



AM400M Home Gateway User Manual

PLEASE READ THESE SAFETY PRECAUTIONS!

RF Energy Health Hazard



The radio equipment described in this guide uses radio frequency transmitters. Although the power level is low, the concentrated energy from a directional antenna may pose a health hazard. Do not allow people to come in close proximity to the front of the antenna while the transmitter is operating.

Protection from Lightning



Before connecting this instrument to the power line, make sure that the voltage of the power source matches the requirements of the instrument. The unit must be standards.

Disposal and Recycling Information



Pursuant to the WEEE EU Directive electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Reduction of Hazardous Substances



This CPE is compliant with the EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation (Regulation No 1907/2006/EC of the European Parliament and of the Council) and the EU Restriction of Hazardous Substances (RoHS) Directive (Directive 2002/95/EC of the European Parliament and of the Council).

FCC Notice, USA

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.

NOTE 1: 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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1. Overview

AM4000M is an indoor multiservice gateway unit (IDU) that supports advanced networking, VoIP gateway and WLAN AP functionalities. It enables wide service coverage and provides high data throughput and networking features to customers who needs easy broadband access, low cost VoIP service and Wi-Fi connectivity.



1.1 User Interface Specification

Model	Description & User Interface
AM4000M	<ul style="list-style-type: none">- 1 RJ45 10/100M ETH (PoE), 2 RJ45 10/100M ETH, 1 RJ11/FXS Line- Power, NET, Wi-Fi, LAN1-2, LINE, WPS- 24V/1.0A DC- Dimensions: 135 mm (L) × 105 mm (W) × 30mm (D)- Weight: < 300g

1.2 Wi-Fi Interface(IDU)

Radio Access	802.11b/g/n (300 Mbps)
Output Power	15± 1dBm
Antenna	3dBi built-in antenna
Security	64/128 bit WEP, WPA/WPA2

2. Getting Started

2.1 Packing list and CPE Unit

Upon receiving the product, please unpack the product package carefully. Each product is shipped with the following items:

Table 2-1 Packing List

Products	Quantity
IDU unit	1
24V DC Power adapter	1
PC Ethernet Cable	1

If you find any of the items is missing, please contact our local distributor immediately.

CPE Unit:

Unpacking the Equipment Table 2-1 lists all the standard parts that are supplied in your LTE CPE Unit Installation Package. Please take the time to unpack the package and check its contents against this list.



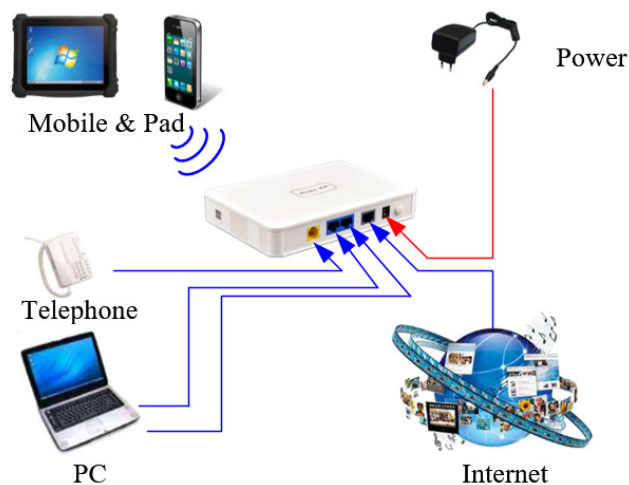
2.2 Installing the Equipment

◆ Device logic connection

AM4000M is user-friendly and easy to setup. To power on the IDU device, the IDU must use a 24V DC power supply adapter. The power adapters can operate in 90-250V AC range and therefore can be used in different countries. Once the IDU device is powered up, the user should wait for about 2 minutes before the device becomes operational.

To connect PC, LAN switch or other type of IP device to the product, the user should use standard CAT5 Ethernet cable and connect to the appropriate LAN port of the IDU. Once connect the CPE LAN LED indicator should come on.

