



AFOUNDRY®

Wireless Router

AF-EW1200

User Guide

802.11AC Wireless Dual Bands Router

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1.Product Key Features

2T2R,2.4GHz,5.8GHz

Throughput up to 1200Mbps

Multiple SSID up to 8

Output power adjustable & ACK timeout

Support PTP and PTMP(Point to Multi-point)

Multi-operation mode : AP/Gateway/ WISP(CR) /Client Bridge

WPA2/WPA/AES/TKIP,SSH and 802.1x Authenticator

Firewall, IP/Port/MAC and URL filtering

QoS:Traffic Control & WMM/WMM-PS

Port based VLAN support

Traffic statistics based port

Supports Ping Watch Dog and Wireless Speed Test

Built-in NAT and DHCP Server & Client

Supports Address Reservation

Virtual DMZ,Port Forwarding

TCP/UDP/ICMP/ARP protocol stack

Supports UPnP, Dynamic DNS, Static Routing

Supports PPPoE, Dynamic IP, Static IP Internet Access

Wireless user access control(ACL)

NTP Client

Support VPN Pass-through(PPTP,L2TP)(option)

Support L2TP,PPTP,IpSec(Option)

4 x LAN +1 x WAN(10/100/1000Mbps)FE

Easy quick setup wizard with web-based utility

Metal housing

External 5dBi Omni ANT

Emergency Recovery Push button Provide a self-aid page for users in case of firmware upgrade failure

NMS management platform(Option)

This guide describes how to install Router quickly and configure it easily. Following with the guidance , it would offer a visual way to help network users and maintenance staff spending less time to obtain whole idea about how to make router run fluently.

2. Quick Configuration guidance

The First Step: Connect the device

- Interfaces:

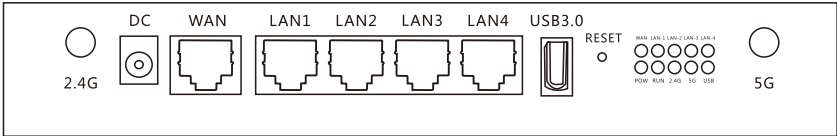


Figure- 1 Router Physical Interfaces

- Power: DC Jack, please equip with 12V/2A DC power adapter
- Reset: Two ways of restoring to factory defaults as below
 - 1) Go to **System**→**Factory Defaults** in the web page, click **"Load Defaults"** icon;
 - 2) Press reset button in 5-10 seconds on the panel of the device, then release it, the device will restore configuration to factory defaults.



Caution

Please keep uninterruptible Power Supply while implementing “Restore to Factory Defaults”, otherwise the device would be damaged.

- Connection means as figure-2:

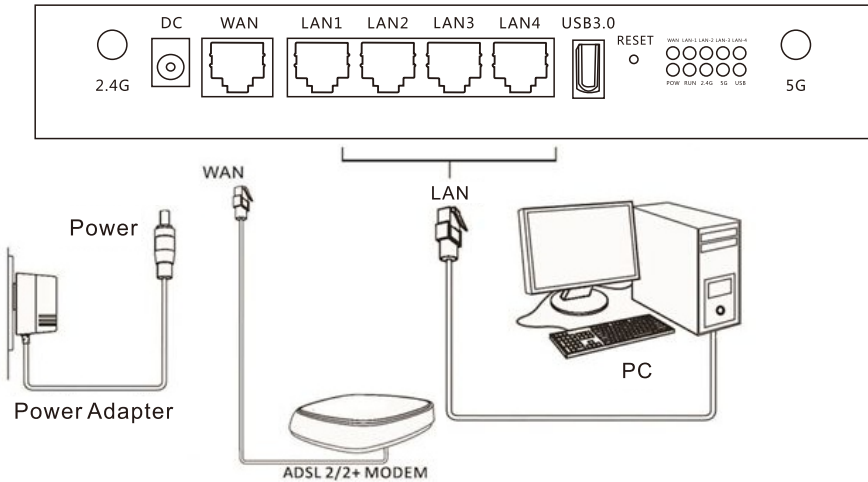


Figure-2 Connection diagram between router and power adapter



Caution

Incorrect connection and using unauthorized accessories could cause the device damaged !

