Broadband 3G Wireless Router

User Manual

Contents

1. Broadband 3G Wireless router

1.1 Introduction

HSUPA-EASY is a SOHO WIFI 150Mbps wireless router with HSUPA modem built-in, through which you can create a WIFI hotspot or Ethernet conveniently when ADSL or fiber line is unavailable.

Integrating 3G, WIFI and router functions, HSUPA-EASY will convert 3G network to WIFI wireless network and LAN Ethernet, through which the terminals could access internet safe and conveniently. Comparing with the solution of wireless router inserting an external USB modem, HSUPA-EASY will be easier to operate, more stable.

Basing on wireless router function, WIFI terminals and RJ45 terminals can be grouped to implement data share and inter-communication. As long as SIM card and power are available, you could get a 100% web experience.

1.2 Main Functions

High speed Wireless WAN connection up to 7.2Mbps downlink and 5.76Mbps uplink rate

Multi network operation compatible HSUPA,HSDPA,UMTS, EDGE,GPRS,GSM

Integrated (U)SIM /(R)UIM Card slot, 6PIN

Broadband Wireless WIFI up to 150Mbps

Downward compatibility 802.11 b/g/n

10/100Mbps auto-Negotiation LAN Ethernet Port (4)

WDS working operation

Quick setting (WPS) for WIFI

64/128-bit WEP encryption and WPA-PSK, WPA2-PSK encryption

Supports Virtual Server and DMZ

Supports DDNS (DynDNS, TZO), and QoS

Supports DHCP server/Client and Anti-Dos firewall

Supprots Anti-DoS Firewall, MAC/IP filter, URL blocking

Separated Omni antennas for 3G and WIFI

1.3 Default settings

WAN connection	3G Default
WLAN accessing	Radio on and Unencrypted Default
LAN connection	Output

PPPOE	Support
SSID	Easy-net, support hidden operation
WPS and WiFi Encryption	Support
DHCP status	Enable Default
DHCP Pool Range	192.168.0.100-192.168.0.200
User name/Password	admin/admin
IP Address	192.168.0.1
Virtual Server, DNS,DDNS	Support
Remote Web management	Support
Port forwarding	Support
Reconnection	Support
3G log & Trouble shot	Support
Firmware update	Ethernet update suggested
Network profile	auto matching, and apply manually
USB sharing	Could support in the future
Qos, MAC/IP filter, URL blocking	Support

1.4 Package and requirements

Accessories:: CD version User Manual/Quick Guide, Quality card, Power adapter, Ethernet cable

Browser: Internet Explorer 6.0 or Firefox 1.0 higher

Language: English, Simple Chinese, Traditional Chinese

2. Framework of 3G router

2.1 Description

3G antenna   WIFI antenna

SIM tray button

Power

(U)SIM card slot   WPS   LAN port x4   Reset

2.2 Leds indication

Power	on	Powered	WAN	Unavailable	
	off	No Power	3G (built-in HSUPA)	on	Connected
LAN	on	Connected		Twinkle	Connecting network
	twinkle	Transmitting data		Twinkle slowly	Idle status
	off	Disconnected		off or in red	No SIM Card
WIFI	on	WIFI wireless open	WPS	on	Quick set open
	twinkle	Transmitting data		twinkle	Wait Connection
	off	WIFI wireless closed		off	Quick set closed

2.3 Dimension and fixing way

Φ4mm

103mm

Press SIM tray button and put SIM card in SIM tray.

108mm

130mm

155mm
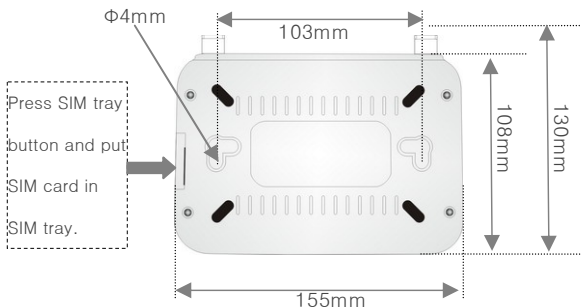
2.4 Connection way

Through Ethernet LAN port or WIFI wireless you can connect the terminals to router.

