

**ZXR10 WAS (V2.0) IP Wireless Access
System
W800A Wireless Access Point**

**Professional Installation
Instruction Manual**

ZTE CORPORATION

ZXR10 WAS (V2.0) IP Wireless Access System

W800A Wireless Access Point

Professional Installation Instruction Manual

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Preface

About This Manual

This manual, *ZXR10 WAS (V2.0) IP Wireless Access System W800A Wireless Access Point — User's Manual*, is applicable to W800A wireless access point (W800A for short) of the ZXR10 WAS (V2.0) IP wireless access system.

The ZXR10 WAS IP wireless access system is the IP wireless access system developed by ZTE. It consists of a series of wireless access network products, such as wireless network card, wireless access point (AP) and DSL 2-in-1 wireless router.

Serving as the operation guide to W800A, this manual introduces the function features, installation, operation, using and maintenance of W800A. This manual consists of 7 chapters and 2 appendixes.

Chapter 1, Safety Precautions, introduces the safety precautions of this product and safety symbols used in this manual.

Chapter 2, Installation and Debugging, deals with the installation and debugging methods of W800A.

Chapter 3, Command Line Configuration, covers the command line configurations of W800A.

Appendix B Making of Ethernet cables, details the power supply mode of W800A Ethernet and making of Ethernet cables.

Conventions

Four striking symbols are used throughout this manual to emphasize important and critical information during operation:



Attention,



Caution,



Warning and



Danger: alerting

you to pay attention to something.

Statement: The actual product may differ from what is described in this manual due to frequent update of ZTE products and fast development of technologies. Please contact the local ZTE office for the latest updating information of the product.



Warning

**This instruction manual only apply to W800A with the following antennas:
TQJ-5800BKF40-W, TQJ-5800C-5, TQJ-5800BKF8, R0322-025**

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1 Safety Precautions

This chapter introduces the safety precautions of this product and safety symbols used in this manual.

1.1 Safety Precautions

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.

To assure continued compliance, (example – use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 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 equipment is with high temperature and voltage, so only the professional

personnel who had passed the training can install, operate and maintain it.

ZTE assumes no responsibility for consequences resulting from violation of general specifications for safety operations or of safety rules for design, production and use of equipment.

1.2 Symbol Description

See Table 1.2-1 for the safety symbols used in this manual, which serves to remind the readers of the safety precautions to be taken when the equipment is installed, operated and maintained.

Table 1.2-1 Safety Symbols and Descriptions

Safety Symbols	Meaning
	Call for notice
	Call for antistatic measures
	Warn against electric shock
	Caution against scald
	Warn against laser
	Caution against microwave

Four types of safety levels are available: danger, warning, caution and note. To the right of a safety symbol is the text description of its safety level. Under the symbol is the detailed description about its contents. See the following formats.

**Danger:**

Any failure to take the reminder seriously may lead to important accidents, such as casualties or damage to the equipment.

**Cautions:**

Any failure to take the reminder seriously may lead to important or severe injury accidents, or damage to the equipment.

**Caution:**

Any failure to take the reminder seriously may lead to severe injury accidents or damage to the equipment.



Note:

Any failure to take the reminder seriously may lead to injury accidents or damage to the equipment.



Remark, reminder, tip...

The remarks, prompt and tips in addition to safety statements.

2 Installation and Debugging

This chapter details the methods and procedure of installation and debugging of the W800A for your reference.

2.1 Installation Preparations

2.1.1 Installation Preparation Flow

Before installing the W800A, the engineering personnel should confirm that such work as solution design, project survey and W800A basic configurations have been completed. Brief introductions to the preparations required for installation are as follows.

2.1.1.1 Channel Planning

According to 802.11b wireless LAN international standard and the standard of state radio management committee, the working frequency band of a wireless device in the wireless LAN is 2400 MHz ~ 2483.5 MHz, and the working frequency bandwidth is 83.5 MHz, divided into 14 sub-channels with 22 MHz as the bandwidth for each one. The sub-channel distribution is shown in Fig. 2.1-1.

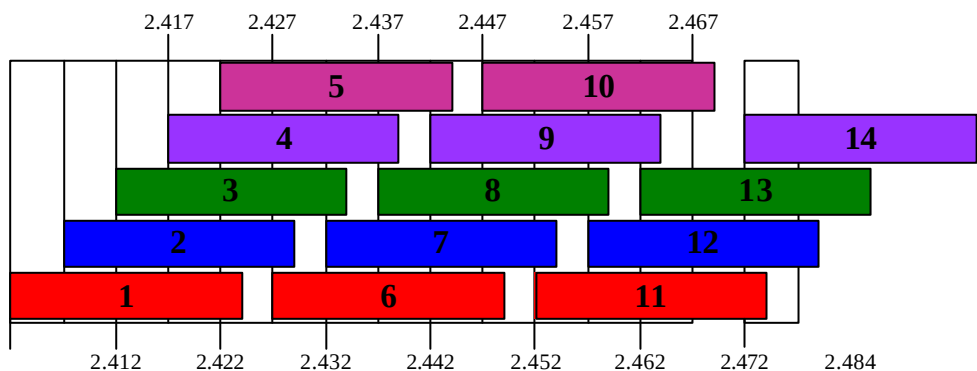


Fig. 2.1-1 Sub-Channel Distribution

Viewed from the above diagram, up to 13 channels are available. The IDs and central frequencies of these 13 channels are described in Table 2.1-1.

Table 2.1-1 IDs and Frequencies of Channels

Channel ID	Central Frequency	Low End/High End Frequency of the Channel
1	2412MHz	2401/2423MHz
2	2417MHz	2411/2433MHz
3	2422MHz	2416/2438MHz
4	2427MHz	2421/2443MHz
5	2432MHz	2426/2448MHz
6	2437MHz	2431/2453MHz
7	2442MHz	2431/2453MHz
8	2447MHz	2436/2458MHz
9	2452MHz	2441/2463MHz
10	2457MHz	2446/2468MHz
11	2462MHz	2451/2473MHz
12	2467MHz	2456/2478MHz
13	2472MHz	2461/2483MHz

When multiple channels work at the same time, the central frequency intervals between two channels should not be less than 25 MHz to avoid mutual interference. As shown in Fig. 2.1-1, in a cell, direct spread spectrum technology can support simultaneous work of up to 3 un-overlapped channels.

In the wireless LAN planning, to realize efficient coverage of APs and avoid mutual interference between channels, the cellular coverage principle of BTS is adopted in the channel distribution. 3 un-overlapped channels (for example, channels 1, 6 and 11) can be used in the same area at the same time, as shown in Fig. 2.1-1.

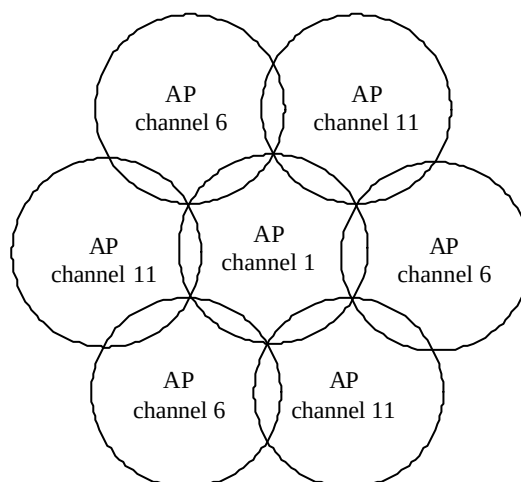


Fig. 2.1-2 Channel Distribution Principle of Adjacent APs

When using APs, for the adjacent APs, we will select their working channels (channels 1, 6 and 11 are usually used) according to the principle shown in Fig. 2.1-1, to guarantee the normal work of the wireless LAN.

The channel distribution principle of 802.11g standard is the same as that of 802.11b.

802.11a standard channels feature anti-interference performance, so no special configuration is required. In the actual networking, you only need make sure that the channels between adjacent APs are different.

2.1.1.2 Configuration before Installation

Before the installation, power on W800As in turn and check whether they can work normally. In the normal case, the Power indicator and ACT indicator on the W800A panel should be always on, and the RUN indicator should flash slowly (about once per second). If the indicator is not in the normal status, you can log on to the W800A in the hyper terminal mode and check whether the version is loaded normally. If necessary, you can reload the version (refer to Section 7.3 Version Loading and Upgrade for detailed procedure).

When you make sure that the W800A works normally, it is required to implement basic configurations for it. The configuration contents are as follows:

1. Configuring the W800A IP addresses, that is, management addresses. At least one management address should be configured for each W800A, for the management configuration of W800A.
2. Configuring the wireless working mode of the W800A wireless interface and the SSID (Service ID), using channel and rate of the corresponding wireless interface.

