Passion for Wireless World

# **EFLINKM1002X User Manual**

**<u>Confidential Material:</u>** This document contains information that is proprietary and confidential, reading and copying this document is prohibited without permission from AsiaTeko Technologies Co.

# Index

1.	About this Manual5
2.	Product Overview5
3.	Definition of buttons and OLED Screen5
	3.1 Buttons Definition5
	3.2 OLED Screen5
4.	Configuring the MiFi5
	4.1 Login6
	4.2 Quick setup
	4.2.1 User settings
	4.2.2 Internet Connection
	4.2.3 Wireless Settings
	4.2.4 Device Placement Guidelines 10
	4.3 Dashboard 11
	4.4 Internet
	4.4.1 Internet Connection
	4.4.2 Traffic Statistics
	4.4.3 PIN Management13
	4.4.4 Manual Network15
	4.5 Home Network
	4.5.1 DHCP settings

4.5.2 Connected Devices	17
4.5.3 Network Activity	18
4.5.4 Custom Firewall Rules	18
4.5.5 Port Filter	20
4.5.6 Port Forwarding	22
4.5.7 Firewall Settings	23
4.6 PhoneBook	24
4.7 SMS	25
4.7.1 Device Inbox	25
4.7.2 Device Outbox	26
4.7.3 SIM SMS	27
4.7.4 Drafts	27
4.7.5 SMS Settings	28
4.8 Wireless	28
4.8.1 Wireless Settings	29
4.8.2 Wireless Security Settings	30
4.8.3 WPS	30
4.8.4 Wireless MAC Filters	31
4.9 Router	32
4.9.1 User Management	33

5.	Revision History	36
	4.9.6 Time Setting	36
	4.9.5 Power Off Router	35
	4.9.4 Reboot Router	35
	4.9.3 Software Upgrade	34
	4.9.2 Configuration Management	33

# **1. About this Manual**

The content of this User Manual has been made as accurate as possible. However, due to continual product improvements, specifications and other information are subject to change without notice.

# 2. Product Overview

Congratulations on your purchase of this product. This MiFi supports Band 38, Band40, Band 41; it can be operated on Linux, Windows and MAC system PC.

Insert a valid USIM card into MiFi, power on the device, then MiFi will attach to the LTE network automatically. It is recommend to read this manual before you start using this device in order to have a good experience.

The device support hotspot function. In hotspot mode , The highest measurement SAR values is 0.836W/Kg.

# 3. Definition of buttons and OLED Screen

Buttons Definition				
Button Location		Operation	Function	
Dowon	ver Key 1	Short Press	ON/OFF Screen	
Power		Long Press (5S)	Power On/Off	

#### **3.1 Buttons Definition**

Table 3-2-1 Buttons Definition

#### 3.2 OLED Screen

Short press the power-key can open the screen. After light up the screen you can see the signal strength, the wireless icon, battery power, and the Operator. Power on press the power-key, you can see the WIFI SSID and password.

# 4. Configuring the MiFi

Power on the MiFi, waiting for about 20 seconds, you can connect to the MiFi via WiFi (the default SSID name is WIFI-XXXXXX, X represents the last six digits of the MAC address, Password is the last eight digits of the IMEI).

In the following sections, we will introduce you the main functions and the method of how to configure them.

## 4.1 Login

Open Web browser and enter 192.168.0.1, login window will pop-up. Input the following username and password.

Username/Password: admin.

Wireless Router	
	English   中文
R Enter username here	
🔒 Enter password here	
Sign In	

Figure 4-1-1 Login

After successful login, you can see the "Welcome" page, here you can choose "Quick Setup" in order to set up the router step by step as the system guides (refer to chapter 4.2), select "Skip" to enter the main interface of the router (refer to chapter 4.3), there is also the quick setup option on the right side at the top of the page. Click the "Help" option near the "Quick Setup" to view an simple instruction of the router, click the "Log Out" option to logout.

Welcome! Thanks for choosing us
We recommend running Quick Setup in order to set up the router.
Please ensure that you have followed the steps in the Quick Setup Guide to make sure that all the cables are connected correctly. This configuration setup procedure will guide you using step-by-ste p instructions on how to get your Internet connection up and running.
Quick Setup
Do not show Quick Setup in future.
Note - You will still be able to access the Quick Setup link on your dashboard even if you skip it here.

Figure 4-1-2 Quick Setup

# 4.2 Quick setup

#### 4.2.1 User settings

From this page, you can modify the router's password, and then click "Next" to enter the "Internet Connection" setting page.

