



**Firmware Release Note**

**Prestige 2602H/HW/HWL -63C**

**Standard version**

**Release 3.40(ADG.0)C0**

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# **ZyXEL Prestige 2602H/HW/HWL-63C Standard Version Release 3.40(ADG.0)C0 Release Note**

**Date:** August 10, 2005

## **Supported Platforms:**

ZyXEL Prestige 2602H/HW/HWL-63C

## **Versions:**

ZyNOS Version: V3.40(ADG.0) | 08/10/2005 19:30:00

Bootbase Version: V1.10 | 12/02/2004 14:00:00

## **Notes:**

The Prestige 2602H/ HW/HWL -63C, is 4th generation of ZyXEL ADSL product family. It is a high performance ADSL router for small/medium office to have Internet access and LAN-to-LAN application over the existing copper line. Prestige 2602H/ HW/HWL-63C provides high-speed ADSL Internet access, faster start-up, advanced diagnostics and better power management. This high performance ADSL router is a high integrated 4 port 10/100M auto MDI/MDIX switch, advanced secure VPN/Firewall, Bandwidth Management, IEEE 802.11g wireless access, and Voice over IP communication capability for small/medium business or small remote office.

P2602HW/HWL-63C provides an embedded mini-PCI module for 802.11g Wireless LAN connectivity, four single auto-sensing, auto-detection 10/100BASE-T Ethernet ports for connection to the user's local network, and a single RJ-11/RJ-45 port for connection to ADSL line.

The version of modem code is 01.01.08.00.

**Features:**

**Modifications in V 3.40(ADG.0)c0 | 08/10/2005**

Change to C0 version.

**Modifications in V 3.40(ADG.0)b4 | 07/29/2005**

none

**Modifications in V 3.40(ADG.0)b3 | 07/15/2005**

none

**Modifications in V 3.40(ADG.0)b2 | 07/12/2005**

none

**Modifications in V 3.40(ADG.0)b1 | 06/24/2005**

1. Create this project for OBM version.

**Annex A CI Command List**

Command Class List Table		
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<a href="#">WAN Related Command</a>	<a href="#">WLAN Related Command</a>	<a href="#">IP Related Command</a>
<a href="#">IPSec Related Command</a>	<a href="#">PPP Related Command</a>	<a href="#">Bridge Related Command</a>
<a href="#">Radius Related Command</a>	<a href="#">8021x Related Command</a>	<a href="#">Firewall Related Command</a>
<a href="#">Configuration Related Command</a>	<a href="#">SMT Related Command</a>	<a href="#">Voice Related Command</a>

## System Related Command

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Command				Description
sys				
	adjtime			retrive date and time from Internet
	cbuf			
		display	[a f u]	display cbuf a: all f: free u: used
		cnt		cbuf static
			display	display cbuf static
			clear	clear cbuf static
	baud		<1..5>	change console speed
	callhist			
		display		display call history
		remove	<index>	remove entry from call history
	clear			clear the counters in GUI status menu
	countrycode		[countrycode]	set country code
	date		[year month date]	set/display date
	domainname			display domain name
	edit		<filename>	edit a text file
	enhanced			return OK if commands are supported for PWC purposes
	errctl		[level]	set the error control level 0:crash no save,not in debug mode (default) 1:crash no save,in debug mode 2:crash save,not in debug mode 3:crash save,in debug mode
	event			
		display		display tag flags information
		trace		display system event information
			display	display trace event
			clear <num>	clear trace event
	extraphnum			maintain extra phone numbers for outcalls
		add	<set 1-3> <1st phone num> [2nd phone num]	add extra phone numbers
		display		display extra phone numbers
		node	<num>	set all extend phone number to remote node <num>
		remove	<set 1-3>	remove extra phone numbers
		reset		reset flag and mask
	feature			display feature bit
	fid			
		display		display function id list
	firmware			display ISDN firmware type
	hostname		[hostname]	display system hostname
	iface			

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		disp	[#]	display iface list
	isr		[all used free]	display interrupt service routine
	interrupt			display interrupt status
	log			
		category		
			access [0:none/1:log]	record the access control logs
			attack [0:none/1:log/2:alert/3:both]	record and alert the firewall attack logs
			display	display the category setting
			error [0:none/1:log/2:alert/3:both]	record and alert the system error logs
			ipsec [0:none/1:log]	record the access control logs
			mten [0:none/1:log]	record the system maintenance logs
			upnp [0:none/1:log]	record upnp logs
			urlblocked [0:none/1:log/2:alert/3:both]	record and alert the web blocked logs
			urlforward [0:none/1:log]	record web forward logs
		clear		clear log
		display		display all logs
		errlog		
			clear	display log error
			disp	clear log error
			online	turn on/off error log online display
		load		load the log setting buffer
		mail		
			alertAddr [mail address]	send alerts to this mail address
			display	display mail setting
			logAddr [mail address]	send logs to this mail address
			schedule display	display mail schedule
			schedule hour [0-23]	hour time to send the logs
			schedule minute [0-59]	minute time to send the logs
			schedule policy [0:full/1:hourly/2:daily/3:weekly/4:non e]	mail schedule policy
			schedule week [0:sun/1:mon/2:tue/3:wed/4:thu/5:fri/6: sat]	weekly time to send the logs
			server [domainName/IP]	mail server to send the logs
			subject [mail subject]	mail subject
		save		save the log setting buffer
		syslog		
			active [0:no/1:yes]	active to enable unix syslog
			display	display syslog setting
			facility [Local ID(1-7)]	log the messages to different files
			server [domainName/IP]	syslog server to send the logs
	mbuf			
		cnt		
			disp	display system mbuf count
			clear	clear system mbuf count
		link	link	list system mbuf link
		pool	<id> [type]	list system mbuf pool
		status		display system mbuf status
		disp	<address>	display mbuf status
		debug	[on off]	
	memory		<address> <length>	display memory content