The detailed configuration methods will be introduced in the subsequent sections.

2.1.2 Tool, Instrument and Document

- One wireless network card.
- One PC for configuration management
- *ZXR10 WAS (V2.0) IP Wireless Access System W800A Wireless Access Point — User's Manual*

2.1.3 Installation Environment Inspection

The W800A can only be used indoors. To guarantee the normal work and longer useful life of the equipment, the indoor temperature range should be -5 °C ~ 45 °C, you should maintain good ventilation and dry air indoors, and the relative humidity range is 5% ~ 95%.

2.1.4 Unpacking Inspection

Generally, the following equipment and accessories are contained in the package of this product.

W800A	1
Power adapter	1
Console configuration cable	1
Delivery attached document CD	1



Note:

Please refer to the packing list in the package. If there is any missing part, please contact ZTE Cooperation.

2.2 Installation

W800A shell is made in plastic with certain mechanical intensity, and can satisfy the using requirement. The material is fire-resistant and satisfies the environment protection requirement. The ground bolt can be installed on the interface board of the shell, for grounding. The W800A can be used not only on the desktop or ceiling but also on the wall, so it is easily to be used.

The W800A installation process is described in detail as follows:

1. Place the W800A to the proper position according to the engineering planning, for example, evenly place it on the desktop, ceiling or wall.
2. Determine the angle of the antenna.
3. Connect the power cable to the power socket on the W800A backplane.
4. Connect the Ethernet cable to the Ethernet interface on the W800A backplane.

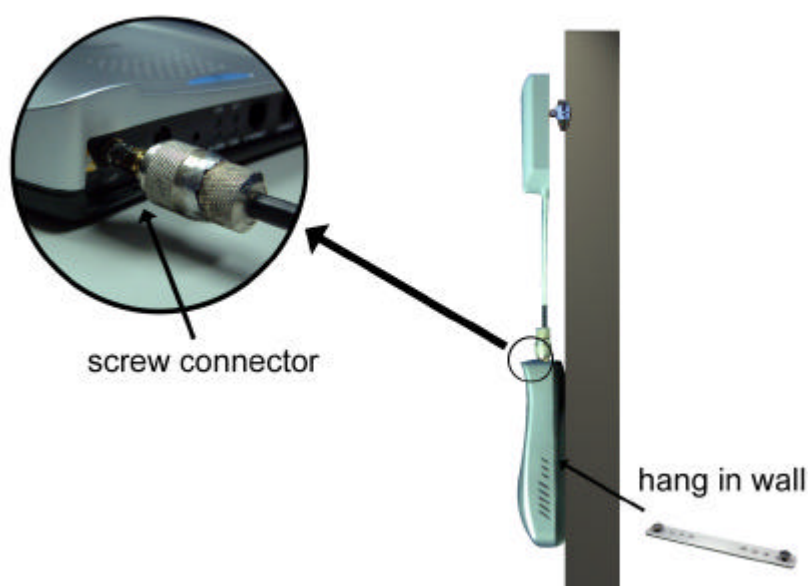


Fig. 2.22-1 installation instruction

When the W800A is installed on the ceiling, for the ceiling in plaster or floor, the W800A antenna can be directly installed on the ceiling; for the ceiling in metal, if the antenna is directly installed on the ceiling, the antenna signal will be shielded and W800A can not work normally, so you should lead the antenna to the place under the ceiling, through correct antenna feeder. If the W800A is hanged on the wall, reliable fixing method is necessary. If the W800A is placed on the desktop, reliable fixing method is required to ensure the safety of the equipment.



Warning

5. Once the RF antenna connector is screwed onto the W800A, the connectors must be rendered "permanent" and non-disconnectable in accordance with FCC rules.

This can be accomplished either by;

- a) Soldering the connectors together, (see Fig. 2.22-2) or,



Fig. 2.22-2 Soldered Connectors

b) Gluing together by using permanent, fast-setting epoxy glue and surround the entire periphery of the connector junction so it is not possible to disconnect.

Follow the directions provided on the glue package for cleaning and mixing the two-part glue together.

2.3 Power-on and Power-off

The following two power methods are used for the W800A system.

1. Use the in-house power adapter of the W800A.
2. Use PoE.

The terminal PoE module is embedded in the W800A. When PoE power supply is adopted, a standard straight-through cable is used to connect the PoE interface of the PoE source end device W112P or W105P. For the detailed description, refer to Appendix B.

To power on the W800A, connect the power adapter or Ethernet cable for powering the Ethernet for the W800A. After being powered on, the W800A will start automatically, without any operation by users.

To power off the W800A, directly disconnect the W800A power adapter or the cable for powering Ethernet.

2.4 Debugging

After W800A is powered on and started, it is required to implement service debugging. There are three purposes for debugging:

1. Ensure that the route between W800A and Internet/customer server is smooth.
2. Ensure that each client in the W800A coverage area can access Internet normally.
3. Ensure that in the whole engineering coverage area, the clients can be roaming switched between the cells containing APs.

3 Command Line Configuration

This chapter describes the operation methods and configuration commands of the W800A command line configuration.

3.1 Overview

The W800A provides the Command Line Interface (CLI) for configuring the W800A data.

The CLI configuration of the W800A has the following features:

1. You can not only implement local configuration through the hyper terminal software with the serial port, but also implement local or remote configuration in Telnet with the Ethernet interface and wireless network card.
2. The CLI provides five command modes: User, privileged, configure, Ethernet interface configuration and wireless interface configuration modes. One mode is the execution environment for a group of related commands, and one command can be executed only in the corresponding command mode. To obtain the valid commands in the current command mode, input “?” in the current mode.
3. Commands are of two types: information query and function. The information query commands serve to obtain some information to be queried. The function commands serve to change the function configuration of the W800A. The changed configuration is saved in the running configuration information library. To cancel the function configuration, execute the reverse command of the former command (that is, no + key word + former command)
4. CLI provides perfect help system: At any time, you can input “?” to obtain the related help information.
5. The command inputting provides the fuzzy match function: Once the information input by the user is enough for determining a command, no more information is required to be input.
6. CLI provides the command history function: You can select a historical command for executing through “?” or “?” of the keyboard.

7. CLI provides two layers of password protection to reject illegal users. The first layer password authentication appears on the Telnet welcome interface, the safety authentication for accessing the user mode is required at this time. The default user name is “root” and default password is “public”. In the user mode, input the enable command and correct password to enter the privileged mode, the default password is “zte”.



Notes:

When you implement the configuration in the serial port mode, you can enter the user mode from the hyper terminal interface directly, without any authentication.

8. CLI can automatically page the output commands on the terminal: “—More—” at the lower left corner of the command output window indicates more output commands. At this time, you can press CTRL to display the next page, press ENTER to output the next line and press other keys to exit.
9. W800A CLI provides the basic command line editing function. The short-cut keys for editing command lines are described as follows:

Ctrl + U: Delete the whole command being input.

Ctrl + A: Move the cursor to the first character of the command line.

Ctrl + E: Move the cursor to the last character of the command line.

Ctrl + X: Delete all the characters before the cursor.

Ctrl + K: Delete all the characters after the cursor (containing the character at the cursor)

Ctrl + C: Give up all the input contents. Enter the new line and the prompt character will appear.

When the serial port mode is used for configuring the W800A, the serial port attribute configurations of the hyper terminal are shown in Fig. 3.-1.

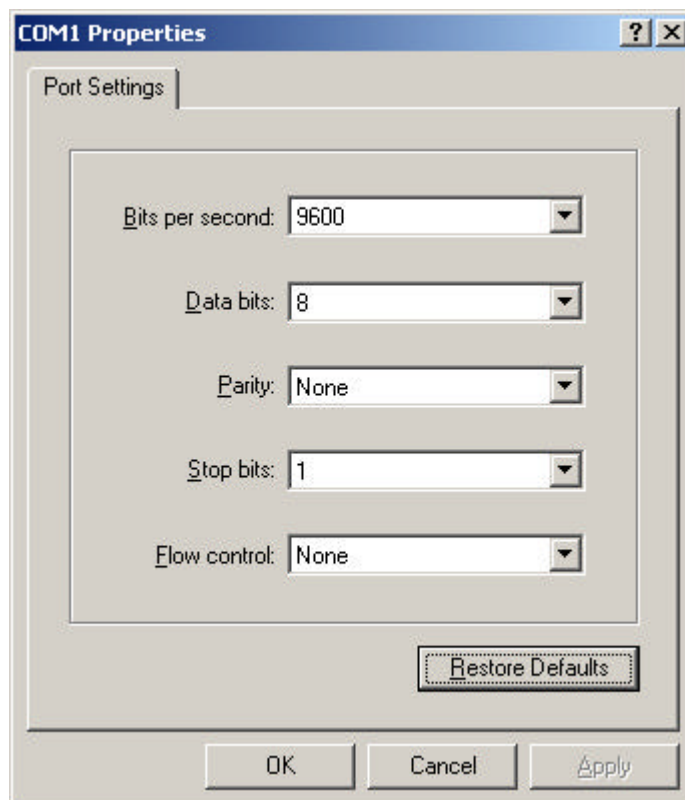


Fig. 3-1 Serial Port Configuration

When the Telnet mode is used for configuring the W800A, you just need input “telnet/W800A working IP address”, as shown in Fig. 3.1-2. By default, the W800A working IP address is 192.168.1.254 and the subnet mask is 55.255.255.0.