Telr	ad 🥍		Help
Quick Setup			
	1 User Settings	2 Internet Connection 3 Wireless 4 Device Placement Guidelines	
	User Settings		
	Router Username: Router Password:	admin	
	Exit Setup	Next	

Figure 4-2-1-1 User Settings

#### **4.2.2 Internet Connection**

From this page, you can configure the Internet connection mode, refer to the following options:

- My Internet Connection is : Cellular/Disabled. This feature must be enabled in order to set other options;
- Network Mode: 4G only, Auto;
- Preferred Network Mode: 4G Preferred (default);
- Connection Mode: Auto (default) /Manual;
- > Auto APN: Auto Configure APN (The option is checked in default)
- Prohibit automatic dial-up in the roaming status: Check the box to take effect;
- MTU: Set it as you like between 1000 and 1500, the default is 1500;
- PDN1 Settings: PDN1 (The option is checked in default) ->Default Bearer1 TFT Settings;

My Internet Connection is	Cellular	Y
Version Switch	WCDMA	Y
Network Mode	4G/3G/2G multimode	Y
Preferred Network Mode	4G Preferred	v
Preferred LTE Type	TD-LTE preferred	T
Connection Mode:	Auto	Ŧ
prohibit automatic dial-up	in the roaming status.	
мти	1400	(1000-1500)
Auto APN	Auto Configure APN	
Dial in Roaming	Enable	Y
PDN1 Settings:		
PDN1(Default Bearer)		

Figure 4-2-2-1 Internet Connection

PDP Setting		×
		1
PDP connection name	Atel	
2G/3G APN Name:	airtelgprs.com	]
LTE APN Name:	airtelgprs.com	]
IP type	IPV4V6 •	
Enable QOS		
2G3G Authentication Type	NONE	
LTE Authentication Type	NONE	]
		OK <u>Cancel</u>

Figure 4-2-2-2 Default Primary PDP

#### 4.2.3 Wireless Settings

After you finish configuring the Internet connection, Click "Next" to enter the wireless settings interface. Here, you can configure the wireless network settings, including the wireless network name, network status, and wireless security.

- Network Name (SSID): You can modify it as you like, the default value is WIFI-XXXXXX, X represents the last six digits of the MAC address;
- > Network Visibility Status: Visible (default) /Invisible;
- Wireless Security: WPA-WPA2 Mixed (default), WPA2-PSK, WEP, WAPI-PSK, Disabled;
- Password: Default value is the last eight digits of the IMEI, can be modified, check the box of the "Unmask Password", password will be clearly displayed;
- **WPA Cipher:** WPA-TKIP/WPA2-AES.

Wireless Settings		
Network Name (SSID):	WIFI-E93C1D	
Network Visibility Status:	Visible     Invisible	
Wireless Security:	WPA-WPA2 Mixed	
Password:		
Unmask Password		

Figure 4-2-3-1 Wireless Settings

#### 4.2.4 Device Placement Guidelines



Figure 4-2-4-1 Device Placement Guidelines

Continue clicking "Next" to enter the "Device Placement Guidelines" page. It is recommended that you do not place your wireless router near a Microwave, Home Cordless Phone, a Baby Monitor, Bluetooth devices (such as a headset or a Bluetooth keyboard or a Bluetooth mouse) and any other wireless network devices. Click "Finish", you can see the "Please Wait" prompt, the settings would be saved automatically, and then the system turns to the dashboard page (Chapter 4.3).

During the Quick Setup process, you can click "exit setup" to return to the main interface of the route;

### 4.3 Dashboard

The main interface includes seven sections: Dashboard, Internet, Home Network, Wireless and Router. You can manage the router configuration through the menu page, and modify the parameters according to your needs. From "Dashboard" page, you can learn Cellular Connection, router information, software information, home network and so on.

Quick Setup   Help   Log Out				
Dashboard Internet Home	e Network PhoneBook	SMS	Wireless	Router
		•	<b>(</b>	
Internet	Router		Home Network	
Signal Strength:	Router LAN IP: 192.168.0.1		1	•
Cellular Data Connectivity: Enabled <u>Disabled</u>	IMEI: 3520990017614823		Wireless Enabled	•
Internet Connection Network Operator: CMCC Cellular Network Mode: LTE	Router Network Mask: 255.255.255.0 Router MAC: 7c:f9:e9:e9:3c:1d Run Time: 0 Day 0 Hour 4 Minutes 34 Seconds		Wireless Settings Wireless Network: WIFI-E93C1D Security Mode: WPA-WPA2 Mixed	
PDP Information	Battery Charging: Fully charged		Channel Number: Automatic	

Figure 4-3-1 Dashboard

connected	Device Mode: EFLINKM1002X	Sent Packets:
10.115.121.34	Software Version: NZ MF N895 AT2.19 V01	Received Packets:
IPv4 DNS Server 211.136.112.50,211.136.150.66	Hardware Version:	43 Sent Bytes:
IPv4 Default Gateway	NZ_SSG_V20	8677
IV. 115. 121.221	WEB UI Version: WEBUI_N895_Telrad_1.01	Received Bytes: 3518
255.0.0.0	Auto APN List	Reset
IPv6 Address NA	MCC: 460	
Global IPv6 Address	MNC:02	
NA	Operator Name: CMCC	
IPv6 DNS Server NA,NA	APN: cmnet	
IPv6 Default Gateway	LTE APN: cmnet	
NA	Network Type: 0	
IPv6 Network Mask NA	2G3G Auth Type: NONE	
Current Connect Time	2G3G User Name:	
0 Day 0 Hour 4 Minutes 34 Seconds	2G3G Password:	
Total Connect Time 0 Day 0 Hour 4 Minutes 34 Seconds	4G Auth Type: NONE	
IMSI	4G User Name:	
460021211576867	4G Password:	
MDN Unknown	Ip Туре: IPv4	
CellID		

Figure 4-3-2 Dashboard

# 4.4 Internet

Click "Internet" option, the page redirects to the following page, including Internet Connection, Traffic Statistics, PIN Management and Manual Network.

