets/Second
Per-Source IP Flood: ICMP	0	Packets/Second
TCP/UDP PortScan	Low	Sensitivity
ICMP Smurf		
IP Land		
IP Spoof		
IP TearDrop		
PingOfDeath		
TCP Scan		
TCP SynWithData		
UDP Bomb		
UDP EchoChargen		
Select ALL Clear ALL		
Enable Source IP Blocking	0 E	Block time (sec)
Apply Changes		

Figure 4-41 Denial of Service

Object	Description		
Enable DoS	Check to enable DoS function. User may set other related configurations		
Prevention	about DoS below		

Table 4-24

4.9.6. Log

Choose menu "**Management** \rightarrow **Log**" to configure the settings of system log. You can check the box of the items you want to record it in the log. After the configuration, please click the "Apply Changes"

button to save the settings.

System Lo	og			
This page can be us	ed to set rem	note log server and show the system	ı log.	
Enable Log				
system all		wireless	DoS	
Enable Ren	note Log	Log Server IP Address:		
—	5			
Apply Changes				
May 20 00:08:16 May 20 00:08:16	usb usbl: usb usbl:	uevent usb probe device		^
May 20 00:08:16	usb usb1:	configuration #1 chosen from	1 choice	
May 20 00:08:16	usb usb1:	adding 1-0:1.0 (config #1, in	terface O)	
May 20 00:08:16	usb 1-0:1.	0: uevent		
May 20 00:08:16	hub 1-0:1.	0: usb_probe_interface		
May 20 00:08:16	hub 1-0:1.	0: usb_probe_interface - got :	id	
May 20 00:08:16	hub 1-0:1.	0: USB hub found		
May 20 00:08:16	hub 1-0:1.	0: 1 port detected		
May 20 00:08:16	hub 1-0:1.	0: standalone hub		
May 20 00:08:16	hub 1-0:1.	0: individual port power swit	ching	
May 20 00:08:16	hub 1-0:1.	0: individual port over-curre	nt protection	
May 20 00:08:16	hub 1-0:1.	0: power on to power good tim	e: 20ms	
May 20 00:08:16	hub 1-0:1.	0: local power source is good		*
Refresh C	lear			

Figure 4-42 System Log

Object	Description		
Enable Log	Check to enable log function.		
System all/Des	Select which log you want to check. Related information will be shown at		
System all/Dos	below.		

Table 4-25

4.9.7. Upgrade Firmware

Choose menu "**Management** → **Upgrade Firmware**" to upgrade the firmware of the WNRT-320GS. Select the new firmware file downloaded from the PLANET website, and then click "Upload" button to upgrade it.

ess Point firmware to new version. Please note, do not power off the nay crash the system.
v2.3
Browse

Figure 4-43 Upgrade Firmware

Object	Description		
Select File	Browse and select file you want to upgrade and press Upload to perform		
	upgrade.		
	Please wait till on screen shows related information after upgrade		
	finished.		

Table 4-26

4.9.8. Save/Reload Settings

Choose menu "**Management** → **Save/Reload Settings**" to backup or reset the configuration of the WNRT-320GS.

Save/Reload Setti	ngs	
This page allows you save current previously. Besides, you could res	settings to a file or rele et the current configur	oad the settings from the file which was saved ation to factory default.
Save Settings to File:	Save	
Load Settings from File:		Browse Upload
Reset Settings to Default:	Reset	
Copyright 2012 Planet Technology corporatio	n, All rights reserved.	

Figure 4-44 Save/Reload Settings

Object	Description			
Save Settings to File	Click the "Save" button to backup the configuration of the WNRT-320GS. And then save the "config.dat" in your computer.			
Load Settings from File	Select the configuration file of the WNRT-320GS, and then click the "Upload" button to reload the configuration back into the WNRT-320GS.			

Reset Settings to	Click the "Reset" button to reset all settings of the WNRT-320GS to
Default	factory default.

```
Table 4-27
```

4.9.9. Password

Choose menu "**Management** → **Password**" to change the user name and password which is inputted to access the web UI of the WNRT-320GS.

Password Setup

This page is used to set the account to access the web server of Access Point. Empty user name and password will disable the protection.

User Name:		
New Password:		
Confirmed Password:		
Apply Changes	leset	

Figure 4-45 Password Setup

Object	Description
User Name	Enter user name.
New Password	Input the password for this user.
Confirmed Password	Confirm the password again.

Table 4-28

4.10. Logout

Click "Logout" to log out the web UI of the WNRT-320GS. And then click the "Apply Change" button for sure.