The Second Step: Start-up and Login

- 1) As figure-2 shown, make sure that the access between Router and PC is ok.
- 2) Configure local IP address with 192.168.2.X (X=2-254) on PC side(The IP address must be in the same segment with Router’s gateway address),subnet mask:255.255.255.0. As figure-3、 4 shown:

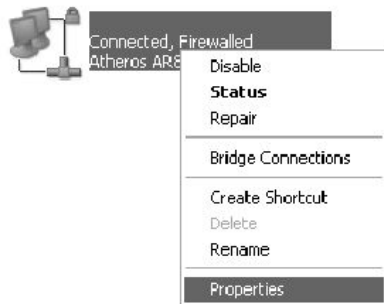


Figure-3 Configuring IP address of PC

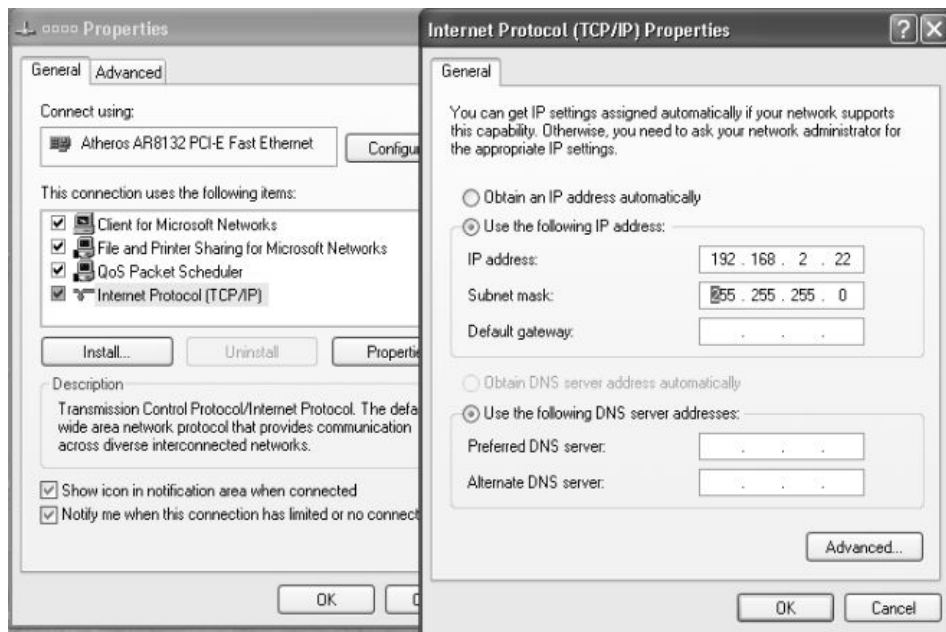


Figure 4 LAN IP address settings on PC side

3) Access to device via wireless

After the basic settings of the device, if you want to access internet or connect the device via wireless as shown in figure-5, please configure local "Wireless Network" properties, lock mouse on the icon of

Wireless Network then click the right button of mouse, then click "View Available Wireless Network" to filter out which AP or Router which you wish to connect to.

Default SSID: AFOUNDRY-2.4G; Default Password: 88888888

Default SSID: AFOUNDRY-5.8G-11AC; Default Password: 88888888



Figure- 5 Wireless Network Icon

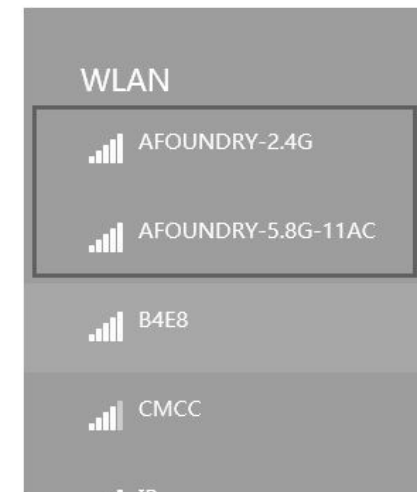


Figure- 6 Wireless Connection Settings



Caution

- A. If your Laptop or PC has internal 802.11b/g/n wireless LAN card, but couldn't find wireless network, please contact with service department of your computer vendor for help:
- 1) Click the right button of mouse upon "My Network Places", then select "Properties", if you could find "Local Network", but there is no "Wireless Network" icon.
 - 2) Click the right button of mouse upon "Local Network" icon, then click the right button and select "Properties", just find "Regular" and "Advanced" options, but there is no "Wireless Network Settings" even if you have ever successfully connected with other wireless hotspot.
- B. Click upon "Refresh Network List", all hotspots scanned will be listed on the right. Select specified SSID you wish to connect to (If password is required, please enter it in pop-up page).

4) Enter "http://192.168.2.1" in your browser's URL item, then you'll see login page as Figure-8 shown;

Default User Name: admin; Default Password: admin.



Figure-7 Enter gateway address in IE explore



Figure-8 Login Page

The Third Step: Setup Wizard

- ① If you have been logged in, please go to Setup Wizard → Select specified WAN type "PPPOE, DHCP, Static" → click Next step.