Dashboard Internet	Home Network Phor	neBook SMS	Wireless	Router			
Internet Connection	Internet Connection			?			
Traffic Statistics	My Internet Connection is	Cellular	•				
PIN Management	Version Switch	WCDMA	Y				
	Network Mode	4G/3G/2G multimode	<b>v</b>				
Manual Network	Preferred Network Mode	4G Preferred	<b>v</b>				
	Preferred LTE Type	TD-LTE preferred	•				
	Connection Mode:	Auto	•				
	prohibit automatic dial-up in the roaming status.						
	MTU	1400	(1000-1500)				
	Auto APN	Auto Configure APN					
	Dial in Roaming	Enable	<b>v</b>				
	PDN1 Settings:						
	PDN1(Default Bearer)						
	Dedicated Bearer1 TFT Setting						
				Save			

Figure 4-4-1 Internet

#### **4.4.1 Internet Connection**

Click on "Internet Connection", you can configure the "Internet Connection" settings here (please refer to chapter 4.2.2), you should click "Save" to save all changes.

#### 4.4.2 Traffic Statistics

Traffic Statistics displays the number of packets sent by your router.

Internet Connection       Traffic Statistics       Iternet Connection (WAN)       USB Connection       Wireless (WLAN)         PiN Management       133       1300       0         Manual Network       96       0       0	Dashboard Internet	Home Netw	ork PhoneBook	SMS	Wireless	Router
Traffic StatisticsPIN ManagementInternet Connection (WAN)USB ConnectionWireless (WLAN)Sent13313000Received4614360Errors9600	Internet Connection	Traffic Statist	ics			?
PIN ManagementInternet Connection (WAN)USB ConnectionWireless (WLAN)Sent13313000Received4614360Errors9600	Traffic Statistics	Traffic Statistics	displays the number of pack	ets sent by your router.		
Sent         133         1300         0           Manual Network         46         1436         0           Errors         96         0         0	PIN Management		Internet Connection (WAN)	USB Connection	Wireless (WLAN)	
Manual Network     Received     46     1436     0       Errors     96     0     0		Sent	133	1300	0	
Errors 96 0 0	Manual Network	Received	46	1436	0	
	·,	Errors	96	0	0	

Figure 4-4-2-1 Traffic Statistics

#### 4.4.3 PIN Management

Click "PIN Management" to turn to the PIN management interface. The default PIN code is empty and disabled enter any 4-8 digits in the dialog, and then click "Enable PIN" to enable the PIN function (Figure 4-4-3-2). After enabled the PIN code, you can enter the current right PIN code to disable the PIN function or change the PIN code, only 3 times failure attempt is allowed, if not, the system would ask you to input the PUK code, you can try it for 10 times. If you failed finally, the USIM card would be locked and invalid.

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Internet Connec	tion	PIN/PUK Attempts				?
Traffic Statistics	;	The number of PIN atte	empts left: 3			
PIN Managemen	t	The number of PUK at	tempts left: 10			
Manual Network		Enable PIN				
		Enter Current PIN:				
						Enable PIN

Figure 4-4-3-1 PIN Management

Dashboard Inte	ernet Home Network	PhoneBook	SMS	Wireless	Router
Internet Connection	PIN/PUK Attempts				2
Traffic Statistics	The number of PIN atte	mpts left: 3			
PIN Management	The number of PUK att	empts left: 10			
Manual Network	Disable PIN				
	Enter Current PIN:				
				D	isable PIN
	Change PIN				
	Enter Current PIN:				
	Enter New PIN:				
	Enter New PIN Again:				
					Save

Figure 4-4-3-2 PIN Enabled

### 4.4.4 Manual Network

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Internet Conne	ction	Manual Network				?
Traffic Statistic	s	Manual Scan Network				
PIN Managemen	nt	Selectable Network:	Auto		Y	
Manual Networ	k	LTE background scan	network time 5 minute	s start	•	
		Current Select Network	Mode Automatic	Mode		*****
						Save

Figure 4-4-4-1 Manual Network

Click "Manual Network", you can see the manual network page. You can set the scan network mode, LTE background scan network time, click "Save" to take effect.