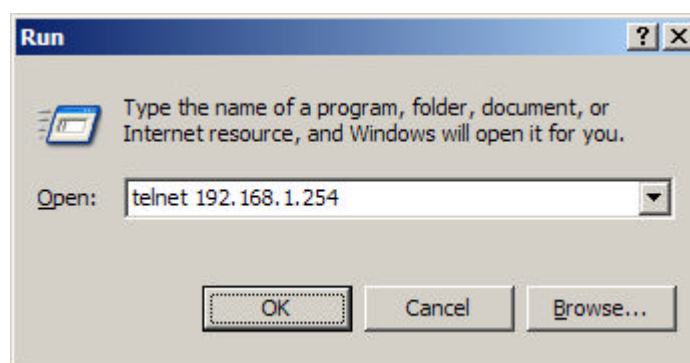


Fig. 3.1-2 Telnet to W800A

These five configuration modes of the W800A and all the available commands under each mode are described in detail as follows: The stipulation of command format are as

follows:

1. **abc** refers to the command or keyword.
2. `<abc>` refers to the contents to be input by the user.
3. `abc|def` indicates that one of the two will be selected.
4. For the contents included in `[ ]`, the user can choose to input or not input them..
5. For the contents included in `{ }`, the user must input them.

3.2 User Mode

Entering mode: Telnet

Exiting mode: exit

Default prompt character: wlan>

Note: After logging on to the W800A in Telnet, the common user can enter the user mode only once the user name and password authentications are passed. The default user name is “root” and default password is “public”. To avoid the case in which the illegal user tries with different passwords, the system will automatically disconnect from the Telnet of a user, after this user inputs wrong password for consecutive three times.

3.2.1 Entering the Privileged Mode

Command mode: User mode

Function: Input the correct password to enter the privileged mode.

Command format: **enable**

Note: After the user inputs the enable command and press ENTER, the system will prompt that password need be input. The default password of privileged mode is “zte”.

3.2.2 Exiting the Telnet Configuration

Command mode: User mode.

Function: Exiting the user mode and returning to the system.

Command format: **exit**.

3.3 Privileged Mode

Entering mode: Input the enable command in the user mode and input correct password.

Exiting mode: disable, entering the user mode; exit, exiting the privileged mode and returning to the system.

Default prompt character: wlan #

3.3.1 Network Connectivity Check

Command mode: Privileged mode

Function: Checking the network connectivity.

Command format: **ping** <A.B.C.D> [-n <echo-number>] [-w <timeout>] [-l <packet-size>] [-t]

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	Destination IP address
-n	None	Setting the flag bit of ping packet quantity.
<echo-number>	1~40	Quantity of ping packets.
-w	None	Setting the flag bit of the maximum time-out interval.
<timeout>	1~2	Maximum time-out interval (unit: second).
-l	None	Setting the flag bit of the buffer area capacity .
<packet-size>	0~1504	Buffer area capacity
-t	None	Setting the consecutive ping packets (complete it by <Ctrl + C>)

3.3.2 Saving the Configuration Data to FLASH

Command mode: Privileged mode.

Function: Saving the configuration data to FLASH.

Command format: **write flash.**

3.3.3 Restoring the Default Configuration

Command mode: Privileged mode

Function: Deleting the database, recovering the default configuration of the W800A

and reset it.

Command format: **default enable**

3.3.4 Resetting the Software

Command mode: Privileged mode

Function: Resetting the W800A.

Command format: **reboot**

3.3.5 Entering the Configure Mode

Command mode: Privileged mode

Function: Entering the configure mode.

Command format: **configure terminal**

3.3.6 Exiting the Privileged Mode

Command mode: Privileged mode

Function: Exiting the privileged mode and entering the user mode.

Command format: **disable**

3.3.7 Exiting the Telnet Configuration

Command mode: Privileged mode

Function: Exiting Telnet and returning to the system.

Command format: **exit**

Note: This command can only be used in the CLI in the Telnet mode. If the user logs on in the hyper terminal mode through the serial port, this command is invalid.

3.4 Configure Mode

Entering mode: Input the configure terminal command in the privileged mode.

Exiting mode: exit, entering the privileged mode.

Default prompt character: wlan (config) #

Note: All the configuration commands can be executed in this mode (or its sub-modes).

3.4.1 Bridge Configuration

1. bridge aging-time

Command mode: Configure mode

Function: Configuring the aging time of the Bridge Forward Table (FDB) MAC address.

Command format: **bridge aging-time** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	10~1000000	The aging time of the FDB MAC address (unit: second), 300 by default.

2. bridge forward-table-size

Command mode: Configure mode

Function: Configuring the quantity of the FDB MAC addresses.

Command format: **bridge forward-table-size** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	220~1024	Quantity of the FDB MAC addresses, 1024 by default.

3.4.2 Clearing the Information

Command mode: Configure mode

Function: Clearing the alarm, log or debugging information.

Command format: **clear** {**alarm**|**logcmd**|**trace**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ alarm logcmd trace }	Alarm, Logcmd, trace	Clearing the alarm, logcmd or trace information.

3.4.3 Configuring the Configuration Server

Command mode: Configure mode

Function: Configuring the parameters of configuration server: IP address, interception port number of the TCP and the interception port number of UDP.

Command format: **config-server** {**ipaddress** <A.B.C.D> [**tcp-port** <value¹> [**udp-port** <value²>] | **udp-port** <value²> [**tcp-port** <value¹>]] | **tcp-port** <value¹> [**ipaddress** <A.B.C.D> [**udp-port** <value²>] | **udp-port** <value²> [**ipaddress** <A.B.C.D>]] | **udp-port** <value²> [**ipaddress** <A.B.C.D> [**tcp-port** <value¹>] | **tcp-port** <value¹> [**ipaddress** <A.B.C.D>]]]}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	IP address of the configuration server
<value ¹ >	3000~65535	The interception port number of tcp, 3601 by default.
<value ² >	3000~65535	The interception port number of udp, 3600 by default.

Note: One or multiple parameters can be configured randomly. The un-configured parameters will keep unchanged.

3.4.4 DHCP Server Configuration

1. dhcp server dns

Command mode: Configure mode

Function: Configuring the IP address parameters of the master and slave DNS servers of the DHCP server.

Command format: **dhcp server dns** <A.B.C.D¹> [<A.B.C.D²>]

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D ¹ >	IP address	IP address of the master DNS server.
<A.B.C.D ² >	IP address	IP address of the slave DNS server (optional).

2. dhcp server gateway

Command mode: Configure mode

Function: Configuring the IP address parameters of the default gateway of the DHCP server.

Command format: **dhcp server gateway** <A.B.C.D>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	IP address of the gateway.

3. dhcp server leasetime

Command mode: Configure mode

Function: Configuring the address lease time of the DHCP server.

Command format: **dhcp server leasetime** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	60~3600	The address lease time of the DHCP server, 6 by default.

4. dhcp server run

Command mode: Configure mode

Function: Starting, stopping or restarting the DHCP server.

Command format: **dhcp server run** {start|stop|restart}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{start stop restart}	Start, stop, restart	start: Startup; Stop: Stopping; restart: Restarting.

5. dhcp server start-flag

Command mode: Configure mode

Function: Configuring the start flag of the DHCP server when the system is restarted.

Command format: **dhcp server start-flag** {true|false}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{true false}	True, false	The start flag of the DHCP server. If it is “true”, the DHCP server will be started when the system is restarted. If it is “false”, the DHCP server will not be started when the system is restarted.

3.4.5 DISCOVER Configuration

1. discover device

Command mode: Configure mode

Function: Configuring the integrated management multicast address and port number of the equipment.

Command format: **discover device** <A.B.C.D> [<value>]

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address with a range of 224.0.0.1 ~ 239.255.255.254.	The integrated management multicast address of the equipment, 224.1.88.89 by default.
<value>	0~65535	The interception port number of the integrated management multicast of the equipment, 2801 by default.