First Step - WAN Settings

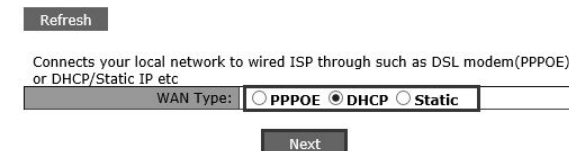


Figure – 9 WAN Settings



Note:

- ✧ **DHCP:** In this mode, the device will obtained dynamic IP address and other network parameters from ISP.
- ✧ **PPPoE:** In this mode, the device access ISP by PPPoE dial-up, PPPoE is used usually for ADSL broadband access.
- ✧ **Static:** Use a fixed IP Address to access ISP, in this mode need user enter fixed IP address, gateway etc manually.

② LAN Settings:

You could configure Gateway IP adress here or keep defaults, then click *Next*

The Second Step - LAN Settings

To configure LAN IP & Subnet Mask, all devices upon the router keep same IP network segment and login the router with the IP address



Figure - 10 LAN Settings

③DHCP Server Settings:

You can choice Disable or Enable DHCP server here, then click *Next*

The Third Step - DHCP Server Settings

To configure the router's DHCP Server which is used for allocating IP address to those devices upon the router.

DHCP Server Status:	☐ Disable ☒ Enable
Start-IP Address:	192 . 168 . 2 . 50
End-IP Address:	192 . 168 . 2 . 100
Lease(Sec):	86400
Gateway:	
DNS1:	
DNS2:	

Figure - 11 DHCP Server Settings

④Wireless Settings:

To configure wireless settings of the device, you can choice **Disable** or **Enable** wireless function here,select security mode/set encrypt key etc,after that click **Apply** to save previous settings.

Wireless Basic Settings

Status:	☐ Disable ☒ Enable
Mode:	11n/G(40M)-
Channel:	Auto
SSID:	CPE-E1C0
Broadcast SSID:	☐ Disable ☒ Enable
Isolated:	☒ Disable ☐ Enable
Security Mode:	WPA2PSK

WPA Security Settings

WPA Encrypt Type:	☐ TKIP ☒ AES ☐ AUTO
WPA Key:	 ☐ text
WPA Rekey Time(sec):	

Figure - 12 Wireless Settings

The Fourth step: Checking connection status

After finishing the related configurations, and you want to check whether the configurations succeed, please go to "Status" page for more details, as figure -13 shown

Setup Wizard »

Operation Mode »

- Status »

- WAN
- Access Point
- LAN
- DHCP Server
- System

+ Wireless »

+ Network »

+ Qos »

+ Security »

+ System »

+ Debug Tools »

WAN Infomation

Status:	Connected
Mode:	PPPOE
IP Address:	58.250.211.96
Subnet Mask:	255.255.255.255
Gateway:	58.250.208.1
DNS1:	210.21.196.6
DNS2:	221.5.88.88
Connected Duration:	0Day(s) 19:08:38
Received(Byte/Packet):	3238204657/7654271
Sent(Byte/Packet):	1012531318/5879261
MAC Address:	00:00:00:00:00:00

Figure - 13 Router Connection Status

When Router successfully connect to front-end WLAN base station or AP, the status is "Connected", other options also are listed on the page, DNS1, DNS2, Connected Duration, Received(Byte/Packet), Sent(Byte/Packet), MAC Address etc.

3. PC Configuration

To set the method of obtaining IP address automatically on PC or laptop note side, then PC will get an IP address from ROUTER or ISP WLAN DHCP Server. As shown in Figure – 14.



Note:

The device will reboot after changing these settings. If you just keep default settings , please click Next for further process.

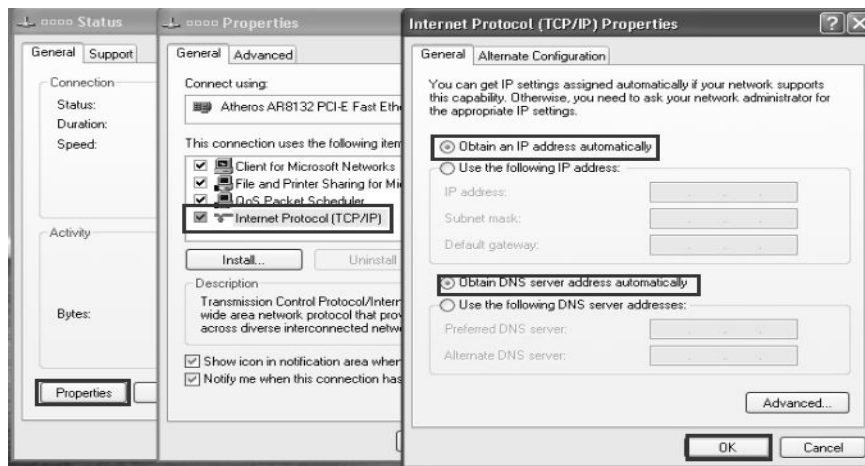


Figure - 14 IP address settings on PC

Once you finished these settings, you could implement “Ping” command to test whether the connection is OK.