To use the phone service, user can simply plug the phone line to the CPE RJ11 port in the back. If the line is not registered or configured, a fast busy tone will be provided and the corresponding LINE LED light will be off.



◆ LED Display

LED Indicator	LED Indicator	Function	Description
AM4000M	PWR	Power Indicator	Orange Color – Device is power on and booting Green Color – Device at work
	NET	WAN Indicator	OFF – NO wireless network access. Blinking Green – WAN data transmission in progress.
	WLAN	Wi-Fi status indicator	Green Light is on –Wi-Fi is enabled and working
	LAN	LAN port status	OFF – No LAN cable connected Solid Green – The LAN port is up Blinking Green – LAN data transmission in progress
	Voice	POTS line status indicator	OFF – Line is not registered or provisioned. Green Color – The line is ready and registered Green Blinking – Voice Call in progress
	WPS	WPS Service Access	Blinking Orange – Device WPS at work

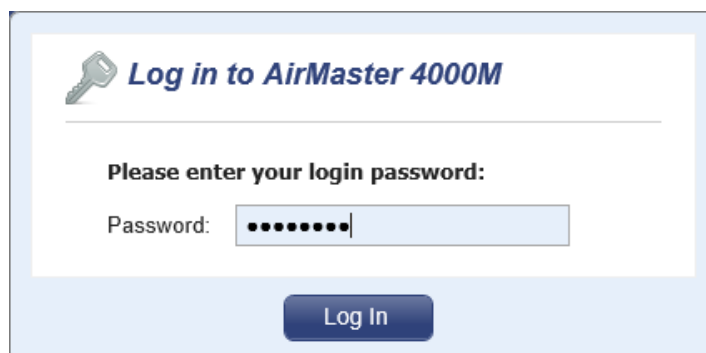
Note: WAN port can also provide the POE power supply.

3. Managing CPE Device

The AM4000M offers rich management features which facilitate the task of service provider. It supports local management access, Telnet, WEB, and centralized remote OTA configuration, upgrades management and device monitoring via standard TR-069 ACS systems.

3.1 WEB Login—172.16.1.1

It is a preferred to setup the CPE using a Web browser from a local PC connected to device LAN port. The user should ensure that the connected PC had acquired IP address via DHCP from the device. After IP connectivity is established between the PC and CPE device, the user may launch a Web browser and specify <http://172.16.1.1> in the address bar. A window will pop up requesting password. Input the user login password and then click the “Log In” button. After successful log on, the default home page of the WEB GUI interface will appear. Note that the default user password is “admin123”.



3.2 System Status Display

Once the user is logged in, the following window System status window will be prompted for viewing. It contains the System Status, WAN link information, Network Configuration, Wi-Fi Configuration, VoIP Configuration and System Management.

AirMaster 4000M

System Information

Network Configuration

WiFi Configuration

Service Configuration

VoIP Configuration

System Maintenance

System Status
Statistics Info

System Status

System Info

Manufacturer:	KZTECH
Software Version:	V2.0.0B1317
Hardware Version:	V2.0
Serial Number:	K4000MFF7B02
System Current Time:	2016-04-15 16:55:39
System Up Time:	4 mins, 0 secs
Operation Mode:	Router

General Information

Connect Status:	Disconnected
Network Operator:	-
Technology:	LTE
Connected Time:	
Signal Strength:	□□□□□

WAN Configuration

Connected Type:	LTE PDN
IP Address:	
Subnet Mask:	
Default Gateway:	
DNS Server:	

LAN Configuration

LAN IP Address:	192.168.0.1
Subnet Netmask:	255.255.255.0
MAC Address:	6C:AD:EF:FF:7B:02

