

Moxa AWK Series Command Line Interface User's Manual

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Models covered by this user's manual:

AWK-1151C Series

AWK-3252A Series

AWK-4252A Series



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Moxa AWK Series Command Line Interface User's Manual

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1

Understanding the Command Line Interface

This chapter explains how to access the command line interface. In addition, this chapter will help you better understand the interface and the general concepts necessary to manage the device using commands.

The following topics are covered in this chapter:

- ❑ **Accessing the AWK**
 - Logging in Using the RS-232 Console
 - Logging in Using Telnet
- ❑ **Command Modes**
 - Basic Configuration
 - Understanding the Command Modes
- ❑ **Help Messages**
- ❑ **Special Usage and Limitations**
- ❑ **Universal Commands**
- ❑ **Account Privilege and Authority**
- ❑ **No and Default Forms of Commands**
- ❑ **CLI Error Messages**
- ❑ **Command History**

Accessing the AWK

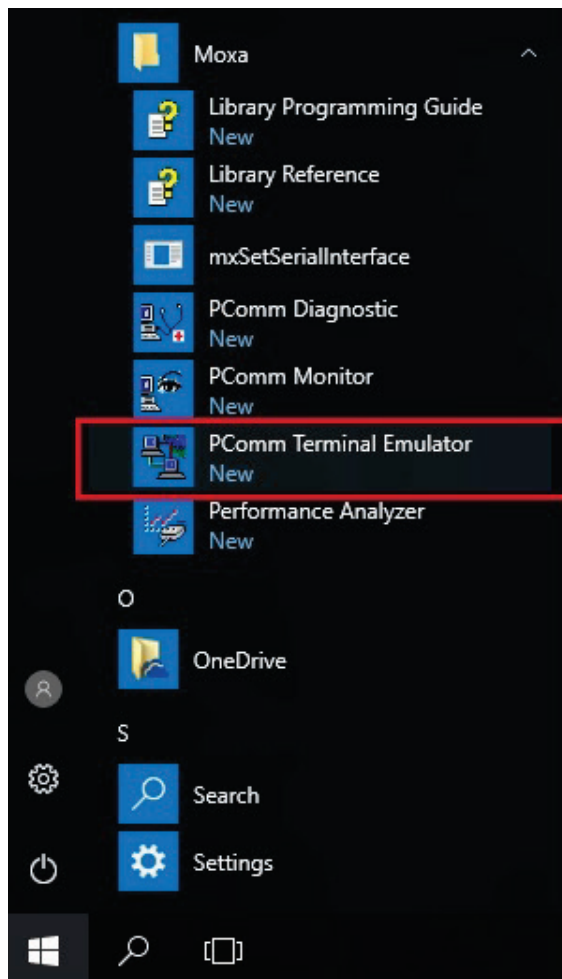
Users can connect to the AWK's command line interface using one of two methods: through the serial console or through Telnet/SSH.

Logging in Using the RS-232 Console

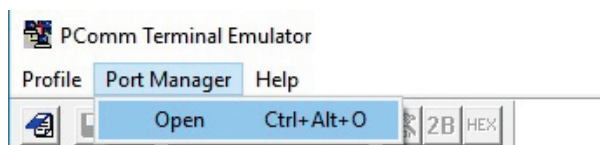
The Moxa AWK features an RJ45 serial console port to allow users to connect to the AWK and configure settings.

NOTE Moxa recommends using PComm Terminal Emulator for serial communication. This software is available for free on the Moxa website. You can use other serial communication software, although the process may be different from the instructions provided below.

1. Connect the RJ45 end of the included serial cable to the console port on the AWK, and the other end to the serial port on the computer.
2. Download **PComm Terminal Emulator** from the Moxa website and install the software.
3. In Windows, click **Start > Moxa > PComm Terminal Emulator**.



4. Click **Port Manager > Open** to establish a new connection. The Property window will appear.



5. On the **Communication Parameter** tab, select the COM port that will be used for the console connection. Configure the fields as follows:

Baud rate: 115200

Data bits: 8

Parity: None

Stop bits: 1

Property ✕

Communication Parameter | Terminal | File Transfer | Capturing

Protocol: Serial

Serial Parameters

COM1	Baud rate:	115200
COM2	<input type="checkbox"/> User defined	
COM4	Data bits:	8
	Parity:	None
	Stop bits:	1
	Flow control:	<input type="checkbox"/> RTS/CTS
		<input type="checkbox"/> DTR/DSR
		<input type="checkbox"/> XON/XOFF
	RTS state:	<input checked="" type="radio"/> ON <input type="radio"/> OFF
	DTR state:	<input checked="" type="radio"/> ON <input type="radio"/> OFF

Default OK Cancel

6. On the **Terminal** tab, select **VT100** as the **Terminal Type**, and click **OK** to continue.

Property ✕

Communication Parameter | Terminal | File Transfer | Capturing

Terminal type: VT100

Window Size

Size: 80 X 25 (col x row)

History depth: 25 (unit: row)

Transmit

Local echo

Send 'Enter' key as: CR-LF

Receive

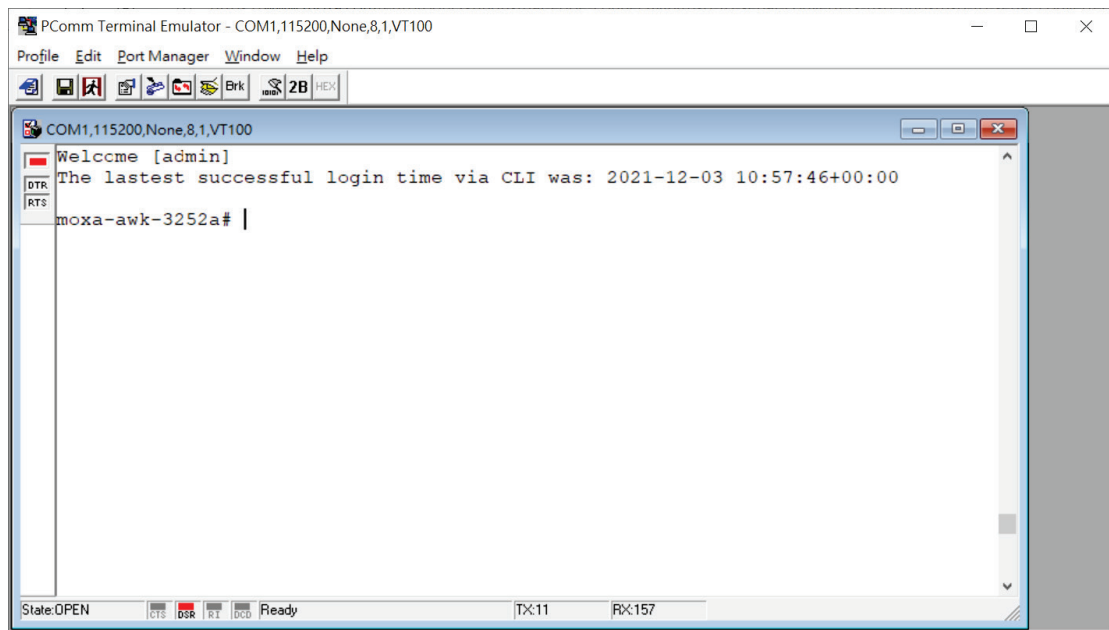
CR translation: No Changed

LF translation: No Changed

Enable auto line wrap

Default OK Cancel

7. Log in to the console using your account name and password. For security reasons, there is no default username and password. If this is the first time logging in, you will be prompted to create a username and password.



8. When successfully connected to the AWK, you can start configuring the AWK parameters using command line instructions.

Logging in Using SSH

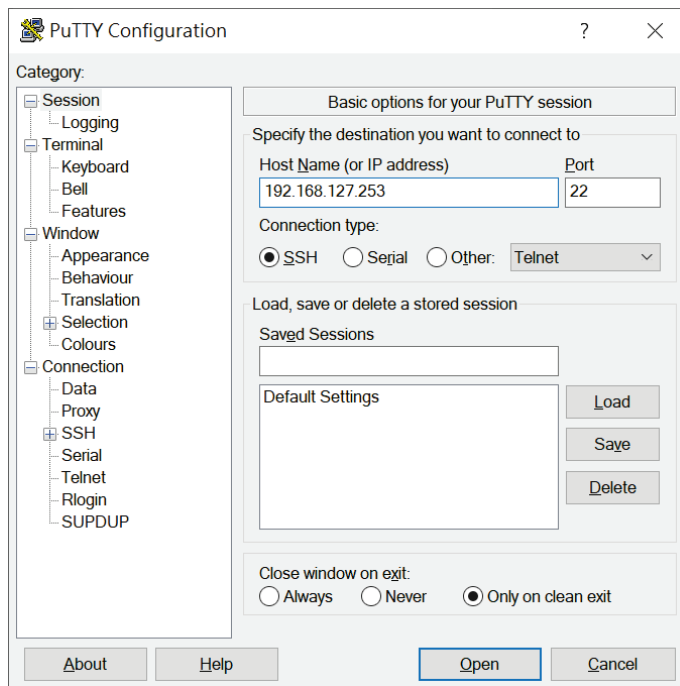
Opening the Moxa AWK's Telnet or web console over a network requires that the PC host and Moxa AWK are on the same logical subnet. You may need to adjust your PC host's IP address and subnet mask. By default, the Moxa AWK's IP address is **192.168.127.253** and the subnet mask is **255.255.255.0**. Your PC's IP address must be configured with an IP of the form 192.168.127.xxx and a subnet mask of 255.255.255.0.

NOTE When connecting to the Moxa AWK through Telnet or the web console, first connect one of the Moxa AWK's Ethernet ports to an Ethernet LAN switch, or directly to your PC's Ethernet port. You may use either a straight-through or cross-over Ethernet cable.

NOTE The Moxa AWK's default IP address is 192.168.127.253 with subnet mask of 255.255.255.0.

After making sure that the Moxa AWK is connected to the same LAN and logical subnet as your PC, open the Moxa AWK's CLI console as follows:

1. Enter the device's IP address into the Telnet tool and set the connection type to **SSH**. You may use any Telnet tool, in this case, we are using PuTTY.



2. Click **Open** to initiate a Telnet connection to the device and open the CLI login page
3. Log in to the console using your account name and password. For security reasons, there is no default username and password. If this is the first time logging in, you will be prompted to create a username and password. In the example below, we log in using the custom account "admin".

```
login as: admin
Pre-authentication banner message from server:

End of banner message from server
Keyboard-interactive authentication prompts from server:
Password: █
```

4. When successfully connected to the AWK, you can start configuring the AWK parameters by using command line instructions.

Command Modes

Basic Configuration

The CLI (Command Line Interface) for Moxa's Managed AWK can be accessed through either the serial console or the Telnet console. For either type of connection, access to the CLI is generally referred to as a Basic session.

The CLI is organized using different configuration levels. When you first enter the CLI, type "?" to view a list of basic commands and a description of each function. Type any of the commands shown on the screen to access the next configuration level. The help panel can be accessed from any configuration level by typing "?". The AWK will show all the commands for the current configuration mode.

```

moxa-awk-3252a# ?

clear          Perform a clear action.
cli           Configure CLI display parameters.
configure     Enter configuration mode.
copy         Perform a copy action.
diag         Perform system diagnostics.
end          Exit configure mode
exit         Exit the session
help         Show the available options for the entered
            command.
list         List the folders and files on the external
            storage.
logout       Terminate the session
password     Change the account password.
ping        Ping the target host.
relay       Show and set the relay state.
reload      Perform a warm restart or reset to factory default
            settings.
show        Show Show the current settings and device status.
unlock      Unlock the user.
username    Configure user session

```

Understanding the Command Modes

The CLI is organized in three configuration tiers:

Basic Mode: On the basic level, you can retrieve the device configuration, status, and logs. In addition, you can perform several basic actions (e.g., locate the device).

Configuration Mode: Configuration mode allows you to configure device parameters and functions.

Specific Command Modes: Some functions have additional parameters that can only be configured through a function-specific command mode. Any changes made in this mode will only apply to that specific function. Examples of specific command modes include ssid-ap, ssid-client, config-if, fw-l2, fw-l3, config-vlan, and config-nat.

NOTE In the specific command modes (e.g., ssid-ap, config-nat), commands will not apply immediately, but will only be applied after executing the "exit" or "end" command.

Mode	Access Method	Prompt	Exit Method	About This Mode
Basic	The default mode after successfully logging in.	moxa#	Enter the exit command to terminate the telnet session.	Use this mode to verify commands that you have entered.
Configuration	Enter the configure command while in Basic mode.	moxa (config)#	Enter the exit command to return to the previous configuration mode.	Use this mode to configure parameters that will apply to the entire AWK.
Specific Command Modes	Dependent on the command (outlined in corresponding sections below).	moxa (config-if)#	Enter the exit command to apply changes made and return to the previous configuration mode.	Use this mode to configure parameters for a specified interface, function, or feature group.

Refer to the following example to see how to change configuration modes.