Chapter 5. Quick Connection to a Wireless Network

5.1. Windows XP (Wireless Zero Configuration)

Step 1: Right-Click on the wireless network icon displayed in the system tray



Figure 5-1

Step 2: Select [View Available Wireless Networks]

Step 3: Highlight and select the wireless network (SSID) to connect

- (1) Select SSID [default]
- (2) Click the [Connect] button



Figure 5-2

Step 4: Enter the encryption key of the Wireless Router

- (1) The Wireless Network Connection box will appear
- (2) Enter the encryption key that configured in section 4.4.3
- (3) Click the [Connect] button

Wireless Network Connection		×
The network 'default' require: network key helps prevent ur	s a network key (also called a WEP key or WPA key). A nknown intruders from connecting to this network.	
Type the key, and then click (Connect.	
Network <u>k</u> ey:	•••••	
Confirm network key:	•••••	
	Connect Cancel	

Figure 5-3

Step 5: Check if "Connected" is displayed



Figure 5-4



Some laptops are equipped with an "Wi-Fi ON/OFF" hardware switch for the internal wireless LAN. Make sure the it is switched to "ON" position.

5.2. Windows 7 (WLAN AutoConfig)

WLAN AutoConfig service is built-in in Windows 7 and can be used to detect and connect to wireless network. This built-in wireless network connection tool is similar to wireless zero configuration tool in Windows XP.

Step 1: Right-Click on the network icon displayed in the system tray



Figure 5-5

Step 2: Highlight and select the wireless network (SSID) to connect

- (1) Select SSID [default]
- (2) Click the [**Connect**] button



Figure 5-6

Not connected 😽	^	
Connections are available		
Dial-up and VPN		
Office VPN 🗙		
Wireless Network	11	
default		
Connect automatically		
line extendents		
In. matter		
comese all		
an	Ŧ	
Open Network and Sharing Center		

Figure 5-7



If you want to connect to this Wireless Router in the future, please check the box of **[Connect automatically**].

Step 3: Enter the encryption key of the Wireless Router

- (1) The [Connect to a Network] box will appear
- (2) Enter the encryption key that configured in section 4.4.3
- (3) Click the [OK] button

Connect to a Network	
Type the network security key	
Security key:	
Hide characters	
You can also connect by pushing the button on the router.	
OK Cancel]











Figure 5-10

5.3. Mac OS X

 Step 1: Right-Click on the network icon displayed in the system tray

 The AirPort Network Connection menu will appear


Figure 5-11

Step 2: Highlight and select the wireless network (SSID) to connect

- (1) Select and SSID [default]
- (2) Double-click on the selected SSID

the second s	• • •	* 🤶	🔹 🔳 💽 🤉 🗘	2
	AirPort: On Turn AirPort Off		No. No.	
	No network selected	•		
1	default	ि <u>२</u> २ ०		
and the second	Accession and accession	(i- (i-		
	STATE OF STREET	• ((:- ((:-		
	torige the second s			
	Join Other Network	₽		
	Create Network Open Network Preferences			

Figure 5-12

Step 3: Enter the encryption key of the Wireless Router

- (4) Enter the encryption key that configured in section 4.4.3
- (1) Click the [OK] button

(î,	The network "default" requires a WPA password.
	Password:
	Show password
	Renember tins network

Figure 5-13



If you want to connect to this Wireless Router in the future, please check [Remember this network].

Step 4: Check if the AirPort is connect to the selected wireless network.

If "Yes", then there will be a "check" symbol in front of the SSID.

	* 6	•			Q,
AirPort: On Turn AirPort Off					
√default	6 1		1		
and the second	A 🔅				
1 COMPANY	((;-				
	6 🛜				
	1				
1000-00000	(((;	20			
10.000	6 🔶				
and the second se	ê 🔶	100		- Colden	
1982	6				
juni filiadi	A 🔅	122			
and Branch	A 🔅	1.2			
1000	9				
Join Other Network Create Network Open Network Preferences					

Figure 5-14

There is another way to configure the MAC OS X Wireless settings:

Step 1: Click and open the [System Preferences] by going to Apple > System Preference or Applications