WiFi Configurations

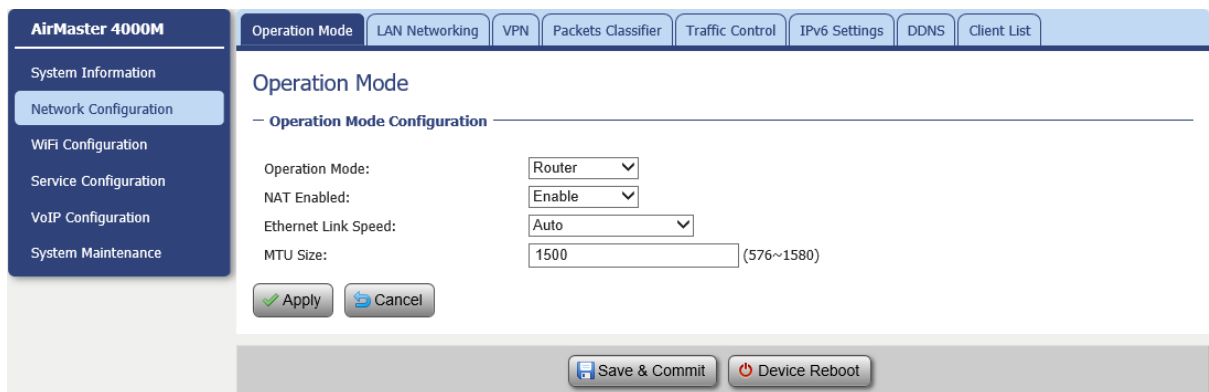
SSID:	KZTECH-FF7B02 (ON)
VSSID:	KZTECH-EFFF7B02 (OFF)
Mode:	802.11(b/g/n) Mixed Mode
Channel:	Auto
Security Mode:	WPA2PSK

Save & Commit
Device Reboot

3.3 Network Configuration

◆ Modify MTU Size

The default Operation Mode is Router, and the PC of the user that connected to device LAN port will obtain IP address via DHCP server of the device. The default MTU Size is 1500, user can modify the MTU Size if necessary.



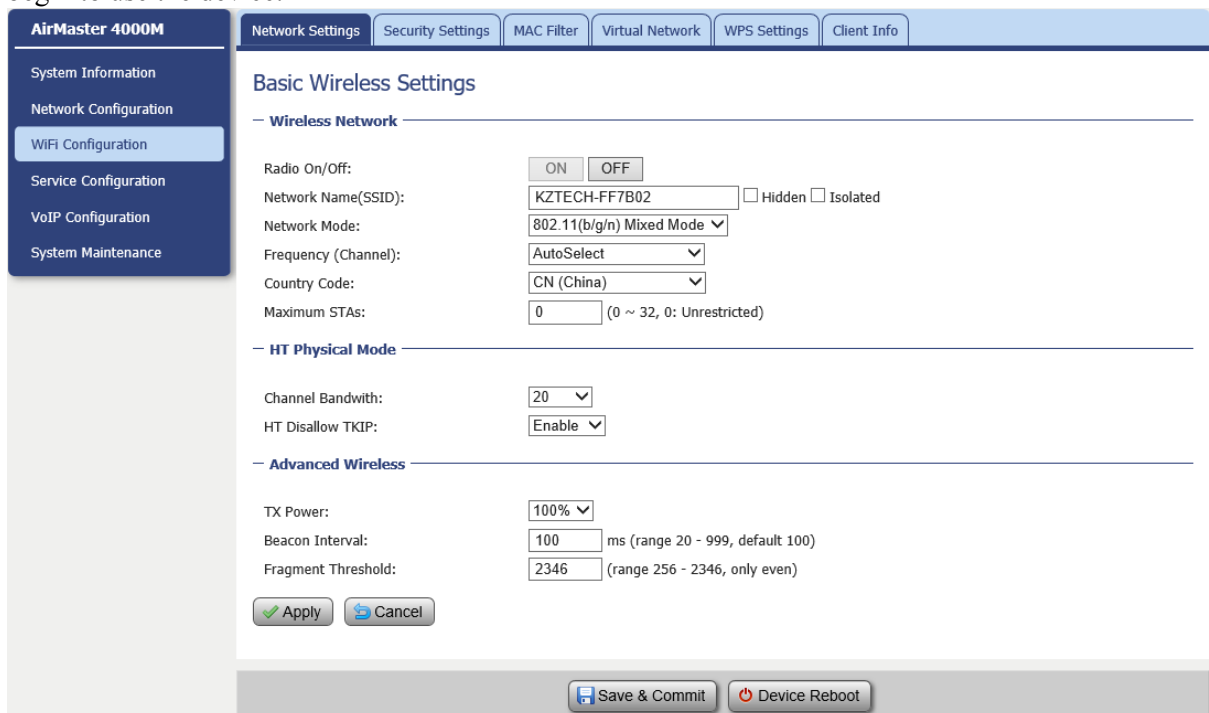
Note: After configure any parameters to the device, you must click the “Apply”→”Save & Commit” button to save the configuration otherwise the configuration will not take effect.