Type **configure** at the command prompt to enter configuration mode.

```

moxa-awk-3252a# configure
moxa-awk-3252a (config) #

```

Type **exit** to return to the previous configuration mode.

```
moxa-awk-3252a(config)# exit
moxa-awk-3252a#
```

Help Messages

The CLI supports several types of interactive commands. The **Help** commands are listed in the following table:

Command	Purpose
?	Shows a brief description of the Help feature in any command level.
Partial command?	Shows a list of commands that begin with the entered character. There should be no space between the command and the question mark.
Partial command<Tab>	Completes a partially entered command name along with its following syntax argument. There should be no space between the command and <Tab>.
Command ?	Shows a list of arguments that can complete the entered partial command. There should be a space between the command and the question mark.
Help	Displays a complete list with all usable commands in the current command level with syntax and argument information.

The "?" command will show all the available commands in the current command level. Use the Up and Down keyboard keys to scroll up and down the command list. Press Q to go to the end of the list and return to the command line prompt.

```
moxa-awk-3252a(config)# ?

clear                Perform a screen clear.
clock               Configure system clock settings.
config             Enable or disable Automatic Configuration Backups/Restore.
end                Exit configure mode
event-notification Configure event notification settings.
exit              Exit to the privileged Exec mode
fail-safe         Configure Fail-Safe password settings.
firewall          Configure firewall settings.
help              Show the available options for the entered command.
hw-if             Configure the hardware interface settings.
interface         Configure network interface settings.
ip                Configure device network settings.
lldp              Configure LLDP settings.
logging           Configure event log settings.
no                Reset settings to their default values.
ntp               Configure NTP settings.
password          Configure password max-life-time
sys-info          Configure system information.
user-iface        Configure user interface settings.
username          Configure user authority
vlan              Configure VLAN settings
wlan              Configure Wi-Fi parameters.
```

```
moxa# help
EXEC commands :
  clear logging event-log
  clear screen
  cli pagination turn {on | off}
  configure [ terminal ]
  ...
```

If you want to narrow down the list of commands to a specific category, add the command prefix after the "help" string. In the following example, we narrow the command list down to "show" commands by adding the "show" prefix to the "help" command.

```
moxa-awk-3252a# help show
EXEC commands :
  show clock
  [Desc]: Show system clock settings.
  show config
  [Desc]: Show Automatic Configuration Backups/Restores settings.
  show device-firmware
  [Desc]: Show the current running and uploaded firmware version.
  show event-notification email-notification
  [Desc]: Show email notification settings.
  show event-notification snmp-trap
  [Desc]: Show SNMP trap Settings
  show event-notification {all | system-event | wifi-event | network-event}
  [Desc]: Show the event and its action
  show firewall l2-policy
  [Desc]: Show the Layer 2 firewall policy settings.
  show firewall l3-policy
  [Desc]: Show the Layer 3 firewall policy settings.
  show history
  [Desc]: Display command list history.
--More--
```

Special Usage and Limitations

If the command contains any special characters, such as *, #, and %, the special characters should be enclosed in quotation marks (""). Refer to the example below.

```
moxa-awk-3252a(config)# ip nat new
You will create a new NAT rule with priority 1.
moxa-awk-3252a(config-nat)# name "IPcam3#"
moxa-awk-3252a(config-nat)#
```

Universal Commands

Universal commands are commands that can be used in multiple configuration modes. Refer to the table below for an overview of universal commands.

Command	Description
# no	All configuration modes support the "no" command, except for basic mode. Privilege requirement: Depends on the command. Refer to the Account Privilege and Authority section for more information.
# show	All configuration modes support the "show" command. Privilege requirement: Depends on the command. Refer to the Account Privilege and Authority section for more information.
# help [command]	All configuration modes support the "help" command.
# clear screen	All configuration modes support the "clear screen" command.
# end	All configuration modes support the "end" command. Executing this command will exit the current mode and return to the Basic configuration mode.
# exit	All configuration modes support the "exit" command. Executing this command will exit the current mode and return to the previous configuration mode level.
# abort	This command is used to leave the current command mode without making any configuration changes and return to the previous configuration mode level.
# show history	Show the command list history.

Account Privilege and Authority

For security purposes, users are separated based on roles, each with different access rights. The AWK supports 4 types of account roles: Admin, Engineer, User, and Custom.

In order to perform certain configurations, the administrator needs to confirm that the user account performing these tasks has the necessary privileges and rights. Refer to the table below for an overview of each role and corresponding privileges.

	Admin	Engineer	User	Custom
Account Privileges	O	X	X	User-defined
Account System	O	O	X	User-defined
Auditor System	O	O	X	User-defined
Advanced Diagnostics	O	O	X	User-defined
Diagnostics	O	O	O	User-defined
Network Configurations	O	O	X	User-defined
Status Monitoring	O	O	O	User-defined
System Backup	O	X	X	User-defined
System Management	O	O	X	User-defined

No and Default Forms of Commands

The "no" command can be used to perform the "delete", "disable", or "reset to default" functions. Type "no ?" to see how the command can be used.

CLI Error Messages

You may encounter some error messages while configuring Moxa's AWK Series device. Refer to the following table for an overview of error messages and solutions.

Error Message	Meaning	Solution
% Ambiguous command	The characters you entered are insufficient for the AWK to recognize the command.	Re-enter the command with a space between the command and the question mark (?). A list of all possible keywords with the command will appear.
% Incomplete command	The keywords or values you entered are incomplete.	Re-enter the command with a space between the command and the question mark (?). A list of all possible keywords with the command will appear.
% Invalid input detected at '^' marker.	The command you entered is incorrect. The point of invalid input will be indicated by a caret (^).	Enter a question mark (?) to display all the available commands in this command mode. A list of all possible keywords with the command will appear.

Command History

Use the Up arrow and Down arrow keys to cycle through the history of previously entered commands.

Pressing the Up arrow will display the previously entered command. Pressing the Down arrow will display the next command in the history.

Users can connect to the AWK's command line interface using one of two methods: through the serial console or through Telnet/SSH.

This chapter covers all available commands to configure the Moxa AWK.

The following topics are covered in this chapter:

□ **System**

- System Management
- Management Interface
- Time

□ **Wi-Fi**

- Wi-Fi Settings
- Turbo Roaming and Mac Cloning
- Ethernet

□ **IP Configuration**

□ **Routing and NAT**

- Static Route
- NAT

□ **Firewall**

- Layer 2 Policy
- Layer 3 Policy

□ **Diagnostics**

- Network Status
- Event Logs and Notifications
- Tools

□ **Maintenance and Tool**

- Locator
- Reboot

System

System Management

Firmware Upgrade

Upgrade the Firmware

Commands

copy {tftp://<server>/<filename> | sftp ://<account>:<password>@<server>/<pathname> | abc-02:<pathname> | <fw_version (v.- Build ----_----_----)>} **device-firmware upgrade**

Syntax Description	copy	Perform a copy action.
	<source>	Specify the source.
	device-firmware	Upload or upgrade the device firmware.
	upgrade	Upgrade the firmware.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# copy tftp://192.168.127.1/FWR_AWK-3252A_v0.1_20030415.rom device-firmware upgrade	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Show the Firmware Version

Commands

show device-firmware

Syntax Description	show	Show the current settings and device status.
	device-firmware	Show the current running and uploaded firmware version.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show device-firmware	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configuration Backup and Restore

Back Up the Running Configuration

Commands

copy running-cfg <storage-location>

Syntax Description	copy	Perform a copy action.
	running-cfg	The current operating configuration.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder> abc-02}	
Examples	moxa# copy running-cfg abc-02	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Backup	

Back Up the Startup Configuration

Commands

copy startup-cfg <storage-location>

Syntax Description	copy	Perform a copy action.
	startup-cfg	The system startup configuration.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder> abc-02}	
Examples	moxa# copy running-cfg tftp://192.168.127.1/config.ini	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Backup	

Restore the Startup Configuration

Commands

copy <storage-location> **startup-cfg**

Syntax Description	copy	Perform a copy action.
	<storage-location>	Specify the storage location.
	startup-cfg	The system startup configuration.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder> abc-02}	
Examples	moxa# copy tftp://192.168.127.1/config.ini startup-cfg	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Backup	

Apply the Running Configuration to the Startup Configuration

Commands

copy running-cfg startup-cfg

Syntax Description	copy	Perform a copy action.
	running-cfg	The current operating configuration.
	startup-cfg	The system startup configuration.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# copy running-cfg startup-cfg	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Enable/Disable Automatic Configuration Backup to ABC-02

Commands

config auto-backup {enabled | disabled}

Syntax Description	config	Enable or disable Automatic Configuration Backups/Restore.
	auto-backup	Automatically back up configurations to the ABC-02.
	enabled	Enable automatic configuration backups.
	disabled	Disable automatic configuration backups.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# config auto-backup enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Backup	

Enable/Disable Automatic Configuration Restoration

Commands

config auto-restore {enabled | disabled}

Syntax Description	config	Enable or disable Automatic Configuration Backup/Restore.
	auto-restore	Automatically restore configurations from the ABC-02.
	enabled	Enable automatic configuration restores.
	disabled	Disable automatic configuration restores.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# config auto-restore enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Backup	

Show the Automatic Configuration Backup/Restoration Settings

Commands

show config

Syntax Description	show	Show the current settings and device status.
	config	Show automatic configuration backups/restores settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show config	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Backup	

Reset to Factory Default Configuration

Commands

reload factory-default [**keep** {log}]

Syntax Description	reload	Perform a warm restart or reset to factory default settings.
	factory-default	Reset to factory default settings.
	keep	Keep the specified item(s) when resetting to factory default settings.
	log	The system event logs.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# reload factory-default keep log	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Account Management

Create a User Account

Commands

username <username (len: 4-32)> [**password**] [**role** {admin | engr | user | custom}] [**status** {enabled | disabled}] [**email** <email (max len: 63)>]

Syntax Description	username	Create an account or configure user settings for this account.
	<username>	Specify the username of the account (4-32 characters).
	password	Configure the password of this account.
	role	Configure the authority of this account.
	{admin engr user custom}	Set the authority of this account to Admin, Engineer, User, or Custom.
	status	Enable or disable this user account.
	{enabled disabled}	Specify to enable or disable this user account.
	email	Configure the email of this account.
<email (max len: 63)>	Specify the email of this account (max. 63 characters).	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# username Forky role admin	
	(config)# username Forky password	
	(config)# username Forky status enabled	
	(config)# username Forky email forky@abc.com	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Account System	

Remove an Account

Commands

no username <username>

Syntax Description	no	Reset settings to their default values.
	username	Delete the user account.
	<username>	Specify the username of the account (4-32 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no username Forky	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Account System	

Enable User Privileges for Custom Authority

Commands

username <username> **custom-authority** [account] [adv-diag] [auditor] [diag] [net-cfg] [status-monitoring] [sys-backup] [sys-mgmt]

Syntax Description	username	Create an account or configure user settings for this account.
	<username>	Specify the username of the account (4-32 characters).
	custom-authority	Enable authorities for this account.
	account	Enable Account System authority for this account.
	adv-diag	Enable Advanced Diagnostics authority for this account.
	auditor	Enable Auditor System authority for this account.
	diag	Enable Diagnostics authority for this account.
	net-cfg	Enable Network Configuration authority for this account.
	status-monitoring	Enable Status Monitoring authority for this account.
	sys-backup	Enable System Backup authority for this account.
sys-mgmt	Enable System Backup authority for this account.	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# username Forky custom-authority account sys-mgmt	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Account System	

Disable User Privileges for Custom Authority

Commands

no username <username> **custom-authority** [account] [adv-diag] [auditor] [diag] [net-cfg] [status-monitoring] [sys-backup] [sys-mgmt]

Syntax Description	no	Reset settings to their default values.
	username	Create an account or configure user settings for this account.
	<username>	Specify the username of the account (4-32 characters).
	custom-authority	Disable authorities for this account.
	account	Disable Account System authority for this account.
	adv-diag	Disable Advanced Diagnostics authority for this account.
	auditor	Disable Auditor System authority for this account.
	diag	Disable Diagnostics authority for this account.

	net-cfg	Disable Network Configuration authority for this account.
	status-monitoring	Disable Status Monitoring authority for this account.
	sys-backup	Disable System Backup authority for this account.
	sys-mgmt	Disable System Backup authority for this account.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no username Forky account	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Account System	

Show the Account Settings

Commands

show username config

Syntax Description	show	Show the current settings and device status.
	username	Show the account status or settings.
	config	Show the account settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show username config	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Account System	

Change the Account Password

Commands

Password

Syntax Description	password	Change the account password.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# password	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Basic	

Management Interface

Hardware Interface

Enable/Disable the USB Interface

Commands

hw-if usb {enabled | disabled}

Syntax Description	hw-if	Configure the hardware interface settings.
	usb	Enable or disable the USB interface.
	enable	Enable the USB interface.
	disable	Disable the USB interface.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# hw-if usb enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Show the Hardware Configuration

Commands

show hw-if

Syntax Description	show	Show the current settings and device status.
	hw-if	Show the hardware interface settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show hw-if	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

List the Folders and Files on the ABC-02

Commands

list abc-02

Syntax Description	list	List the folders and files on the external storage.
	abc-02	List the folders and files on the ABC-02.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# list abc-02	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Enable/Disable the Reset Button

Commands

hw-if reset-button {enabled | disabled [**active-duration** <active-duration (0-180 sec)>]}

