



Thank you for using KT ES series coaxial cable modem. ES series EoC modem (with Wi-Fi) is a high price-performance-ratio coaxial cable modem. It adopts Qualcomm AR6400/7411 chip, and complies with HomePlug AV. You could enjoy high speed internet via CATV network by using our product. It can be connected to PC, MAC or STB by internal 10/100Base Ethernet interface. The excellent bandwidth provides high transmission speed so that you can enjoy high-quality images, music and other service, gain high-quality video conference, VOD, online game, remote education, as well as use IP telephone/fax or VPN.

ES series modem (with Wi-Fi) complies with 802.11n (wireless) standard. It provides wireless access for laptop, cell phone, PDA, and other terminal equipment, so users can enjoy internet surfing, video and voice services.

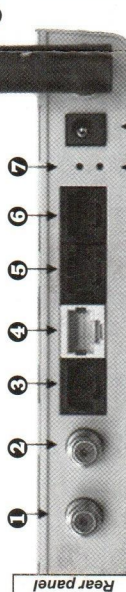
Advanced SNMP network management system will monitor the device online status, and update client system via headend.

We value users' suggestions. We are convinced that your advice to work; your proposal is our spiritual wealth. We hope that our products would bring users into an exciting world.

1 Product Description



Indicator	Function
①	Power indicator Off-on: power on
②	Coaxial cable signal synchronous indicator Off-on: synchronization succeeded Flashing: signal transmitting Off: synchronization failed
③	WIFI connection indication Flashing: WIFI data transmitting
④	Indicator of number 4 Ethernet interface On: good connection Flashing: normal data transmission Off: connection failed or no connection
⑤	Indicator of number 3 Ethernet interface On: good connection Flashing: normal data transmission Off: connection failed or no connection
⑥	WIFI configuration / Data service interface For WIFI local WEB configuration or data service access On: good connection of Ethernet interface Flashing: normal data transmission Off: connection failed or no connection
⑦	Indicator of number 1 Ethernet interface On: good connection Flashing: normal data transmission Off: connection failed or no connection



Symbol	Function
①	RF OUT
②	TV loop output port
③	RF IN
④	Number 1 Ethernet interface
⑤	Configuration and service interface
⑥	Number 3 Ethernet interface
⑦	Number 4 Ethernet interface
⑧	WIFI RESET
⑨	EOC RESET
⑩	Power port
⑪	WIFI antenna

Remark:
 1. Ports in black are used for data service; Port in yellow is used for route;
 2. When it comes to two COON ports, user can tell it from the color (yellow).

2 Technical Specification

CATV signal Downstream	Insert loss
	≤1.5dB
	Flatness
	±0.75 dB
	Return loss
	≥16dB

EoC data	Working frequency
	7.6-65MHz
	Modulation mode
	OFDM(BPSK-4096QAM self-adapt)
	Physical bandwidth
	700Mbps
	MAC layer bandwidth
	330Mbps
	Max. RF output signal level
	118dBμv
	Single module physical layer data rate
	500Mbps

WIFI parameter	Frequency range
	2.4G
	Max transmission rate
	Signal channel 150Mbps
	Wireless protocol
	Support 802.11n, compatible with 802.11b/g
	Working channel
	13
	RF power
	15dBm omnidirectional
	Antenna gain
	5dBi High-gain omnidirectional antenna
	Encrypt mode
	Support WEP, WPA-PSK, WPA2-PSK
	NAT
	Support
	DHCP
	Support
	PPPoE
	Support

Function	Support TR-069 management, support Qualcomm expansion MME management (Reserved)
	Support IPv6
	National standard remote SNMP (Reserved)
	Remote software upgrade (Reserved)
	WEB management
	Support virtual server, DMZ, ALG
	Support 802.1Q Vlan Max.4096 VLAN
	Support QoS
	Support ACL
	Support MAC banding and filtering
	Support DOS attack defense
	Traffic statistics
	System log

General	1 10/100Mbps Ethernet RJ-45 CON interfaces
	3 10/100Mbps Ethernet RJ-45 interfaces
	1 RF input F-connector
	1 RF output loop out F-connector
	One external antenna
	Working temperature
	0°C~40°C
	Dimension
	190mm*135mm*33mm
	Relative humidity
	10%~90% no condensing
	Power supply
	External adapter power: 12V DC 0.5A
	Power consumption
	≤6W