3.4 Wi-Fi Configuration-Modify SSID/Security

In Wi-Fi configuration, the user can modify the default SSID and select the desired Security Policy to protect device Wi-Fi access. For easy configuration, the user can use one of the following three common security policies for setup.

WPA-PSK / WPA2-PSK The most commonly used standard Wi-Fi Security policy.

For all the configuration changes to take effect, the user is required to click on the “apply” button to save the configuration. Click on the “Save & Commit” button to complete the parameters setup and begin to use the device.



AirMaster 4000M

System Information
Network Configuration
WiFi Configuration
Service Configuration
VoIP Configuration
System Maintenance

Network Settings | Security Settings | MAC Filter | Virtual Network | WPS Settings | Client Info

Wireless Security/Encryption Settings

Security Policy

Security Mode: WPA2-PSK

WPA

WPA Algorithms: TKIP/AES

Pass Phrase: Visible Passwords

Key Renewal Interval: 3600 (Seconds: 0 ~ 4194303)

◆ WPS setting

When a quick and convenient access to connect is needed, the WPS function is useful.

AirMaster 4000M

System Information
Network Configuration
WiFi Configuration
Service Configuration
VoIP Configuration
System Maintenance

Network Settings | Security Settings | MAC Filter | Virtual Network | WPS Settings | Client Info

WPS Setting

WPS Config

WPS: Enable

WPS Summary

WPS Current Status: Idle
WPS Configured: Yes
WPS SSID: KZTECH-FF7B02
WPS Auth Mode: WPA2-PSK
WPS Encryp Type: TKIPAES
WPS Default Key Index: 2
WPS Key(ASCII): EFFF7B02
AP PIN: 01625622
Reset OOB:

WPS Progress

WPS mode: PBC

3.5 Service Configuration-DMZ Setting

By enabling this option will make the specified local LAN host (DMZ IP) was exposed to the Internet, all ports can be accessed by other computers on the Internet.

AirMaster 4000M

System Information
Network Configuration
WiFi Configuration
Service Configuration
VoIP Configuration
System Maintenance

Virtual Server | Packet Filtering | DMZ Setting | Security Setting

DMZ Settings

DMZ Settings

DMZ Settings: Enable

DMZ IP Address: 192 . 168 . 0 . 2

Exclude Web Server Port

3.6 Voip Configuration-SIP Account Setting

In this configuration page, the user requires to enter the SIP user name, account and password information if he desires to configure the VoIP networking. And the register status must to enable, the register server IP also requires to configure.

The SIP server configuration will be performed by the network operator via admin management. The SIP account status is displayed for user information. When the SIP line is registered and ready, the LINE LED in the front panel will be light up. If the device VoIP function is not working properly, the user is advised to contact the network operator for assistance.