Syntax Description	hw-if	Configure the hardware interface settings.
	reset-button	Configure the reset button settings.
	enabled	Set the reset button to always be enabled.
	disabled	The reset button will remain active for the specified "active duration", after which it will be disabled.
	active-duration	Configure the duration the reset button will be active for.
<active-duration>	Specify the active duration. If the reset button is disabled and the duration is set to 0, the reset will be disabled immediately (0-180 sec).	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# hw-if reset-button enabled active-duration 120	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Reset the Reset Button Configuration Settings

Commands

no hw-if reset-button

Syntax Description	no	Reset settings to their default values.
	hw-if	Reset the hardware interface settings.
	reset-button	Reset the reset button configuration settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no hw-if reset-button	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Enable/Disable the Serial Port

Commands

hw-if serial-console {enabled | disabled}

Syntax Description	hw-if	Configure the hardware interface settings.
	serial-console	Enable or disable the serial port.
	enabled	Enable the serial port.
	disabled	Disable the serial port.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# hw-if serial-console disabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Show the Hardware Interface Settings

Commands

show hw-if

Syntax Description	show	Show all modified settings.
	hw-if	Show the hardware interface settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show hw-if	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

User Interface

Configure SNMP Access Settings

Commands

user-iface snmp status {read-write | read-only | disabled}

Syntax Description	user-iface	Configure user interface settings.
	snmp	Configure SNMP settings.
	status	Configure SNMP status settings.
	read-write	Enable SNMP with Read/Write privilege.
	read-only	Enable SNMP with Read-only privilege.
	disable	Disable SNMP.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# user-iface snmp status read-only	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Access TCP/UDP Port of the User Interfaces

Commands

user-iface {http | https | telnet | ssh | snmp} **port** <port-number (1-65535)>

Syntax Description	user-iface	Configure user interface settings.
	http	Configure HTTP settings.
	https	Configure HTTPS settings.
	telnet	Configure Telnet settings.
	ssh	Configure SSH settings.
	snmp	Configure SNMP settings.
	port	Configure the access TCP/UDP port of the user interface.
<port-number>	Specify the access TCP/UDP port of the user interface (1-65535).	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# user-iface https port 443	

Error Messages	N/A
Related Commands	N/A
Privilege Required	System Management

Configure the Maximum Number of Concurrent Sessions for HTTP and HTTPS

Commands

user-iface http max-session <session-number (1-10)>

Syntax Description	user-iface	Configure user interface settings.
	http	Configure HTTP settings.
	max-session	Configure the maximum number of concurrent sessions for HTTP and HTTPS.
	<session-number>	Specify the maximum number of concurrent sessions (1-10).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# user-iface http max-session 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Maximum Number of Concurrent Sessions for the Serial Console, Telnet, and SSH

Commands

user-iface terminal max-session <session-number (1-10)>

Syntax Description	user-iface	Configure user interface settings.
	terminal	Configure CLI settings.
	max-session	Configure the maximum number of concurrent sessions for HTTP and HTTPS.
	<session-number>	Specify the maximum number of concurrent sessions (1-10).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# user-iface terminal max-session 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Time

Configure the Clock Synchronization Source

Commands

clock source {internal-clock | ntp}

Syntax Description	clock	Configure system clock settings.
	source	Specify the clock synchronization source.
	internal-clock	Set the clock synchronization source to the system's internal clock.
	ntp	Set the clock synchronization source to NTP.

Defaults	N/A
Command Modes	Config
Usage Guidelines	N/A
Examples	moxa (config)# clock source internal-clock
Error Messages	N/A
Related Commands	N/A
Privilege Required	System Management

Configure System Internal Clock Settings

Commands

clock set <time (hh:mm:ss)> [{<month (1-12)> | jan | feb | mar | apr | may | jun | jul | aug | sep | oct | nov | dec }] [<date (1-31)>] [<year (2000-2037)>]

Syntax Description	clock	Configure system clock settings.
	set	Set the system time.
	<time>	Set the time (hh:mm:ss).
	<month>	Specify the month by integer (1-12).
	<date>	Set the date (1-31).
	<year>	Set the year (2000-2037).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# clock set 11:11:11 12 31 2022	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure NTP Server Settings

Commands

ntp remote-server ntp <server-index (1-2)> <server-address (max len: 60)>"

Syntax Description	ntp	Configure NTP settings.
	remote-server	Configure NTP server settings.
	ntp	Configure NTP server settings.
	<server-index>	Specify the index of the NTP server (1-2).
	<server-address>	Specify the NTP server address (max. 60 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ntp remote-server ntp 1 pool.ntp.org	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure NTP Server Synchronization Interval

Commands

ntp sync-interval <sync-interval (10-1440 min)>

Syntax Description	ntp	Configure NTP settings.
	sync-interval	Configure the NTP sync interval.
	<sync-interval>	Specify the NTP sync interval (10-1440 min).

Defaults	N/A
Command Modes	Config
Usage Guidelines	N/A
Examples	moxa (config)# ntp sync-interval 150
Error Messages	N/A
Related Commands	N/A
Privilege Required	System Management

Configure Time Zone Settings

Commands

clock timezone {"-12" | "-11" | "-10" | "-9:30" | "-9" | "-8" | "-7" | "-6" | "-5" | "-4" | "-3:30" | "-3" | "-2" | "-1" | "0" | "1" | "2" | "3" | "3:30" | "4" | "4:30" | "5" | "5:30" | "5:45" | "6" | "6:30" | "7" | "8" | "8:30" | "8:45" | "9" | "9:30" | "10" | "10:30" | "11" | "12" | "12:45" | "13" | "14"}

Syntax Description	clock	Configure system clock settings.
	timezone	Configure time zone settings.
	<timezone -12 ~ +14>	Set the integer -12 to +14 to define UTC -12 to UTC +14 correspondingly, or set special time zone such as 5:45 for time zone UTC+05:45.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# clock timezone -8	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure System Information

Configure the Device Name

Commands

sys-info hostname <device-name (len: 1-255)>

Syntax Description	sys-info	Configure system information.
	hostname	Configure the device name.
	<device-name>	Specify the device name (1-255 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# sys-info hostname "hostname exmpale"	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Device Location

Commands

sys-info location <location (max len: 255)>

Syntax Description	sys-info	Configure system information.
	location	Configure the device location.
	<location>	Specify the device location (max. 255 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# sys-info location "assembly workstation"	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Device Description

Commands

sys-info description <description (max len: 255)>

Syntax Description	sys-info	Configure system information.
	description	Configure the device description.
	<description>	Specify the device description (1-255 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# sys-info description "WLAN for assembly automation"	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Wi-Fi

Wi-Fi Settings

Configure the Wireless Operation Mode

Commands

wlan mode {disabled | ap | client | client-router | master | slave | sniffer {5ghz | 2.4ghz | 2.4-and-5ghz}}

Syntax Description	wlan	Configure Wi-Fi settings.
	mode	Configure the Wi-Fi operation mode.
	disabled	Disable Wi-Fi.
	ap	Set the device to AP mode.
	client	Set the device to Client mode.
	client-router	Set the device to Client-router mode.
	master	Set the device to Master mode.
	slave	Set the device to Slave mode.
	sniffer	Set the device to Sniffer mode.
	{5ghz 2.4ghz 2.4-and-5ghz}	Specify to sniffer on 5 GHz, 2.4 GHz, or both bands.
Defaults	N/A	

Command Modes	Config
Usage Guidelines	N/A
Examples	(config)# wlan mode sniffer 5ghz
Error Messages	N/A
Related Commands	N/A
Privilege Required	Network Configuration

Reset the Wireless Operation Mode to Default Settings

Commands

no wlan mode

Syntax Description	no	Reset settings to their default values.
	wlan	Reset Wi-Fi settings.
	mode	Reset the Wi-Fi operation mode.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no wlan mode	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure SSID Settings

Commands

wlan ap ssid <ssid> {5ghz | 2.4ghz}

Syntax Description	wlan	Configure Wi-Fi settings.
	ap	Configure AP settings.
	ssid	Configure SSID settings by SSID name.
	<ssid>	Specify the SSID name (max. 32 characters).
	{5ghz 2.4ghz}	Assign this SSID to the 5 GHz or 2.4 GHz band.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Besides assigning a SSID, this command will automatically enter the configuration mode for the specified SSID	
Examples	(config)# wlan ap ssid "test ap1" 5ghz	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Enable/Disable the SSID

Commands

status {enabled | disabled}

Syntax Description	status	Configure the SSID status.
	enabled	Enable the SSID.
	disabled	Disable the SSID.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	After entering AP configuration mode	
Examples	(config)# wlan ap ssid "test ap1" 5ghz (ssid-ap)# status disabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Delete SSID Settings

Commands

no wlan ap {**ssid** <ssid> {5ghz | 2.4ghz} | **ssid-idx** <ssid-index>}

Syntax Description	no	Reset settings to their default values.
	wlan	Configure Wi-Fi settings.
	ap	Configure AP settings.
	ssid	Delete SSID settings by SSID name.
	<ssid>	Specify the SSID name (max. 32 characters).
	{5ghz 2.4ghz}	Delete this SSID from the 5 GHz or 2.4 GHz band.
	ssid-idx	Delete SSID settings by SSID index.
<ssid-index>	Specify the SSID index (1-9).	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no wlan ap ssid "test ap1" 5ghz (config)# no wlan ap ssid-idx 3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the SSID List**Commands****wlan ap show ssid**

Syntax Description	wlan	Configure Wi-Fi settings.
	ap	Configure AP settings.
	show	Show the current settings and device status.
	ssid	Show the SSID list
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# wlan ap show ssid	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Enter Client Configuration Mode**Commands****wlan client**

Syntax Description	wlan	Configure Wi-Fi settings.
	client	Configure Client settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# wlan client	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure a Client SSID**Commands****ssid <ssid>**

Syntax Description	ssid	Configure the SSID name.
	<ssid>	Specify the SSID name (max. 32 characters).
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	After entering AP or client configuration mode	
Examples	(config)# wlan client (ssid-client)# ssid "test ap1"	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure Protected Management Frame Settings.**Commands****pmf** {disabled | 802.11w}

Syntax Description	pmf	Configure Protected Management Frame settings.
	disabled	Disable the Protected Management Frame.
	802.11w	Enable 802.11w Management Frame security.
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-ap)# pmf disabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure SSID Broadcasting Settings.**Commands****ssid-broadcast** {enabled | disabled}

Syntax Description	ssid-broadcast	Configure SSID broadcasting settings.
	enabled	Enable SSID broadcasting.
	disabled	Disable SSID broadcasting.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# ssid-broadcast enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure SSID Security Settings**Commands****security** {open | wpa | wpa2 | wpa3 | wpa-wpa2-mixed | wpa2-wpa3-mixed}

Syntax Description	security	Configure security mode settings.
	open	Set the security mode to Open. This is not recommended.
	wpa	Set the security mode to WPA.
	wpa2	Set the security mode to WPA2.
	wpa3	Set the security mode to WPA3.
	wpa-wpa2-mixed	Set the security mode to WPA/WPA2 Mixed.
	wpa2-wpa3-mixed	Set the security mode to WPA2/WA3 Mixed.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# security wpa3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure WPA Mode Settings

Commands

wpa-mode {personal | enterprise}

Syntax Description	wpa-mode	Configure WPA mode settings.
	personal	Set the WPA mode to Personal.
	enterprise	Set the WPA mode to Enterprise.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# wpa-mode personal	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the WPA Encryption Method

Commands

wpa-encrypt {aes | tkip-aes-mixed }

Syntax Description	wpa-encrypt	Configure the WPA encryption method.
	aes	Set the WPA encryption mode to AES.
	tkip-aes-mixed	Set the WPA encryption mode to TKIP/AES Mixed.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# wpa-encrypt aes	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the EAPOL Version

Commands

wpa-eap-ver {1 | 2}

Syntax Description	wpa-eap-ver	Configure the EAPOL version.
	1	Use EAPOL version 1.
	2	Use EAPOL version 2.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# wpa-eap-ver 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the WPA Passphrase

Commands

wpa-key

Syntax Description	wpa-key	Configure WPA passphrase and key renewal parameters.
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan client moxa (ssid-client)# wpa-key Enter Passphrase: Retype Passphrase:	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the WPA Key Renewal Interval

Commands

wpa-key renewal <period (60-86400 sec)>

Syntax Description	wpa-key	Configure the WPA key.
	renewal	Configure the WPA key renewal interval.
	<period>	Specify the key renewal interval (60-86400 seconds).
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# wpa-key renewal 1000	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure EAPOL RADIUS Server Settings

Commands

eap radius-server host <server (ipv4)> auth-port <port (0-65535)>] { primary | secondary}

Syntax Description	eap	Configure EAPOL-related parameters.
	radius-server	Configure the EAPOL RADIUS server.
	host	Configure the EAPOL RADIUS server host.
	<server>	Specify the EAPOL RADIUS server IP address (ipv4).
	auth-port	Configure the EAPOL RADIUS server authentication port.
	<port>	Specify the EAPOL RADIUS server TCP port number (0-65535).
	primary secondary	Set the server as the primary RADIUS server. Set the server as the secondary RADIUS server.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap ssid "ap-1" 5g moxa (ssid-ap)# eap radius-server host "192.168.127.3" primary Enter Shared Key: Retype Shared Key:	
Error Messages	N/A	
Related Commands	N/A	

