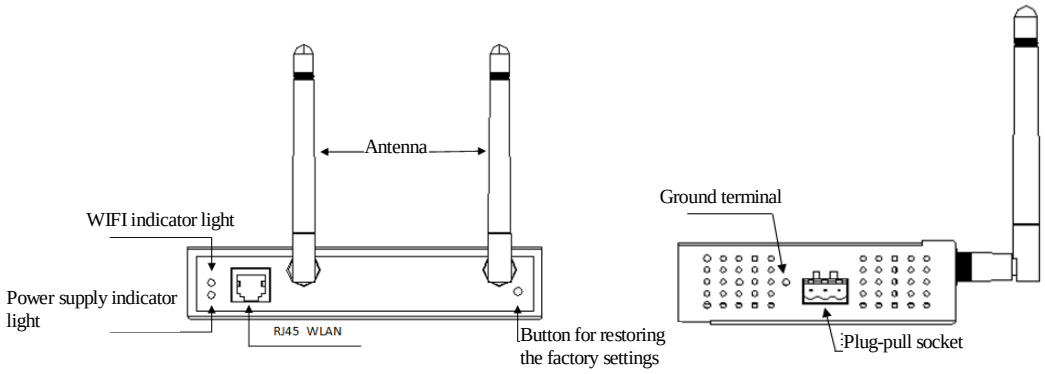
UT-9021
Wireless AP Repeater
User Manual

I. Product introduction

UT-9021 is an industrial grade wireless AP mainly used for Wi-Fi coverage in factories, stations, marketplaces and hotels etc. This AP is made based on the 2T2R 2.4G wireless MIMO technology and can support up to 32 ends accessing the wireless internet at the same time since the max. band width can reach up to 300Mbps; The customizable external power supply is made based on the 24V-POE supply technology for supporting the 50~70m network cable perfectly, making this router installable even at places without power supply, reducing the installation cost, realizing easier installation, operation and unified management especially in places without power output and improving traditional network infrastructures

II. Hardware introduction

Appearance and function structure



III. Product features

High speed - 300Mbps

The UT-9021 is made based on the 2T2R MIMO technology for supporting the wireless access speed of up to 300Mbps that is about 6 times that of the 802.11b/g/n products under the same condition. The upload / download speeds are quicker.

Multi-operation mode (AP, routing and relay) for users with different requirements

The UT-9021 supports multiple operation modes such as AP, route and universal relay and therefore can not only serve the wireless coverage in factories, stations, marketplaces and hotels but also be used as a wireless router for household PPPoE dialing as well as for full Wi-Fi coverage through relay service.

Multiple functions, centralized AC management, automatic allocation of IP addresses, sample and easy layout

The UT-9021 supports Chinese SSID (up to 4 virtual SSIDs), and thus network users can be separated completely. At the same time this product supports centralized AC management, VLAN management and AP address server, realizing the automatic allocation of AP IP address. Further more, it is also available for remote management and configuration changing, and therefore the installation and layout of large-scale network s are more convenient and easier.

IV. Technical specifications

Wireless technology	802.11N, 2T2R 300M MIMO technology		
Equipment interface	1 10/100 Mbps self-adaptive wired network interface.		
	1 reset button for restoring the factory settings.		
	1 3p plug-pull socket		
Antenna	2 pcs, 2.4G gain: 3dBi TLB high-gain omni-directional external rubber stick antennas		
Power supply	DC12~24V /1A		
RF parameter			
RF characteristics	802.11b/g/n:		
	2.4~2.4835GHz		
	Optional Korean, Japanese, ETSI, FCC communication channels		
Transmission speed	300 Mbps		
Receiving sensitivity	802.11n(2.4GHz)	802.11g	802.11b
	-90dBm @ MCS0	- 90dBm @ 6Mbps	- 95dBm @ 1Mbps
	-70dBm @ MCS7	- 72dBm @ 54Mbps	- 90dBm @ 11Mbps
	-90dBm @ MCS8		
	-68dBm @ MCS15		
Transmission power		Radio1(WLAN1)	
	802.11n(2.4GHz)(± 1.5dBm)	802.11g(± 1.5dBm)	802.11b(±1.5dBm)
	20dBm@ MCS0~2/MCS8~10	20dBm @ 6~24Mbps	20dBm @1~11Mbps
	18dBm @ MCS3/MCS11	18dBm @ 36Mbps	
	18dBm @ MCS4/MCS12	16dBm @ 48Mbps	
	18dBm @ MCS5/MCS13	16dBm @ 54Mbps	
	16dBm @ MCS6/MCS14		
	16dBm @ MCS7/MCS15		
Size	150mm×100mm×37mm		
Net weight	700g		