3. Introduction of web server

3.1 Access web server

After connected to router through Ethernet or WIFI wireless, please open browser such as IE or Firefox and access web server via IP address http://192.168.0.1. And before customized setting, both password and username are factory settings admin.

http://192.168.0.1
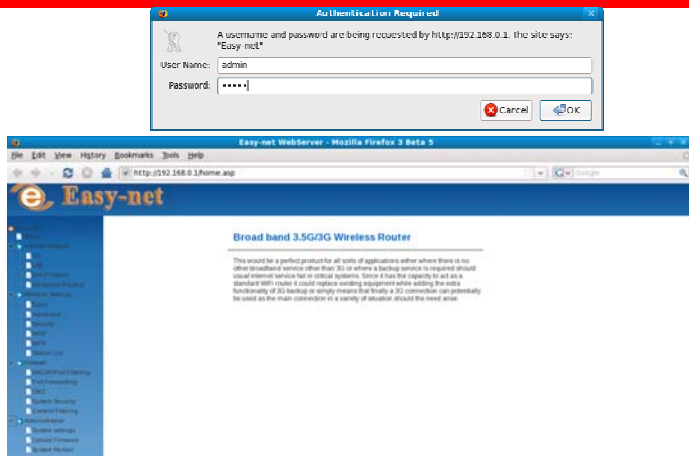
Remarks:

➢ Username and password could be changed in system setting of web server.

3.2 Application of web server

3.2.1 Check the router status

In this page you can find the connection status, factory settings and the version of router.

Internet Status

Current Internet	
Connected Type	3G
Connected status	🟢
Sim Card	🟢
Current Net	CHN-CUGSM
Signal Quality	📶
Wan Configurations	
WAN IP Address	172.28.165.39
Subnet Mask	255.255.255.255
Default Gateway	10.64.64.64
Primary Domain Name Server	210.21.196.6
Secondary Domain Name Server	221.5.88.88
MAC Address	00.0C.43.30.71.0D
Local Network	
Local IP Address	192.168.0.1
Local Netmask	255.255.255.0
MAC Address	00.0C.43.30.71.0C
System Info	
System Up Time	10 mins. 44 secs
System Version	3.3.3.0 (Dec 14 2010)

3.2.2 3G and LAN

(1) 3G Connection

Most of the network profiles have been built in this manager, so usually the manager will connect internet automatically. If fail to connect internet, please check the network profile firstly. If the APN is incorrect or unavailable, please modify or create a new profile. After apply the new profile, the router will restart automatically.

3G Network Settings

3G Mode	
Dialing Status	🟢
Operator	CHN-CUGSM
Dial Number*	*99***1#
Username	
Password	
APN	uninet
Auth Type	NONE
MAC Clone	
Enabled	Disable
MAC Address	[ ] Fill my MAC

Apply   Cancel

Remarks:

➢ If you don't know the network profile, please contact the local ISP.

➢ If the local ISP require MAC address bound, please enable "MAC clone".

➢ if 3G led indicates successful connection but no volume stream, please check the balance of SIM card

➢ Before reset, the router will save all the setting you made.

➢ 3G connection is the default WWAN connection, which could not be disconnected manually unless (U)SIM card was taken out.

(2) LAN Connection

If you want to use LAN2 , please enable this function. Usually the DHCP mode is open, so that the router will dispatch the client ip address

automatically, if you want to get the IP address manually, please close
DHCP. What's more this router could also support LLTD, IGMP proxy,UPNP
and advertisement.

Local Area Network (LAN) Settings

LAN Setup	
IP Address	192.168.0.1
Subnet Mask	255.255.255.0
LAN 2	○ Enable ● Disable
LAN2 IP Address	
LAN2 Subnet Mask	
MAC Address	00:0C:43:30:71:0C
DHCP Type	Server ∨
Start IP Address	192.168.0.100
End IP Address	192.168.0.200
Subnet Mask	255.255.255.0
Primary DNS Server	10.10.10.251
Secondary DNS Server	168.95.1.1
Default Gateway	192.168.0.1
Lease Time	86400
Statically Assigned	MAC: IP:
Statically Assigned	MAC: IP:
Statically Assigned	MAC: IP:
802.1d Spanning Tree	Disable ∨
LLTD	Disable ∨
IGMP Proxy	Disable ∨
UPNP	Disable ∨
Router Advertisement	Disable ∨

If you want to check all terminals connected to this router, please go to
panel of DHCP clients.

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(3) Advanced routing

This router could support both static routing and dynamic routing. Usually the router will use static routing. If you want to use dynamic routing, please enable this RIP setting.