- Manual Network: Click the "Manual Scan Network" button, it would take you more than 1min to scan the PLMN, you can choose the PLMN you want to attach in the PLMN list, if failed, the prompt said timeout would be pop-up. Check the "Disconnect network before manual scan network" option, the network would be disconnected before scanning the PLMN.
- Selectable Network: Auto(default);
- Manually select network when system start: Check "I want to manually select network when system start" to take effect;
- LTE background scan network time: 5minutes (default), 30 seconds, 1 minutes, 3 minutes, 10 minutes, 15 minutes, 30 minutes, 60 minutes, Immediate, Disabled.

### 4.5 Home Network

The "Home Network" page includes DHCP Settings, Connected Devices, Network Activity, Custom Firewall Rules, Port Filter, Port Forwarding and Firewall Settings.

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
DHCP Settings		DHCP Settings				2
Connected Devi	ces	DHCP Range:	192.168. 0	. X		
Network Activity		Router LAN IP: DHCP Server:	192.168.0.1	Disabled		
Custom Firewall	Rules	DHCP Start Address:	192 · 10	58 · 0	· 100	
Port Filter		DHCP End Address:	192 · 10	58 · 0	· 200	
Port Forwarding		DHCP Lease Time: DNS Configure Switch	86400 Disabled	(in Seconds)		
Firewall Settings	;	DNS1 IP Address:				
		DNS2 IP Address:				
					A	Add Static IP
		MAC Address		IP Address		
		No entries found.				
		DHCPV6 Settings				
		DHCPV6 Server:	Stateless S	erver 🔘 Sta	teful Server	
						Save

Figure 4-5-1 Home Network

#### 4.5.1 DHCP settings

Clicking on the header of the "DHCP Settings" tab will take you to the "DHCP Settings" header page. There displays DHCP Settings and the IP address that allows you to define. DHCP can dynamically assign IP address to make sure that each network device can assigned to a different address. Click "Save" to take effect.

- DHCP Server: Enabled (default)/Disabled. You can configure the following settings only when DHCP server is enabled;
- DHCP Start and End Address: Define an address range from start IP address to the end IP address, DHCP server assigns the IP address in the range to the users;

- Add Static IP: Bind IP and MAC, the rules will display in the list, you can delete or continue adding the rules;
- > **DHCPV6 Server:** Stateless Server (default) / Stateful Server.

Static IP setting	X
MAC Address: IP Address:	A0 · F4 · 19 · 89 · 38 · B6
	Add <u>Cancel</u>

Figure 4-5-1-1 Add Static IP

IP A	ddress	
192.	168.0.102	8
⊙ Stateless Server	🔿 Stateful Server	
	IP A     192.     Stateless Server	IP Address     192.168.0.102     Stateless Server     Stateful Server

Figure 4-5-1-2 Static IP list

#### **4.5.2 Connected Devices**

From the "Connected Devices" page, you can see the users' Name, Status, IP Address, MAC Address, Connection and Connected time.

Dashboard Internet	Home Netw	ork P	honeBook	SMS	Wire	less Rou	ıter
DHCP Settings	Connected De	vices				(	?
Connected Devices	Name	Status	IP Address	MAC Address	Connection	Connected time	
Network Activity	FHAN-PC	•	192.168.0.100	ac:f9:e9:16:c3:e2	USB	0 Hour 24 Minutes 52 Seconds	
Custom Firewall Rules							
Port Filter							
Port Forwarding							
Firewall Settings							

Figure 4-5-2-1 Connected Devices

#### 4.5.3 Network Activity

From the "Network Activity" page, you can know the access logs and the WiFi client access logs.

Dashboard Internet	Home Netw	ork Phonel	Book	SMS	Wirele	ess	Router	
DHCP Settings	Network Activ	/ity					?	
Connected Devices	Last Login Time:	: 10/9/2016 10:43:4	5					
Network Activity	Access Logs							
Custom Eirowall Bulas	PDP Name	CID Start Time	End Time	ІР Туре	IPv4 Addr	IPv6 Addr		
Custom Pnewan Rules	No entries found	No entries found.						
Port Filter	WiFi Client Acces	ss Logs						
Port Forwarding	Client MAC Add	dress	Connect Time		Disconnect 1	lime		
	No entries found	d.						
Firewall Settings								

Figure 4-5-3-1 Network Activity

#### 4.5.4 Custom Firewall Rules

The custom firewall rules can be used to block the network traffic the using source IP address, source ports, destination IP address, destination ports or any combination of these parameters. The default IP filter mode is deny, it means the packets that match the rules would be denied, then the user can't access Internet network.

Dashboard Internet	Home Network	PhoneB	ook	SMS	Wireless	Router
DHCP Settings	Custom Firewall Ru	iles				2
Connected Devices	Custom Firewall Rules ca	in be used to	block the netw	ork traffic th	ne using source IP address	s, source ports,
Network Activity	destination IP address, d	estination po	orts or any comb	pination of t	hese parameters.	
Custom Firewall Rules						Add Rule
Port Filter	Rule Name	Enabled	Source IP Address	Source Port	Destination Destinat IP Address Port	ion Protocol
Port Forwarding	No entries found.					
Firewall Settings						

Figure 4-5-4-1 Custom Firewall Rules Page

Click "Add Rule" to set the custom firewall rules.