V. Quick start wizard

5.01. Connect it on the DC12-24V power supply. The equipment will be OK when the red power supply indicator light is On.

5.02. Switch it on and just wait for 30S, search the peripheral wireless networks with a wireless network adapter installed computer or a cellphone and then find the network ID of UTEK_AP. When the IP address for the wireless network adapter installed computer or cellphone is selected as 192.168.1.XXX (XXX: 0-252), the wireless network connection will be allowed. The password for wireless connection is 12345678.

5.03. Network parameter configuration. Connect the equipment to the computer adapter with a piece of network cable. Configure the IP address 192.168.1.XXX (XXX: 0-252) that is at the same network segment as that of the equipment. The default IP address of the equipment is 192.168.1.254, see Fig. 1 for the configuration:

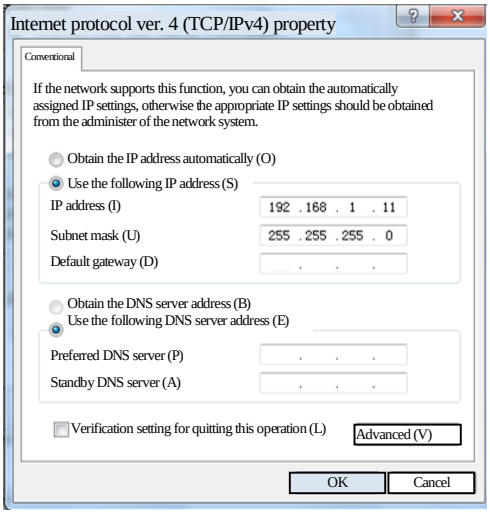
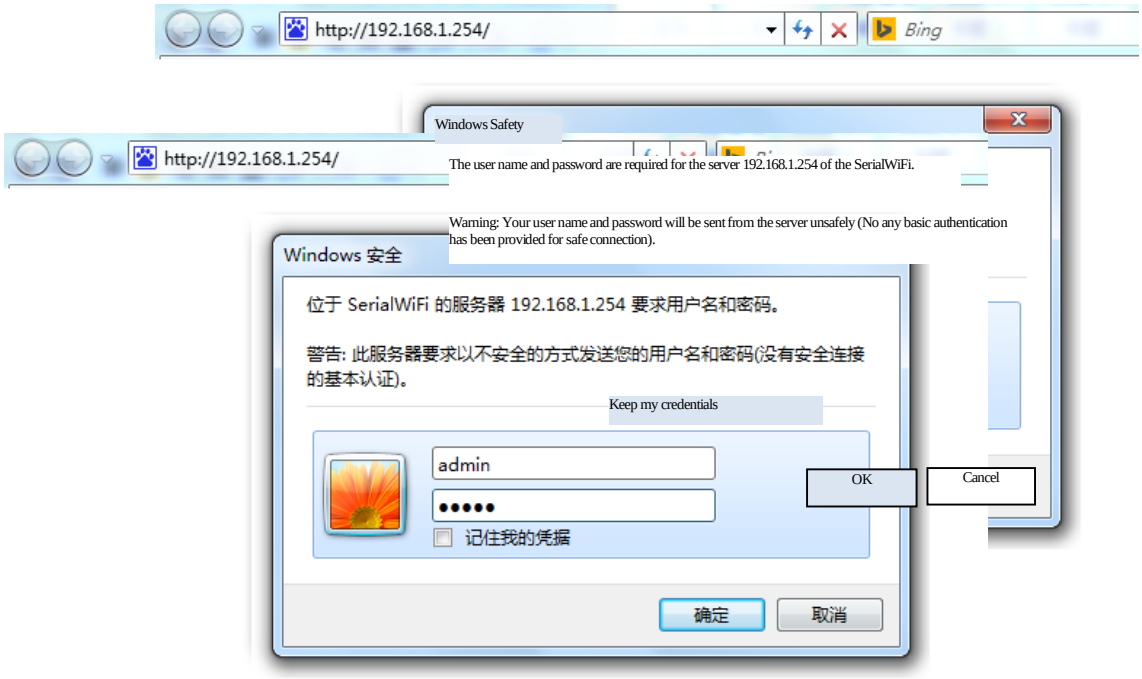