Figure 5-15

0 0		System I	Preferences			
Show All					٩	
Personal						
New		Ŧ		101		
Appearance Desktop &	Dock	Exposé &	Language &	Security	Spotlight	
Screen Saver		Spaces	lext			
Hardware	~				denot	
CDs & DVDs Displays	Energy	Keyboard	Mouse	Trackpad	Print & Fax	Sound
Internet & Wireless	Javer					
	0	-				
	8	۲				
MobileMe Network	Bluetooth	Sharing				
System	·					
	*					
	Barantal	E oftware	Encoch	Startup Dick	Time Machine	Universal
Accounts Date & Time	Controls	Update	speech	Startup Disk	Time Machine	Access
Other						
MacFUSE						

Step 2: Open Network Preference by clicking on the [Network] icon

Figure 5-16

Step 3: Check Wi-Fi setting and select the available wireless network

- (1) Choose the **AirPort** on the left-menu (make sure it is ON)
- (2) Select Network Name [default] here

If this is the first time to connect to the Wireless Router, it should shows "Not network selected".

	14				
	Location:	Automatic		\$	
USB Ethernet	600	Status:	On	(Turn AirPor	t Off
802.11dapter Not Connected	600		AirPort is turned of a network.	on but is not connect	ted to
AirPort On		Network Name	/ No network se	elected	
Home VPN					<u>ج</u> (
			default		<u> </u>
			Can Departure		A 🔶
					9
			Join Other Net Create Networ	twork rk	
- \$-		Show AirPort statu	ıs in menu bar	Advance	ed) (

Figure 5-17

5.4. iPhone / iPod Touch / iPad

Step 1: Tap the [Settings] icon displayed in the home screen



Figure 5-18

Step 2: Check Wi-Fi setting and select the available wireless network

- (3) Tap [General] \ [Network]
- (4) Tap [Wi-Fi]

If this is the first time to connect to the Wireless Router, it should appears "Not Connected".

iPad	10:35 AM	मे 100% 🚍
Settings	General	
Airplane Mode OFF		
SWI-FI Not Connected	About	>
Notifications On	Usage	>
Carrier	Sounds	>
🕎 Cellular Data		
Brightness & Wallpaper	Network	>
Picture Frame	Bluetooth	Off >
General	Location Services C)n >
Mail, Contacts, Calendars	Spotlight Search	>
🧱 Safari		

Figure 5-19

iPad	10:35 AM 🚇 100% 🖩
Settings	General Network
Airplane Mode OFF	
SWI-FI Not Connected	Not Connected >
Notifications On	Wi-Fi Not Connected >
Carrier	
Cellular Data	
Brightness & Wallpaper	
Picture Frame	
General	
Mail, Contacts, Calendars	
Mafari Safari	

Figure 5-20

Step 3: Tap the target wireless network (SSID) in "Choose a Network..."

- (1) Turn on Wi-Fi by tapping "Wi-Fi"
- (2) Select SSID [default]

iPad	11:23 PM	@ 76% ■
Settings	Network Wi-Fi Networks	
Airplane Mode OFF		
Wi-Fi Not Connected	Wi-Fi	ON
Notifications On	Choose a Network	
Location Services On	default	₽ 🗢 📀
🕎 Cellular Data	Other	>
🙀 Brightness & Wallpaper	Ask to Join Networks	ON
Picture Frame	Known networks will be joined automatica	illy. If no
Seneral	known networks are available, you will be before joining a new network.	e asked



Step 4: Enter the encryption key of the Wireless Router

- (1) The password input screen will be displayed
- (2) Enter the encryption key that configured in section 4.4.3
- (3) Tap the [Join] button

iPad 奈		11:20 PM		(ê 76% ■
Settings		Network	Wi-Fi Netwo	rks	
Airplane Mode	OFF				
🛜 Wi-Fi	CA8-4	Wi-Fi		ON	
Notifications	On	Choose a Ne	twork		
Location	5		ofoult"	₽ 	
Cellular Cancel	Er	Enter Password for d	d	⊜	
Brightne	_		-	_	>
Passwo	ord ••••	•••••			
				y. If n asked	0
Safarı					
iPod					
Video				_	
Photos				_	
Notes					
Store					
Apps					
1 2 3	4	5 6	7 8	9 0	
- / :	;	()	\$ &	@	Join
#+= undo	·	, ?!	,	"	#+=
ABC				ABC	iiii ▼

Figure 5-22

Step 5: Check if the iDevice is connected to the selected wireless network.If "Yes", then there will be a "check" symbol in front of the SSID.

iPad	11:25 PM	5% 🛋
Settings	Network Wi-Fi Networks	
Airplane Mode OFF		
SWI-Fi default	Wi-Fi ON	J
Notifications On	Choose a Network	_
Location Services On	✓ default 🔒 🗢 📀	
🛞 Cellular Data	Other >	J
🙀 Brightness & Wallpaper	Ask to Join Networks ON	
Picture Frame	Known networks will be joined automatically. If no known networks are available, you will be asked	
General	before joining a new network.	