Privilege Required	Network Configuration
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Configure the EAPOL Protocol

Commands

eap proto {tls | ttls | peap}

Syntax Description	eap	Configure EAPOL-related parameters.
	proto	Configure the EAPOL protocol.
	tls	Set the EAPOL protocol to TLS.
	ttls	Set the EAPOL protocol to TTLS.
	peap	Set the EAPOL protocol to PEAP.
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# eap proto peap	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Upload a TLS Certification File

Commands

upload certification {tftp://<server>/<filename> |
sftp ://<account>:<password>@<server>/<pathname>}

Syntax Description	upload	Upload a file.
	certification	Upload a TLS certification files.
	<source>	Specify the source.
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	Source: {tftp://<server>/<filename> sftp ://<account>:<password>@<server>/<pathname>}	
Examples	moxa (ssid-client)# upload certification tftp://192.168.127.123/abc Enter certification password: Retype certification password:	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure TTLS Inner Authentication Settings

Commands

eap ttls-inner-auth {pap | ms-chap | ms-chap-v2}

Syntax Description	eap	Configure EAPOL-related settings.
	ttls-inner-auth	Configure TTLS inner authentication settings.
	pap	Set the authentication method to PAP.
	ms-chap	Set the authentication method to MS-CHAP.
	ms-chap-v2	Set the authentication method to MS-CHAP-V2.
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# eap ttls-inner-auth pap	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure PEAP Inner Authentication Protocol Settings

Commands

eap peap-inner-auth {ms-chap-v2}

Syntax Description	eap	Configure EAPOL-related settings.
	peap-inner-auth	Configure PEAP inner authentication protocol settings.
	ms-chap-v2	Set the authentication method to MS-CHAP-V2.
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# eap peap-inner-auth ms-chap-v2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Anonymous Name for EAPOL TTLS/PEAP

Commands

eap anonymous <anonymous name (max len: 32)>

Syntax Description	eap	Configure EAPOL-related settings.
	anonymous	Configure the anonymous name for EAPOL TTLS/PEAP.
	<anonymous name>	Specify the anonymous name (max. 32 characters).
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# eap anonymous agv_auth	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the EAPOL TTLS/PEAP Username

Commands

eap username <username (max len: 32)>

Syntax Description	eap	Configure EAPOL-related settings.
	username	Configure the username for EAPOL TTLS/PEAP.
	<username>	Specify the username (max. 32 characters).
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# eap username IT_Group	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the EAPOL TTLS/PEAP Password

Commands

eap password

Syntax Description	eap	Configure EAPOL-related settings.
	password	Configure the password for EAPOL TTLS/PEAP (8-128 characters).
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan client moxa (ssid-client)# eap password Enter passphrase: Retype passphrase:	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Clear Client Settings

Commands

no wlan client

Syntax Description	no	Reset settings to their default values.
	wlan	Reset Wi-Fi settings.
	client	Reset Client settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no wlan client	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Modify SSID RF Band Settings

Commands

rf-band {5ghz | 2.4ghz | 2.4-or-5ghz}

Syntax Description	rf-band	[AP] Assign the SSID to a RF band. [Client] Enable the client to connect to the 5 GHz band.
	{5ghz 2.4ghz}	[AP] Assign the SSID to the 5GHz or 2.4GHz band. [Client] Enable the client to connect to the 2.4 GHz band.
	{2.4-or-5ghz}	[Client mode only] Enable the client to connect to either the 2.4 or 5 GHz band.
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires either "ssid-ap" or "ssid-client" configuration mode. The function of this command depends on the configuration it is used in.	

Examples	[AP] (config)# wlan ap ssid "test ap" 5ghz (ssid-ap)# rf-band 2.4ghz [Client] (config)# wlan client (ssid-client)# rf-band 2.4-or-5ghz
Error Messages	N/A
Related Commands	N/A
Privilege Required	Network Configuration

Configure the Unicast Data Frame Transmission Rate

Commands

tx-rate {5ghz | 2.4ghz} **data** {auto | <rate>}

Syntax Description	tx-rate	Configure the transmission rate.
	{5ghz 2.4ghz}	Configure the transmission rate for the 5 GHz or 2.4 GHz band.
	data	Configure the unicast data frame transmission rate.
	auto	Set the transmission rate to Auto.
	<rate>	Specify the transmission rate: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 (Mbps) 802.11b: 1, 2, 5.5, 11 (Mbps) 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 (Mbps) 802.11n: ht-mcs[0-15] 802.11ac: vht-mcs[0-9]-nss[1-2]
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires either "ssid-ap" or "ssid-client" configuration mode.	
Examples	(config)# wlan client (ssid-client)# tx-rate 5ghz data auto	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure Minimum Unicast Data Frame Transmission Rate

Commands

tx-rate {5ghz | 2.4ghz} **min-data** <rate>

Syntax Description	tx-rate	Configure the transmission rate.
	{5ghz 2.4ghz}	Configure the transmission rate for the 5 GHz or 2.4 GHz band.
	min-data	Configure the minimum unicast data frame transmission rate.
	<rate>	Specify the minimum transmission rate (0-65 Mbps).
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires either "ssid-ap" or "ssid-client" configuration mode.	
Examples	(config)# wlan client (ssid-client)# tx-rate 5ghz min-data 65	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Multicast/Broadcast Data Frame Transmission Rate

Commands

tx-rate {5ghz | 2.4ghz} **mcast-bcast** <rate>

Syntax Description	tx-rate	Configure the transmission rate.
	{5ghz 2.4ghz}	Configure the transmission rate for the 5 GHz or 2.4 GHz band.
	mcast-bcast	Configure the multicast/broadcast data frame transmission rate.
	<rate>	Specify the transmission rate.
Defaults	N/A	
Command Modes	ssid-ap	
Usage Guidelines	This command requires the "ssid-ap" configuration mode of the target SSID.	
Examples	(config)# wlan ap ssid "test ap" 5ghz (ssid-ap)# tx-rate 5ghz mcast-bcast 54	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Management Frame Transmission Rate

Commands

tx-rate {5ghz | 2.4ghz} **mgmt** <rate>

Syntax Description	tx-rate	Configure the transmission rate.
	{5ghz 2.4ghz}	Configure the transmission rate for the 5 GHz or 2.4 GHz band.
	mgmt	Configure the management frame transmission rate.
	<rate>	Specify the transmission rate.
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires the "ssid-ap" configuration mode of the target SSID.	
Examples	(config)# wlan ap ssid "test ap" 5ghz (ssid-ap)# tx-rate 5ghz mgmt 54	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset Unicast, Multicast, Broadcast, and Management Frame Transmission Rate Settings

Commands

no tx-rate

Syntax Description	no	Reset settings to their default values.
	tx-rate	Reset the transmission rate for unicast, multicast, broadcast, and management frames.
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires either the "ssid-ap" or "ssid-client" configuration mode of the target SSID.	
Examples	(config)# wlan ap ssid "test ap" 5ghz (ssid-ap)# no tx-rate	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the RTS/CTS Threshold

Commands

rts-cts <rts-cts-threshold>

Syntax Description	rts-cts	Configure the RTS/CTS threshold.
	<rts-cts-threshold>	Specify the RTS/CTS threshold (32-2346 Bytes).
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires either the "ssid-ap" or "ssid-client" configuration mode of the target SSID.	
Examples	(config)# wlan ap ssid "test ap" 5ghz (ssid-ap)# rts-cts 2346	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset the RTS/CTS Threshold

Commands

no rts-cts

Syntax Description	no	Reset settings to their default values.
	rts-cts	Reset the RTS/CTS threshold.
Defaults	N/A	
Command Modes	ssid-ap ssid-client	
Usage Guidelines	This command requires either the "ssid-ap" or "ssid-client" configuration mode of the target SSID.	
Examples	(config)# wlan ap ssid "test ap" 5ghz (ssid-ap)# no rts-cts	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the Wi-Fi Operation Mode and SSID Configuration

Commands

show wlan ssid-config

Syntax Description	show	Show the current settings and device status.
	wlan	Show the Wi-Fi configuration and status information.
	ssid-config	Show the Wi-Fi configuration.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show wlan ssid-config	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the SSID Status of All Running SSIDs

Commands

show wlan ssid-status

Syntax Description	show	Show the current settings and device status.
	wlan	Show the Wi-Fi configuration and status information.
	ssid-status	Show the enabled SSID status.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show wlan ssid-status	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

Show the List of Associated Clients by SSID Name

Commands

show wlan associated-client-list {ssid <ssid> {5ghz | 2.4ghz} | **ssid-idx** <ssid-index>}

Syntax Description	show	Show the current settings and device status.
	wlan	Show the Wi-Fi configuration and status information.
	associated-client-list	Show the associated client list for the specified SSID.
	ssid	Show the list of associated clients by SSID name.
	<ssid>	Specify the SSID name (max. 32 characters).
	{5ghz 2.4ghz}	Show the SSID from the 5 GHz or 2.4 GHz band.
	ssid-idx	Show the list of associated clients by SSID index.
	<ssid-index>	Specify the SSID index (1-9).
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show wlan associated-client-list ssid "Master 2" 5ghz	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

Show the MAC List of LAN Devices Connected to Slave Nodes

Commands

show wlan mac-list-connected-to-slave {ssid <ssid> {5ghz | 2.4ghz} | **ssid-idx** <ssid-index>}

Syntax Description	show	Show the current settings and device status.
	wlan	Show the Wi-Fi configuration and status information.
	mac-list-connected-to-slave	Show the MAC list of devices connected to Slave nodes.
	ssid	Show the MAC list of devices connected to Slave nodes by SSID name.
	<ssid>	Specify the SSID name (max. 32 characters).
	{5ghz 2.4ghz}	Show the SSID from the 5 GHz or 2.4 GHz band.
	ssid-idx	Show the MAC list of devices connected to Slave nodes by SSID index.
	<ssid-index>	Specify the SSID index (1-9).
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	This command is only available for Master mode.	
Examples	moxa# show wlan mac-list-connected-to-slave ssid AP1-SSID 5ghz	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

Show the List of LAN Devices Connected to Client Nodes

Commands

show wlan client-lan-device-list

Syntax Description	show	Show the current settings and device status.
	wlan	Show the Wi-Fi configuration and status information.
	client-lan-device-list	Show the list of LAN devices connected to the Client node.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	This command is only available for Client mode.	
Examples	moxa# show wlan client-lan-device-list	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

Configure the 5 GHz Band RF Settings

Commands

wlan rf 5ghz [rf-type {ac-only | n-ac-mixed | a-n-ac-mixed}] [channel <chan-no>] [channel-width {20 | 20-40 | 20-40-80}] [antenna {1 | 2 | all}] [txpower <tx-power (dBm)>] [antenna-gain <antenna-gain (0-18 dBi)>]

Syntax Description	wlan	Configure Wi-Fi settings.
	rf	Configure RF parameters.
	5ghz	Configure the 5 GHz band settings.
	rf-type	Configure the RF type.
	ac-only	Set the 5 GHz RF type to 802.11ac Only.
	n-ac-mixed	Set the 5 GHz RF type to 802.11n/ac Mixed.
	a-n-ac-mixed	Set the 5 GHz RF type to 802.11a/n/ac Mixed.
	channel	Configure the band channel.
	<chan-no>	Specify the channel number.
	channel-width	Configure the channel width (in MHz).
	20	Set the channel width to 20 MHz.
	20-40	Set the channel width to 20/40 MHz.
	20-40-80	Set the channel width to 20/40/80 MHz.
	antenna	Configure the antenna(s).
	1	Use antenna 1.
	2	Use antenna 2.
	all	Use all antennas.
	tx-power	Configure the maximum transmission power (in dBm).
	<tx-power>	Specify the maximum transmission power (in dBm).
	antenna-gain	Configure the antenna gain.
<antenna-gain>	Specify the antenna gain (0-18 dBi).	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan rf 5ghz rf-type ac-only	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the 2.4 GHz Band RF Settings

Commands

wlan rf 2.4ghz [rf-type {n-only | g-n-mixed | b-g-n-mixed}] [channel <chan-no>] [channel-width {20 | 20-40}] [antenna {1 | 2 | all}] [txpower <tx-power (dBm)>] [antenna-gain <antenna-gain (0-18 dBi)>]"

Syntax Description	wlan	Configure Wi-Fi settings.
	rf	Configure RF parameters.
	2.4ghz	Configure the 2.4 GHz band settings.
	rf-type	Configure the RF type.
	n-only	Set the 2.4 GHz RF type to 802.11n Only.
	g-n-mixed	Set the 2.4 GHz RF type to 802.11g/n Mixed.
	b-g-n-mixed	Set the 2.4 GHz RF type to 802.11b/g/n Mixed.
	channel	Configure the band channel.
	<chan-no>	Specify the channel number.
	channel-width	Configure the channel width (in MHz).
	20	Set the channel width to 20 MHz.
	20-40	Set the channel width to 20/40 MHz.
	antenna	Configure the antenna(s).

