4G/3G Wireless Router

USER MANUAL



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This user manual is used for router installation and router management. In this manual you will see the instruction description, SIM socket operation, Web server, and FQA.

1. Model description

This manual can be used for following routers. Home class 3G/4G WIFI wireless router Industrial class 3G/4G WIFI wireless router Industrial class 3G/4G wireless router

2. SIM card slot

Before inserting SIM card, plrease press the yellow button to unlock the SIM tray, and pull out the SIM tray as following.



According to the angle in the tray please put the SIM card correctly.



Please do not insert the SIM card or SIM tray in opposite direction, as may damage the SIM socket.

3. Web server

The web server in above routers is similar, and the display may Version: 313 be not same in different networks. For example in LTE network, the network type will be LTE, while in HSPA network, the network type will display HSPA+, HSUPA, HSDPA or UMTS. All these routers could be backward compatible with networks.

Please access web server through windows IE, Firefox or other browse based on IE kernel. The web server may not support other web browse.

3.1. Requirement of client computer

TCP/IP protocol and available RJ45 interface or WIFI card

Windows IE 6.0 or higher version, Firefox 1.0 or higher version

3.2. Access web server

Please connect computer to router through Ethernet connection or WIFI connection. If you use a switch to connect the router, please make sure the computer and 3G router are in the same network segment.

3.2.1 Configure computer

Please set the computer to obtain IP automatically. If you want to use static IP, please configure computer network as follows.

IP range: 10.10.10.1~ 10.10.10.253 Sub-mask: 255.255.255.0 Default Gateway: 10.10.10.254

eneral /ou can get IP settings assigned his capability. Otherwise, you n for the appropriate IP settings.	d automatically if your network need to ask your network admi	supports nistrator
Obtain an IP address auto	matically	
C Use the following IP addre	ss:	
IP address:		
Sybnet mask:		
Default gateway:	ſ	
Obtain DNS server addres	s automatically	
C Use the following DNS serv	ver addresses:	
Preferred DNS server:		
Alternate DNS server:	ſ	
	Adj	anced

3.2.2 Login management

1) Please enter the default IP 10.10.10.254. in browser address bar to access user interface.



2) The factory default of user name and password are "admin"

۷	Authentication Required	×
R	A username and password are being requested by http://10.10.10.254. The site says: "GoAhead"	
User Name:	admin	
Password:	•••••	
	Scancel Cancel	

Remarks:

- The administrator can modify the user name and password in system management of web server.
- If you forget the modified user name and password, please reset the router

3) In front page of web server you can find the function menu and shortcut. The default language is English.



- > Open/Close all: Spread or fold down the sub menu
- > Language: English, Simple Chinese, Traditional Chinese
- Status: network status
- > Statistics: Volume data statistics
- > Management: system setting, update, security setting

3.3. Internet configuration

3.3.1 network status

1) 3G status

Connection: green led for successful connection, red led for failed connection

SIM: green led for ready SIM, red led for no SIM

Register: three status "searching", "registered", "refused"

3G		
SIM card Status	0	
Register Status	Registered	
Network Type	HSPA+	
Current Network	China Unicom	
Signal Quality	Υ	

2) Internet status

3G is the default WAN connection on this router. After register the router will obtain an IP, usually which is not a public IP. In this sheet the MAC is the physical address of WAN.

Wide Area Network		
Connected Status	0	
Connected Type	30	
WAN IP Address	10.102.170.39	
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:43:32:33:25	

3) Router IP address

This local IP is the router's address in LAN, which could be modified in LAN settings. In this sheet the MAC is the physical address of LAN.

Local Network	
Local IP Address	10.10.10.254
Local Netmask	255.255.255.0
MAC Address	00:0C:43:30:52:77

4) Firmware version

From this sheet you will see the router's software version. If you have problem with the router please send the below system information to us

System Info	
SDK Version	3.6.0.0
Software Version	2.1.3.2
System Up Time	1 min, 18 secs
System Platform	RT5350 embedded switch
Operation Mode	Gateway Mode

3.3.2 3G network settings

Most of APN profiles have been predefined in the list. The factory default is auto APN mode, so after powered, the router will connect 3G Internet automatically. If you need create your APN please select custom mode, and create the required profiles "profile name", "APN", "Dial Number", "User name"(if required), "Password"(if required).