Figure 5-23

Appendix

Malfunction	Solution
The WNRT-320GS is not	Please check the connection of power cord and network
responding to me when I want	cable of the WNRT-320GS. All cords and cables should be
to access it via web browser	correctly and firmly inserted to the device.
	If all LEDs on the WNRT-320GS are off, please check the
	status of power adapter, and make sure it is correctly
	powered.
	You must configure your PC as the same IP address
	section with the WNRT-320GS.
	Are you using MAC or IP address filter? Try to connect the
	WNRT-320GS by another computer and see if it works; if
	not, please restore the WNRT-320GS to factory default
	settings (Press "reset" button for over 10 seconds).
	Shift the hardware switch to Router Mode, and set your
	computer to obtain an IP address automatically (DHCP)
	and see if your computer can get an IP address
	If you just did firmware ungrade and this hannens, contact
	the dealer of purchase for help
	a If all above solutions den't work, contact the dealer of
	a. If all above solutions don't work, contact the dealer of
Linchia to got connected with	a Go to "Management → Status" submenu and check the
the Internet	WAN configuration status.
	Please be patient, sometime Internet is just that slow.
	b. If you connect your computer to the Internet directly
	before, try to do that again. And check if you can get
	connected to the Internet with your computer directly
	via the device provided by your local Internet service
	provider.
	c. Check the WAN access type (Static IP / Dynamic IP /
	other parameters provided by your local ISP again
	d. Call your Internet service provider and check if there is
	something wrong with their service.
	e. If you just can't connect to one or more website, but you
	can still use other internet services, please check URL
	filter in the web UI.
	f. Reset the WNRT-320GS to the factory default settings
	and try again later.
	 Reset the device provided by your internet service provider as well.

	h. Try to use IP address instead of hostname. If you can
	access a remote server by an IP address but not by a
	hostname, please check the DNS setting.
Unable to be found by the	a. Check if the "Broadcast SSID" is disabled.
wireless clients	b. Are you too far from the WNRT-320GS? Try to get closer.
	c. Please remember that you have to enter SSID to your
	wireless client device manually, if SSID broadcast is
	disabled.
File download is very slow or breaks frequently	a. Are you using QoS function? Please disable it and try again.
	Please be patient, sometime Internet is just that slow.
	b. Reset the WNRT-320GS to the factory default settings
	and see if it is better after that.
	c. Iry to know what other computers are doing in the
	same local area network. If someone is transferring big
	d If this never happens before, call you Internet service.
	u. In this never happens before, can you internet service
	network.
Unable to login the web	a. Make sure you are connecting to the correct IP address
management UI: password is	b. Password is case-sensitive. Make sure the "Caps Lock"
wrong	light is not illuminated.
	c. If you really forget the password, please do hardware
	reset.
The device is getting hot.	a. This is not a malfunction if you can keep your hand on
	the case of the WNRT-320GS.
	b. If you smell something wrong or see the smoke coming
	out from the WNRT-320GS or power adapter, please
	disconnect the device and power adapter from power
	(make sure it's safe before you're doing this!), and call
	your dealer of purchase for help.
The date and time of all event	a. Adjust the internal clock of the WNRT-320GS.
logs are wrong	



EC Declaration of Conformity

For the following equipment:

*Type of Product:	3G / 802.11n Wireless Portable Router with 3G HSUPA
*Model Number:	WNRT-320GS

Planet Technology Corp.
10F., No.96, Minquan Rd., Xindian Dist.,
New Taipei City 231, Taiwan (R.O.C.)

is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to 1999/5/EC R&TTE. For the evaluation regarding the R&TTE the following standards were applied:

EN 300 328 V1.7.1	(2006-10)
EN 301 489-17 V2.1.1	(2009-05)
EN 301 489-1 V1.8.1	(2008-04)
EN 62311	(2008)
EN 60950-1	(2006 + A11:2009 + A1:2010)

Responsible for marking this declaration if the:

Manufacturer Authorized representative established within the EU

Authorized representative established within the EU (if applicable):

Company Name: Planet Technology Corp.