Fig. 1

5.04. Enter 192.168.1.254 in the web browser and press “Enter”, and then enter the user name and password in the shown access window. Both the default user name and password are admin, see Fig. 2. Fig. 3 shows the configuration interface after log-in.



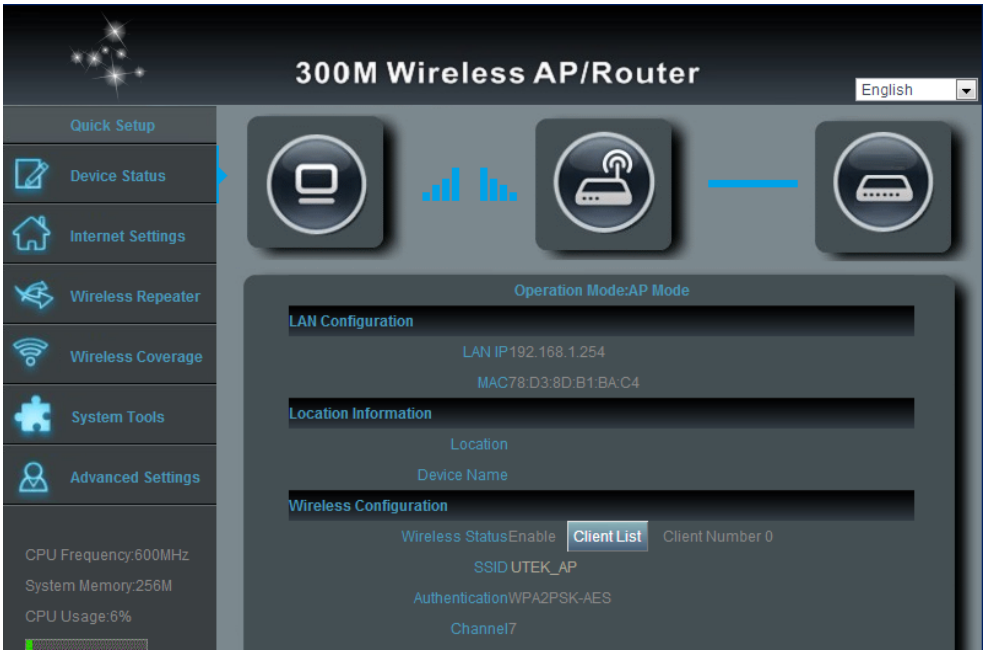


Fig. 3 Configuration interface

5.05. Work mode configuration. Main interface - Advanced setup - work mode. Options under the work mode are gateway mode, universal relay mode and AP mode, which can be selected as required.

◎ Gateway mode: You can visit the Internet through wire dialing (PPPOE) / dynamic IP, static IP. The wire / wireless network can be accessed by using the UT-9021. The Internet is connected to the WAN interface of the equipment with the network cable. For computers, the wireless connection equipment can be used, see Fig. 4.

Fig. 4 Gateway mode

◎ Universal relay mode: Long distance transmission. If the original wireless signals can not reach the target, just select the universal relay mode of the UT-9021. The equipment is connected to the Internet wireless router through the wireless mode. For computers, the Internet can be visited through connecting to the equipment through the wireless mode, see Fig. 5.