Static Routing Settings

Add a routing rule	
Destination	
Range	Host
Gateway	
Interface	LAN
Comment	

Apply   Reset

Current Routing table in the system:									
No.	Destination	Netmask	Gateway	Flags	Metric	Ref	Use	Interface	Comment
1	10.64.64.64	255.255.255.255	0.0.0.0	5	0	0	0	WAN(ppp0)	
2	255.255.255.255	255.255.255.255	0.0.0.0	5	0	0	0	LAN(br0)	
3	192.168.0.0	255.255.255.0	0.0.0.0	1	0	0	0	LAN(br0)	
4	0.0.0.0	0.0.0.0	10.64.64.64	3	0	0	0	WAN(ppp0)	

Delete   Reset

Dynamic Routing Settings

Dynamic Routing Protocol	
RIP	Disable

Apply   Reset

3.2.3 WiFi and WDS

(1) Basic and advanced settings of WIFI

Usually the wifi function is open. If you want to close wifi function please

set the radio status at RADIO OFF. This router could support mixed wifi mode and single wifi mode. For example, if you just want 802.11 g mode, please select the only 802.11g mode. Please do not change the frequency channel unless it is required in special wireless environment.

Basic Wireless Settings

Wireless Network	
Radio On/Off	RADIO OFF
Network Mode	11b/g/n mixed mode
Network Name(SSID)	Easy-net Hidden ☐ Isolated ☐
Multiple SSID1	Hidden ☐ Isolated ☐
Multiple SSID2	Hidden ☐ Isolated ☐
Multiple SSID3	Hidden ☐ Isolated ☐
Multiple SSID4	Hidden ☐ Isolated ☐
Multiple SSID5	Hidden ☐ Isolated ☐
Multiple SSID6	Hidden ☐ Isolated ☐
Multiple SSID7	Hidden ☐ Isolated ☐
Broadcast Network Name (SSID)	● Enable ○ Disable
AP Isolation	○ Enable ● Disable
MBSSID AP Isolation	○ Enable ● Disable
BSSID	00:0C:43:30:71:0C
Frequency (Channel)	2437MHz (Channel 6)
HT Physical Mode	
Operating Mode	● Mixed Mode ○ Green Field
Channel BandWidth	○ 20 ● 20/40
Guard Interval	○ Long ● Auto
MCS	Auto
Reverse Direction Grant(RDG)	○ Disable ● Enable
Extension Channel	2457MHz (Channel 10)
Aggregation MSDU(A-MSDU)	● Disable ○ Enable
Auto Block ACK	○ Disable ● Enable
Decline BA Request	● Disable ○ Enable

Remarks:

➢ There're wifi wireless modes for different transmission. 11b, 11g, 11b/g, 11n, 11b/g/n. When setting the wifi wireless mode, please make sure the wireless terminals and router are in same wifi wireless mode, otherwise the terminals could not receive the WIFI signal.

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➢ SSID is used for identify the known users, which could be set in different name, visible or hidden type. However the maximum SSIDs you can set is 7, and the seventh will be retained for other usage

➢ Isolation function is used for improving the security. If this function enabled, the users cannot visit each other.

➢ If more than one wifi networks in same channel used at the same time together will inter-interfere, Then you can use another channel.

➢ If you are not good at wifi frequency and wifi network, please do not modify the advanced settings.

➢ If you want to connect this router to a 802.11N network via wifi connection, please set the router wifi as "11g only" or "11b/g mixed mode", which will be used in WDS function.

(2) Wireless Security Settings

In order to prohibit an unauthorized access or monitor to this router, it is suggested than you should enable the wireless encryption function and select a security mode to encrypt the wifi network. Before enabling the encryption, please select the SSID you set.

This router manager could support many different security way. Some of them can be set as group passwords, but you can not use the group passwords at the same time. Herein it is suggested that you might modify the passwords or security way in aperiodicity.

(3) WPS and WDS

1) **WPS** is a quick setting for wireless network. Usually there're two working mode, PIN and PBC.

a. **PIN Mode**

This mode used in creating connection by input generated PIN code of the router

First step: choose PIN mode, set down PIN code of the router, also can click <Generate> and generate new PIN code. As shown follow:

Second step: Open the network card software, choose PIN code to connect, and waiting for connecting after enter into the PIN code.

b. **PBC Mode**

This mode used in creating connection between router and network card by press the button.

First step: choose PBC mode, press the WPS button on network card, searching Wi-Fi signal.

Second step: press WPS button on router, and waiting for connection.

2) **WDS** means Wireless Distribution System, which can enlarge the coverage area of Wi-Fi signal. The function setting of WDS has main router and sub-router. Main router connects internet and Sub-router Bridge the main router so that enlarge the main router Wi-Fi signal. When the function of WDS set successful, either the main router or LAN/WAM on the sub-router or several ways of Wi-Fi can connect internet.