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	memwrite		<address> <len> [data list ...]	write some data to memory at <address>
	memwl		<address>	write long word to memory at <address>
	memrl		<address>	read long word at <address>
	memutil			
		usage		display memory allocate and heap status
		mqueue	<address> <len>	display memory queues
		mcell	mid [f u]	display memory cells by given ID
		msecs	[a f u]	display memory sections
		mtstart	<n-mcell>	start memory test
		mtstop		stop memory test
		mtalloc	<size> [n-mcell]	allocate memory for testing
		mtfree	<start-idx> [end-idx]	free the test memory
	model			display server model name
	proc			
		display		display all process information
		stack	[tag]	display process's stack by a give TAG
		pstatus		display process's status by a give TAG
	queue			
		display	[a f u] [start#] [end#]	display queue by given status and range numbers
		ndisp	[qid]	display a queue by a given number
	quit			quit CI command mode
	reboot		[code]	reboot system code = 0 cold boot, = 1 immediately boot = 2 bootModule debug mode
	reslog			
		disp		display resources trace
		clear		clear resources trace
	stdio		[second]	change terminal timeout value
	time		[hour [min [sec]]]	display/set system time
	timer			
		disp		display timer cell
		trace	[on off]	set/display timer information online
		start	[tmValue]	start a timer
		stop	<ID>	stop a timer
	trcdisp			monitor packets
	trclog			
		switch	[on off]	set system trace log
		online	[on off]	set on/off trace log online
		level	[level]	set trace level of trace log #:1-10
		type	<bitmap>	set trace type of trace log
		disp		display trace log
		clear		clear trace
		call		display call event
		encapmask	[mask]	set/display tracelog encapsulation mask
	trcpacket			
		create	<entry> <size>	create packet trace buffer
		destroy		packet trace related commands
		channel	<name> [none incoming outgoing bothway]	<channel name>=enet0,sdsl00, fr0 set packet trace direction for a given channel
		string		enable smt trace log
		switch	[on off]	turn on/off the packet trace
		disp		display packet trace

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		udp		send packet trace to other system
			switch [on off]	set tracepacket upd switch
			addr <addr>	send trace packet to remote udp address
			port <port>	set tracepacket udp port
		parse	[[start_idx], end_idx]	parse packet content
		brief		display packet content briefly
	version			display RAS code and driver version
	view		<filename>	view a text file
	wdog			
		switch	[on off]	set on/off wdog
		cnt	[value]	display watchdog counts value: 0-34463
	romreset			restore default romfile
	server			
		access	<telnet ftp web icmp snmp dns> <value>	set server access type
		load		load server information
		disp		display server information
		port	<telnet ftp web snmp> <port>	set server port
		save		save server information
		secureip	<telnet ftp web icmp snmp dns> <ip>	set server secure ip addr
	spt			
		dump		dump spt raw data
			root	dump spt root data
			rn	dump spt remote node data
			user	dump spt user data
			slot	dump spt slot data
		save		save spt data
		size		display spt record size
		clear		clear spt data
	cmgr			
		trace		
			disp <ch-name>	show the connection trace of this channel
			clear <ch-name>	clear the connection trace of this channel
		cnt	<ch-name>	show channel connection related counter
	socket			display system socket information
	filter			
		clear		clear filter statistic counter
		disp		display filter statistic counters
		sw	[on off]	set filter status switch
		set	<set>	display filter rule
		netbios		
			disp	display netbios filter status
			config <0:LAN to WAN, 1:WAN to LAN, 2:LAN to DMZ, 3:IPSec passthrough, 4:Trigger Dial> <on off>	config netbios filter
	ddns			
		debug	<level>	enable/disable ddns service
		display	<iface name>	display ddns information
		restart	<iface name>	restart ddns
		logout	<iface name>	logout ddns
	cpu			
		display		display CPU utilization

## Exit Command

[Home](#)

Command				Description
exit				exit smt menu

## Ethernet Related Command

[Home](#)

Command				Description
ether				
	config			display LAN configuration information
	driver			
		cnt		
			disp <name>	display ether driver counters
			clear <name>	clear ether driver counters
		iface	<ch_name> <num>	send driver iface
		ioctl	<ch_name>	Useless in this stage.
		mac	<ch_name> <mac_addr>	Set LAN Mac address
		reg	<ch_name>	display LAN hardware related registers
		rxmod	<ch_name> <mode>	set LAN receive mode. mode: 1: turn off receiving 2: receive only packets of this interface 3: mode 2+ broadcast 5: mode 2 + multicast 6: all packets
		status	<ch_name>	see LAN status
		init	<ch_name>	initialize LAN
	version			see ethernet device type
	pkttest			
		disp		
			packet <level>	set ether test packet display level
			event <ch> [on/off]	turn on/off ether test event display
		sap	[ch_name]	send sap packet
		arp	<ch_name> <ip-addr>	send arp packet to ip-addr
		mem	<addr> <data> [type]	write memory data in address
	test		<ch_id> <test_id> [arg3] [arg4]	do LAN test
	pncconfig		<ch_name>	do pnc config
	mac		<src_ch> <dest_ch> <ipaddr>	fake mac address

## WAN Related Command

[Home](#)

Command				Description
wan	adsl	bert		ADSL ber
		chandata		ADSL channel data, line rate
		close		Close ADSL line
		coding		ADSL standard current
		ctrleint		ADSL CTRL response command
		defbitmap		ADSL defect bitmap status
		dyinggasp		Send ADSL dyinggasp
		fwav		Test the ADSL F/W available ping
		fwdl		Download modem code, but must reset first
		linedata		
			near	Show ADSL near end noise margin
			far	Show ADSL far end noise margin