3 Safety Precautions

1. Please read this manual before using the products.
2. To avoid electric shock, DO NOT disassemble the device unauthorizedly.
3. Power supply: AC100V to 240V/50Hz ONLY.
4. Please ensure power line and other lines are connected well before power on the device.
5. Do not switch on/off the device frequently; otherwise its working time will be reduced.
6. To save energy, please turn off the device if not using it.
7. Remove the power plug from the socket while cleaning and/or maintaining, or when the device will not be used for a long time.
8. Do not let children play with it, to prevent them from electric shock. If there are liquid or solid substances falling into the chassis, please power off immediately and keep it no using until it is inspected by professionals.
9. When unplugging the power cord, please first turn the unit off, hold the plug insulated part and slowly pull out.
10. Mount the machine in a ventilated environment; avoid sun light and wet as well as severe vibration. Do not install the unit in a place with high temperature and humidity. The normal operating temperature range is 0°C to 55°C.
11. Please keep the original package material to ensure later safe transmission.

4 Other Precautions

The following suggestions will help you fulfill all liabilities, obligations, as well as long-term use of this product during the warranty period.

1. Please keep the device dry.
2. Do not store the modulator in dusty, dirty areas, or high temperature, in order to avoid a short circuit or damage.
3. Do not attempt to disassemble the device. Disposal of non-professional may damage the device. If users turned seals unauthorized, the Company is not covered under warranty.
4. Do not drop, knock or gravity jolt the device. Rough handling can break internal circuit board.
5. Do not use harsh chemicals, cleaning solvents or abrasive cleaners to clean the surface of this unit. Please use a soft, clean and dry cloth.
6. Please use a soft, clean and dry cloth.

Disclaimer: The Company shall not be responsible for any consequences when user do not follow the instructions.

5 Troubleshooting

If there is not network data connection, users can check it by following steps:

1. Indicator ① does not light. Poor contact of power socket. **Maintain a strong connection.**
2. Indicator ② does not light. Poor connection. **check whether the RF cable is reliably connected. If the connection is good and user could watch TV through RF OUT port, please contact the local CATV operator.**
3. Indicator ③ does not light. Poor connection. **Check whether the RJ45 port (LAN) has been connected to Ethernet port of a computer.**
4. Cannot access the network while all the indicators that mentioned above are working. Your account balance is not sufficient. **Recharge your account, or contact the local operator.**

6 Installation and Operation

Read the manual carefully before you install the device. Do follow the operation steps below.

1. Installation

1. Please follow the instructions on rear panel and connect RF IN to CATV user base, and LAN interface to PC Ethernet interface, and power outlet to power supply. Accessories are in the package.

2. Operation

1. Login WEB configuration interface

Most of the parameters has been set in factory, and can be applied to common residential networks. If you need to check the working status of the device, or want to use other advanced network function, WEB configuration interface will help you with that. Operation steps are as follow:

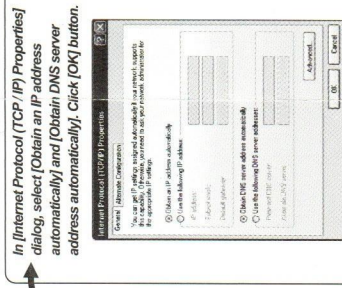
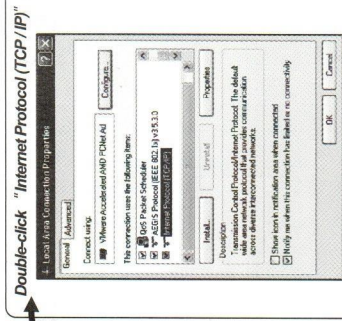
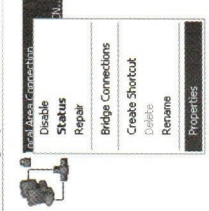
1. Connect PC Ethernet interface and modem CON interface by cable.