APN Settings		
Mode	Automatic 💌	
Profile Name	Automatic	
APN	UNINET	
Dial Number	*99***1#	
Username		
Password		
Auth Type	AUTO 💙	
(Apply Cancel	

- > If no volume stream, please check the balance of SIM card.
- > If no volume stream, please restart the router system.
- > Incorrect APN will cause failed connection.
- Usually the dial number is *99#. If your network dial number is different, please use yours.
- Usually the authentication it auto mode. If your network can not support auto mode, please select the from the list.

3.3.3 Network searching mode

The inbuilt 3G can support multi-network operation. The factory default is auto mode, under which the router will search 3G network firstly, then 2G network. In the below list you can also select 2G only or 3G only. After apply the new searching mode, the 3G circuit will restart and re-register network which may cost 1 or 2 minutes.

Network Mode			
Network Mode	Auto	*	
Арр	Auto GSM Only WCDMA Only	incel	

3.3.4 Ping feature

The ping function is used for detecting the Internet connection. If the router can not successfully ping remote server 4 times, the router will will reset 3G. Before effect to this function, the router administrator need to enable Ping function, add remote IP address, and set a inter time between two ping. In default the interval is 60s.

Ping address Settings			
Ping address Settings	Disa	ble 🔽	
Primary Address			
Secondary Address			
Ping Interval	12	*5(s)	
	Apply	Cancel	

> Ping function will cost some data volume.

3.3.5 Auto rebooting system

Auto-reboot function is used for restart the router system if the dialing program goes to a halt.

Version: 313



3.3.6 3G log

The 3G log is enabled in defaul.



3.4. Local network configuration

3.4.1 LAN setting

1) Basic settings

IP: Router's IP in Local network, 10.10.10.254 as default

Subnet mask: 255.255.255.0 as default

LAN2: if you need to use two different network segment, please enable this function, and configure LAN2 IP and LAN2 subnet mask.

MAC: physical address of LAN interface

IP Address	10.10.254
Subnet Mask	255.255.255.0
LAN 2	○ Enable ● Disable
LAN2 IP Address	
LAN2 Subnet Mask	
MAC Address	00:0C:43:30:52:77

2) DHCP service

In local network, the router will dispatch IP address to every clients connected, and the DHCP IP address will be from 10.10.10.100 to 10.10.10.200. In default, this function is enabled. If you use the bridge, WDS, switch function, please disable DHCP.

DHCP Туре	Server v
Start IP Address	10.10.100
End IP Address	10.10.200
Subnet Mask	255.255.255.0
Primary DNS Server	168.95.1.1
Secondary DNS Server	8.8.8.8
Default Gateway	10.10.254
Lease Time	86400
Statically Assigned	MAC:
Statically Assigned	MAC:
Statically Assigned	MAC:

Remarks:

> New IP configuration will effect after restart.

3.4.2 DHCP client

From this sheet you can see all the clients obtaining IP through DHCP.

DHCP Clients					
Hostname	MAC Address	IP Address	Expires in		
localhost.local	00:16:76:9E:D2:E3	10.10.10.100	23:57:40		

3.4.3 Advanced routing

In default the router will work out data transmission via auto routing. While if you are good at network configuration, static routing is a good way to improve the routing efficiency in basic network.

Static Routing Settings

Add a routing rule			
Destination			
Range	Host		
Gateway			
Interface			
Comment			
Apply Reset			

Destination: the host or network segment to access

Range: host as default

Gateway: the gateway in destination router

Interface: LAN as default

Remarks:

- Destination IP and WAN/LAN IP should be configured in different network segment.
- If the destination is a host, please use subnet mask 255.255.255.255.
- If the destination is a network segment, please use subnet mas 255.0.0.0.

Gateway and WAN/LAN IP should be configured in same network segment.

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.

3.5. WLAN configuration

3.5.1 Basic settings

The router provides two ways to open and close WIFI. RADIO ON/OFF is based on bottom firmware, and the operation is equivalent to a hardware switch. WIFI ON/OFF is based on application software, and the operation is equivalent to enabling/disabling WIFI function. Based on multi network mode, 802.11b/g/n mixed mode is the default, while you can modify the network mode.