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		open		Open ADSL line
		opencmd		Open ADSL line with specific standard
		opmode		Show the operational mode
		perfdata		Show performance information,CRC,FEC, error seconds..
		rdata	[start] [length]	Read DSP CTRL registers 512 bytes
		reset		Reset ADSL modem, and must reload the modem code again
		selftest		
			long	ADSL long loop test
			short	ADSL short loop test
		status		ADSL status (ex: up, down or wait for init)
		version		ADSL version information
		vendorid		ADSL vendor information
		utopia		Show ADSL utopia information
		cellcnt		Show ADSL cell counter
		display		
			shutdown	Show the counter of rate adaptive mechanism happening
			rateup	Show real status that rate adaptive mechanism happened
		rateadap	[on off]	Turn on/off rate adaptive mechanism
		dumpcondition	[on off]	Turn on/off online debug information of rate adaptive mechanism
		sampletime	[mins]	Tune the sample time of rate adaptive mechanism
		noisegt	[dB]	if noise margin is 3db greater than before, and rate is worse than before, then system will do “L1 shutdown RA3”, default is 3db
		noisemargin	[dB]	if noise margin is greater than this value, and rate is worse than before, then system will do “L1 shutdown RA3”, default is 8db
		persisttime	[time]	when the adaptive condition is matched system will continue to monitor the time period “persisttime” before doing “L1 shutdown RA3”, default is 30 seconds
		timeinterval	[mins]	when “L1 shutdown RA3” is done twice, and still can’t reach the max rate which system recorded, it will delay a time period that the period base time is “timeinterval” before starting again. The time-based default is 2 hrs
		defectcheck	[on off]	Turn on/off detect table checking, default is on
		txgain	[value]	Set the CTRL register (0xc3), the value is from 0xfa to 0x06
		targetnoise	[value]	Set the CTRL register (0xc4), the value is from 0xfa to 0x06
		maxtonelimit	[value]	Set the CTRL register (0xc5), the value is from 0xfa to 0x06
		rxgain	[value]	Set the CTRL register (0xc6), the value is from 0xfa to 0x06
		txoutputpwr	[value]	Set the CTRL register (0xc7), the value is from 0xfa to 0x06
		rxoutputpwr	[value]	Set the CTRL register (0xc8), the value is from 0xfa to 0x06
		maxoutputpwr	[value]	Set the CTRL register (0xc9), the value is from

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				0xfa to 0x06
		errorsecond		
			sendes	Send current error second information immediately
		dygasprecover		
		dygasprecover	level [value]	By default is 100, after receiving 100 dying gasp system will reboot
		dygasprecover	active [on/off]	Turn on/off this mechanism
		rsploss	[1 0]	Turn on means to response signal loss of CTRL-E immediately, default is off
	atm	test	[fix rand period oam loopback]	Generate ATM traffic
	hwsar	disp		Display hwsar packets incoming/outgoing information
		clear		Clear hwsar packets information

**WLAN Related Command**[Home](#)

Command				Description
Wlan				
	active	[on/off]	[0 1]	Turn on/off wireless lan
	association			Show association list
	load			Load WLAN configuration into buffer.
	Display			Display WLAN configuration data.
	chid			Configure channel ID
	essid			Configure ESSID
	hiddenssid		[on/off]	Enable/Disable hidden SSID
	threshold			
		rts	<RTS threshold value>	Set threshold rts value
		Fragment	<Fragment threshold value>	Set threshold fragmentation value
	wep			
		type	<none 64 128 256>	Set WEP key to 64, 128 or 256 bits.
		Key	Set <set> <value>	Set WEP key value per set
		Key	Default <set>	Set WEP default key set
	macfilter			
		Enable		Enable macfilter
		Disable		Disable macfilter
		Action	<allow deny>	When action match, allow or deny this mac
		Set	<Set#> <MAC Address>	Set mac address by set
	Clear			Clear all WLAN configuration data.
	Save			Save WLAN configuration working buffer to Rom file.
	filter			
		[incoming   outgoing]	<generic>[set#1][set#2][set#3][set#4]	To set generic filter for wireless channel

**IP Related Command**[Home](#)

Command				Description
ip				
	address		[addr]	display host ip address
	loopbackaddr		<IP1> [IP2]	Set loopback address.
	alias		<iface>	alias iface
	aliasdis		<0 1>	disable alias
	arp			

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		status	<iface>	display ip arp status
		add	<hostid> ether <ether addr>	add arp information
		resolve	<hostid>	resolve ip-addr
		drop	<hostid> [hardware]	drop arp
		flush		flush arp table
		publish		add proxy arp
	dhcp		<iface>	
		client		
			release	release DHCP client IP
			renew	renew DHCP client IP
		mode	<server relay none client>	set dhcp mode
		relay	server <serverIP>	set dhcp relay server ip-addr
		reset		reset dhcp table
		server		
			probecount <num>	set dhcp probe count
			dnsserver <IP1> [IP2] [IP3]	set dns server ip-addr
			winsserver <winsIP1> [<winsIP2>]	set wins server ip-addr
			gateway <gatewayIP>	set gateway
			hostname <hostname>	set hostname
			initialize	fills in DHCP parameters and initializes (for PWC purposes)
			leasetime <period>	set dhcp leasetime
			netmask <netmask>	set dhcp netmask
			pool <startIP> <numIP>	set dhcp ip pool
			renewaltime <period>	set dhcp renew time
			rebindtime <period>	set dhcp rebind time
			reset	reset dhcp table
			server <serverIP>	set dhcp server ip for relay
			dnsorder [router isp]	set dhcp dns order
		status	[option]	show dhcp status
		static		
			delete <num> all	delete static dhcp mac table
			display	display static dhcp mac table
			update <num> <mac> <ip>	update static dhcp mac table
	dns			
		query		
			address <ipaddr> [timeout]	resolve ip-addr to name
			debug <num>	enable dns debug value
			name <hostname> [timeout]	resolve name to ip-addr
			status	display dns query status
			table	display dns query table
		server	<primary> [secondary] [third]	set dns server
		stats		
			clear	clear dns statistics
			disp	display dns statistics
		table		display dns table
	httpd			
		debug	[on off]	set http debug flag
	icmp			
		echo	[on off]	set icmp echo response flag
		data	<option>	select general data type
		status		display icmp statistic counter
		trace	[on off]	turn on/off trace for debugging