2. discover manager

Command mode: Configure mode

Function: Configuring the management multicast address and port number of the integrated management server.

Command format: **discover manager** <A.B.C.D> [<value>]

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address with a range of 224.0.0.1 ~ 239.255.255.254.	The management multicast address of the integrated management server, 224.1.88.88 by default.
<value>	0~65535	The management interception port number of the integrated management server, 2800 by default.

3.4.6 802.1X Parameter Configuration

1. dot1x enable

Command mode: Configure mode

Function: Enabling or disabling the 802.1x function.

Command format: **[no] dot1x enable**

2. dot1x max-reauth

Command mode: Configure mode

Function: Configuring the maximum times of 802.1x re-authenticating.

Command format: **dot1x max-reauth** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~10	The maximum times of 802.1x re-authenticating, 5 by default.

3. dot1x max-request

Command mode: Configure mode

Function: Configuring the maximum times of 802.1x authentication request.

Command format: **dot1x max-request** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~10	The maximum times of 802.1x authentication request, 2 by default.

4. dot1x md5-domain

Command mode: Configure mode

Function: Configuring the domain name in the EAP-MD5 authentication mode.

Command format: **dot1x md5-domain** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	The domain name in the EAP-MD5 authentication mode, USR by default.

5. dot1x nas-id

Command mode: Configure mode

Function: Configuring the 802.1x NAS-ID field information.

Command format: **dot1x nas-id** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 64 characters	NAS-ID character string, W800A by default.

6. dot1x portenable

Command mode: Configure mode

Function: Enabling or disabling the 802.1x port control function.

Command format: [no] **dot1x portenable**

7. dot1x quiet-period

Command mode: Configure mode

Function: Configuring the 802.1x quiet period.

Command format: **dot1x quiet-period** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~255	The 802.1x quiet period (unit: second), 30 by default.

8. dot1x server-timeout

Command mode: Configure mode

Function: Configuring the time-out time of the 802.1x authentication server.

Command format: **dot1x server-timeout** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~255	The authentication server time-out time (unit: second), 60 by default.

9. dot1x sim-domain

Command mode: Configure mode

Function: Configuring the domain name in the EAP-SIM authentication mode.

Command format: **dot1x sim-domain** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	The domain name in the EAP-SIM authentication mode, SIM by default.

10. dot1x supp-timeout

Command mode: Configure mode

Function: Configuring the time-out time of the 802.1x client.

Command format: **dot1x supp-timeout** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~255	The time-out time of the 802.1x client (unit: second), 30 by default.

11. dot1x tx-period

Command mode: Configure mode

Function: Configuring the 802.1x sending period.

Command format: **dot1x tx-period** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~255	The 802.1x sending period (unit: second), 3 by default.

12. dot1x wpa-domain

Command mode: Configure mode

Function: Configuring the domain name in the WPA authentication mode.

Command format: **dot1x wpa-domain** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	WPA domain name, WPA by default.

3.4.7 Password Configuration in the Privileged Mode

Command mode: Configure mode

Function: Configuring the password for enabling the privileged mode.

Command format: **enable-password** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 30 characters	The password for enabling the privileged mode, zte by default.

3.4.8 Erasing the Filtration Rules

Command mode: Configure mode

Function: Erasing the ACL rule according to the global regular numbers.

Command format: **erase mac-access-rule** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~1023	Numbers of the filtration rules.

3.4.9 Exiting the Configure Mode

Command mode: Configure mode

Function: Exiting the configure mode and entering the privileged mode.

Command format: **exit**

3.4.10 IAPP Load Balance Configuration

1. iapp balance

Command mode: Configure mode

Function: Configuring the load balance mode and nominal capacity of the load balance group.

Command format: **iapp balance** <vlaue¹> {**flow** <value²>|**user** <value³> }

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value ¹ >	1~65535	Load balance group ID
<vlaue ² >	1~65535	The lower limit of the flow implementing the load balance according to the data flow.
<vlaue ³ >	1~30	The lower limit of the users implementing the load balance according to the user quantity.

2. iapp enable-flag

Command mode: Configure mode

Function: Configuring the enabling status of the load balance and the limitation of the maximum user quantity.

Command format: **iapp enable-flag** {**disable**|**balance**|**max-user**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ disable balance max-user }	Disable, Balance, max-user	disable: Disabling both of them. balance: Enabling the load balance. max-user: Enabling the limitation of maximum user quantity.



Note:

Configurations iapp balance and iapp max-user can not be enabled at the same time.

3. iapp max-user

Command mode: Configure mode

Function: Configuring the maximum user quantity (the quantity of the users can be accessed).

Command format: **iapp max-user** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~150	The maximum quantity of the wireless users can be accessed by the system, 30 by default.

3.4.11 Entering the Interface Configuration Mode

1. interface ethernet

Command mode: Configure mode

Function: Entering the Ethernet interface configuration mode. The command is followed by the unit ID of the Ethernet interface. The equipment can hold multiple Ethernet interfaces.

Command format: **interface ethernet** {0}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{0}	0	The unit ID of the Ethernet interface. The W800A only has one Ethernet interface, so this value is 0 fixedly.

2. interface wlan

Command mode: Configure mode

Function: Entering the Wireless interface configuration mode. The command is followed by the unit ID of the wireless interface. The equipment can hold multiple wireless interfaces.

Command format: **interface wlan** {0|1}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{0 1}	0 or 1	The unit ID of the wireless interface. The W800A

		has two wireless interfaces, so this value is 0 or 1.
--	--	---

3.4.12 IP Network Parameter Configuration

1. ip address

Command mode: Configure mode

Function: Adding the IP address of the W800A management interface.

Command format: **[no] ip address** <A.B.C.D¹> <A.B.C.D²> **[second]**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D ¹ >	IP address	IP address of the host.
<A.B.C.D ² >	Subnet mask	Subnet mask of the host.
second	second	The main address is without “second” and the standby address is with “second”. The main address quantity can only be one and the standby address quantity can be up to nine.

2. ip route

Command mode: Configure mode

Function: Configuring the default route address of the system.

Command format: **[no] ip route** <A.B.C.D¹> <A.B.C.D²> <A.B.C.D³>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D ¹ >	IP address	IP address of the host.
<A.B.C.D ² >	Subnet mask	Subnet mask of the host.
<A.B.C.D ³ >	IP address	IP address of the router of the next hop.

3. ip pool

Command mode: Configure mode

Function: Configuring the IP address pool of the system.

Command format: **[no] ip pool** <index> <A.B.C.D¹> <A.B.C.D²> <A.B.C.D³>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<index>	0~9	IP address pool group ID

<A.B.C.D ¹ >	IP address	Initial IP address of the host address pool.
<A.B.C.D ² >	IP address	End IP address of the host address pool.
<A.B.C.D ³ >	Subnet mask	Subnet mask of the address pool address.

3.4.13 Kicking Users

1. kick all

Command mode: Configure mode

Function: Kicking all the users.

Command format: **kick all**

2. kick station

Command mode: Configure mode

Function: Kicking the user with the specified MAC address.

Command format: **kick station** <xx-xx-xx-xx-xx-xx>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<xx-xx-xx-xx-xx-xx>	MAC address	User MAC address

3.4.14 Two-Layer Separation Configuration

1. l2-separate enable

Command mode: Configure mode

Function: Enabling or disabling the two-layer separation function.

Command format: **[no] l2-separate enable**

2. l2-separate gateway

Command mode: Configure mode

Function: Configuring the gateway MAC address .

Command format: **l2-separate gateway mac** <xx-xx-xx-xx-xx-xx>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<xx-xx-xx-xx-xx-xx>	MAC address	Gateway MAC address

3. l2-separate mode

Command mode: Configure mode

Function: Configuring the two-layer separation working mode.

Command format: **l2-separate mode {simple_mode| gateway_mode }**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{simple_mode gateway_mode }	simple_mode, gateway_mode	Selecting the simple mode or gateway mode for the two-layer separation.

3.4.15 Log Printing Message Configuration

1. logmsg all-enable

Command mode: Configure mode

Function: Enabling or disabling the log printing messages of all the modules.

Command format: **[no] logmsg all-enable**

2. logmsg level

Command mode: Configure mode

Function: Configuring the levels of the log printing messages to be output.

Command format: **logmsg level {Lowest|Lower|Higher|Highest}**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ Lowest Lower Higher Highest }	Lowest (Flood), Lower (Info), Higher (Error), Highest (Fatal)	Level of the log printing messages to be output. Only the printing messages higher than this level can be output.

3. logmsg mod-enable

Command mode: Configure mode

Function: Determining the module containing the log printing messages.