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For example:

Note: maintain the parameter such as Wi-Fi channel, SSID, password be the same, when you set up the main router and sub-router.

a. Main router IP address: 192.168.0.1, enable DHCP, (shown as follows) select "repeat mode" on WDS mode, and fill sub-router MAC. (Shown as follows)

b. Sub-router IP address: 192.168.0.2, shut down DHCP (shown as follows), select "Repeat mode" on WDS mode, and fill main router MAC. (Shown as follows)

c. Other sub router, such as: Set up sub-n IP address: 192.168.0.n⋯

d. DHCP Open and Close: Access "Internet Settings"->"LAN", open "Server", and shut down "Disable".

e. Set up main and sub-router MAC：Access "Wireless Setting"->"WDS", shown as follows:

f. Router WDS mode selection, shown as follows:

g. Disable: shut down the function of router WDS

h. Lazy Mode: the main router need not set up sub-router MAC, sub-router

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set up the main router MAC only

i. Bridge Mode: this mode can be adopted by sub-router only, and enter into main router MAC

l. Repeater Mode: main router connects Internet, and enters sub-router MAC; sub-router enters into the main router MAC.

Remarks:

➢ When the connection succeed, you can connect by LAN/WAN or Wi-Fi three modes is belong to the same LAN network, and IP address will be distributed by main router

3.2.4 System security

(1) MAC/IP/Port Filtering

Before setting you need to enable **MAC/IP/Port Filtering function** and select a filtering policy.

MAC/IP/Port Filtering Settings

Basic Settings	
MAC/IP/Port Filtering	Disable ⌄
Default Policy -- The packet that don't match with any rules would be:	Dropped. ⌄

[Apply]   [Reset]

Remarks:

➢ Only choose one of the ways from IP address bar and MAC address bar, can not fill it at the same time.

➢ Source IP address: the computer IP address is controlled in LAN network, if none it means all computer of LAN.

➢ Destination IP address: IP address of WAN, stand for the whole WAN network if the text is empty

➢ Destination port: WAN control computer IP address for corresponding port server and input ports or port range

For example:

Forbidding IP 192.168.0.100 on the internet in computer

Enter 192.168.0.100 into IP address text box, after click <Apply>, the forbidding IP address will be shown on the table, shown as follows:

No.	MAC address	Dest IP Address	Source IP Address	Protocol	Dest Port Range	Source Port Range	Action	Comment	Pkt Cnt
1 ☐	-	-	192.168.0.100	-	-	-	Drop		-
			Others would be accepted						-

Delete Selected   Reset

The conditions of above demonstration: firewall choose "Enable", filtering rule choose "Dropped", and the way of setting on MAC address and IP address must be the same, the form is: "00:00:00:00:00:00"

(2) Port Forwarding

Enable the port service from one computer within the LAN, such as mail, FTP and so on; public network can visit the service directly, the setting shown as follows

Virtual Server Settings	
Virtual Server Settings	Enable ▼
IP Address	192.168.0.100
Port Range	80 , 80
Protocol	TCP ▼
Comment	

(The maximum rule count is 32.)

Apply   Reset

Shown as follows when add up:

No.	IP Address	Port Range	Protocol	Comment
1 ☐	192.168.0.100	80 - 80	TCP	

Delete Selected   Reset

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(3) DMZ

After Set up DMZ in one computer on LAN, input router WAN IP address, the WAN can access this computer directly, and not affect other computers of LAN. If use this function, choose "Enable", input the IP address from one computer, it come into effect when click "Apply", shown as follows:

(4) Content Filtering

1） **Plug-in programs Filtering.** Filtering the contents on HTTP can prevent Proxy deputy, Java program, ActiveX components invading. Firewall can clean the contents away from the HTTP, and protect computers from aggressive plugins, program and some hidden virus.

Setting shown as follows, choose the contents to filter, and it will come into effect after click "Apply".

（2） **Website Filtering.** The web server could work on both HTTP and FTP.

3） Keyword Filtering.

(5) Remote management

3.2.5 System Management

(1) Language and time settings

This web server can support English, simple Chinese and traditional

Chinese. The default language is English.

(2) User name and password of web server

In order to prevent an unauthorized access to this router, it is suggested please change a new user name and password before you create a sharing network. The default user name and password are admin.

Remarks:

➤ If you forget the user name and password, please go to the rear side of the router and press the reset button to reset the router.

➤ Resetting function will load the factory settings, which will lost all parameters you set.

(3) DDNS

This router can support DDNS (Dynamic Domain Name Server) function, through which it is convenient to access the router from public network by fixed domain bound with the router IP address.