	1	Use antenna 1.
	2	Use antenna 2.
	all	Use all antennas.
	tx-power	Configure the maximum transmission power (in dBm).
	<tx-power>	Specify the maximum transmission power (in dBm).
	antenna-gain	Configure the antenna gain.
	<antenna-gain>	Specify the antenna gain (0-18 dBi).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan rf 2.4ghz rf-type n-only	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Channel Plan

Commands

wlan rf {2.4ghz | 5ghz} **channel-plan** <channel-list>

Syntax Description	wlan	Configure Wi-Fi settings.
	rf	Configure RF parameters.
	2.4ghz	Configure the 2.4 GHz band settings.
	5ghz	Configure the 5 GHz band settings.
	channel-plan	Configure the channel plan. To use all available channels, use the "no" version of this command.
	channel-list	Specify the channels to add to the channel plan. Enter the channel numbers separated by a comma (.). For example, '36,40,44'.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan rf 5ghz channel-plan 36,40,44	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Beacon Interval

Commands

wlan rf {2.4ghz | 5ghz} **beacon-interval** <beacon-interval (40-1000 ms)>

Syntax Description	wlan	Configure Wi-Fi settings.
	rf	Configure RF parameters.
	2.4ghz	Configure the 2.4 GHz band settings.
	5ghz	Configure the 5 GHz band settings.
	beacon-interval	Configure the beacon interval (in ms).
	<beacon-interval>	Specify the beacon interval (40-1000 ms)
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan rf 5ghz beacon-interval 100	
Error Messages	N/A	

Related Commands	N/A
Privilege Required	Network Configuration

Reset RF Settings

Commands

no wlan rf {2.4ghz | 5ghz} [channel-plan]

Syntax Description	no	Reset the parameters.
	wlan	Reset Wi-Fi settings.
	rf	Reset the 2.4/5 GHz band RF settings.
	2.4ghz	Reset 2.4 GHz band RF settings.
	5ghz	Reset 5 GHz band RF settings.
	channel-plan	Reset the channel plan of the specified RF band.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no wlan rf 2.4ghz channel-plan	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the RF Settings and the List of Available Channels

Commands

show wlan rf [channel-txpower]

Syntax Description	show	Show all modified settings.
	wlan	Show Wi-Fi-related status information.
	rf	Show the RF settings.
	channel-txpower	Show the list of available channels and their maximum transmission power.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show wlan rf	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Execute a Site Survey

Commands

wlan site-survey

Syntax Description	wlan	Configure Wi-Fi settings.
	site-survey	Execute a site survey.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan site-survey	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Turbo Roaming and MAC Cloning

Enable/Disable Turbo Roaming Analyzer

Commands

client-based-troam {enabled | disabled}

Syntax Description	client-based-troam	Configure Client-based Turbo Roaming settings.
	enabled	Enable Client-based Turbo Roaming.
	disabled	Disable Client-based Turbo Roaming.
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# client-based-troam enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Roaming Threshold

Commands

client-based-troam threshold {snr [5ghz <roam-thr-snr (5-60 dB)>] [2.4ghz <roam-thr-snr (5-60 dB)>] | signal-strength [5ghz <roam-thr-signal-strength (-100 - -35 dBm)>] [2.4ghz <roam-thr-signal-strength (-100 - -35 dBm)>]}

Syntax Description	client-based-troam	Configure Client-based Turbo Roaming settings.
	threshold	Configure the roaming threshold.
	snr	Configure the SNR roaming threshold.
	5ghz	Configure the roaming threshold for the 5 GHz band.
	2.4ghz	Configure the roaming threshold for the 2.4 GHz band.
	<roam-thr-snr>	Specify the roaming SNR threshold (5-60 dB).
	signal-strength	Configure the signal strength roaming threshold.
	<roam-thr-signal-strength>	Specify the roaming signal strength threshold (-100 - -35 dBm).
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# client-based-troam threshold snr 5ghz 30	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Roaming Difference

Commands

client-based-troam diff <roam-diff (5-30)>

Syntax Description	client-based-troam	Configure Client-based Turbo Roaming settings.
	diff	Configure the signal strength or SNR difference between the AP candidate and the connecting APs.
	<roam-diff>	Specify the SNR and signal strength roaming difference (5-30).
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# client-based-troam diff 10	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset Client-based Turbo Roaming Settings

Commands

no client-based-troam

Syntax Description	no	Reset settings to their default values.
	client-based-troam	Reset Client-based Turbo Roaming settings.
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# no client-based-troam	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show Client-based Turbo Roaming Settings

Commands

show wlan client-based-troam

Syntax Description	show	Show all modified settings.
	wlan	Show Wi-Fi-related status information.
	client-based-troam	Show Client-based Turbo Roaming settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show wlan client-based-troam	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure MAC Cloning Settings

Commands

mac-cloning{enabled [method {auto [ethernet <interface-id (1-2)>] | static [mac <clone-mac-addr (MAC addr)>]}] | disabled }

Syntax Description	mac-cloning	Configure MAC cloning settings.
	enabled	Enable MAC cloning.
	method	Configure the MAC cloning method.
	auto	Set the cloning method to Auto.
	ethernet	Configure the Ethernet interface that the Wi-Fi client will clone the MAC address from.
	<interface-id>	Specify the index of the Ethernet interface that the Wi-Fi client will clone the MAC address from (1-2).
	static	Set the cloning method to Static.
	<clone-mac-addr>	Specify the static clone MAC address (e.g., 00:11:22:aa:bb:cc).
disabled	Disable MAC cloning.	
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# mac-cloning enable method auto ethernet 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Ethernet

Access Config-if Mode to Configure Network Interfaces

Commands

interface { **ethernet** <interface-id(1-2)> | **ssid-ap** <ssid (rf-band/ssid-name)> | **ssid-client** }

Syntax Description	interface	Configure network interface settings.
	ethernet	Configure LAN interface settings.
	<interface-id>	Specify the LAN interface index (1-2).
	ssid-ap	Configure Wi-Fi interface settings for AP mode.
	<ssid>	Specify the RF band and SSID name (e.g. 5ghz/ssid-1).
	ssid-client	Configure Wi-Fi interface settings for Client-based mode.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# interface ethernet 2 moxa (config-if)#	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management or Network Configuration	

Enable the Ethernet Interfaces

Commands

no shutdown

Syntax Description	no	Reset settings to their default values.
	shutdown	Enable the interface.
Defaults	N/A	
Command Modes	Config-if	
Usage Guidelines	N/A	
Examples	moxa (config-if)# no shutdown	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Disable the Ethernet Interfaces

Commands

Shutdown

Syntax Description	shutdown	Disable the interface.
Defaults	N/A	
Command Modes	Config-if	
Usage Guidelines	N/A	
Examples	moxa (config-if)# shutdown	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Interface Description.

Commands

description <description (max len: 127)>

Syntax Description	description	Configure the description.
	<description>	Enter a description (max. 127 characters).
Defaults	N/A	
Command Modes	Config-if	
Usage Guidelines	N/A	
Examples	moxa (config-if)# description ETH_LAN1	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Show the Interface Status

Commands

show interface [status]

Syntax Description	show	Show all modified settings.
	interface	Show interface-related information.
	status	Show interface status.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show interface status	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

Connection Check & Recovery

Configure Client-to-AP Link Check Settings

Commands

ap-link-check {enabled | disabled}[check-timeout <check-timeout (10-60 sec)>] [reset-conn {enabled | disabled}] [reset-conn-cnt <retry-count (1-5)>] [reboot {enabled | disabled}] [reboot-cnt <reboot-count (1-5)>]

Syntax Description	ap-link-check	Configure Client-to-AP Link Check settings.
	enabled	Enable Client-to-AP Link Check.
	disabled	Disable Client-to-AP Link Check.
	check-timeout	Configure the Client-to-AP Link Check timeout threshold.
	<check-timeout>	Specify the Client-to-AP Link Check timeout threshold (10-60 sec).
	reset-conn	Configure the Reset Connection Recovery action.
	enabled	Reset the Wi-Fi connection if the Client-to-AP Link Check fails.
	disabled	Do not reset the Wi-Fi connection if the Client-to-AP Link Check fails.
	reset-conn-cnt	Configure the maximum number of times the device will perform the Reset Wi-Fi Connection recovery action.

	<retry-count>	Specify the maximum number of times the device will perform the Reset Wi-Fi Connection recovery action (1-5).
	reboot	Configure the Reboot Recovery action.
	enabled	Reboot the device if the Client-to-AP Link Check fails.
	disabled	Do not reboot the device if the Client-to-AP Link Check fails.
	reboot-cnt	Configure the maximum number of times the device will perform the Reboot Device recovery action.
	<reboot-count>	Specify the maximum number of times the device will perform the Reboot Device recovery action (1-5).
Defaults	N/A	
Command Modes	ssid-client	
Usage Guidelines	N/A	
Examples	moxa (ssid-client)# ap-link-check enabled check-timeout 20 reset-conn enabled reset-conn-cnt 3 reboot enabled reboot-cnt 3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Candidate AP Criteria for the AP Alive Check Function

Commands

wlan ap-alive-check ap-threshold {snr [5ghz <snr (5-60 dB)>] [2.4ghz <snr (5-60 dB)>] | signal-strength [5ghz <signal-strength (-100 - -35 dBm)>] [2.4ghz <signal-strength (-100 - -35 dBm)>]}

Syntax Description	wlan	Configure Wi-Fi settings.
	ap-alive-check	Configure AP Alive Check settings.
	ap-threshold	Configure the candidate AP criteria for the AP Alive Check function.
	snr	Configure the SNR candidate threshold.
	signal-strength	Configure the signal strength threshold for candidate APs.
	5ghz	Configure the threshold for the 5 GHz band of the AP.
	2.4ghz	Configure the threshold for the 2.4 GHz band of the AP.
	<snr>	Specify the SNR threshold (5-60 dB).
	<signal-strength>	Specify the signal strength threshold (-100 - -35 dBm).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan ap-alive-check ap-threshold snr 5ghz 30	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure Wi-Fi Remote Host Check Settings

Commands

wlan remote-host-check {enabled | disabled}[host-type {static <host (max len: 60)> | dynamic}] [check-interval <check-interval (1-60 sec)>] [check-timeout <check-timeout (100-1000 ms)>] [retry-interval <retry-interval (1-30 sec)>] [retry-cnt <retry-count (1-5)>]

Syntax Description	wlan	Configure Wi-Fi settings.
	remote-host-check	Configure Wi-Fi Remote Host Check settings.
	enabled	Enable Remote Host Check.
	disabled	Disable Remote Host Check.
	host-type	Configure the host type.
	static	Set the host type to Static.
	<host>	Specify the remote host to check (max. 60 characters).
	dynamic	Set the host type to Dynamic.
	check-interval	Configure the Remote Host Check interval.
	<check-interval>	Specify the Remote Host Check interval (1-60 sec).
	check-timeout	Configure the Remote Host Check timeout.
	<check-timeout>	Specify the Remote Host Check timeout (10-1000 ms).
	retry-interval	Configure the Remote Host Check retry interval.
	<retry-interval>	Specify the Remote Host Check retry interval (1-30 sec).
	retry-cnt	Configure the Remote Host Check retry count.
<retry-count>	Specify the Remote Host Check retry count (1-5).	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# wlan remote-host-check enabled host-type static www.moxa.com check-interval 10 check-timeout 500 retry-interval 5 retry-cnt 3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

IP Configuration

Configure the Device Management IP Address

Commands

ip management {lan | wan} address {dhcp | <device-ip (ipv4)> <netmask> [<gateway (ipv4)>]}

Syntax Description	ip	Configure device network settings.
	management	Configure device network interface settings.
	lan	Configure LAN settings.
	wan	Configure WAN settings.
	address	Configure the device management IP address.
	dhcp	Assign the management IP address using DHCP.
	<device-ip>	Specify the device IP address (ipv4).
	<netmask>	Specify the netmask.
	<gateway>	Specify the gateway (ipv4).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip management wan address 192.168.127.44 255.255.255.0 192.168.128.254	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Device DNS Server Address

Commands

ip management {lan | wan} name-server <server-id (1-2)> <dns-server (ipv4)>

Syntax Description	ip	Configure device network settings.
	management	Configure device network interface settings.
	lan	Configure LAN settings.
	wan	Configure WAN settings.
	name-server	Configure the device DNS server address.
	<server-id>	Specify the index of the DNS server (1-2).
	<dns-server>	Specify the DNS server address (IPv4).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip management lan name-server 1 192.168.127.5	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Reset the Device Management IP Address

Commands

no ip management {lan | wan} address

Syntax Description	no	Reset settings to their default values.
	ip	Reset device network settings.
	management	Reset device network interface settings.
	lan	Reset LAN network settings.
	wan	Reset WAN network settings.
	address	Reset the device management IP address.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no ip management lan address	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Reset the Device DNS Server Settings

Commands

no ip management {lan | wan} name-server <server-index (1-2)>

Syntax Description	no	Reset settings to their default values.
	ip	Reset device network settings.
	management	Reset device network interface settings.
	lan	Reset LAN network settings.
	wan	Reset WAN network settings.
	name-server	Reset the DNS server settings.
	<server-index>	Specify the DNS server index (1-2).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no ip management lan name-server 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Show the Device Network Management IP Status