Command format: **[no] logmsg mod-enable <module>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<module>	Specified module names: BSP, DATABASE, 80211, BRIDGE, IAPP, DHCP, IPPool, DOT1X, RADIUS, ACL, SVCMANAGE, TELNET, WEB, CONSOLE, SNMP, ALARM, R01, TFTP, DISCOVER, QOS	The module containing the log printing messages.

4. logmsg telnet-log

Command mode: Configure mode

Function: Configuring the current Telnet window as the output window of the log printing messages

Command format: **[no] logmsg telnet-log**

3.4.16 MAC Filtration Configuration

Command mode: Configure mode

Function: Adding or deleting a number accessing list.

Command format: **[no] mac-access-list <value> {deny|permit}**

{<xx-xx-xx-xx-xx-xx>|any}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~99	MAC filtration group ID
{deny permit}	deny, permit	deny: If the condition is satisfied, the MAC communication will be denied. permit: If the condition is satisfied, the MAC communication will be permitted.

Parameter Name	Value Range	Parameter Descriptions
{<xx-xx-xx-xx-xx-xx> any}	MAC address or any	The MAC address sending the MAC packet. Two methods can be used for specifying the source address: One is to use the format of 48-bit 6 hexadecimal hyphens, for example: 00-d0-d0-f1-c4-ef. The other is to use the keyword any as the abbreviation of the source 00-00-00-00-00-00. This keyword is not recommended.

3.4.17 MAC Address Authentication Configuration

Command mode: Configure mode

Function: Configuring the MAC address authentication function.

Command format: [no] **mac-authen** {deny|permit} {<xx-xx-xx-xx-xx-xx>|any}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{deny permit}	Deny, permit	deny: If the condition is satisfied, the MAC communication will be denied. permit: If the condition is satisfied, the MAC communication will be permitted.
{<xx-xx-xx-xx-xx-xx> any}	MAC address or any	The MAC address sending the MAC packet. Two methods can be used for specifying the source address: One is to use the format of 48-bit 6 hexadecimal hyphens, for example: 00-d0-d0-f1-c4-ef; The other is to use the keyword any as the abbreviation of the source 00-00-00-00-00-00, and this keyword is not recommended.

3.4.18 Manager Configuration

Command mode: Configure mode

Function: Adding or deleting the manager account.

Command format: [no] **manage-user** <string¹> <string²>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string ¹ >	1 ~ 32 characters	User name
<string ² >	1 ~ 32 characters	User password.

3.4.19 QoS Configuration

1. qos enable

Command mode: Configure mode

Function: Enabling or disabling QoS function.

Command format: **[no] qos enable**

2. qos policy

Command mode: Configure mode

Function: Configuring QoS policy.

Command format: **qos policy {ESSID|802.1p}**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ESSID 802.1p}	ESSID, 802.1p	Indicating the priority policy which is the base of QoS, ESSID by default.

3.4.20 RADIUS Server Configuration

1. radius-server account

Command mode: Configure mode

Function: Adding or deleting the accounting server of an ISP.

Command format: **[no] radius-server account <string¹> {master|slave} <A.B.C.D> <value> <string²>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string ¹ >	1 ~ 32 characters	ISP name, and only the created ISP can be input.
{master slave}	Master, slave	Master or slave flag of the accounting server.
<A.B.C.D>	IP address	IP address of the accounting server
<value>	0~65535	Port number of the accounting server

Parameter Name	Value Range	Parameter Descriptions
<string ² >	1 ~ 255 characters	Character string of the accounting shared secret key

2. radius-server authen

Command mode: Configure mode

Function: Adding or deleting the authentication server of an ISP.

Command format: [**no**] **radius-server authen** <string¹> {**master|slave**}
<A.B.C.D> <value> <string²>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string ¹ >	1 ~ 32 characters	ISP name, and only the created ISP can be input.
{ master slave }	Master, slave	Master/slave authentication server. The master authentication server can only be one.
<A.B.C.D>	IP address	IP address of the authentication server
<value>	0~65535	Port number of the authentication server
<string ² >	1 ~ 255 characters	Character string of the authentication shared secret key

3. radius-server dns

Command mode: Configure mode

Function: Adding or deleting the DNS server of an ISP.

Command format: [**no**] **radius-server dns** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	ISP name, and only the created ISP can be input.

4. radius-server isp-name

Command mode: Configure mode

Function: Adding or deleting an ISP.

Command format: [**no**] **radius-server isp-name** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	ISP name.

5. radius-server retry-times

Command mode: Configure mode

Function: Configuring the retrying times of the RADIUS authentication of an ISP.

Command format: **radius-server retry-times** <string> <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	ISP name, and only the created ISP can be input.
<value>	1~10	The retrying times of the RADIUS authentication, 3 by default.

6. radius-server timeout

Command mode: Configure mode

Function: Configuring the time-out time of the RADIUS authentication of an ISP.

Command format: **radius-server timeout** <string> <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	ISP name, and only the created ISP can be input.
<value>	1~65535	The time-out time of the RADIUS authentication (unit: second), 2 by default.

3.4.21 SNMP Module Configuration

1. snmp access-host

Command mode: Configure mode

Function: Adding or deleting the IP address of the host which can be accessed.

Command format: **[no] snmp access-host** <A.B.C.D>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	The host IP address represented by dotted decimal (A.B.C.D) (at most 10).

2. snmp access-mode

Command mode: Configure mode

Function: Configuring the local agent can be accessed by all the hosts or the host in access-host.

Command format: **snmp access-mode {all|list}**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{all list}	All, list	all: All the users can access it. list: The users in access-host can access it.

3. snmp authtrap

Command mode: Configure mode

Function: Enabling or disabling the community string authentication.

Command format: **[no] snmp authtrap enable**

4. snmp community

Command mode: Configure mode

Function: Configuring the SNMP access community string and its accessing authority.

Command format: **snmp community <string> {read-only| read-write}**

no snmp community <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	SNMP access community string name (at most 10). <string> is a character string with at most 32 characters.
{read-only read-write}	read-only, read-write	read-only: Read-only authority. read-write: Read-write authority.

5. snmp contact

Command mode: Configure mode

Function: Configuring the name and contact method of the equipment manager.

Command format: **snmp contact <End-Mark> <string>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<End-Mark>	Any character.	Serving as the end mark of inputting character string.
<string>	1 ~ 255 characters	A management variable content in the MIB II system group, containing the name and contact method of the equipment manager.

6. snmp enable

Command mode: Configure mode

Function: Enabling or disabling the SNMP management function.

Command format: **[no] snmp enable**

7. snmp location

Command mode: Configure mode

Function: Configuring the geographic location information of the managed equipment.

Command format: **snmp location** <End-Mark> <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<End-Mark>	Any character.	Serving as the end mark of inputting character string.
<string>	1 ~ 255 characters	sysLocation, a management variable in the MIB system group, describing the geographic location of the managed equipment.

8. snmp nodecode

Command mode: Configure mode

Function: Configuring the NE code information of the managed equipment.

Command format: **snmp nodecode** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~241920000	A management variable in the MIB system group, describing the NE code of the managed equipment.

9. snmp nodecreatdate

Command mode: Configure mode

Function: Configuring the creation time information of the NE of the managed equipment.

Command format: **snmp nodecreatdate** <hh:mm:ss> <month> <day> <year>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<hh:mm:ss>	0~241920000	hh (hour):mm (minute): ss (second)
<month>	1~12	Month
<day>	1~31	Date
<year>	2002~2130	Year, 4 bits are needed.

hh:mm:ss month day year is a management variable in the MIB system group, describing the creation time of the NE of the managed equipment.

10. snmp nodeid

Command mode: Configure mode

Function: Configuring the NE ID information of the managed equipment.

Command format: **snmp nodeid** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	0 ~ 31 characters	A management variable in the MIB system group, describing the NE ID of the managed equipment.

11. snmp sysname

Command mode: Configure mode

Function: Configuring the name of the managed equipment.

Command format: **snmp sysname** <End-Mark> <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<End-Mark>	Any character.	Serving as the end mark of inputting character string.
<string>	1 ~ 255 characters	RFC1213, a management variable in the MIB system group, and it is the name of the managed equipment.

12. snmp trap enable

Command mode: Configure mode

Function: Enabling or disabling SNMP Agent to send trap.

Command format: **[no] snmp trap enable**

13. snmp traphost

Command mode: Configure mode

Function: Adding a trap target host address and trap version number information.

Command format: **[no] snmp traphost <A.B.C.D> [version <value>]**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	trap target host address.
<value>	1~2	trap version number.

3.4.22 SSH Parameter Configuration

1. ssh server enable

Command mode: Configure mode

Function: Enabling or disabling SSH function.