AirMaster 4000M

System Information
Network Configuration
WiFi Configuration
Service Configuration
VoIP Configuration
System Maintenance

SIP | Number Analysis | Call | DSP | Enhanced Services | Line Features | Port | Module Management

SIP Configuration

— User Configurations

Port Status	Receive Port	User Name	Account	Password
Registering	5060	8002	8002	*****

Apply Cancel

— Register Configurations

Register Status: Enable Register

Registrar Address:

Registrar Receiving Port: (0~65534)

Register Period: (30~7200s)

Local Hostname:

Use Registrar as Hostname: Enable

Apply Cancel

— Proxy Configurations

Use Registrar as Proxy: Enable

Proxy Status: Enable Proxy

Proxy Address:

Proxy Receiving Port: (0~65534)

(0~65534)

Keep-Alive status: Enable Keep-Alive

Keep-Alive Period: (10~600s)

Apply Cancel

— SIP Protocol Parameter Configurations

Hook Flash:

Max Forwards: (1~100)

Max Auth: (1~5)

Supported: 100rel

User Agent: Product Label
 MAC Address
 Version

Use Tel URL: Enable

Apply Cancel

It would show “register success” of the Port Status after register succeed.

3.7 System Maintenance

WEB GUI menu to configure the device in more details (see diagram below). The configuration is easy to use and self explanatory. You can select the language or modify the web login password via the General Setting page.

◆ Telnet Enable all and modify password

You can also set Telnet Management as Enable All for all the users, include WAN user, LAN user and the Wireless station to telnet to the CPE.

The screenshot shows the 'General Setting' page for the AirMaster 4000M. The left sidebar contains navigation options: System Information, Network Configuration, WiFi Configuration, Service Configuration, VoIP Configuration, and System Maintenance. The main content area is titled 'General Setting' and includes the following sections:

- Language Settings:** Select Language: English (dropdown), with Apply and Cancel buttons.
- Administrator Settings:** User Account: admin, Password: [masked], Confirm Password: [masked], with Apply and Cancel buttons.
- Device Management Setting:** Enable TR069 Management: Enable, with Apply and Cancel buttons.
- Device Management Control:** WEB Admin Management: Enable All (dropdown), Remote IP Address: []-[]-[]-[] (two rows), Enable Debug Mode: Enable, Allow User SIP Account Configuration: Enable, Allow User SIP Server Configuration: Enable, Remote Management for Bridge Mode: Enable, Web Server Port for Router Mode: 80 (1 ~ 65535), Web Server Port for Bridge Mode: 8080 (1 ~ 65535), Auto-Logout Timeout: Enable (dropdown) 20 (Minutes: 1 ~ 25), with Apply and Cancel buttons.

At the bottom of the page, there are two buttons: 'Save & Commit' and 'Device Reboot'.

cmd shell and run command:

```
telnet 172.16.1.1
```

Login: admin

Password: root123

◆ TR069 Configuration

After **enable the tr069 management** in the General Setting page, you must also configure the validity **acs url** for monitoring the device via standard TR-069 ACS systems.

AirMaster 4000M

- System Information
- Network Configuration
- WiFi Configuration
- Service Configuration
- VoIP Configuration
- System Maintenance

General Setting
NTP Setting
Auto Update
Maintenance
Ping

General Setting

Language Settings

Select Language: English ▼

Administrator Settings

User Account: admin

Password: ●●●●●●●●

Confirm Password: ●●●●●●●●

Device Management Setting

Enable TR069 Management: Enable

AirMaster 4000M

- System Information
- Network Configuration
- WiFi Configuration
- Service Configuration
- VoIP Configuration
- System Maintenance

General Setting
TR069
NTP Setting
Auto Update
Maintenance
Ping

TR069 Configuration

TR069 Configuration

ACS URL: http://10.3.0.15:8080/im2000/acs

ACS Username:

ACS Password:

Re-enter Password:

Periodic Inform Enable: Enable

Periodic Inform Interval: 90 (seconds: 90~604800)

Periodic Inform Time: 2001 - 01 - 01 T 00 : 00 : 00

(e.g. 2000-01-01T01:01:01)

CPE Username: admin

CPE Password: ●●●●●●●●

Re-enter Password: ●●●●●●●●

Maximum Reconnections: 0 (0~255, 0: Unlimited reconnections.)