Wireless Network	
Driver Version	2.6.0.0
Radio On/Off	RADIO OFF
WiFi On/Off	WiFi OFF
Network Mode	11b/g/n mixed mode v
Network Name(SSID)	Mobidata Hidden Isolated
Multiple SSID1	Hidden 🗆 Isolated 🗆
Multiple SSID2	Hidden 🗆 Isolated 🗆
Multiple SSID3	Hidden 🗆 Isolated 🗆
Multiple SSID4	Hidden 🗆 Isolated 🗆
Multiple SSID5	Hidden 🗆 Isolated 🗆
Multiple COIDC	

Remarks:

- 11b, 11g, 11b/g, 11n, 11b/g/n, these network modes conduct different transmission. Please make sure the terminals' network mode is same to the router you set, otherwise the terminals could not receive the WIFI signal.
- 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.

3.5.2 Advanced settings

Advanced wireless is used for operation between two wireless stations, as is enabled in auto mode at default. Besides internet operation, the router provides a WMM application, through which you can configure WMM with internet.

Advanced Wireless	
BG Protection Mode	Auto
Beacon Interval	100 ms (range 20 - 999, default 100)
Data Beacon Rate (DTIM)	1 ms (range 1 - 255, default 1)
Fragment Threshold	2346 (range 256 - 2346, default 2346)
RTS Threshold	2347 (range 1 - 2347, default 2347)
TX Power	100 (range 1 - 100, default 100)
Short Preamble	● Enable ○ Disable

3.5.3 WIFI security

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.

SSID choice	Mobidata
y-net	
Security Mode	Disable
Access Policy	
Access Folicy	1
Doligy	Disable v
Policy	

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.

Access Policy WPA Policy WPA-PSK WPA2-PSK WPA2-PSK Add a station Mac: WPAPSKWPA2PSK 802 1X	Security Mode	Disable 💌	[
Access Policy WPA-PSK Policy WPA2 WPA2-PSK WPA2-PSK Add a station Mac: WPAPSWPA2PSK 802_1X 802_1X		Disable WPA	
Policy WPA2-PSK Add a station Mac: WPAPSKWPA2PSK 802 1X	Access Policy	WPA-PSK WPA2	
Add a station Mac: WPA1WPA2	Policy	WPA2-PSK WPAPSKWPA2PSK	-
	Add a station Mac:	WPA1WPA2 802,1X	

3.5.4 WDS application

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.

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".

DHCP Type	Server 💌
Start IP Address	Disable Server 00
End IP Address	192.168.0.200

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

AP MAC Address	
----------------	--

f. Router WDS mode selection, shown as follows:

WDS Mode	Repeater Mode 💌
Phy Mode	Disable Lazy Mode
EncrypType	Bridge Mode Repeater Mode

g. Disable: shut down the function of router WDS

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

I. Repeater Mode: main router connects Internet, and enters Version: 313 14 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

3.5.5 WPS quick setting

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

Wi-Fi Flotected Setup			
WPS Config			
WPS:	Disable		
Apply			

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:

AP PIN:

85813403 Generate

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.

3.5.6 Station list

In this sheet you can see all the terminals connected to router via WIFI.

Wireless Network							
MAC Address	Aid	PSM	MimoPS	MCS	BW	SGI	STBC

3.5.7 WIFI statistics

In this sheet you can see the RX and TX power and volume statistics. With the statistics you can optimize the router WIFI configuration.

3.6. Firewall

3.6.1 MAC/IP/Port Filtering

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

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

MAC/IP/Port Filter Settings									
MAC	C address								
Dest	IP Addres	S							
Sou	rce IP Addr	ess							
Prot	ocol			None	·				
Des	t Port Rang	e			-				
Source Port Range				-					
Action			Accept						
Comment									
(The	The maximum rule count is 32.)								
Apply Reset									
Cur	Current MAC/IP/Port filtering rules in system:								
No.	MAC address	Dest IP Address	Source IP Address	Protocol	Dest Port Range	Source Port Range	Action	Comment	Pkt Cnt
	Others would be dropped					-			

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

3.6.2 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:

Current Virtual Servers in system:					
No.	IP Address	Port Range	Protocol	Comment	
1	192.168.0.100	80 - 80	TCP		
Delete Selected Reset					

3.6.3 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:

DMZ Settings	
DMZ Settings	Disable 💌
DMZ IP Address	
Apply Reset	

3.6.4 System security

In this sheet you can configure remote management via WAN Internet. If you need to access router via 3G network, please make sure the WAN IP is public. After configure DDNS, then you can access router through wireless network.