Fig. 5. Universal relay mode

◎ AP mode: When the equipment is operated under this mode, the equipment can be connected to the Internet router with the network cable. For cellphones or computers etc., the wireless equipment can be connected to the Internet through the UT-9021, see Fig. 6.

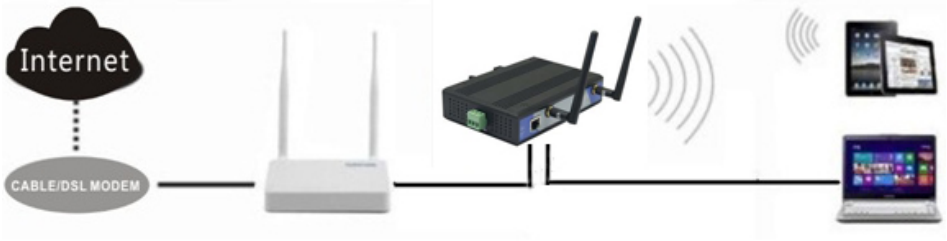


Fig. 6 AP mode

5.06. Basic information configuration for wireless network. Main page - wireless coverage. This option has SSID number, channel, cipher mode and cipher key configuration.

5.07. DHCP service. Obtaining IP dynamically. Under the Advanced setup - Network setup, the IP address setup has options of static and dynamic IP addresses, which can be obtained as required.

5.08. Under the WEB configuration interface, when the Advanced setup - Equipment management is clicked, the following can be configured:

◎ System configuration management: The system settings and factory settings can be recovered or the equipment can be restarted through exporting the system configuration and importing the backup configuration files here.

◎ Router setup: The routing rule can be added manually.

◎ DDNS setup: The DDNS rule can be set here.

◎ QoS setup: Bandwidth allocation setups etc. for each IP or IP segment are allowed.

◎ Administer setup: The system administer and password can be set here. Both the default user name and password are admin.

◎ System log: The log service can be set as opened or closed and the system log files can be checked.

◎ Software upgrade: Through upgrading the software, the performance of the equipment can be improved and the functions can be stabler and perfecter.

◎ System time: The time information of the router can be set and the time interval of the system can be optimized.

5.09. The factory settings can be recovered by pressing the “RST” for 6S. The soft recovery can also be selected - configuration page - Advanced setup - Equipment management - System configuration management.

VI. Handling of FAQs

Table 1 FAQs and their handling method

FAQ	Handling method
User name and password missed	Recover the factory settings
Failing to access through the WEB page	1. Check the IP address of the computer for being at the same segment as that of the equipment. (The IP address of the computer shall not be192.168.1.254). Check if the equipment is connected through ping 192.168.1.254; 2. Try to log in after the factory settings are recovered; 3. Check if the IP address of the equipment is used by other equipment; 4. Check the network cable of the computer for being in good condition.
Wireless password missed	1. Click the wireless setup and basic setup under the WEB interface of the equipment. Enter the desired cipher key in the password bar; 2. Recover the factory settings. Default password: 12345678.
Failing to obtain the IP address	1. Check the DHCP server of this system for being used under the gateway mode; 2. Check this computer for being connected with the superior network correctly under the AP and relay modes.
Failing to connect the Internet	1. If the dynamic IP log-in mode is selected, enter the WEB configuration interface. Check the selected network type for being the dynamic IP user under the network setup - WAN setup; 2. If the ADSL broadband network is used, enter the WEB configuration interface. Check the selected WAN is set as the PPPOE user under the network setup - WAN setup and check the password for being correct. 3. If you are a fixed IP address user, enter the WEB configuration interface. Check the selected WAN for being set as the static IP user under the network setup - WAN setup, and check the entered data for being correct; 4. Check if the IP address of the computer is set as to be obtained automatically.

Packing list

No.	Name	Unit	Qty.
1	UT-9021 main machine	Set	1
2	CD of the User Manual	Pcs	1
3	Plug-pull power supply terminal	Pcs	1
4	Guide rail support	Pcs	1
5	stator	Pcs	2
6	M3 screw	Pcs	3
7	M3 grub screw	Pcs	6
8	Antenna	Pcs	2
9	Acceptance certificate		1