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		discovery	<iface> [on off]	set icmp router discovery flag
	ifconfig		[iface] [ipaddr] [broadcast <addr>  mtu <value> dynamic]	configure network interface
	ifdrop		<iface>	chaek if iface is available.
	ping		<hostid>	ping remote host
	pong		<hostid> [<size> <time-interval>]	pong remote host
	route			
		status	[if]	display routing table
		add	<dest_addr default>[/<bits> <gateway> [<metric>]	add route
		addiface	<dest_addr default>[/<bits> <gateway> [<metric>]	add an entry to the routing table to iface
		addprivate	<dest_addr default>[/<bits> <gateway> [<metric>]	add private route
		drop	<host addr> [/<bits>]	drop a route
		flush		flush route table
		lookup	<addr>	find a route to the destination
		errent		
			disp	display routing statistic counters
			clear	clear routing statistic counters
	status			display ip statistic counters
	adjTcp		<iface> [<mss>]	adjust the TCP mss of iface
	udp			
		status		display udp status
	rip			
		accept	<gateway>	drop an entry from the RIP refuse list
		activate		enable rip
		merge	[on off]	set RIP merge flag
		refuse	<gateway>	add an entry to the rip refuse list
		request	<addr> [port]	send rip request to some address and port
		reverse	[on off]	RIP Poisoned Reverse
		status		display rip statistic counters
		trace		enable debug rip trace
		mode		
			<iface> in [mode]	set rip in mode
			<iface> out [mode]	set rip out mode
		dialin user	[show in out both none]	show dialin user rip direction
	tcp			
		ceiling	[value]	TCP maximum round trip time
		floor	[value]	TCP minimum rtt
		irtt	[value]	TCP default init rtt
		kick	<tcb>	kick tcb
		limit	[value]	set tcp output window limit
		max-incomplete	[number]	Set the maximum number of TCP incomplete connection.
		mss	[value]	TCP input MSS
		reset	<tcb>	reset tcb
		rtt	<tcb> <value>	set round trip time for tcb
		status	[tcb] [<interval>]	display TCP statistic counters
		syndata	[on off]	TCP syndata piggyback
		trace	[on off]	turn on/off trace for debugging
		window	[tcb]	TCP input window size
	samenet		<iface1> [<iface2>]	display the ifaces that in the same net
	uninet		<iface>	set the iface to uninnet

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	tftp			
		support		prtn if tftp is support
		stats		display tftp status
	xparent			
		join	<iface1> [<iface2>]	join iface2 to iface1 group
		break	<iface>	break iface to leave ipxparent group
	antiprobe		<0 1> 1:yes 0:no	set ip anti-probe flag
	igmp			
		debug	[level]	set igmp debug level
		forwardall	[on/off]	turn on/off igmp forward to all interfaces flag
		querier	[on/off]	turn on/off igmp stop query flag
		iface		
			<iface> grouptm <timeout>	set igmp group timeout
			<iface> interval <interval>	set igmp query interval
			<iface> join <group>	join a group on iface
			<iface> leave <group>	leave a group on iface
			<iface> query	send query on iface
			<iface> rsptime [time]	set igmp response time
			<iface> start	turn on of igmp on iface
			<iface> stop	turn off of igmp on iface
			<iface> ttl <threshold>	set ttl threshold
			<iface> v1compat [on/off]	turn on/off v1compat on iface
		robustness	<num>	set igmp robustness variable
		status		dump igmp status
	pr			
		clear		clear ip pr table counter information
		disp		dump ip pr table counter information
		switch		turn on/off ip pr table counter flag
	nat			
		timeout		
			gre [timeout]	set nat gre timeout value
			iamt [timeout]	set nat iamt timeout value
			generic [timeout]	set nat generic timeout value
			reset [timeout]	set nat reset timeout value
			tcp [timeout]	set nat tcp timeout value
			tcpother [timeout]	set nat tcp other timeout value
		update		create nat system information from spSysParam
		iamt		display nat iamt information
		iface	<iface>	show nat status of an interface
		lookup	<rule set>	display nat lookup rule
		new-lookup	<rule set>	display new nat lookup rule
		loopback	[on/off]	turn on/off nat loopback flag
		reset	<iface>	reset nat table of an iface
		server		
			disp	display nat server table
			load <set id>	load nat server information from ROM
			save	save nat server information to ROM
			clear <set id>	clear nat server information
			edit active <yes no>	set nat server edit active flag
			edit svrport <start port> [end port]	set nat server server port
			edit intport <start port> [end port]	set nat server forward port
			edit remotehost <start ip> [end ip]	set nat server remote host ip
			edit leasetime [time]	set nat server lease time
			edit rulename [name]	set nat server rule name

			edit forwardip [ip]	set nat server server ip
			edit protocol [protocol id]	set nat server protocol
		service		
			irc [on/off]	turn on/off irc flag
		resetport		reset all nat server table entries
		incikeport	[on/off]	turn on/off increase ike port flag

## IPSec Related Command

[Home](#)