Remote management		
Remote management (via	WAN) Deny v	
	·	
Ping form WAN Filter		
Ping form WAN Filter	Disable 🗸	
Block Port Scan		
Block port scan	Disable 🗸	
Block SYN Flood		
Block SYN Flood	Disable 🗸	
Stateful Packet Inspec	tion (SPI)	
SPI Firewall	Disable 🗸	
Apply Reset		

3.6.5 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".

Vebs Content Filter		
Filters:	Proxy 🔲 Java 🗋 ActiveX	
Apply Reset		

2) Website Filtering. The web server could work on both HTTP

and F	TP.			
	Current Webs URL	rent Webs URL Filters:		
	No	URL		
	1 🔲	http://www.google.com/		
	Delete Reset]		
	Add a URL filter:			
	URL:			
	Add Reset			
3) K	eyword Fi	ltering.		
	Current Website H	ost Filters:		
	No	Host(Keyword)		
	1 🔲	google		
	Delete Reset]		
	Add a Host(keywo	d) Filter:		
	Keyword			
	Add Reset			

3.7. System Management

3.7.1 Language and time settings

This web server can support English, simple Chinese and traditional Chinese. The default language is English.

Language Settings					
Select Language		English			
	Apply	/	Cancel		

NTP Settings	
Current Time	Mon Feb 27 09:52:00 UTC Sync with host
Time Zone:	(GMT+08:00) China Coast, Hong Kong
NTP Server	ex: time.nist.gov ntp0.broad.mit.edu time.stdtime.gov.tw
NTP synchronization(hours)	
	Apply Cancel

3.7.2 User name and password

The default user name and password are admin.

Adminstrator Settings		
Account	admin	
Password	•••••	
Арр	Cancel	

3.7.3 Upload Firmware

Please update firmware through the pop-up window of "update firmware"

opuate i innivial e	·	
Location:		Browse
Apply		
Upgrade firmware from USB		
Apply Scan		
Update Bootloader	-	
Location:		Browse
Apply		
	_	
Force upgrade firmware via me	em	
Force: No 🔻		

Remarks:

 \geq Please update router through Ethernet connection.

3.7.4 DDNS

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

DDNS Settings	
Dynamic DNS Provider	None
Account	
Password	
DDNS	
	Apply Cancel

3.7.5 Back up settings

Both resetting router and add new settings will lose the settings you made, so it is suggested that please back up the settings.

Export Button	Export	
Import Settings		

3.7.6 Load factory default

Choose "Load Factory Defaults" and press reset button at the back of router, the system will be restarted and recovered default settings,

Load Factory Defaults	Load Factory Defaults		
Load Default Button	Load Default		
ion: 313	22		

3.7.7 System command

Sometimes the industrial module doesn't work fine because of unexpected bug in system, and then you can check and reset the industrial module manually.

System command	
Command:	

3.7.8 System logs and statistics

In this sheet you will see the router operation logs, including part of 3G connection logs, so when you have problem with the router, please also send the system logs to us.

3.7.9 Operation mode

Gateway is the default operation mode, and the 3G will work under gateway mode.

O Bridge: All ether	net and wireless interfaces are bridged into a single bridge interface.
 Gateway: The first interface AP Client: 	ethernet port is treated as WAN port. The other ethernet ports and the wireless are bridged together and are treated as LAN ports.
The wire ethernet	less apcli interface is treated as WAN port, and the wireless ap interface and the ports are LAN ports.
NAT Enabled:	Enable 🗸
TCP Timeout:	180
UDP Timeout:	180
	Apply Cancel

4. FAQ

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.

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.

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 connection, or no LAN connection to router

Please sure 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 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. 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.

6. 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.

7. How to backup the web server and parameters? Aailable

8. How to upload the new firmware into router

Please connect router to computer through LAN connection, and upload the firmware.

9. Router logs

There're 3G connection logs and system logs in management.

10. WAN ping function

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

11. Remote wWeb server

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.

12. 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.

13. 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.

14. 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.

15. Fail to enter into Web server

Please check the connection to router.

Please reset router manually.

16. "UNKNOW" network operator

Lease clear the buffer of IE, and then reset the router manually.