There will be the detail rules displayed in the list, you can delete or continue

adding them.

- Rule name: Custom, ex.:123;
- Status: Enabled (default, correspond IP filter mode is Deny) /Disabled;
- Source IP Address: The user's IP address that need to be set the rules, ex:192.168.0.110;
- **Source Port:** 1-65535;
- Destination IP Address: The destination IP address to be filtered (website or Internet IP);
- > **Destination Port:** The port of the destination IP Address;
- **Protocol:** Include TCP, UDP, BOTH.

Custom Firewall Rul	e	X
Rule Name:	123	
Status:	💿 Enabled 🛛 🔿 Disabled	
Source IP Address:	192 · 168 · 0 · 110 /	
Source Port:	1 65535	
Destination IP Address:	220 • 168 • 111 • 86 /	
Destination Port:		
Protocol:	ТСР	
	ОК <u>Cano</u>	<u>:el</u>

Figure 4-5-4-2 Add Rule

Home Network	Phone	Book	SMS	V	/ireless	Ro	outer
Custom Firewall R	ules						?
Custom Firewall Rules c	an be used	to block the net	work traffic	the using sourc	e IP address,	source port	s,
destination IP address, o	lestination	ports or any con	nbination of	these paramete	ers.		
			-			Add Ru	le
Rule Name	Enabled	Source IP Address	Source Port	Destination IP Address	Destination Port	Protocol	
111111	1	192.168.0.10	1:65535	8.8.8.8	23:24	TCP	8
	Home Network Custom Firewall Rules c. destination IP address, c Rule Name 111111	Home Network       Phone         Custom Firewall Rules       Custom Firewall Rules can be used         Custom Firewall Rules, destination       Enabled         Rule Name       Enabled         111111       1	Home Network       PhoneBook         Custom Firewall Rules         Custom Firewall Rules can be used to block the net destination IP address, destination ports or any con         Rule Name       Enabled       Source IP Address         111111       1       192.168.0.10	Home Network       PhoneBook       SMS         Custom Firewall Rules         Custom Firewall Rules can be used to block the network traffic destination IP address, destination ports or any combination of         Rule Name       Enabled       Source IP Address       Source Port         111111       1       192.168.0.10       1:65535	Home Network         PhoneBook         SMS         W           Custom Firewall Rules         Custom Firewall Rules can be used to block the network traffic the using source destination IP address, destination ports or any combination of these parameter         Rule Name         Enabled         Source IP Address         Port         Destination IP Address           111111         1         192.168.0.10         1:65535         8.8.8.8	Home Network         PhoneBook         SMS         Wireless           Custom Firewall Rules           Custom Firewall Rules can be used to block the network traffic the using source IP address, destination IP address, destination ports or any combination of these parameters.           Rule Name         Enabled         Source IP Address         Source IP Port         Destination IP Address         Destination Port           111111         1         192.168.0.10         1:65535         8.8.8.8         23:24	Home Network         PhoneBook         SMS         Wireless         Rc           Custom Firewall Rules           Custom Firewall Rules can be used to block the network traffic the using source IP address, source port destination IP address, destination ports or any combination of these parameters.           Add Ru         Enabled         Source IP Address         Destination Port         Protocol           111111         1         192.168.0.10         1:65535         8.8.8         23:24         TCP

Figure 4-5-4-3 Custom Firewall Rules

#### 4.5.5 Port Filter

Click on "Port Filter" tab will take you to the "Port Filter" page. From this page, you can configure Trigger Port Range & Response Port Range to achieve Port Filter purpose. Default mode is disabled, click "Enabled" then you can click "Add Rule" button to set port filter rules. (Figure 4-5-6-2). After the setup is completed, the rule details will be displayed in the list; you can delete or continue adding the rules.

Port filtering open or close some ports, allowing users to use internal or partial ban on the use of Internet services

Dashboard Internet	Home Networ	PhoneBool	c SMS	Wireless	Router
DHCP Settings	Port Filter				
Connected Devices	Note:The default rule	is to filter all ports;th	e ports in the rule table	is not filter	
Network Activity	Port Filter Mode	Ena	led		
Custom Firewall Rules					Save
Port Filter				Ad	d Port Filter
Part Franciscus dina	Rule Name	Protocol	Trigger Port	Response Port	
Port Forwarding	No entries found.				
Firewall Settings					

Figure 4-5-5-1 Port Filter

Port Filter Dialog			×
Rule Name	111		
Trigger Port	1	65535	
Response Port	21	21	
Protocol	TCP	~	
		Add	Cancel

Figure 4-5-5-2 Port Filter

- Rule Name: Custom, ex:1234;
- Trigger Port: You can enter a range of service ports (the format is XXX-YYY; XXX is the start port and YYY is the end port).
- **Response Port:** The port needs to be filtered in the range of (XXX-YYY),
- **Protocol:** The protocol used for this application, TCP, UDP, or TCP&UDP.