WIB Configuration

WIB Enable: Enable

WIB Operator Domain:

WIB Server URL:

ACS STUN Configuration

STUN Status: Enable STUN

Server Address:

Server Port: 3478 (0~65535)

Username:

Password:

Re-enter Password:

Minimum Keep Alive Period: 10 (seconds: 10~90)

Maximum Keep Alive Period: 90 (seconds: -1~90)

Current STUN Status: 0

Current Keep Alive Period: 0

Load ACS Certificate

ACS Certificate Status: N / A

Size (Byte): N / A

Certificate Path:

◆ Firmware Upgrade over HTTP

Click on the Browser button to select the firmware file to be uploaded to the device.

Click the **Apply** button to begin the upgrade process.

The screenshot shows the 'Maintenance' page of the AirMaster 4000M web interface. The 'Firmware Upgrade over HTTP' section is active, displaying a 'Location' field with the path 'C:\Users\Administrator\Docume' and a 'Browse...' button. Below the field is a green 'Apply' button with a checkmark icon.

Please do not interrupt the upgrade process and continue to wait for the following pop window to appear, then Restore Defaults and Reboot.

The screenshot shows a 'Success' pop-up window with a blue header and a close button (X). The message reads: 'The upgrade has been successfully. Please select one of the following to continue:'. There are three buttons: 'Restore Defaults & Reboot' (highlighted with a red box), 'Reboot Device Only', and 'Continue without Reboot'.

◆ Load Factory Default

Click the **Load Default** button will restore the device to original factory setting. User will need to reconfigure the authentication setting in order to get the device operational.

The screenshot shows the 'Maintenance' page of the AirMaster 4000M web interface. The 'Load Factory Default' section is active, displaying a 'Load Factory Default' button with a red 'X' icon and the text '(Device Will Reboot)'. At the bottom of the page, there are two buttons: 'Save & Commit' and 'Device Reboot'.

4. Hardware Reset

In case the user forgot the login password, the device can be reset by pressing (using a pin) the reset button next to the LAN port for 10 seconds and then wait for the CPE to reboot and complete the restart. The user can then be allowed to use the original default login password to gain access to the unit WEB GUI again.

After factory reset, the device may need to be reconfigured by the user or even operator to gain network access. This is not a recommended operation and special care must be taken to ensure the device will be properly re-configured after factory reset.

5. FAQ and Troubleshooting

1) My PC cannot connect to the CPE.

- Re-plug the PC Ethernet cable and check if the PC LAN connection is up or showing activity.
- Check if the system run LED is on. If it is not, check the power cord and make sure it is connected properly. Also verify that the AC power supply is available.
- If the PC LAN shows no activity and system run LED is off but the power cord is connected properly and there is AC supply, then it is likely the adapter is damaged. Please contact distributor to obtain replacement part.

2) My PC cannot acquire IP from the CPE.

- First check if the Network card is up and working properly. Then check the PC Network card configuration and make sure the DHCP is enabled.
- To release and renew the correct IP address, please unplug the Ethernet cable from PC and wait for about 5 seconds, then connect it again.
- If the problem persists, please contact the operator or distributor for further diagnose.

3) My CPE networking is not working properly.

- You may want to check if the WAN connection is up and running properly. You can do this by login the WEB GUI and check the Interface Info page.
- You may want to perform a factory reset and see if the problem is being corrected. You can do this by log into the WEB GUI using “admin” password and perform restore the unit to default factory setting.
- If the problem cannot be corrected by factory reset, please contact the operator or distributor for further diagnose.

4) I forget the login password and like to reset the unit to factory default.

- The user can hold the RESET button on the reverse side of CPE for 10 seconds to clear and reset the unit to factory default setting.
- After the unit is reset to factory default, you can login using the default password.