Company Address: 10F., No.96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)

Person responsible for making this declaration

Name, Surname Kent Kang

Position / Title : <u>Product Manager</u>

<u>Taiwan</u> Place **30st March, 2012** Date

Legal Signature

PLANET TECHNOLOGY CORPORATION

EC Declaration of Conformity

	-		
English	Hereby, PLANET Technology Corporation , declares that this 3G / 802.11n Wireless Portable Router with 3G HSUPA is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.	Lietuviškai	Šiuo PLANET Technology Corporation,, skelbia, kad 3G / 802.11n Wireless Portable Router with 3G HSUPA tenkina visus svarbiausius 1999/5/EC direktyvos reikalavimus ir kitas svarbias nuostatas.
Česky	Společnost PLANET Technology Corporation, tímto prohlašuje, že tato 3G / 802.11n Wireless Portable Router with 3G HSUPA splňuje základní požadavky a další příslušná ustanovení směrnice 1999/5/EC.	Magyar	A gyártó PLANET Technology Corporation , kijelenti, hogy ez a 3G / 802.11n Wireless Portable Router with 3G HSUPA megfelel az 1999/5/EK irányelv alapkövetelményeinek és a kapcsolódó rendelkezéseknek.
Dansk	PLANET Technology Corporation, erklærer herved, at følgende udstyr 3G / 802.11n Wireless Portable Router with 3G HSUPA overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF	Malti	Hawnhekk, PLANET Technology Corporation , jiddikjara li dan 3G / 802.11n Wireless Portable Router with 3G HSUPA jikkonforma mal-ħtiģijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC
Deutsch	Hiermit erklärt PLANET Technology Corporation , dass sich dieses Gerät 3G / 802.11n Wireless Portable Router with 3G HSUPA in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMWi)	Nederlands	Hierbij verklaart , PLANET Technology orporation, dat 3G / 802.11n Wireless Portable Router with 3G HSUPA in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG
Eesti keeles	Käesolevaga kinnitab PLANET Technology Corporation, et see 3G / 802.11n Wireless Portable Router with 3G HSUPA vastab Euroopa Nõukogu direktiivi 1999/5/EC põhinõuetele ja muudele olulistele tingimustele.	Polski	Niniejszym firma PLANET Technology Corporation, oświadcza, że 3G / 802.11n Wireless Portable Router with 3G HSUPA spełnia wszystkie istotne wymogi i klauzule zawarte w dokumencie "Directive 1999/5/EC".
Ελληνικά	METHNΠΑΡΟΥΣΑPLANETTechnologyCorporation, $\Delta H \land \Omega N E I$ OTIAYTO3G/802.11nWirelessPortableRouterwith3GHSUPAΣΥΜΜΟΡΦΩΝΕΤΑΙΠΡΟΣΤΙΣΟΥΣΙΩΔΕΙΣΑΠΑΙΤΗΣΕΙΣΚΑΙ ΤΙΣ ΛΟΙΠΕΣΣΧΕΤΙΚΕΣΔΙΑΤΑΞΕΙΣΤΗΣΟΔΗΓΙΑΣ1999/5/ΕΚ	Português	PLANET Technology Corporation, declara que este 3G / 802.11n Wireless Portable Router with 3G HSUPA está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Español	Por medio de la presente, PLANET Technology Corporation , declara que 3G / 802.11n Wireless Portable Router with 3G HSUPA cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE	Slovensky	Výrobca PLANET Technology Corporation, týmto deklaruje, že táto 3G / 802.11n Wireless Portable Router with 3G HSUPA je v súlade so základnými požiadavkami a ďalšími relevantnými predpismi smernice 1999/5/EC.
Français	Par la présente, PLANET Technology Corporation , déclare que les appareils du 3G / 802.11n Wireless Portable Router with 3G HSUPA sont conformes aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE	Slovensko	PLANET Technology Corporation, s tem potrjuje, da je ta 3G / 802.11n Wireless Portable Router with 3G HSUPA skladen/a z osnovnimi zahtevami in ustreznimi določili Direktive 1999/5/EC.
Italiano	Con la presente , PLANET Technology Corporation , dichiara che questo 3G / 802.11n Wireless Portable Router with 3G HSUPA è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva. 1999/5/CE.	Suomi	PLANET Technology Corporation, vakuuttaa täten että 3G / 802.11n Wireless Portable Router with 3G HSUPA tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Latviski	Ar šo PLANET Technology Corporation , apliecina, ka šī 3G / 802.11n Wireless Portable Router with 3G HSUPA atbilst Direktīvas 1999/5/EK pamatprasībām un citiem atbilstošiem noteikumiem.	Svenska	Härmed intygar, PLANET Technology Corporation , att denna 3G / 802.11n Wireless Portable Router with 3G HSUPA står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.