#### 4.5.6 Port Forwarding

Click on "Port Forwarding" tab will take you to the "Port Forwarding" page. From this page, you can configure IP Address, Port Range to achieve Port Forwarding purpose. Default mode is disabled, click "Enabled" then you can click "Add Rule" button to set port forwarding rules. After the setup is completed, the rule details will be displayed in the list; you can delete or continue adding the rules.

This function will allow you to route external (Internet) calls for services such as a web server, FTP server, or other applications through your Router to your internal network. Since your internal computers are protected by a firewall, computers outside your network (over the Internet) cannot get to them because they cannot be "seen."

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
DHCP Settings		Port Forwarding				?
Connected Device	es	Custom Port Forwardi	ng Rules 🔘 Enabled	<ul> <li>Disabled</li> </ul>		
Network Activity						Save
Custom Firewall F	Rules					
Port Filter						
Port Forwarding						
Firewall Settings						

Figure 4-5-6-1 Port Forwarding

Port Forwording Rul	9	X
Rule Name	1234	
IP Address	192 · 168 · 0 · 102	
Port	5100 5200	]
Protocol	ТСР	
	ОК	<u>Cancel</u>

Figure 4-5-6-2 Port Forwarding Rule

- Rule Name: Custom, ex:1234;
- > **IP Address**: The IP address of the PC running the service application.
- Port: You can enter a range of service ports(the format is XXX-YYY; XXX is the start port and YYY is the end port).
- > **Protocol:** The protocol used for this application, TCP, UDP, or TCP&UDP.

DHCP Settings Connected Devices Network Activity	Port Forv Custom Po	varding			2
Connected Devices	Custom Po	+ Farmerding Dulas @ Fr			
Network Activity		t Forwarding Rules 🔘 Er	nabled Oisabled	I	
					Add Rule
Custom Firewall Rule	s Rule Nam	e IP Address	Port Range	Protocol	
Port Filter	123456	192.168.0.10	1:65535	TCP	8
Port Forwarding Firewall Settings					Save

Figure 4-5-6-3 The Port Forwarding rule list

#### 4.5.7 Firewall Settings

From the "Firewall Settings" page, you can Enable the Firewall Protection, contents IPSec Passthrough, PPTP Passthrough and L2TP Passthrough.

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
DHCP Settings	Firewall Settings				?
Connected Devices	Firewall Protection:	Enabled	Disabled		
Network Activity	Virtual Private Network	k (VPN)			
Custom Eirewall Bules	IPSec Passthrough:	Enabled	Disabled		
	PPTP Passthrough:	Enabled	Disabled		
Port Filter	L2TP Passthrough:	Enabled	Disabled		
Port Forwarding					Save
Firewall Settings					

Figure 4-5-7-1 Network Activity

# 4.6 PhoneBook

You can create, delete phone book. Include ALL, Common, Family, Friends and Colleagues.

Dashboard	Internet	Home Network	PhoneBook	SMS	Wirele	ss Router
All		Phonebook (All)				
Common					A	ld Delete
Family		Na	me	Mobile Number	Group	Save Docation
Friends					То	otal:0 (Device:0, SIM:0)
Colleagues						



- > Add: Click "Add" to enter Add new Phonebook page.
- > **Delete:** Click "Delete" to delete the selected records.

Phone Information		×
Name		
Save Location	SIM Card 💌	
Mobile Number		
	Save	<u>Cancel</u>

Figure 4-6-2 PhoneBook

### 4.7 SMS

#### 4.7.1 Device Inbox

In this page you can add, read, delete, copy & move messages in the Device Inbox.

Dashboard	Internet	Home Network	k PhoneBook	SMS	Wireless	Router
Device Inbox		Device Inbox				
Device Outbox				New Delete	Copy to SIM	Move to SIM
SIM SMS		From	Subject		Time	Status 🔲
Drafts						
SMS Settings						



- > **New:** Click "New" to enter message page
- > **Delete:** Click "Delete" to Delete the selected records
- **Copy to SIM:** Click "Copy to SIM" to Copy the selected records to SIM
- > Move to SIM: Click "Move to SIM" to Move the selected records to SIM

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Device Inbox						
Device Outbox						
SIM SMS						//
Drafts			(0/160)	Send	Save	Cancel
SMS Settings						

Figure 4-7-1-2 Message

#### 4.7.2 Device Outbox

In this page you can add, delete, message in the Device Outbox.

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Device Inbox						
Device Outbox						
SIM SMS						
Drafts			(0/160)	Ser	nd Save	Cancel
SMS Settings						



- > New: Click "New" to enter message page
- > **Delete:** Click "Delete" to Delete the selected records

#### 4.7.3 SIM SMS

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Device Inbox		SIM SMS				
Device Outbox			New	Delete	Copy to Device	love to Device
SIM SMS		From	Subject		Time	Status 📃
Drafts						
SMS Settings						
	,					

In this page you can add, read, delete, copy& move messages in the SIM.