Command				Description
ipsec				
	debug	<1 0>		turn on/off trace for IPsec debug information
	route	lan	<on off>	After a packet is IPSec processed and will be sent to LAN side, this switch is to control if this packet can be applied IPSec again.
				Remark: Command available since 3.50(WA.3)
		wan	<on off>	After a packet is IPSec processed and will be sent to WAN side, this switch is to control if this packet can be applied IPSec again.
				Remark: Command available since 3.50(WA.3)
	show_runtime	sa		display runtime phase 1 and phase 2 SA information
		spd		When a dynamic rule accepts a request and a tunnel is established, a runtime SPD is created according to peer local IP address. This command is to show these runtime SPD.
	switch	<on off>		As long as there exists one active IPSec rule, all packets will run into IPSec process to check SPD. This switch is to control if a packet should do this. If it is turned on, even there exists active IPSec rules, packets will not run IPSec process.
	timer	chk_my_ip	<1~3600>	- Adjust timer to check if WAN IP in menu is changed
				- Interval is in seconds
				- Default is 10 seconds
				- 0 is not a valid value
		chk_conn.	<0~255>	- Adjust auto-timer to check if any IPSec connection has no traffic for certain period. If yes, system will disconnect it.
				- Interval is in minutes
				- Default is 2 minutes
				- 0 means never timeout
		update_peer	<0~255>	- Adjust auto-timer to update IPSec rules which use domain name as the secure gateway IP.
				- Interval is in minutes
				- Default is 30 minutes
				- 0 means never update
				Remark: Command available since 3.50(WA.3)
	updatePeerIp			Force system to update IPSec rules which use domain name as the secure gateway IP right away.
				Remark: Command available since 3.50(WA.3)
	dial	<rule #>		Initiate IPSec rule <#> from ZyWALL box
				Remark: Command available since 3.50(WA.3)

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	display	<rule #>		Display IPSec rule #
	config	netbios	active <on off>	Set netbios active flag
			group <group index1, group index2...>	Set netbios group
		name	<string>	Set rule name
		active	<Yes   No>	Set active or not
		keepAlive	<Yes  No>	Set keep alive or not
		localIdType	<0:IP   1:DNS   2:Email>	Set local ID type
		localIdContent	<string>	Set local ID content
		myIpAddress	<IP address>	Set my IP address
		peerIdType	<0:IP   1:DNS   2:Email>	Set peer ID type
		peerIdContent	<string>	Set peer ID content
		secureGatewayAddr	<IP address   Domain name>	Set secure gateway address or domain name
		protocol	<1:ICMP   6:TCP   17:UDP>	Set protocol
		localAddrType	<0:single   1:range   2:subnet>	Set local address type
		localAddrStart	<IP>	Set local start address
		localAddrEndMask	<IP>	Set local end address or mask
		localPortStart	<port>	Set local start port
		localPortEnd	<port>	Set local end port
		remoteAddrType	<0:single   1:range   2:subnet>	Set remote address type
		remoteAddrStart	<IP>	Set remote start address
		remoteAddrEndMask	<IP>	Set remote end address or mask
		remotePortStart	<port>	Set remote start port
		remotePortEnd	<port>	Set remote end port
		antiReplay	<Yes   No>	Set antireplay or not
		keyManage	<0:IKE   1:Manual>	Set key manage
		ike	negotiationMode <0:Main   1:Aggressive>	Set negotiation mode in phase 1 in IKE
			preShareKey <string>	Set pre shared key in phase 1 in IKE
			p1EncryAlgo <0:DES   1:3DES>	Set encryption algorithm in phase 1 in IKE
			p1AuthAlgo <0:MD5   1:SHA1>	Set authentication algorithm in phase 1 in IKE
			p1SaLifeTime <seconds>	Set sa life time in phase 1 in IKE
			p1KeyGroup <0:DH1   1:DH2>	Set key group in phase 1 in IKE
			activeProtocol <0:AH   1:ESP>	Set active protocol in phase 2 in IKE
			p2EncryAlgo <0:Null   1:DES   2:3DES>	Set encryption algorithm in phase 2 in IKE
			p2AuthAlgo <0:MD5   1:SHA1>	Set authentication algorithm in phase 2 in IKE
			p2SaLifeTime <seconds>	Set sa life time in phase 2 in IKE
			encap <0:Tunnel   1:Transport>	set encapsulation in phase 2 in IKE
			pfs <0:None   1:DH1   2:DH2>	set pfs in phase 2 in IKE
		manual	activeProtocol <0:AH   1:ESP>	Set active protocol in manual
		manual ah	encap <0:Tunnel   1:Transport>	Set encapsulation in ah in manual
			spi <decimal>	Set spi in ah in manual
			authAlgo <0:MD5   1:SHA1>	Set authentication algorithm in ah in manual
			authKey <string>	Set authentication key in ah in manual
		manual esp	encap <0:Tunnel   1:Transport>	Set encapsulation in esp in manual
			spi <decimal>	Set spi in esp in manual
			encryAlgo <0:Null   1:DES   2:3DES>	Set encryption algorithm in esp in manual
			encryKey <string>	Set encryption key in esp in manual
			authAlgo <0:MD5   1:SHA1>	Set authentication algorithm in esp in manual
			authKey < string>	Set authentication key in esp in manual

## PPP Related Command

[Home](#)

Command				Description
ppp				
	autotriggger			
		on	<remoteNodeIndex>	turn on packet trigger, default is enable
		off	<remoteNodeIndex>	turn off packet trigger
		status		show autotriggger status
	retry		<interval>	adjust PPP retrial interval

## Bridge Related Command

[Home](#)

Command				Description
bridge				
	mode		<1/0> (enable/disable)	turn on/off (1/0) LAN promiscious mode
	blt			related to bridge local table
		disp	<channel>	display blt data
		reset	<channel>	reset blt data
		traffic		display local LAN traffic table
		monitor	[on off]	turn on/off traffice monotor. Default is off.
		time	<sec>	set blt re-init interval
	brt			related to bridge route table
		disp	[id]	display brt data
		reset	[id]	reset brt data
	cnt			related to bridge routing statistic table
		disp		display bridge route counter
		clear		clear bridge route counter
	stat			related to bridge packet statistic table
		disp		display bridge route packet counter
		clear		clear bridge route packet counter
	disp			display bridge source table

## Radius Related Command

[Home](#)