Command format: **[no] ssh server enable**

2. ssh server only

Command mode: Configure mode

Function: Enabling or disabling SSH function, and disabling Telnet function.

Command format: **[no] ssh server only**

3. ssh server generate-key rsa

Command mode: Configure mode

Function: Generating SSH server secret key.

Command format: **ssh server generate-key rsa**

4. ssh server auth isp-name

Command mode: Configure mode

Function: Configuring SSH with the ISP name of the authentication server authenticated by radius.

Command format: **ssh server auth isp-name** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 64 characters	SSH adopts the ISP name of the authentication server authenticated by radius.

5. ssh server auth mode

Command mode: Configure mode

Function: Configuring the SSH authentication mode.

Command format: **ssh server auth mode** {radius|local}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{radius local}	Radius, local	SSH authentication mode.

6. ssh server auth type

Command mode: Configure mode

Function: Configuring the SSH authentication type.

Command format: **ssh server auth type** {chap|pap}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{chap pap}	Chap, pap	SSH authentication type.

3.4.23 Spanning Tree Parameter Configuration

1. stp bridge forward-delay

Command mode: Configure mode

Function: Configuring the forwarding delay time of the spanning tree protocol bridge.

Command format: **stp bridge forward-delay** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	4~30	The forwarding delay time of the spanning tree protocol bridge (unit: second), 15 by default.

2. stp bridge hello-time

Command mode: Configure mode

Function: Configuring the hello time of the spanning tree protocol bridge.

Command format: **stp bridge hello-time** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~10	The hello time of the spanning tree protocol bridge (unit: second), 2 by default.

3. stp bridge max-age

Command mode: Configure mode

Function: Configuring the maximum age of the spanning tree protocol bridge.

Command format: **stp bridge max-age** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	6~40	The maximum age of the spanning tree protocol bridge (unit: second), 20 by default.

4. stp bridge priority

Command mode: Configure mode

Function: Configuring the priority of the spanning tree protocol bridge.

Command format: **stp bridge priority** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~65535	The priority of the spanning tree protocol bridge, 32768 by default.

5. stp enable

Command mode: Configure mode

Function: Enabling or disabling the spanning tree protocol function.

Command format: **[no] stp enable**

6. stp interface path-cost

Command mode: Configure mode

Function: Configuring the path cost of the spanning tree protocol interface.

Command format: **stp interface path-cost {eth0|wlan0|wlan1} <value>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{eth0 wlan0 wlan1}	eth0, wlan0, wlan1	Configured interface.
<value>	1~65535	The path cost of the spanning tree protocol interface .

7. stp interface priority

Command mode: Configure mode

Function: Configuring the priority of the spanning tree protocol interface.

Command format: **stp interface priority {eth0|wlan0|wlan1} <value>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{eth0 wlan0 wlan1}	eth0, wlan0, wlan1	Configured interface.
<value>	0~255	The priority of the spanning tree protocol interface, 128 by default.

8. stp interface state

Command mode: Configure mode

Function: Configuring the state of the spanning tree protocol interface.

Command format: **stp interface state {eth0|wlan0|wlan1} {enable|disable}**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{eth0 wlan0 wlan1}	eth0, wlan0, wlan1	Configured interface.
{enable disable}	Enable, disable	The state of the spanning tree protocol interface, enable by default.

3.4.24 TELNET Configuration

1. telnet enable

Command mode: Configure mode

Function: Enabling or disabling Telnet function.

Command format: **[no] telnet enable**

2. telnet idletime

Command mode: Configure mode

Function: Configuring the automatic exiting time when the Telnet window is idle.

Command format: **telnet idletime** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	300~3600	The automatic exiting time when the Telnet window is idle (unit: second), 300 by default.

3.4.25 Uploading/Downloading TFTP Files

1. tftp dir

Command mode: Configure mode

Function: Observing the spare space of the flash disk (unit: byte)

Command format: **tftp dir**

2. tftp get: downloading files

Command mode: Configure mode

Function: With TFTP transmission protocol, downloading files from the TFTP server and save them to the flash disk

Command format: **tftp get** <A.B.C.D> {**runbin** | **zxipcmd.dat** | **database.dat**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	The TFTP server IP address represented by dotted decimal.
{ runbin zxipcmd.dat database.dat }	Runbin, zxipcmd.dat, database.dat	The full file name (including the extension name) of the version file set to be transmitted on the TFTP server.

3. tftp pic

Command mode: Configure mode

Function: Downloading the picture file on the WEB configuration page from the TFTP server and save them to the flash disk.

Command format: **tftp pic** <A.B.C.D>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<A.B.C.D>	IP address	The TFTP server IP address represented by dotted decimal.

4. tftp put: uploading files

Command mode: Configure mode

Function: With TFTP transmission protocol, uploading files from the flash disk to the TFTP server.

Command format: **tftp put** <A.B.C.D> {**runbin** | **zxipcmd.dat** | **database.dat**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
A.B.C.D	IP address	The TFTP server IP address represented by dotted decimal.
{ runbin zxipcmd.dat database.dat }	Runbin, zxipcmd.dat, database.dat	The full file name (including the extension name) of the file to be transmitted on the flash disk.

3.4.26 VLAN Configuration

1. vlan enable

Command mode: Configure mode

Function: Enabling or disabling VLAN function.

Command format: **[no] vlan enable**

2. vlan manager-vlanid

Command mode: Configure mode

Function: Configuring the VLAN of the management interface.

Command format: **vlan manager-vlanid** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~4094	0: The management interface is without VLAN. 1 ~ 4094: The VLAN domain flag of the management interface. The default value is 0.

3.4.27 Web Configuration

Command mode: Configure mode

Function: Enabling or disabling web function.

Command format: **[no] web enable**

3.4.28 Nation Zone Configuration

Command mode: Configure mode

Function: Configuring the nation and zone whether the equipment is located, for setting the corresponding channel and frequency band.

Command format: **zone** {NA|CA|CN|TW|FR|GE|HK|KR|MX|GB|US}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{NA CA CN TW FR GE HK KR MX GB US}	NA CA CN TW FR GE HK KR MX GB US	NA: Not been configured; CA: Canada; CN: China; TW: Taiwan; FR: France; GE: Germany; HK: Hongkong; KR: Korea; MX: Mexico; GB: Britain; US: USA; The default value is CN.

3.4.29 Showing Parameter Configuration

1. show alarm

1) show alarm all

Command mode: Configure mode

Function: Showing all the alarm information.

Command format: **show alarm all**

2) show alarm bycode

Command mode: Configure mode

Function: Showing the alarm information according to the alarm codes.

Command format: **show alarm bycode** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1001~3999	Alarm codes.

3) show alarm bylevel

Command mode: Configure mode

Function: Showing the alarm information according to the alarm levels.

Command format: **show alarm bylevel** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~3	Alarm levels.

2. show bridge

Command mode: Configure mode

Function: Showing the bridge configuration parameter information.

Command format: **show bridge**

3. show config-server

Command mode: Configure mode

Function: Showing the parameter information of the configuration server.

Command format: **show config-server**

4. show dhcp server

Command mode: Configure mode

Function: Showing the parameter information of the DHCP server.

Command format: **show dhcp server**

5. show discover

Command mode: Configure mode

Function: Showing the parameter information of the equipment discovering configuration.

Command format: **show discover**

6. show dot1x-cfg

Command mode: Configure mode

Function: Showing 802.1x parameter information.

Command format: **show dot1x-cfg**

7. show iapp

Command mode: Configure mode

Function: Showing the parameter information of the load balance configuration.

Command format: **show iapp**

8. show interface

Command mode: Configure mode

Function: Showing the parameter information of the interface configuration.

Command format: **show interface {ethernet|wlan} {0|1}**

9. show ip

1) show ip address

Command mode: Configure mode

Function: Showing IP address information.

Command format: **show ip address**

2) show ip pool

● show ip pool config

Command mode: Configure mode

Function: Showing all the IP address pool information.

Command format: **show ip pool config**

● show ip pool used

Command mode: Configure mode

Function: Showing the used IP address information in the specified IP address pool.

Command format: **show ip pool used <value>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~9	Serial number of the IP address pool

3) show ip route

Command mode: Configure mode

Function: Showing the parameter information of the IP route configuration.

Command format: **show ip route**

10. show l2-separate

Command mode: Configure mode

Function: Showing the parameter information of the 2-layer separation configuration.

Command format: **show l2-separate**

11. show logmsg

Command mode: Configure mode

Function: Showing all the configuration information and configuration historical commands of log printing.

Command format: **show logmsg {config|logcmd}**

12. show mac-access-list

Command mode: Configure mode

Function: Showing the parameter information of mac-access-list filtration configuration.

Command format: **show mac-access-list <value>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~99	MAC filtration group number.