Commands

show ip management [status]

Syntax Description	show	Show all modified settings
	ip	Show device network settings.
	management	Show device network interface settings or status.
	status	Show the device management IP address status.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show ip management status	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the Default Gateway

Commands

default-gateway <gateway (ipv4)>

Syntax Description	default-gateway	Configure the DHCP pool default gateway.
	<gateway (ipv4)>	Specify the default gateway address.
Defaults	N/A	
Command Modes	dhcp-pool	
Usage Guidelines	N/A	
Examples	(dhcp-pool)# default-gateway 192.168.127.200	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the DHCP IP Lease Time

Commands

lease <duration (10-14400 min)>

Syntax Description	lease	Configure the DHCP IP address lease time.
	<duration (10-14400 min)>	Specify the IP address lease time (10-14400 min).
Defaults	N/A	
Command Modes	dhcp-pool	
Usage Guidelines	N/A	
Examples	(dhcp-pool)# lease 10000	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the DNS Servers

Commands

dns-server <DNS server 1 (ipv4)> [<DNS server 2 (ipv4)>]

Syntax Description	dns-server	Configure DNS server settings.
	<DNS server 1 (ipv4)>	Specify the primary DNS server.
	<DNS server 2 (ipv4)>	Specify the secondary DNS server.
Defaults	N/A	
Command Modes	dhcp-pool	
Usage Guidelines	N/A	
Examples	(dhcp-pool)# dns-server 192.168.127.202	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the NTP Server

Commands

ntp-server <NTP server>

Syntax Description	ntp-server	Configure NTP server settings.
	<NTP server>	Specify the NTP server.
Defaults	N/A	
Command Modes	dhcp-pool	
Usage Guidelines	N/A	
Examples	(dhcp-pool)# ntp-server 1.pool.ntp.org	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Routing and NAT

Static Route

Create a New Static Route Entry

Commands

ip route <index (1-32)> <ip-addr> <netmask> <next-hop> <metric (1-32766)> [iface {lan | wan}]

Syntax Description	ip	Configure device network settings.
	route	Configure static route settings.
	<index>	Specify the index of the routing entry(1-32).
	<ip-addr>	Specify the destination address (IPv4).
	<netmask>	Specify the destination subnet mask of the route entry.
	<next-hop>	Specify the next hop of the route entry (IPv4).
	<metric>	Specify the metric of the route entry (1-32766).
	iface	Configure the interface of the route entry (default: WAN).
	lan	Set the route interface to LAN.
wan	Set the route interface to WAN.	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip route 2 192.168.127.10 255.255.255.0 192.168.127.251 10 iface lan	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Enable/Disable the Static Route

Commands

ip route <index (1-32)> {enabled | disabled}

Syntax Description	ip	Configure device network settings.
	route	Configure static route settings.
	<index>	Specify the index of the routing entry (1-32).
	enabled	Enable this static route entry.
	disabled	Disable this static route entry.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip route 3 enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Static Route Name

Commands

ip route <index (1-32)> name <name (max len: 31)>

Syntax Description	ip	Configure device network settings.
	route	Configure static route settings.
	<index>	Specify the index of the routing entry (1-32).
	name	Configure the name of the static route entry.
	<name>	Enter the name of the static route entry (max. 31 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip route 3 name AGV_PLC	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset the Static Routing Table

Commands

no ip route [<index (1-32)>]

Syntax Description	no	Delete or reset.
	ip	Configure device network settings.
	route	Reset the static routing table.
	<index>	Specify the index of the routing table (1-32).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no ip route 3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the Static Routing Table

Commands

ip route show

Syntax Description	ip	Configure device network settings.
	route	Configure static route settings.
	show	Show the static routing table settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip route show	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the Routing Table Settings

Commands

show ip route config

Syntax Description	show	Show all modified settings.
	ip	Configure device network settings.
	route	Show the routing table.
	config	Show the routing table settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show ip route config	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the Routing Table

Commands

show ip route [status]

Syntax Description	show	Show all modified settings.
	ip	Configure device network settings.
	route	Show the routing table.
	status	Show the routing table status.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show ip route status	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

NAT

Configure NAT Settings

Commands

ip nat {enabled | disabled}

Syntax Description	ip	Configure device network settings.
	nat	Configure NAT settings.
	enabled	Enable NAT.
	disabled	Disable NAT.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip nat disabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure N-to-1 NAT Settings

Commands

ip nat n-to-1 {enabled | disabled} [<name (max len: 31)>]

Syntax Description	ip	Configure device network settings.
	nat	Configure NAT settings.
	n-to-1	Configure N-to-1 NAT settings.
	enabled	Enable N-to-1 NAT.
	disabled	Disable N-to-1 NAT.
	<name>	Specify the name of the N-to-1 NAT rule (Max. 31 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip nat n-to-1 enabled IPcam2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Create a New Rule or Edit a Rule With a Specific Priority

Commands

ip nat {new | <priority (1-31)>}

Syntax Description	ip	Configure device network settings.
	nat	Configure NAT settings.
	new	Create a new rule without specifying a priority. A priority will be assigned automatically.
	<priority>	Specify the priority of the rule (1-31).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Executing this command will enter "config-nat" mode to configure the rule details.	
Examples	moxa (config)# ip nat new moxa (config)# ip nat 1	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Enable/Disable a NAT Rule

Commands

ip nat <priority (1-31)> {enabled | disabled}

Syntax Description	ip	Configure device network settings.
	nat	Configure NAT settings.
	<priority>	Specify the NAT rule priority (1-31) to enable or disable.
	enabled	Enable the NAT rule.
	disabled	Disable the NAT rule.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip nat 3 disabled	
Error Messages	N/A	
Related Commands	N/A	

Privilege Required	Network Configuration
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Enable/Disable the Specified NAT Rule in Config-nat Mode

Commands

status {enabled | disabled}

Syntax Description	status	Configure the status of this rule.
	enabled	Enable the NAT rule.
	disabled	Disable the NAT rule.
Defaults	N/A	
Command Modes	Config-nat	
Usage Guidelines	Refer to the " Create a New Rule or Edit a Rule With a Specific Priority " command for how to enter config-nat mode.	
Examples	moxa (config-nat)# status enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Change the Mode of the NAT Rule in Config-nat Mode

Commands

mode {1-to-1 | pat}

Syntax Description	mode	Configure the NAT mode of this rule.
	1-to-1	Set the NAT mode to 1-to-1.
	pat	Set the NAT mode to Port Forwarding.
Defaults	N/A	
Command Modes	Config-nat	
Usage Guidelines	Refer to the " Create a New Rule or Edit a Rule With a Specific Priority " command for how to enter config-nat mode.	
Examples	moxa (config-nat)# mode pat	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Change the Priority of the NAT Rule in Config-nat Mode

Commands

priority <priority (1-31)>

Syntax Description	priority	Configure the priority of this rule.
	<priority>	Specify the priority of this rule (1-31).
Defaults	N/A	
Command Modes	Config-nat	
Usage Guidelines	Refer to the " Create a New Rule or Edit a Rule With a Specific Priority " command for how to enter config-nat mode.	
Examples	moxa (config-nat)# priority 1	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure 1-to-1 NAT/Port Forwarding Settings

Commands

original [**dst-ip** {any | <dest-ipaddr (ipv4)> | <dest-ipaddr-range (ip1-ip2)>}] [**dst-port** {any | <dest-port (0-65535)> | <dest-port-range (port1-port2)>}] **translated dst-ip** {any | <dest-ipaddr (ipv4)>} [**dst-port** {any | <dest-port (0-65535)>}] **protocol** {tcp | udp | tcp-udp}

Syntax Description	original	Configure the condition of this rule.
	translated	Configure the translating action.
	dst-ip	Configure the destination IP address.
	any	Set the destination IP address to Any.
	<dest-ipaddr>	Specify the destination IP address (IPv4).
	<range-of-dest-ip>	Specify the destination IP range (ip1-p2, e.g., 192.168.127.1-192.168.127.10).
	dst-port	Configure the destination port.
	any	Set the destination port to Any.
	<dest-port>	Specify the destination port (0-65535).
	<range-of-dest-port>	Specify the destination port range (port1-port2, e.g., 404-410).
	protocol	Configure the protocol of this rule.
	tcp	Set the protocol to TCP.
	udp	Set the protocol to UDP.
tcp-udp	Set the protocol to TCP and UDP.	
Defaults	N/A	
Command Modes	Config-nat	
Usage Guidelines	N/A	
Examples	<pre>moxa (config-nat)# original dst-ip 192.168.128.10-192.168.128.20 moxa (config-nat)# translated dst-ip 192.168.127.110 moxa (config-nat)# protocol tcp-udp moxa (config-nat)# original dst-port 100 moxa (config-nat)# translated dst-ip 192.168.127.110 dst-port 3030</pre>	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Name of the NAT Rule in Config-nat Mode

Commands

name <name (max len: 31)>

Syntax Description	name	Configure the name of this rule.
	<name>	Specify the name of this rule (max. 31 characters).
Defaults	N/A	
Command Modes	Config-nat	
Usage Guidelines	Refer to the " Create a New Rule or Edit a Rule With a Specific Priority " command for how to enter config-nat mode.	
Examples	<pre>moxa (config-nat)# name IPCam2</pre>	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Description of the Rule in Config-nat Mode

Commands

desc <description (max len: 127)>

Syntax Description	desc	Configure the description of this rule.
	<description>	Enter a description for this rule (max. 127 characters).
Defaults	N/A	
Command Modes	Config-nat	
Usage Guidelines	Refer to the " Create a New Rule or Edit a Rule With a Specific Priority " command for how to enter config-nat mode.	
Examples	moxa (config-nat)# desc rule for WAN to IPcam2 IP translation	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset all NAT Settings

Commands

no ip nat

Syntax Description	no	Reset or delete configurations.
	ip	Reset device network settings.
	nat	Reset NAT settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no ip nat	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset a NAT Rule

Commands

no ip nat [<priority (1-32)>]

Syntax Description	no	Reset or delete configurations.
	ip	Reset device network settings.
	nat	Reset NAT settings.
	<priority>	Reset the specified NAT rule (1-32).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# no ip nat 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show a NAT Rule**Commands****ip nat show** [<priority (1-32)>]

Syntax Description	ip	Configure device network settings.
	nat	Configure NAT settings.
	show	Show NAT rule settings.
	<priority>	Specify the priority of the NAT rule (1-32).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip nat show 2	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show All NAT Rules**Commands****ip nat show**

Syntax Description	ip	Configure device network settings.
	nat	Configure NAT settings.
	show	Show NAT rule settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# ip nat show	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Failsafe Password**Commands****fail-safe**

Syntax Description	fail-safe	Configure failsafe password settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# fail-safe Enter New Password: Retype New Password:	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Firewall

Layer 2 Policy

Configure the Layer 2 Firewall Policy and the Default Action

Commands

firewall l2-policy {enabled | disabled} [**default-action** {drop | accept}]

Syntax Description	firewall	Configure firewall settings.
	l2-firewall	Configure Layer 2 firewall policy settings.
	enabled	Enable the Layer 2 firewall policy.
	disabled	Disable the Layer 2 firewall policy.
	default-action	Configure the default action of the Layer 2 firewall policy.
	drop	Drop all packets that do not match any rules.
	accept	Accept all packets that do not match any rules.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# firewall l2-policy enabled default-action drop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the L2 Policy List in Configuration Mode

Commands

firewall l2-policy show

Syntax Description	firewall	Configure firewall settings.
	l2-firewall	Configure Layer 2 firewall policy settings.
	show	Show the Layer 2 firewall policy settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# firewall l2-policy show	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Create a New L2 Policy Rule or Edit an Existing Rule With a Specific Priority

Commands

firewall l2-policy {new | <priority (1-64)>}

Syntax Description	firewall	Configure firewall settings.
	l2-firewall	Configure Layer 2 firewall policy settings.
	new	Create a new rule without specifying a priority. A priority will be assigned automatically.
	priority	Specify the priority of the rule (1-64).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Create a new rule or edit an existing rule with the specified priority. Executing this command will automatically enter "fw-l2" configuration mode.	
Examples		

	moxa (config)# firewall l2-policy new moxa (config)# firewall l2-policy 3
Error Messages	N/A
Related Commands	N/A
Privilege Required	Network Configuration

Enable/Disable the L2 Policy Rule

Commands

status {enabled | disabled}

Syntax Description	status	Enable or disable this rule.
	enabled	Enable this rule.
	disabled	Disable this rule.
Defaults	N/A	
Command Modes	fw-l2	
Usage Guidelines	Enable or disable this rule. Refer to Create a New L2 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l2" mode.	
Examples	moxa (fw-l2)# status enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Priority of the L2 Policy Rule

Commands

priority <priority (1-64)>

Syntax Description	priority	Configure the priority of this rule.
	<priority>	Specify the priority of the rule (1-64).
Defaults	N/A	
Command Modes	fw-l2	
Usage Guidelines	Set the priority of this rule. Refer to Create a New L2 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l2" mode.	
Examples	moxa (fw-l2)# priority 5	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Action of the L2 Policy Rule