- > **New:** Click "New" to enter message page
- > **Delete:** Click "Delete" to Delete the selected records
- > Copy to SIM: Click "Copy to Device" to Copy the selected records to Device
- > Move to SIM: Click "Move to Device" to Move the selected records to Device

#### 4.7.4 Drafts

In this page you can add, delete message in the Drafts

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Device Inbox		Drafts				
Device Outbox					New	Delete
SIM SMS		From	Subject		Time	Status 🔲
Drafts						
SMS Settings						



- > **New:** Click "New" to enter message page
- > **Delete:** Click "Delete" to Delete the selected records

#### 4.7.5 SMS Settings

This page includes SMS Save Location, SMS Over Mode, Center Number; you can configure the basic SMS settings.

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
Device Inbox		SMS Settings				?
Device Outbox		SMS Save Location	Device	٣		
SIM SMS		SMS Over Mode	SMS Over (	CS •		
Drafts		Center Number	+86138002	10500		
SMS Settings						Save



- **SMS Save Location:** Device(default)/SIM Cards
- SMS Over Mode: SMS Over CS (default), SMS Over PS;
- > Center Number: Will show different operators SMS center number

#### 4.8 Wireless

This page includes Wireless Settings, Wireless Security, WPS and Wireless MAC Filters; you can configure the basic wireless settings.

Dashboard Internet	Home Network Pho	ne <b>Book</b> S	SMS	Wireless	Router
Wireless Settings	Wireless Settings				?
Wireless Security	Status:	Enabled	Disabled		
WPS	802.11 Mode:	802.11n(b/g compat	tible) 🔻		
	Channel Bandwidth:	20 MHz	•		
Wireless MAC Filters	Primary Channel:	Automatic	•		
	Band40 ACS Switch	Enabled	Disabled		
	Max Simultaneous Clients:	8	¥		
	Beacon Period Setting	100	(	(in msec(50~4000))	
	DTIM Interval Setting	1	(	(1~100)	
	AP Isolate Switch	Close	•		
					Save
	Wifi Auto Off Function	I want to disable	wifi auto of	ff function.	
					Save

Figure 4-8 Wireless Settings

#### 4.8.1 Wireless Settings

In this page, you can configure basic wireless settings. Click "Save" to take effect.

- Status: Enabled(default)/Disabled;
- > 802.11 Mode: 802.11n(b/g compatible) (default), 802.11 b/g;
- Channel Bandwidth: Automatic (20/40 MHz), 40MHz, 20MHz (default);
- Primary Channel: Support Channel 1~13, 2412MHz~2472MHz, 5MHz as a channel interval;
- Secondary Channel: Below(default), Above
- ➤ Maximum Simultaneous Clients: 1~8;
- **Beacon Period Setting:** 50~4000,default is 100
- > **DTIM Interval Setting:** 1~100,default is 1
- > **AP Isolate Switch:** Close(default)/ Open
- **WiFi Auto Off Function:** Enable/Disabled(default).

### 4.8.2 Wireless Security Settings

Dashboard Internet	Home Network Pho	oneBook	SMS	Wireless	Router
Wireless Settings	Wireless Security				?
Wireless Security	Network Name (SSID):	WIFI-E93C1D			
WPS	Network Visibility Status:	Visible	<ul> <li>Invisible</li> </ul>		
Wireless MAC Filters	Wireless Security:	WPA-WPA2 Mixe	ed 🔻		
	Password:				
	Unmask Password				
					Save

Wireless Security Settings, refer to chapter 4.2.3.

#### 4.8.3 WPS

On this page, you can modify WPS settings. This feature can make your wireless client within a few minutes automatically synchronized with the AP settings and connect via WiFi.

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
Wireless Settings	WPS				2
Wireless Security	Choose a method to as	ssociate WPS certified Cli	ient		
WPS	WPS Push Button	Push			
Wireless MAC Filters	Enter PIN		Regis	ster	

Figure 4-8-3-1 WPS

> **Push:** Click "Push" to Connected WPS's PBS, Then Mifi and wireless client will

automatically complete the interaction and connect via WiFi if these two devices can match with each other.

Enter PIN: Input the PIN code which got from wireless client and click "Apply" on this "WPS" configuration page.

#### 4.8.4 Wireless MAC Filters

This function is a powerful security feature that allows you to specify which wireless clients are not allowed. Default is disabled, click "Enabled" and then you can add MAC Filter rules.

**Mode Settings:** Allow/Deny, default is deny. It means that the clients in the list unable to access the MiFi. You can change it to "Allow" and then click "Save". The Wireless Client MAC Address which you set will display in the list. You can click the red "x" mark to delete the MAC address and click "Add" button to set new MAC address.