2. Obtain an IP address automatically DHCP function is enabled by default in the device, so it can distribute IP address for PC automatically. Take Windows XP system for example:

Click "Start-control panel > network and internet connection > network connection"

Remark: If you turn off the DHCP function, make sure the PC IP address is in the same network segment of IP address of WLAN interface of the device, and then the PC can access the WEB configuration interface

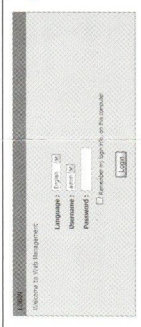
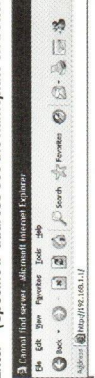
LAN or High-Speed Internet



In [Local Connection Properties] dialog box, click [OK] button to complete the IP address settings.

3. Open browser and login. Take IE browser for example.

Input an IP address, for instance "http://192.168.1.1" to address bar, and press "Enter". (Specific IP address see the nameplate on bottom cover).



Input user name (default is admin) and password (default is admin) to login dialog.

Click "Ok".

2. Use Setting Wizard

If you have already logged in, you can make a quick setup via setting wizard. Steps as follow:

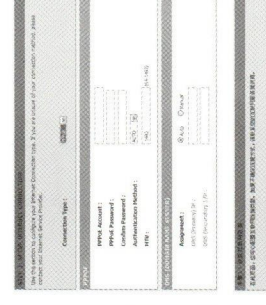
Login configuration web.

Refer to the introduction of the following table, configure the connection type and network parameters.

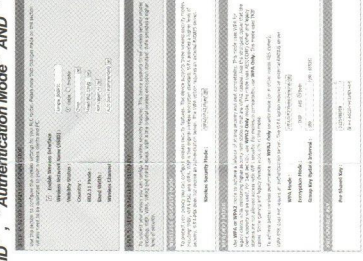
Connect type	Application
PPPOE	User account and password are provided by network service provider.
Dynamic IP (DHCP)	No parameter is restricted by the network service provider. IP address is automatically distributed by provider.
Static IP	A fixed IP address and a DNS server address is restricted by the network service provider.

When select "Dynamic IP" or "Static IP", without any configuration. Click "Next".

If you select "PPPOE" or "Static IP", please input corresponding information, and click "Next".



Configure wireless network parameter, click "Wireless setting-basic setting", click "Next" to configure "SSID", "Authentication Mode" AND "WPA Key".

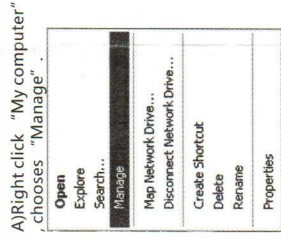


Remark: SSID is short for service set identifier. An SSID is the name of a wireless local area network (WLAN). It can be default, or be modified to other names, such as "kingtype". Authentication mode is the authentication method between wireless router and terminal, which could be None, WEP or WPA. We suggest users enabling authentication mode and input a wireless key for security purpose. Internet will be available after configuration.

3. Manually configure wireless LAN.

You can set up wireless connection by manually configuration. Take WINDOWS XP system for example:

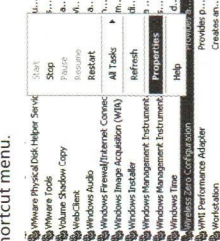
Enable WINDOWS XP wireless configuration.



B) Choose "Computer management (Local)" service and applications > services" on the left of computer management window.



C) Right click "Wireless Zero Configuration" on the right service list of "Computer management" window; select "Properties" in the shortcut menu.



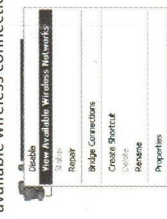
D) Check whether "service status" is "enable" in "Wireless Zero Configuration Properties (local computer)". If not, please click "Enable".

E) "Click "Ok".

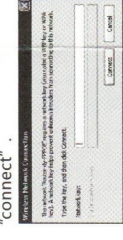
Configure the wireless network connection of the computer.

A) Click "Start > Control panel > Network and Internet Connection > Network Connection".

B) Right click "wireless network connection", select "View available wireless connections".



D) Input the network key and click "connect".



If the key were verified, wireless network icon will display "connected", and that means the computer has been added to the wireless network.

4. Language selection

Default operation panel will be Chinese. User can change it before login.