Command				Description
radius				
	auth			show current radius authentication server configuration
	acco			show current radius accounting server configuration

## 8021x Related Command

[Home](#)

Command				Description
8021x				
	debug	level	[debug level]	set ieee802.1x debug message level
		trace		show all supplications in the supplication table
		user	[username]	show the specified user status in the supplicant table

## Configuration Related Command

[Home](#)

Command				Description
config				The parameters of config are listed below.
edit	firewall	active		Activate or deactivate the saved firewall settings



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		<yes no>			
retrieve	firewall				Retrieve current saved firewall settings
save	firewall				Save the current firewall settings
display	firewall				Displays all the firewall settings
		set <set#>			Display current entries of a set configuration; including timeout values, name, default-permit, and number of rules in the set.
		set <set#>	rule <rule#>		Display current entries of a rule in a set.
		attack			Display all the attack alert settings in PNC
		e-mail			Display all the e-mail settings in PNC
		?			Display all the available sub commands
		e-mail	mail-server <mail server IP>		Edit the mail server IP to send the alert
			return-addr <e-mail address>		Edit the mail address for returning an email alert
			e-mail-to <e-mail address>		Edit the mail address to send the alert
			policy <full   hourly  daily   weekly>		Edit email schedule when log is full or per hour, day, week.
			day <sunday   monday   tuesday   wednesday   thursday   friday   saturday>		Edit the day to send the log when the email policy is set to Weekly
			hour <0~23>		Edit the hour to send the log when the email policy is set to daily or weekly
			minute <0~59>		Edit the minute to send to log when the email policy is set to daily or weekly
			Subject <mail subject>		Edit the email subject
		attack	send-alert <yes no>		Activate or deactivate the firewall DoS attacks notification emails
			block <yes no>		Yes: Block the traffic when exceeds the tcp-max-incomplete threshold
					No: Delete the oldest half-open session when exceeds the tcp-max-incomplete threshold
			block-minute <0~255>		Only valid when sets 'Block' to yes. The unit is minute
			minute-high <0~255>		The threshold to start to delete the old half-opened sessions to minute-low
			minute-low <0~255>		The threshold to stop deleting the old half-opened session
			max-incomplete- high <0~255>		The threshold to start to delete the old half-opened sessions to max-incomplete-low
			max-incomplete- low <0~255>		The threshold to stop deleting the half-opened session
			tcp-max-incompl ete <0~255>		The threshold to start executing the block field
		set <set#>	name <desired name>		Edit the name for a set
			default-permit <forward block>		Edit whether a packet is dropped or allowed when it does not match the default set
			icmp-timeout <seconds>		Edit the timeout for an idle ICMP session before it is terminated

			udp-idle-timeout <seconds>		Edit the timeout for an idle UDP session before it is terminated
			connection-timeout <seconds>		Edit the wait time for the SYN TCP sessions before it is terminated
			fin-wait-timeout <seconds>		Edit the wait time for FIN in concluding a TCP session before it is terminated
			tcp-idle-timeout <seconds>		Edit the timeout for an idle TCP session before it is terminated
			pnc <yes no>		PNC is allowed when 'yes' is set even there is a rule to block PNC
			log <yes no>		Switch on/off sending the log for matching the default permit
			rule <rule#>	permit <forward block>	Edit whether a packet is dropped or allowed when it matches this rule
				active <yes no>	Edit whether a rule is enabled or not
				protocol <0~255>	Edit the protocol number for a rule. 1=ICMP, 6=TCP, 17=UDP...
				log <none match not-match both>	Sending a log for a rule when the packet none matches not match both the rule
				alert <yes no>	Activate or deactivate the notification when a DoS attack occurs or there is a violation of any alert settings. In case of such instances, the function will send an email to the SMTP destination address and log an alert.
				srcaddr-single <ip address>	Select and edit a source address of a packet which complies to this rule
				srcaddr-subnet <ip address> <subnet mask>	Select and edit a source address and subnet mask if a packet which complies to this rule.
				srcaddr-range <start ip address> <end ip address>	Select and edit a source address range of a packet which complies to this rule.
				destaddr-single <ip address>	Select and edit a destination address of a packet which complies to this rule
				destaddr-subnet <ip address> <subnet mask>	Select and edit a destination address and subnet mask if a packet which complies to this rule.
				destaddr-range <start ip address> <end ip address>	Select and edit a destination address range of a packet which complies to this rule.
				tcp destport-single <port#>	Select and edit the destination port of a packet which comply to this rule. For non-consecutive port numbers, the user may repeat this command line to enter the multiple port numbers.
				tcp destport-range <start port#> <end port#>	Select and edit a destination port range of a packet which comply to this rule.
				udp destport-single <port#>	Select and edit the destination port of a packet which comply to this rule. For non-consecutive port numbers, users may repeat this command line to enter the multiple port numbers.
				udp destport-range <start port#> <end port#>	Select and edit a destination port range of a packet which comply to this rule.

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				desport-custom <desired custom port name>	Type in the desired custom port name
delete	firewall	e-mail			Remove all email alert settings
		attack			Reset all alert settings to defaults
		set <set#>			Remove a specified set from the firewall configuration
		set <set#>	rule <rule#>		Remove a specified rule in a set from the firewall configuration
insert	firewall	e-mail			Insert email alert settings
		attack			Insert attack alert settings
		set <set#>			Insert a specified rule set to the firewall configuration
		set <set#>	rule <rule#>		Insert a specified rule in a set to the firewall configuration
cli					Display the choices of command list.