13. show mac-authen

Command mode: Configure mode

Function: Showing the parameter information of mac-authen configuration.

Command format: **show mac-authen**

14. show manage-mode

Command mode: Configure mode

Function: Showing the configuration information of the Telnet, snmp and web.

Command format: **show manage-mode**

15. show manage-user

Command mode: Configure mode

Function: Showing the parameter information of manage-user configuration.

Command format: **show manage-user**

16. show multi-ssid

Command mode: Configure mode

Function: Showing the parameter information of multi-ssid configuration.

Command format: **show multi-ssid** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0 or 1	Number of the wireless interface.

17. show qos

Command mode: Configure mode

Function: Showing the parameter information of qos configuration.

Command format: **show qos**

18. show radius

Command mode: Configure mode

Function: Showing the parameter information of radius configuration.

Command format: **show radius**

19. show snmp

1) show snmp access-host

Command mode: Configure mode

Function: Showing the parameter information of snmp access-host configuration.

Command format: **show snmp access-host**

2) show snmp community

Command mode: Configure mode

Function: Showing the parameter information of snmp community

configuration.

Command format: **show snmp community**

3) show snmp nodeinfo

Command mode: Configure mode

Function: Showing the parameter information of snmp nodeinfo configuration.

Command format: **show snmp nodeinfo**

4) show snmp sysinfo

Command mode: Configure mode

Function: Showing the parameter information of snmp sysInfo configuration.

Command format: **show snmp sysinfo**

5) show snmp traphost

Command mode: Configure mode

Function: Showing the parameter information of snmp traphost configuration.

Command format: **show snmp traphost**

20. show station-info

Command mode: Configure mode

Function: Showing the information of the client connected to W800A.

Command format: **show station-info**

21. show ssh

Command mode: Configure mode

Function: Showing the parameter information of SSH configuration.

Command format: **show ssh**

22. show stp

1) show stp bridge

Command mode: Configure mode

Function: Showing the parameter information of stp bridge configuration.

Command format: **show stp bridge**

2) show stp interface

Command mode: Configure mode

Function: Showing the parameter information of stp interface configuration.

Command format: **show stp interface**

23. show telnet-idletime

Command mode: Configure mode

Function: Showing the parameter information of the automatic exiting time when the Telnet window is idle.

Command format: **show telnet-idletime**

24. show trace

Command mode: Configure mode

Function: Showing the printing information of the client.

Command format: **show trace**

25. show version

Command mode: Configure mode

Function: Showing the software version number information.

Command format: **show version**

26. show vlan

Command mode: Configure mode

Function: Showing the vlan configuration information.

Command format: **show vlan**

3.5 Ethernet Interface Configuration Mode

Entering mode: Input the interface Ethernet 0 command in the configure mode.

Exiting mode: exit, entering the configure mode.

Default prompt character: wlan (config-eth) #

Note: All the information of the corresponding interface can be configured in this mode.

3.5.1 Exiting the Ethernet Interface Configuration Mode

Command mode: Ethernet interface configure mode

Function: Exiting the Ethernet interface configuration mode and entering the configure mode.

Command format: **exit**

3.5.2 Ethernet Interface MAC Filtration Configuration

Command mode: Ethernet interface configure mode

Function: Configuring the Ethernet interface MAC filtration.

Command format: [**no**] **mac-l-bind** <value> {**in**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~99	The article number of the MAC filtration bound to the interface.
{ in }	in	The in direction bound to the interface.

3.6 Wireless Interface Configuration Mode

Entering mode: Input the interface wlan {0|1} command in the configure mode.

Exiting mode: exit, entering the configure mode.

Default prompt character: wlan (config-wlan) #

Note: All the information of the corresponding interface can be configured in this mode.

3.6.1 802.11-Related Parameter Configuration of the Wireless Interface

1. 80211 authmode

Command mode: Wireless interface configure mode

Function: Configuring the wireless authentication mode of the AP.

Command format: **80211 authmode** {**OpenSystem** | **ShareKey**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ OpenSystem ShareKey }	OpenSystem, ShareKey	The wireless authentication mode is configured as open system or shared secret key mode.

2. 80211 essid

Command mode: Wireless interface configure mode

Function: Configuring the wireless network ESSID.

Command format: **80211 essid** <string>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 31 characters	Wireless network ESSID. By default, interface 0 is wireless0 and interface 1 is wireless1.

3. 80211 frg-threshold

Command mode: Wireless interface configure mode

Function: Configuring the fragment threshold.

Command format: **80211 frg-threshold** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	256 ~ 2346 (even number)	The fragment threshold, 2346 by default.

4. 80211 rts-threshold

Command mode: Wireless interface configure mode

Function: Configuring the RTS threshold.

Command format: **80211 rts-threshold** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	0~2347	RTS threshold, 2347 by default. .

5. 80211 wirelessmode

Command mode: Wireless interface configure mode

Function: Configuring the wireless standard working mode of the wireless interface.

Command format: **80211 wirelessmode {11a|11b|11g|help} [channel <num>] [rate <value>]**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{11a 11b 11g help}	11a, 11b, 11g, help	11a: Configuring 800A as the 802.11a working mode. 11b: Configuring 800A as the 802.11b working mode. 11g: Configuring 800A as the 802.11g working mode. help: Listing the configurable channels in the current working mode, according to the configured country code.
<num>		Configure the 800A working channel. Select the proper channel according to the country code. See Table 3.6-1 for the corresponding relationship of the nation code and selectable channel.
<value>	11a: auto, 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps; 11b: auto, 1Mbps, 2Mbps, 5.5Mbps, 11Mbps; 11g: auto, 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps	Configuring the 800A working rate.

Table 3.6-1 W800A Working Channels

Abbreviations of Nations and Zones	Full Names of Nations and Zones	11a Available Channel Numbers	11b Available Channel Numbers	11g Available Channel Numbers
CN	CHINA	0 (Auto), 149, 153, 157, 161, 165	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
CA	CANADA	0 (Auto), 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
TW	TAIWAN	0 (Auto), 56, 60, 64, 149, 153, 157, 161	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
FR	FRANCE	0 (Auto), 36, 40, 44, 48, 52, 56, 60, 64	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
GE	GERMANY	0 (Auto), 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
HK	HONG KONG	0 (Auto), 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
KR	KOREA REPUBLIC	0 (Auto), 149, 153, 157, 161	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
MX	MEXICO	0 (Auto), 52, 56, 60, 64, 36, 40, 44, 48, 149, 153, 157, 161, 165	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
GB	the UNITED KINGDOM	0 (Auto), 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
US	the UNITED STATES	0 (Auto), 52, 56, 60, 64, 36, 40, 44, 48, 149, 153, 157, 161, 165	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	0 (Auto), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

3.6.2 ESSID Hiding Configuration

Command mode: Wireless interface configure mode

Function: Enabling or disabling the ESSID.

Command format: **[no] essid-hide enable**

3.6.3 Exiting the Wireless Interface Configuration Mode

Command mode: Wireless interface configure mode

Function: Exiting the wireless interface configuration mode and entering the configure mode.

Command format: **exit**

3.6.4 Enabling the Link Integrity Detection Function

Command mode: Wireless interface configure mode

Function: Enabling or disabling the AP link integrity detection function.

Command format: [**no**] **link-integrity enable**

Note: AP link integrity detection function is: when AP Ethernet links are disconnected, AP will release all the created wireless users and close the wireless interface, denying the connection requests from other wireless terminals; when AP Ethernet links are restored normally, AP will open the wireless interface and receive the wireless user connections. If the AP placement position is difficult to be reached, please be cautious to use this function.

3.6.5 Wireless Interface MAC Filtration Configuration

Command mode: Wireless interface configure mode

Function: Configuring the wireless interface MAC filtration.

Command format: [**no**] **macf-bind** <value> {**in**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	1~99	The article number of the MAC filtration bound by the interface.
{ in }	in	The in direction bound to the interface.

3.6.6 Multi-ESSID Configuration

Command mode: Wireless interface configure mode

Function: Configuring the VLAN ID, maximum user quantity and priority corresponding to the ESSID.

Command format: **multi-ssid** <string> [**vlan-id** <value¹>] [**max-user** <value²>]

[**priority** <value³>]

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	1 ~ 32 characters	ESSID name.
<value ¹ >	1~4094	The VLAN ID corresponding to the ESSID.
<value ² >	1~30	The maximum user quantity corresponding to the ESSID.
<value ³ >	0~7	The priority corresponding to the ESSID.

3.6.7 Security Parameter Configuration

1. security mode

Command mode: Wireless interface configure mode

Function: Configuring the security mode.