Commands

action {accept | drop}

Syntax Description	action	Configure the action of this rule.
	accept	Accept any packets that match this rule.
	drop	Drop any packets that match this rule.
Defaults	N/A	
Command Modes	fw-l2	
Usage Guidelines	Configure the action of this rule. Refer to Create a New L2 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l2" mode.	
Examples	moxa (fw-l2)# action drop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Source MAC of the L2 Policy Rule

Commands

src-mac <src-mac-address>

Syntax Description	src-mac	Configure the source MAC address of this rule.
	<src-mac-address>	Specify the source MAC address of this rule.
Defaults	N/A	
Command Modes	fw-l2	
Usage Guidelines	Refer to Create a New L2 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l2" mode.	
Examples	moxa (fw-l2)# src-mac 00:90:E8:01:02:03	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Destination MAC of the L2 Policy Rule

Commands

dst-mac <dst-mac-address>

Syntax Description	dst-mac	Configure the destination MAC address of this rule.
	<dst-mac-address>	Specify the destination MAC address of this rule.
Defaults	N/A	
Command Modes	fw-l2	
Usage Guidelines	Refer to Create a New L2 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l2" mode.	
Examples	moxa (fw-l2)# dst-mac 00:90:E8:01:02:08	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Delete a Specific or All L2 Policy Rules

Commands

no firewall l2-policy {all | <priority (1-64)>}

Syntax Description	no	Delete a configuration.
	firewall	Configure firewall settings.
	l2-firewall	Configure Layer 2 firewall policy settings.
	all	Delete all Layer 2 firewall policy rules.
	priority	Delete the Layer 2 firewall policy rule with the specified priority (1-64).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Delete Layer 2 firewall policy rules.	
Examples	moxa (config)# no firewall l2-policy all moxa (config)# no firewall l2-policy 3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Layer 3 Policy

Configure the Layer 3 Firewall Policy and the Default Action

Commands

firewall l3-policy {enabled | disabled} [**default-action** {drop | accept}]

Syntax Description	firewall	Configure firewall settings.
	l3-firewall	Configure the Layer 3 firewall policy.
	enabled	Enable the Layer 3 firewall policy.
	disabled	Disable the Layer 3 firewall policy.
	default-action	Configure the default action of the Layer 3 firewall policy.
	drop	Drop all packets that do not match any rules.
	accept	Accept all packets that do not match any rules.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# firewall l3-policy enabled default-action drop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the L3 Policy List in Configuration Mode

Commands

firewall l3-policy show

Syntax Description	firewall	Configure firewall settings.
	l3-firewall	Configure Layer 3 firewall policy settings.
	show	Show the Layer 3 firewall policy settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# firewall l3-policy show	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Create a New L3 Rule or Edit an Existing Rule With a Specific Priority

Commands

firewall l3-policy {new | <priority (1-64)>}

Syntax Description	firewall	Configure firewall settings.
	l3-firewall	Configure Layer 3 firewall policy settings.
	new	Create a new rule without specifying a priority. A priority will be assigned automatically.
	priority	Specify the priority of the rule (1-64).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Create a new rule or edit an existing rule with the specified priority. Executing this command will automatically enter "fw-l3" configuration mode.	
Examples	moxa (config)# firewall l3-policy new moxa (config)# firewall l3-policy 3	
Error Messages	N/A	
Related Commands	N/A	

Privilege Required	Network Configuration
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Enable/Disable the L3 Policy Rule

Commands

status {enabled | disabled}

Syntax Description	status	Enable or disable this rule.
	enabled	Enable this rule.
	disabled	Disable this rule.
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	Enable or disable this rule. Refer to Create a New L3 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l3" mode.	
Examples	moxa (fw-l3)# status enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Priority of the L3 Policy Rule

Commands

priority <priority (1 - 64)>

Syntax Description	priority	Configure the priority of this rule.
	<priority>	Specify the priority of the rule (1-64).
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	Set the priority of this rule. Refer to Create a New L3 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l3" mode.	
Examples	moxa (fw-l3)# priority 5	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Action of the L3 Policy Rule

Commands

action {accept | drop}

Syntax Description	action	Configure the action of this rule.
	accept	Accept any packets that match this rule.
	drop	Drop any packets that match this rule.
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	Configure the action of this rule. Refer to Create a New L3 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l3" mode.	
Examples	moxa (fw-l3)# action drop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Protocol of the L3 Policy Rule

Commands

protocol {all | icmp | tcp | udp}

Syntax Description	protocol	Configure the protocol(s) this rule will apply to.
	all	This rule applies to all IP frames.
	icmp	This rule applies to all ICMP frames.
	tcp	This rule applies to all TCP frames.
	udp	This rule applies to all UDP frames.
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	Refer to Create a New L3 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l3" mode.	
Examples	moxa (fw-l3)# protocol all	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Source IP of the L3 Policy Rule

Commands

src-ip <net-id> <netmask>

Syntax Description	src-ip	Configure the source network of this rule.
	<net-id>	Specify the IP address of the source network of this rule.
	<netmask>	Specify the subnet mask of the source network of this rule.
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	Refer to Create a New L3 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l3" mode.	
Examples	moxa (fw-l3)# src-ip 192.168.127.88 255.255.255.0	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Source Port Range of the L3 Policy Rule

Commands

src-port <port-start (0-65535)> [<port-end (0-65535)>]

Syntax Description	src-port	Configure the source TCP/UDP port range of this rule.
	<port-start>	Specify the starting port of the source port range (0-65535).
	<port-end>	Specify the ending port of the source port range (0-65535).
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	Refer to Create a New L3 Rule or Edit an Existing Rule With a Specific Priority for how to enter "fw-l3" mode.	
Examples	moxa (fw-l3)# src-port 50 80	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Destination IP of the L3 Policy Rule

Commands

dst-ip <net-id> <netmask>

Syntax Description	dst-ip	Configure the destination network of this rule.
	<net-id>	Specify the IP address of the destination network of this rule.
	<netmask>	Specify the subnet mask of the destination network of this rule.
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	N/A	
Examples	moxa (fw-l3)# dst-ip 192.168.127.253 255.255.255.0	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the Destination Port Range of the L3 Policy Rule

Commands

dst-port <port-start (0-65535)> [<port-end (0-65535)>]

Syntax Description	dst-port	Configure the destination TCP/UDP port range of this rule.
	<port-start>	Specify the starting port of the source port range (0-65535).
	<port-end>	Specify the ending port of the source port range (0-65535).
Defaults	N/A	
Command Modes	fw-l3	
Usage Guidelines	N/A	
Examples	moxa (fw-l3)# dst-port 50 80	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Delete a Specific or All L3 Policies Rules

Commands

no firewall l3-policy {all | <priority (1-64)>}

Syntax Description	no	Delete configuration
	firewall	Configure firewall settings.
	l3-firewall	Configure Layer 3 firewall policy settings.
	all	Delete all Layer 3 firewall policy rules.
	priority	Delete the Layer 3 firewall policy rule with the specified priority (1-64).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Delete Layer 3 firewall policy rules.	
Examples	moxa (config)# no firewall l3-policy all moxa (config)# no firewall l3-policy 3	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Diagnostics

SNMP

Configure the SNMP Server Version

Commands

user-iface snmp version {v1-v2c-v3 | v1-v2c | v3}

Syntax Description	user-iface	Configure user interface settings.
	snmp	Configure SNMP settings.
	version	Configure the SNMP server version.
	v1-v2c-v3	Set the SNMP server version to v1-v2c-v3 mixed.
	v1-v2c	Set the SNMP server version to v1-v2c mixed.
	v3	Set the SNMP server version to v3 only.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# user-iface snmp version v1-v2c	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the SNMP Read-only Community

Commands

user-iface snmp community read-only <read-community (max len: 31)>

Syntax Description	user-iface	Configure user interface settings.
	snmp	Configure SNMP settings.
	community	Configure the SNMP community.
	read-only	Configure the SNMP read-only community.
	<read-community>	Specify the SNMP read-only community (max. 31 characters).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	moxa (config)# user-iface snmp community read-only NMS	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Configure the SNMP Read-Write Community

Commands

user-iface snmp community read-write <read-write-community (max len: 31)>

Syntax Description	user-iface	Configure user interface settings.
	snmp	Configure SNMP settings.
	community	Configure the SNMP community.
	read-write	Configure the SNMP read-write community.
	<read-write-community>	Specify the SNMP read-write community (max. 31 characters).
Defaults	N/A	
Command Modes	Config	

Usage Guidelines	N/A
Examples	moxa (config)# user-iface snmp community read-write NMSadmin
Error Messages	N/A
Related Commands	N/A
Privilege Required	System Management

Network Status

LDDP

Enable/Disable LLDP

Commands

lldp {enabled | disabled}

Syntax Description	lldp	Configure LLDP settings.
	enable	Enable LLDP.
	disable	Disable LLDP.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# lldp enabled	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Configure the LLDP Transmission Interval

Commands

lldp transmit-interval <interval (5-32768 sec)>

Syntax Description	lldp	Configure LLDP settings.
	transmit-interval	Configure the LLDP transmission interval.
	<interval>	Specify the transmission interval (5-32768 sec).
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# lldp transmit-interval 1000	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Reset LLDP Settings

Commands

no lldp

Syntax Description	no	Reset settings to their default values.
	lldp	Reset LLDP settings.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no lldp	

Error Messages	N/A
Related Commands	N/A
Privilege Required	Network Configuration

Show the LLDP Settings

Commands

show lldp config

Syntax Description	show	Show the current settings and device status.
	lldp	Show the LLDP configuration and status.
	config	Show the LLDP configuration.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show lldp config	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Network Configuration	

Show the List of Discovered Neighbor Devices

Commands

show lldp neighbors

Syntax Description	show	Show the current settings and device status.
	lldp	Show the LLDP configuration and status.
	neighbors	Show the list of discovered neighbor devices.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show lldp neighbors	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

Bridge Table

Commands

show net bridge

Syntax Description	show	Show the current settings and device status.
	net	Show network-related status information.
	bridge	Show the bridge table.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show net bridge	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Status Monitoring	

ARP Table

Show the ARP Table

Commands

show net arp

Syntax Description	show	Show the current settings and device status.
	net	Show network-related status information.
	arp	Show the ARP table.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show net arp	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Account System Auditor System Advanced Diagnostics Diagnostics Network Configuration Status Monitoring System Backup System Management	

Event Logs and Notifications

Enable Event Logs for Specific or All Event Groups

Commands

logging group {all | wi-fi | network | system | account | config | pwr} [**action** [local] [syslog]]

Syntax Description	logging	Configure event log settings.
	group	Enable event logs for event groups.
	all	Enable event logs for all event groups.
	wi-fi	Enable Wi-Fi event logs.
	network	Enable network event logs.
	system	Enable system event logs.
	account	Enable account event logs.
	config	Enable configuration event logs.
	pwr	Enable power event logs.
	action	Configure the event log action.
	local	Record the event logs locally.
	syslog	Send the event logs to the syslog server.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# logging group all action local	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Disable Event Logs for Specific or All Event Groups

Commands

no logging group {all | wi-fi | network | system | account | config | pwr } [**action** [local] [syslog]]

Syntax Description	no	Reset settings to their default values.
	logging	Reset event log settings.
	group	Disable event logs for event groups.
	all	Disable event logs for all event groups.
	wi-fi	Disable Wi-Fi event logs.
	network	Disable network event logs.
	system	Disable system event logs.
	account	Disable account event logs.
	config	Disable configuration event logs.
	pwr	Disable power event logs.
	action	Disable the event log action.
	local	Do not record event logs locally.
syslog	Do not send the event logs to the syslog server.	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	N/A	
Examples	(config)# no logging group all action local	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Show the Event Log Group Settings

Commands

show logging group

Syntax Description	show	Show the current settings and device status.
	logging	Show recorded event logs or event log settings.
	group	Show the settings for each event log group.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show logging group	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Configure System Event Notifications and Actions

Commands

event-notification system-event {all | event-name} [action [trap] [email] [relay]]

Syntax Description	event-notification	Configure event notification settings.
	system-event	Configure system event notification settings.
	all	Enable notifications for all system events.
	event-name	Specify the type of event notification to enable.
	action	Configure the event notification action.
	trap	Enable event notifications through SNMP Traps.
	email	Enable event notifications through email.
	relay	Enable event notifications through the relay.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	<p>Event names and description:</p> <p>cold-start: The system was cold started.</p> <p>warm-start: The system warm started.</p> <p>config-changed: The system configuration was changed.</p> <p>reaching-log-capacity: The log capacity has been reached.</p> <p>cleared-event-logs: The logs have been cleared.</p> <p>auth-failure: A user failed to log in.</p> <p>pwr1-turned-on: Power 1 was turned on.</p> <p>pwr1-turned-off: Power 1 was turned off.</p> <p>pwr2-turned-on: Power 2 was turned on.</p> <p>pwr2-turned-off: Power 2 was turned off.</p> <p>poe-received: Receiving PoE power.</p> <p>poe-not-received: Not Receiving PoE power.</p> <p>di1-triggered: DI 1 was triggered.</p> <p>di1-disabled: DI 1 was disabled.</p> <p>di2-triggered: DI 2 was triggered.</p> <p>di2-disabled: DI 2 was disabled.</p>	
Examples	(config)# event-notification system-event warm-start action trap	
	(config)# event-notification system-event all action trap email	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Configure Wi-Fi Event Notifications and Actions