**Firewall Related Command**[Home](#)

Command				Description
sys				
	firewall			
		acl		
			disp	Display specific ACL set # rule #, or all ACLs.
		active	<yes no>	Active firewall or deactivate firewall
		cnt		
			disp	Display firewall log type and count.
			clear	Clear firewall log count.
		pktdump		Dump the 64 bytes of dropped packet by firewall
		update		Update firewall
		dynamicrule		
		teprst		
			rst	Set TCP reset sending on/off.
			rst113	Set TCP reset sending for port 113 on/off.
			display	Display TCP reset sending setting.
		icmp		
		dos		
			smtp	Set SMTP DoS defender on/off
			display	Display SMTP DoS defender setting.
			ignore	Set if firewall ignore DoS in lan/wan/dmz/wlan
		ignore		
			triangle	Set if firewall ignore triangle route in lan/wan/dmz/wlan

**SMT Related command**[Home](#)

No	Command	Description	Comment
	sys bridge [on off]	Set system bridge on/off	Menu 1
	sys routeip [on off]	Set system IP routing on/off	Menu 1
	sys hostname [hostname]	Set system name	Menu 1
	sys display	Display hostname, routing/bridge mode information in menu 1	Display Menu 1
	sys default	Load All Default Settings Except LAN and DHCP.	

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	sys save	Save all the parameters which will include menu 1, menu 3.2 LAN, menu 4 or menu 11 WAN, menu 12 static route, menu 15 NAT server set, menu 21 filter sets, menu 22 SNMP, menu 24.11 remote management and 3.5 Wireless LAN	
	wan backup mechanism [dsl   icmp]	Set wan backup mechanism to DSL link or ICMP	Menu 2
	wan backup addr [index] [IP addr]	Set wan ip address <index>	Menu 2
	wan backup tolerance [number]	Set keepalive fail tolerance	Menu 2
	wan backup recovery [interval(sec)]	Set recovery interval	Menu 2
	wan backup timeout [number]	Set ICMP timeout	Menu 2
	wan backup save	Save wan backup related parameters	Menu 2
	wan backup display	Display wan backup configurations	Menu 2
	wan tredir active [on/off]	Set traffic redirect on/off	Menu 2.1
	wan tredir ip [IP addr]	Set traffic redirect gateway IP address	Menu 2.1
	wan tredir metric [number]	Set traffic redirect metric	Menu 2.1
	wan tredir save	Save traffic redirect related parameters ** Have to apply “wan backup save” command thereafter	Menu 2.1
	wan tredir display	Display traffic redirect configurations	Menu 2.1
	lan index [1 2 3] 1: Select main LAN Interface 2: Select IP Alias 1 3: Select IP Alias 2	Select a LAN interface to edit	Menu 3.2
	lan active [on/off]	Turn on or off on IP Alias Interface	Menu 3.2.1
	lan ipaddr [address] [subnet mask]	Set LAN IP address and subnet mask Example: > lan ipaddr 192.168.1.1 255.255.255.0	Menu 3.2
	lan rip [none in out both] [rip1 rip2b rip2m]	Set LAN IP RIP mode and RIP version, if you choose none in the first parameter, the second parameter is also necessary	Menu 3.2
	lan multicast [none igmpv1 igmpv2]	Set LAN IP multicast mode	Menu 3.2
	lan filter [incoming outgoing] [tcpip generic] [set#1] [set#2] [set#3] [set#4]	Set LAN filter to be incoming/outgoing or protocol /device and the filter set could be 1-12, 0 means empty Example: Lan filter incoming tcpip 1 0 0 0	Menu 3.1
	lan dhcp mode [server relay none]	Set DHCP mode to be “server”, “relay”, “none”	Menu 3.2
	lan dhcp server dnsserver [pri dns] [sec dns]	Set primary and secondary LAN DNS server	Menu 3.2
	lan dhcp server pool [start-address] [num]	Set DHCP start address and pool size	Menu 3.2
	lan dhcp server gateway [IP address]	Set DHCP gateway	Menu 3.2
	lan dhcp server netmask [subnet mask]	Set DHCP subnet mask	Menu 3.2
	lan dhcp server leasetime [second]	Set DHCP lease time	Menu 3.2
	lan dhcp server renewalttime [second]	Set DHCP renew time	Menu 3.2
	lan dhcp server rebindtime [second]	Set DHCP rebind time	Menu 3.2
	lan dhcp relay server [IP address]	Set IP address of DHCP relay server	Menu 3.2
	lan display	Display LAN or IP alias parameters	Display Menu 3
	lan clear	Clear the Working Buffer	
	lan save	Save LAN related parameters	
	wan node index [1-8]	Set the node pointer to specific wan profile. If you want to set WAN profile, please use this command first, system will use the index number for pointing to specific PVC (remote node), and for consequent commands reference, if index = 1 means it's ISP node	Menu 11.1
	wan node clear	Clear the parameters of the temporary WAN profile	Menu 11.1
	wan node ispname [ISP name]	Enable the name of wan node	Menu 11.1