Command format: **security mode** {**none**|**wep64**|**wep128**|**wep152**|**wpa-eap-tls**|**wpa-psk**} {**Alphanumeric**|**Hexadecimal**} {**TKIP**|**AES**}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ none wep64 wep128 wep152 wpa-eap-tls wpa-psk }	none, wep64, wep128, wep152, wpa-eap-tls, wpa-psk	none: No encryption wep64: Encryption of WEP 64-bit secret key mode. wep128: Encryption of WEP 128-bit secret key mode. wep152: Encryption of WEP 152-bit secret key mode. wpa-eap-tls: Encryption of wpa mode. wpa-psk: Encryption of wpa-psk mode.
{ Alphanumeric Hexadecimal }	Alphanumeric, Hexadecimal	Alphanumeric: WEP secret key is in the character string format. Hexadecimal: WEP secret key is in the hexadecimal format.
{ TKIP AES }	TKIP, AES	Configuring the WPA encryption mode.

2. security wep set-key

Command mode: Wireless interface configure mode

Function: Configuring the WEP encryption secret key.

Command format: **security wep set-key** {**key1**|**key2**|**key3**|**key4**}

<character/hex>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{key1 key2 key3 key4}	key1, key2, key3, key4	The article number of the secret key to be configured.
<character/hex>	wep64: 5 characters/10 hexadecimal numerals; wep128: 13 characters/26 hexadecimal numerals; wep152: 16 characters/32 hexadecimal numerals.	If 64-bit encryption is configured, <string> can be 5 case-sensitive characters (Alphanumeric format) or 10 hexadecimal numerals (Hexadecimal format). If 128-bit encryption is configured, <string> can be 13 case-sensitive characters (Alphanumeric format) or 26 hexadecimal numerals (Hexadecimal format). If 152-bit encryption is configured, <string> can be 16 case-sensitive characters (Alphanumeric format) or 52 hexadecimal numerals (Hexadecimal format).

3. security wep use-key

Command mode: Wireless interface configure mode

Function: Configuring the WEP encryption secret key to be used.

Command format: **security wep use-key {key1|key2|key3|key4}**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{key1 key2 key3 key4}	key1, key2, key3, key4	The article number of the secret key to be used.

4. security wpa pre-shared-key

Command mode: Wireless interface configure mode

Function: Configuring the WPA mode to be used.

Command format: **security wpa pre-shared-key <string>**

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<string>	8 ~ 36 characters	Configuring the shared secret key of the WPA encryption.

5. security wpa rekey-interval

Command mode: Wireless interface configure mode

Function: Configuring the WPA mode to be used.

Command format: **security wpa rekey-interval** <value>

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
<value>	30~3600	Configuring the updating interval of the dynamic secret key (unit: second).

3.6.8 Transmission Power Configuration

Command mode: Wireless interface configure mode

Function: Configuring the transmission power of the equipment.

Command format: **tx-power** {full|half|quarter|eighth|min}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{full half quarter eighth min}	full, half, quarter, eighth, min	full: Maximum transmission power; half: Half transmission power; quarter: Quarter transmission power; eight: Eighth transmission power; min: Minimum transmission power;

3.6.9 Working Mode Configuration

Command mode: Wireless interface configure mode

Function: Configuring the working mode of the equipment.

Command format: **workmode** {ap|repeater}

Parameter descriptions:

Parameter Name	Value Range	Parameter Descriptions
{ ap repeater }	ap, repeater	The working mode of the equipment.

A.1 Making of Ethernet Cables

A.1.1 Making of Straight Through Ethernet Cables (RJ45)

In IP wireless access system, the following network cables must adopt the straight through Ethernet cables:

1. The Ethernet cable between the Ethernet switch (end A) and W112P (end B).
2. When no Ethernet switch is used, AP will directly connect with the AC downlink port, at this time, the Ethernet cable between the AC (end A) and AP (end B) must be straight through Ethernet cable.
3. In the cases where no Ethernet switch is used, as when the system adopts the Ethernet power supply, the AC downlink port will directly connect with W112P, at this time, the Ethernet cable between the AC (end A) and W112P (end B) must be straight through Ethernet cable.

The connections of the straight through Ethernet cables are shown in Table A.1-1.

Table A.1-1 Connections of Straight Through Ethernet Cables (RJ45)

End A	Signal Name	Conductor Color	End B	Signal Name	Conductor Color
1	Data receiving Rx+	White/orange	1	Data transmitting Tx+	White/orange
2	Data receiving Rx-	Orange	2	Data transmitting Tx-	Orange
3	Data transmitting Tx+	White/green	3	Data receiving Rx+	White/green
4	MATCH1	Blue	4	MATCH1	Blue
5	MATCH2	White/blue	5	MATCH2	White/blue
6	Data transmitting Tx-	Green	6	Data receiving Rx-	Green
7	MATCH3	White/brown	7	MATCH3	White/brown
8	MATCH4	Brown	8	MATCH4	Brown

A.1.2 Making of Straight Through Power Supply Ethernet Cables (C-RJ45-001)

The Ethernet cable between the W112P (end A) and AP (end B) not only serves as the Ethernet data signal cable, but also provides -48V DC power for two twisted pairs 4&5 and 7&8 on the load balance, to power AP remotely.

The connection method of this cable is the same as that of the straight through cable without power supply, and the connection table is shown in Table A.1-2.

Table A.1-2 Connections of Straight Through Power Supply Ethernet Cables (C-RJ45-001)

End A	Signal Name	Conductor Color	End B	Signal Name	Conductor Color
1	Data receiving Rx+	White/orange	1	Data transmitting Tx+	White/orange
2	Data receiving Rx-	Orange	2	Data transmitting Tx-	Orange
3	Data transmitting Tx+	White/green	3	Data receiving Rx+	White/green
4	GND	Blue	4	GND	Blue
5	GND	White/blue	5	GND	White/blue
6	Data transmitting Tx-	Green	6	Data receiving Rx-	Green
7	-48V	White/brown	7	-48V	White/brown
8	-48V	Brown	8	-48V	Brown



Note:

These cables contain -48 V DC power supply. Do prevent any short circuits; otherwise, the signal will be interrupted and the equipment may not work normally, and even the equipment protection action will be activated. GND and -48 V each occupy one twisted pair. These twisted pairs should be separate, otherwise short circuit may occur.

A.1.3 Making of Crossover Ethernet Cables (RJ45J)

The connections of the crossover Ethernet cables are shown in Table A.1-3.

Table A.1-3 Connections of Crossover Ethernet Cables (RJ45J)

End A	Signal Name	Conductor Color	End B	Signal Name	Conductor Color
1	Data receiving Rx+	White/orange	3	Data transmitting Tx+	White/green
2	Data receiving Rx-	Orange	6	Data transmitting Tx-	Green
3	Data transmitting Tx+	White/green	1	Data receiving Rx+	White/orange
4	MATCH1	Blue	4	MATCH1	Blue
5	MATCH2	White/blue	5	MATCH2	White/blue
6	Data transmitting Tx-	Green	2	Data receiving Rx-	Orange
7	MATCH3	White/brown	7	MATCH3	White/brown
8	MATCH4	Brown	8	MATCH4	Brown

**Note:**

The signals and connection methods mentioned here are designed according to the signal definitions of the ZTE AC equipment interface. If the AC in the actual engineering is not from ZTE, modify the cable making methods according to the actual conditions.

A.1.4 Ethernet Cable Label

After the Ethernet cable is crimped, paste labels on ends A and B of the network cable, indicating name and length of this cable.

1. Label of the straight through Ethernet cable

The label of the straight through Ethernet cable (RJ45) is shown in Fig. A.1-1.

RJ45 **m

A rectangular box containing the text "RJ45 **m".

Fig. A.1-1 Label of the Straight Through Ethernet Cable

In the diagram, “**m” indicates the actual length of the cable.

2. Label of the straight through power supply Ethernet cable

The label of the straight through power supply Ethernet cable (C-RJ45-001) is shown in Fig. A.1-2.

C-RJ45-001 **m
POE Cable

A rectangular box containing two lines of text: "C-RJ45-001 **m" on the top line and "POE Cable" on the bottom line.

Fig. A.1-2 Label of the Straight Through Power Supply Ethernet Cable

In the diagram, “**m” indicates the actual length of the cable; “PoE Cable” indicates that this is the Ethernet power cable.

3. Label of the Crossover Ethernet Cable

The label of the crossover Ethernet cable (RJ45J) is shown in Fig. A.1-3.

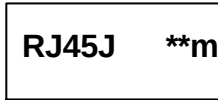


Fig. A.1-3 Label of the Crossover Ethernet cable

In the diagram, “**m” indicates the actual length of the cable; “J” after “RJ45” indicates that this is the crossover Ethernet cable.