4. System

Click “System” to go to system management page, as shown in Figure – 15.



Figure - 15 System Management

- **Password Settings:** To set system administrator and password here.
- **Time Settings:** To set time zone and time information here.
- **Backup & Restore:** To export system configuration file to local document or import backup-file for

restoring configuration to factory defaults.

- **Factory Defaults:** Restore system configuration to factory defaults.
- **Reboot:** re-power on system by software interface.
- **WEB Server:** To set web server related option here.
- **Firmware Upgrade:** To upgrade Router's firmware for obtaining a more stable and functional

performance of the ROUTER.



Note:

To restore router to factory defaults via physical reset button on panel by pressing reset button in 5-10 seconds or click “Reset” button on the web page.

You could check system logs on “Log Management” page, as shown in Figure - 16

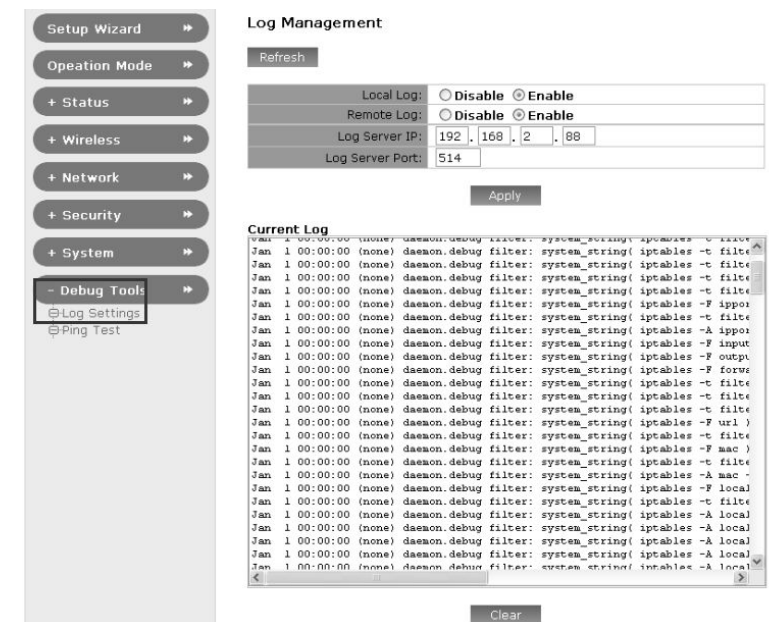


Figure -16 System Logs

5. Troubleshooting

Troubles	Treatment
SYS indicator doesn't shine	Please double check if the connection is done between POE box and LAN port. Right way is that connecting "POE" interface to Router and "LAN" to PC or laptop.
Couldn't login Web page	1. Please check whether both IP addresses are in the same segment. You can check it via selecting "Start"- "Run" blank and implementing "CMD" command, by ping "192.168.2.1" to test whether the connection is OK; 2. Restore factory defaults, then login again; 3. Double check there is no same IP address of "192.168.2.1" in same network range; 4. Please check if driver of your PC WLAN Nic has been installed correctly, and Ethernet cable is good.(10/100M UTP Ethernet cable is recommended strongly); 5. By entering "arp -d" command over "Start"- "Run" interface to clear arp bind; 6. To clear the files of IE browser
ROUTER could not connect with front-end AP (Status: disconnected)	1. To scan wireless network again and reconnect hotspots; 2. To check whether wireless options of the ROUTER have been set correctly; 3. To check whether encrypt type & Key could match between AP and ROUTER; 4. Whether wireless signal of front-end AP is very weak, which recommended is greater than -75dBm.
Couldn't detect signal of targeted ROUTER	Try to perform "Scan" command twice, if target SSID still be invisible, please check if channel of ROUTER could support front-end AP or hotspots. Such as AP or hotspots working in Channel 14, but ROUTER only support channel number maximum up to 13; Another way to check if the protocol could match between ROUTER and AP or hotspots. It is necessary to restore factory defaults before make the configuration.
PC couldn't access internet ,but indicator show connection has been connected successfully.	1. Please check whether it is right on PC side, such as IP address, gateway and DNS. 2. For DHCP, set WLAN NIC to obtain IP address automatically; 3. For Static IP address, please ask for correct IP & DNS address from your ISP.
To restore to factory defaults	In operation status of the Router, press "RESET" button in 5-10s, then release the button, system will restore to Factory Defaults.

Table - 1 Troubles and treatment

6. Contact us

Vendor: Shenzhen Afoundry Electronic Co., Ltd

Website: www.afoundry360.com

E-mail: support@afoundry.com.cn

Tel: (+86)18520825425, (+86)-400-0118677, (+86)0755-82910479

Skype: Afoundry Tech

Whatsapp: +8618520825425

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

For the band 5.15-5.25 GHz is only used indoors.