Commands

event-notification wifi-event {all | event-name} [**action** [trap] [email] [relay]]

Syntax Description	event-notification	Configure event notification settings.
	wifi-event	Configure Wi-Fi event notification settings.
	all	Enable notifications for all Wi-Fi events.
	event-name	Specify the type of event notification to enable.
	action	Configure the event notification action.
	trap	Enable event notifications through SNMP Traps.
	email	Enable event notifications through email.
	relay	Enable event notifications through the relay.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Event names and description: client-joined: A client has joined the network. client-left: A client has left the network.	
Examples	(config)# event-notification wifi-event all action email	
	(config)# event-notification wifi-event client-joined action email	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Configure Network Event Notifications and Actions

Commands

event-notification network-event {all | event-name} [**action** [trap] [email] [relay]]

Syntax Description	event-notification	Configure event notification settings.
	network-event	Configure network event notification settings.
	all	Enable notifications for all network events.
	event-name	Specify the type of event notification to enable.
	action	Configure the event notification action.
	trap	Enable event notifications through SNMP Traps.
	email	Enable event notifications through email.
	relay	Enable event notifications through the relay.
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Event names and description: lan1-link: A link is established on LAN 1. no-lan1-link: The link on LAN 1 was disconnected. lan2-link: A link is established on LAN 2. no-lan2-link: The link on LAN 2 was disconnected.	
Examples	(config)# event-notification network-event all action email	
	(config)# event-notification network-event no-lan1-link action trap	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Disable System Event Notifications and Actions

Commands

no event-notification system-event {all | event-name} [**action** [trap] [email] [relay]]

Syntax Description	no	Reset settings to their default values.
	event-notification	Disable event notifications.
	system-event	Disable system event notifications.
	all	Disable notifications for all events.
	event-name	Specify the type of event notifications to disable.
	action	Disable event notifications actions.
	trap	Disable event notifications through SNMP Traps.
	email	Disable event notifications through email.
	relay	Disable event notifications through the relay.
Defaults	N/A	
Command Modes	Config	

Usage Guidelines	Event names and description: cold-start: The system was cold started. warm-start: The system warm started. config-changed: The system configuration was changed. reaching-log-capacity: The log capacity has been reached. cleared-event-logs: The logs have been cleared. auth-failure: A user failed to log in. pwr1-turned-on: Power 1 was turned on. pwr1-turned-off: Power 1 was turned off. pwr2-turned-on: Power 2 was turned on. pwr2-turned-off: Power 2 was turned off. poe-received: Receiving PoE power. poe-not-received: Not Receiving PoE power. di1-triggered: DI 1 was triggered. di1-disabled: DI 1 was disabled. di2-triggered: DI 2 was triggered. di2-disabled: DI 2 was disabled.
Examples	(config)# no event-notification system-event warm-start action trap (config)# no event-notification system-event all action trap email
Error Messages	N/A
Related Commands	N/A
Privilege Required	Auditor Systems

Disable Wi-Fi Event Notifications and Actions

Commands

no event-notification wifi-event {all | event-name} [**action** [trap] [email] [relay]]

Syntax Description	no	Reset settings to their default values.
	event-notification	Disable event notification settings.
	wifi-event	Disable Wi-Fi event notification settings.
	all	Disable notifications for all Wi-Fi events.
	event-name	Specify the type of event notification to disable.
	action	Disable event notifications actions.
	trap	Disable event notifications through SNMP Traps.
	email	Disable event notifications through email.
relay	Disable event notifications through the relay.	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Event names and description: client-joined: A client has joined the network. client-left: A client has left the network.	
Examples	(config)# no event-notification wifi-event all action email	
	(config)# no event-notification wifi-event client-joined action email	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Disable Network Event Notifications and Actions

Commands

no event-notification network-event {all | event-name} [**action** [trap] [email] [relay]]

Syntax Description	no	Reset settings to their default values.
	event-notification	Disable event notification settings.
	network-event	Disable network event notification settings.
	all	Disable notifications for all network events.
	event-name	Specify the type of event notification to disable.
	action	Disable event notifications actions.
	trap	Disable event notifications through SNMP Traps.
	email	Disable event notifications through email.
relay	Disable event notifications through the relay.	
Defaults	N/A	
Command Modes	Config	
Usage Guidelines	Event names and description: lan1-link: A link is established on LAN 1. no-lan1-link: The link on LAN 1 was disconnected. lan2-link: A link is established on LAN 2. no-lan2-link: The link on LAN 2 was disconnected.	
Examples	(config)# no event-notification network-event all action email	
	(config)# no event-notification network-event no-lan1-link action trap	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Show Event Notification Settings

Commands

show event-notification {all | system-event | wifi-event | network-event}

Syntax Description	show	Show the current settings and device status.
	event-notification	Show the event notification settings.
	all	Show the notification settings for all events.
	system-event	Show the notification settings for system events.
	wifi-event	Show the notification settings for Wi-Fi events.
	network-event	Show the notification settings for network events.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# show event-notification all	
	moxa# show event-notification system-event	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Auditor Systems	

Tools

System Data Collection

Create a Snapshot of the System Configuration and Status

Commands

diag one-key <storage-location>

Syntax Description	diag	Perform system diagnostics.
	one-key	Create a snapshot of the system configuration and status.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	storage-location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder> abc-02}	
Examples	moxa# diag one-key tftp://192.87.87.87	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Configure Data Collection Settings

Commands

diag data-collect data [wifi-statistic] [wifi-conn] [wifi-txrx] [network] [service] [system]

Syntax Description	diag	Perform system diagnostics.
	data-collect	Configure data collection settings.
	data	Configure which data is collected.
	[wifi-statistic]	Collect Wi-Fi statistics.
	[wifi-conn]	Collect Wi-Fi connection information.
	[wifi-txrx]	Collect Wi-Fi data transmission and reception information.
	[network]	Collect network status information.
	[service]	Collect device service status information.
	[system]	Collect system status information.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag data-collect data wifi-statistic system	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Configure the Data Collection Interval and Stopping Time

Commands

diag data-collect interval <interval (1-30 sec)> **stop** <end-time (hh:mm:ss)> <end-month (1-12)> <end-date (1-31)> <end-year (2000-2037)>

Syntax Description	diag	Perform system diagnostics.
	data-collect	Configure data collection settings.
	interval	Configure data collection interval settings.
	<interval>	Specify the collection interval (1-30 sec).
	Stop	Specify the data collection stopping time.
	<end-time>	Specify the stop time (hh:mm:ss, e.g., 01:02:03).
	<end-month>	Specify the ending month (1-12).
	<end-date>	Specify the ending date (1-31).
<end-year>	Specify the ending year (2000-2037).	
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag data-collect interval 25 stop 01:02:03 1 30 2023	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Start Data Collection

Commands

diag data-collect start <storage-location>

Syntax Description	diag	Perform system diagnostics.
	data-collect	Configure data collection settings.
	start	Start data collection.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder> abc-02}	
Examples	moxa# diag data-collect start abc-02	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Stop Data Collection

Commands

diag data-collect stop

Syntax Description	diag	Perform system diagnostics.
	data-collect	Configure data collection settings.
	stop	Stop data collection.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag data-collect stop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

View the Data Collection Result

Commands

diag data-collect list

Syntax Description	diag	Perform system diagnostics.
	data-collect	Configure data collection settings.
	list	Show the data collection results.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag data-collect list	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Upload the Data Collected Result

Commands

diag data-collect upload <storage-location>

Syntax Description	diag	Perform system diagnostics.
	data-collect	Configure data collection settings.
	upload	Upload the data collection results.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder> abc-02}	
Examples	moxa# diag data-collect upload tftp://192.168.127.84	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Channel Scan

Perform a Channel Analysis

Commands

diag wlan channel-analyze

Syntax Description	diag	Perform system diagnostics.
	wlan	Perform a Wi-Fi action.
	channel-analyze	Perform a channel analysis.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag wlan channel-analyze Wi-Fi performance will be affected during the channel analysis. Are you sure you want to continue? [Y/N] Y	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Advanced Diagnostics	

Ping

Ping the Target Host

Commands

ping <host> **round** <round (3-86400)> **stop** <end-time (hh:mm:ss)> <end-month (1-12)> <end-date (1-31)> <end-year (2000-2037)> [**interval** <interval (1-30 sec)>]

Syntax Description	ping	Ping target host.
	<host>	Specify the target host to ping (IPv4 Address/Host).
	round	Stop pinging after a specified number of rounds.
	<round>	Specify the number of pinging rounds (3-86400).
	stop	Stop pinging after a specified period of time.
	<end-time>	Specify the stop time (hh:mm:ss, e.g., 01:02:03).
	<end-month>	Specify the ending month (1-12).
	<end-date>	Specify the ending date (1-31).
	<end-year>	Specify the ending year (2000-2037).
	interval	Configure the ping interval. The default interval is 1 sec.
	<interval>	Specify the ping interval (1-30 sec).
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# ping 192.168.127.10 round 3 moxa# ping 192.168.127.10 stop 01:02:03 1 1 2004 interval 5	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Stop Pinging

Commands

ping stop

Syntax Description	ping	Ping the target host.
	stop	Stop pinging the target host.
Defaults	N/A	

Command Modes	Basic
Usage Guidelines	N/A
Examples	moxa# ping stop
Error Messages	N/A
Related Commands	N/A
Privilege Required	Diagnostics

Show the Ping Result

Commands

ping result [<storage-location>]

Syntax Description	ping	Ping the target host.
	result	Retrieve the ping result.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: [tftp://<server>/<filename> sftp ://<account>:<password>@<server>/<pathname>]	
Examples	moxa# ping result	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Show the Ping Status

Commands

ping state

Syntax Description	ping	Ping the target host.
	state	Show the ping status.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# ping state	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Wi-Fi Mirroring

Start the Wi-Fi Mirror Capture

Commands

diag wlan mirror {local <mirror-period (1-60 min)> | remote}

Syntax Description	diag	Perform system diagnostics.
	wlan	Perform a Wi-Fi action.
	mirror	Configure Wi-Fi mirroring settings.
	local	Set the Wi-Fi mirroring type to Local.
	<mirror-period>	Specify the mirroring period (1-60 min).
	remote	Set the Wi-Fi mirroring type to Remote.

Defaults	N/A
Command Modes	Basic
Usage Guidelines	N/A
Examples	moxa# diag wlan mirror remote
Error Messages	N/A
Related Commands	N/A
Privilege Required	Diagnostics

Stop the Wi-Fi Mirror Capture

Commands

diag wlan mirror stop

Syntax Description	diag	Perform system diagnostics.
	wlan	Perform a Wi-Fi action.
	mirror	Configure Wi-Fi mirroring settings.
	stop	Stop Wi-Fi mirroring.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag wlan mirror stop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Upload the Mirroring Result to a SFTP/TFTP Server

Commands

diag wlan mirror result <storage-location>

Syntax Description	diag	Perform system diagnostics.
	wlan	Perform a Wi-Fi action.
	mirror	Configure Wi-Fi mirroring settings.
	result	Upload the mirroring results to an SFTP/TFTP server or delete the mirroring results.
	<storage-location>	Specify the storage location.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	Storage location: {tftp://<server> sftp ://<account>:<password>@<server>/<folder>}	
Examples	moxa# diag wlan mirror result tftp://192.168.127.84	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Delete the Wi-Fi Mirroring Result**Commands****diag wlan mirror result delete**

Syntax Description	diag	Perform system diagnostics.
	wlan	Perform a Wi-Fi action.
	mirror	Configure Wi-Fi mirroring settings.
	result	Upload the mirroring results to an SFTP/TFTP server or delete the mirroring results.
	delete	Delete the mirroring results.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag wlan mirror result delete	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Maintenance and Tools

Locator

Activate the Device Locator

Commands

diag locator [<duration (1-300 sec)>]

Syntax Description	diag	Perform system diagnostics.
	locator	Start or stop the device locator.
	<duration (1-300 sec)>	Specify the duration the device locator will be active for (1-300 sec).
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag locator moxa# diag locator 60	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Stop the Device Locator

Commands

diag locator stop

Syntax Description	diag	Perform system diagnostics.
	locator	Start or stop the device locator.
	stop	Deactivate the device locator.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# diag locator stop	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	Diagnostics	

Reboot

Perform a Warm Reboot

Commands

reload

Syntax Description	reload	Perform a warm restart.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# reload	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	

Perform Reset to Factory Default**Commands****reload factory-default** [keep log]

Syntax Description	reload	Perform a warm restart or reset to factory default settings.
	factory-default	Reset to factory default settings.
	keep log	Keep the system event logs when resetting to factory default settings.
Defaults	N/A	
Command Modes	Basic	
Usage Guidelines	N/A	
Examples	moxa# reload factory-default Are you sure you want to reset the device to factory default settings? [Y/N] y	
Error Messages	N/A	
Related Commands	N/A	
Privilege Required	System Management	