Remarks:

➢ Because the IP from the router is not fixed, so it is not convenient for public computers to visit the router by dynamic IP address. After fixed DDNS, it can be visited once put into domain, and the router can sent dynamic IP address to DDNS server and analyze.

➢ Router provides many DDNS providers, that is Dyndns.org, freedns.afraid.org, www.zoneedit.com, www.no-ip.com to choose.

(4) Upload Firmware

If there's an update from the manufacturer, you can update the router via this update interface. Please pay more attention on update, incorrect update will collapse the router.

Upgrade Firmware

Remarks:

➢ Please make sure the update is correct version and official release.

➢ Update will lose all the parameters you set before, so if no need update, which is not suggested.

➢ During updating, please make sure the router works on uninterrupted power supply, otherwise sudden power-off will collapse the router.

➢ After select the update files, please don't press the button "Apply" ceaselessly, otherwise the router might collapse.

➢ After update if the router collapse, please contact

(5) System Restart

Besides power on and off could restart the router, system reboot could also reboot the router. Usually after setting parameters, the router will restart automatically. Choose "System Reboot" and press the button, the system will be restarted without changing settings.

Choose "Load Factory Defaults" and press the button, the system will be restarted and recovered default settings,
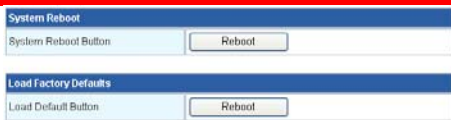
3.3 Web server compatibility

The windows might be a little different when you access web server from different browser. So far the web server can be compatible with Microsoft Internet Explorer 6.0, and higher version, Firefox 1.0 and higher version, Opera 9.0 and higher version.

4. Appendix Q&A

1. No SIM card

Please plug out SIM tray and insert SIM card in correct way.

Please check whether the SIM card has been damaged or out of service.

Please reset the router.

2. SIM card recognized, no internet connection

Please check the network profile of 3G.

Please check the network signals.

Please check whether the SIM card support data service.

Please restart the software by web server.

3. Internet connected, no volume stream

Please check the balance of SIM card.

Please check whether the terminals have connected to router successfully.

4. Limited LAN/WIFI connection, or no LAN/WIFI connection to router

Please sure the WIFI card and Ethernet card of terminals have been enabled.

Please check whether the Ethernet cable has been damaged.

Please sure the DHCP function of the router is enabled.

If DHCP server is enabled and the terminal is auto configuration, please reconnect the LAN or WIFI connection. Otherwise please fill the terminals IP address manually. When using fixed IP address, the terminal's IP address

and the router's IP address must in same IP segment.
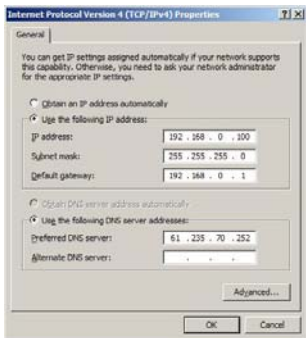
5.   No WPS function

You need to install the quick setting software on your terminal.

6.   Plugging out SIM card when router is working.

It's not allowed to take our SIM card when router is working, which might damage the router.

7.   How many users he router can support?

Theoretically, the router could support 30 visitors online simultaneously, while as known too many users will sharply decrease the internet transmission rate. Usually if the visitor use router for browsing web pages, it is suggested 10 or less users online simultaneously.

8.   How to backup the web server and parameters?

Not available

9.   Online update

Not available

10. Router working logs

Not available

11. WAN ping function

Before sending ping command to router from public network computer, you need enable WAN ping in web server.

12. Remote web management

Before managing web servers remotely please enable remote management and WAN ping firstly, then enable DDNS server. By this fixed domain name you can visit the router remotely.

13. How to change the port of web management

Not available

14. Trouble shot

Not available

15. How to save new network profile

The new network profile you create or update will be stored in buffer. However after resetting router, all the parameters will be lost.

16. How to disconnect 3G connection manually

3G is the default connection. As long as SIM card available inside and powered, the router will be always online, unless you plug out SIM card.

17. Reconnection function

When fail to connect internet or disconnect temporally, the router will reconnect automatically. However if there's no SIM card, the reconnection function will not work.

18. How to use WAN , PPPOE, L2TP, PPTP?

Not available

19. Telnet

Support

20. Fail to enter into Web server

Please check the connection to router.

Please reset router manually.

21. "UNKNOW" network operator

Please clear the buffer of IE, then reset the router manually.