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
Wireless Settings	Wireless MAC Filt	ers			2
Wireless Security	MAC Filters:	Enabled	<ul> <li>Disabled</li> </ul>		
WPS					Save
Wireless MAC Filters					

Figure 4-8-4-1 Wireless MAC Filters

Add MAC Filter							X
MAC Address:	AO	·EF	• 14	• AD	• EE	• 34	
					Add	i	<u>Cancel</u>

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
Wireless Settings	Wireless MAC Filte	ers			?
Wireless Security	MAC Filters:	Enabled	O Disabled		
WPS	Mode Settings:	Allow	Deny		
Wireless MAC Filters					Save
	Deny List				Add
	Wireless Client MAC	Address			
	A0:EF:14:AD:EE:34				

#### Figure 4-8-4-2 Add MAC Filter

Filter 4-8-4-3 The MAC Filters

### 4.9 Router

From this page, you can see User Management, Configuration Management, Software Upgrade, Reboot Router, Power Off Router and Time Setting.

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
User Management	User Management				?
Configure Management				Add No	www.Account
Software Upgrade	User Accounts			Add He	AWACCOUNT
Reboot Router	User Name		Access Level		Action
	admin		Standard		Delete
Power Off Router					
Time Setting					
Inne Setting					

Figure 4-9 Router

# 4.9.1 User Management

On the "User Management" page, you can create, delete new account, click "Save" to take effect. The system shows the new account.

Dashboard Inte	ernet Home Net	work PhoneBook	SMS	Wireless	Router
User Management	User Manag	ement			?
Configure Management				Add N	w Account
Software Upgrade	User Accounts	i		Add N	ew Account
Reboot Router	User Name		Access Level		Action
	admin		Standard		Delete
Power Off Router	1234		Restricted		Delete
Time Setting					

Figure 4-9-1 Router

# 4.9.2 Configuration Management

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
User Management	Configure Manage	ment			2
Configure Management	Restore Factory Setting	gs			
Software Upgrade	This option resets the	router to the factory defa	ults. The existing	settings will be lost. Restore Facto	ory Settings
Reboot Router	Diagon chonce configu	ration file/* hin) to undat	•		
Power Off Router	Please make sure you	connect to MIFI using U	sB cable before u	ıpgrade.	
Time Setting	Device will reboot after	r update configuration fil	e.		
					Update
	Click right link to expo	rt configuration file:		Export configuration file.	

Figure 4-9-2-1 Configuration Management

This page includes Restore Factory Settings, Update Configuration file and Export Configuration file.

- Restore Factory Settings: The existing settings will be lost, all restored to the factory defaults;
- Update Configuration file: Connect PC and device with a USB cable, click "Brower" to select a Bin file, then begin to update the configuration file, the device will automatically reboot after updated completely.
- Export Configuration file: Click "Export Configuration file" to export the existing configuration and save.

#### 4.9.3 Software Upgrade

From the software upgrade page, you can see the current software version and current software date. If you have a software upgrade file on your machine, you can use the "Upgrade" option to manually upgrade the router. Make sure you connect to MiFi using USB cable before upgrade. Click "Browse" to choose the upgrade file, then click "Upgrade" to begin to update. The upgrade process will take you  $1\sim2$  minutes and the MiFi will reboot automatically when the upgrade is completed.

Dashboard	Internet	Home Network	PhoneBook	SMS	Wireless	Router
User Managemen	t	Software Upgrade				?
Configure Manag	ement	Software Information				
Software Upgrade	2	Current Software Versi Current Software Date:	on: NZ_MF_N895_ Aug 4 2016	AT2.19_V01		
Reboot Router		If you have a software	upgrade file on your ma	chine, you can us	e this option to manual	ly upgrade the
Power Off Router		router.			·	
Time Setting		Warning!!! Please	make sure you conr	ect to MIFI usi	ng USB cable befor	re upgrade.
			Browse			
						Upgrade

Figure 4-9-3-1 Software Upgrade

#### 4.9.4 Reboot Router

Click the "Reboot Router" button, then the MiFi will reboot immediately. You can also restart it by the power key.

Dashboard I	nternet	Home Network	PhoneBook	SMS	Wireless	Router
User Management		Reboot Router				?
Configure Manageme	nt	Please press the buttor	n shown below to Rebo	ot the Router		
Software Upgrade			Ret	boot Router		
Reboot Router						
Power Off Router						
Time Setting						

Figure 4-9-4-1 Reboot Router

#### 4.9.5 Power Off Router

Click the "Power Off Router" button, then the MiFi will Power off immediately. You can also power off by the power key.





# 4.9.6 Time Setting

From the "Time Setting" page, you can set the time of the device system, click "Save Current Time" to take effect.

Dashboard Internet	Home Network	PhoneBook	SMS	Wireless	Router
User Management	Time Setting				2
Configure Management	Year\Month\Day:	2016 / 1	0 / 9		
Software Upgrade	Hour:Minute:Second(2	12 : 5	57 : 47		
Reboot Router	NTF Status		Uisabled		
Power Off Router				Save C	urrent Time
Time Setting					

Figure 4-9-6-1 Time Setting

# 5. Revision History

Author	Revision	Changes	Date
Fhan	V1.0	Initial Draft	2016-10-09

#### **FCC Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

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

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/Kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna should be minimized.

Note: The device complies with RF specifications when the device used at 5mm far from your body.

The highest reported SAR values for body as below: Body:1.007W/Kg.