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	wan node enable	Enable the wan profile	Menu 11.1
	wan node disable	Disable the wan profile	Menu 11.1
	wan node encap [1483 pppoa pppoe enet]	Set the wan protocol	Menu 11.1
	wan node mux [vc llc]	Set the wan multiplex	Menu 11.1
	wan node ppp authen [chap pap both]	Set PPP authentication type	Menu 11.1
	wan node ppp username [name]	Set PPP username	Menu 11.1
	wan node ppp password [password]	Set PPP password	Menu 11.1
	wan node service [name]	Set PPPoE service name	Menu 11.1
	wan node bridge [on off]	Set the wan bridge mode	Menu 11.1
	wan node routeip [on off]	Set the wan IP routing mode	Menu 11.1
	wan node callsch [set1#][set2#][set3#][set4#]	Set call schedule set, set number 0 means empty	Menu 11.1
	wan node nailedup [on off]	Set nailed up connection on/off	Menu 11.1
	wan node vpi [num]	Set the wan vpi. Range : 0~255	Menu 11.6
	wan node vci [num]	Set the wan vci. Range : 32~65535	Menu 11.6
	wan node qos[ubr cbr]	Set the wan QOS type to be UBR or CBR	Menu 11.6
	wan node pcr [num]	Set the wan PCR value	Menu 11.6
	wan node scr [num]	Set the wan SCR value	Menu 11.6
	wan node mbs [num]	Set the wan MBS value	Menu 11.6
	wan node wanip [static dynamic] [address]	Set the wan IP address	Menu 11.3
	wan node remoteip [address] [subnet mask]	Set the remote gateway IP address and subnet mask	Menu 11.3
	wan node nat [off sua full] [address mapping #]	Set type wan NAT mode to be off or SUA or Full feature	Menu 11.3
	wan node rip [none in out both] [rip1 rip2b rip2m]	Set the wan RIP mode and RIP version	Menu 11.3
	wan node multicast [none igmpv1 igmpv2]	Set the wan IP multicast mode	Menu 11.3
	wan node filter [incoming outgoing] [tcpip generic] [set #1] [set #2] [set #3] [set #4]	Set WAN filter, incoming or outgoing can be specified, and filter set can be 1-12, value 0 means empty	Menu 11.5
	wan node save	Save the related parameters of WAN node	
	wan node display	Display WAN profile configuration in buffer	Display Menu 11
	ip route addrom index [Rule #]	Select a Static Route index 1-16 to edit	Menu 12.1
	ip route addrom name [Name]	Set Rule Name	Menu 12.1
	ip route addrom active [on off]	Set Active or Inactive Flag	Menu 12.1
	ip route addrom set [dest address/ mask bits] [gateway] [metric]	Set IP static route Example: > ip ro addrom set 192.168.1.33/24 192.168.1.1 2	Menu 12.1
	ip route addrom private [yes no]	Set Private Flag	Menu 12.1
	ip route addrom disp	Display both working buffer and Editing Entry	Menu 12.1
	ip route addrom freememory	Discard all changes	Menu 12.1
	ip route addrom save	Save edited settings	Menu 12.1
	ip route addrom clear [Index #]	Clear Static Route Index	Menu 12.1
	ip nat addrmap map [map#] [set name]	Select NAT address mapping set and set mapping set name, but set name is optional Example: > ip nat addrmap map 1 myset	Menu 15.1
	ip nat addrmap rule [rule#] [insert   edit] [type] [local start IP] [local end IP] [global start IP] [global end IP] [server set #]	Set NAT address mapping rule. If the “type” is not “inside-server” then the “type” field will still need a dummy value like “0”. Type is 0 - 4 = one-to-one, many-to-one, many-to-many-overload, many-to-many-non overload,	Menu 15.1

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		inside-server Example: > ip nat addrmap rule 1 edit 3 192.168.1.10 192.168.1.20 192.168.10.56 192.168.1.56 0	
	ip nat addrmap clear [map#] [rule#]	Clear the selected rule of the set	Menu 15.1
	ip nat addrmap freememory	Discard Changes	Menu 15.1
	ip nat addrmap disp	Display nat set information	Menu 15.1
	ip nat addrmap save	Save settings	Menu 15.1
	ip nat server load [set#]	Load the server sets of NAT into buffer	Menu 15.2
	ip nat server disp [1]	“disp 1” means to display the NAT server set in buffer, if parameter “1” is omitted, then it will display all the server sets	Menu 15.2
	ip nat server save	Save the NAT server set buffer into flash	Menu 15.2
	ip nat server clear [set#]	Clear the server set [set#], must use “save” command to let it save into flash	Menu 15.2
	ip nat server edit [rule#] active	Activate the rule [rule#], rule number is 1 to 24, the number 25-36 is for UPNP application	Menu 15.2
	ip nat server edit [rule#] svrport <start port> <end port>	Configure the port range from <start port > to <end port>	Menu 15.2
	ip nat server edit [rule#] remotehost <start IP> <end IP>	Configure the IP address range of remote host (Leave it to be default value if you don’t need this command)	Menu 15.2
	ip nat server edit [rule#] leasetime <seconds>	Configure the lease time (Leave it to be default value if you don’t want this command)	Menu 15.2
	ip nat server edit [rule#] rulename <string>	Configure the name of the rule (Leave it to be default value if you don’t want this command)	Menu 15.2
	ip nat server edit [rule#] forwardip <IP address>	Configure the LAN IP address to be forwarded	Menu 15.2
	ip nat server edit [rule#] protocol <TCP UDP ALL>	Configure the protocol to be used TCP , UDP or ALL (it must be capital)	Menu 15.2
	sys filter set index [set#] [rule#]	Set the index of filter set rule, you may apply this command first before you begin to configure the filter rules	Menu 21 filter sets
	sys filter set name [set name]	Set the name of filter set	Menu 21 filter sets
	sys filter set type [tcpip   generic]	Set the type of filter rule	Menu 21 filter sets
	sys filter set enable	Enable the rule	Menu 21 filter sets
	sys filter set disable	Disable the rule	Menu 21 filter sets
	sys filter set protocol [protocol #]	Set the protocol ID of the rule	Menu 21 filter sets
	sys filter set sourceroute [yes no]	Set the sourceroute yes/no	Menu 21 filter sets
	sys filter set destip [address] [subnet mask]	Set the destination IP address and subnet mask of the rule	Menu 21 filter sets
	sys filter set destport [port#] [compare type = none equal notequal less greater]	Set the destination port and compare type (compare type could be 0(none) 1(equal) 2(not equal) 3(less) 4(greater) )	Menu 21 filter sets
	sys filter set srcip [address] [subnet mask]	Set the source IP address and subnet mask	Menu 21 filter sets
	sys filter set srcport [port#] [compare type = none equal not equal less greater]	Set the source port and compare type (compare type could be 0(none) 1(equal) 2(not equal) 3(less) 4(greater) )	Menu 21 filter sets
	sys filter set tcpEstab [yes no]	Set TCP establish option	
	sys filter set more [yes no]	Set the more option to yes/no	Menu 21 filter sets
	sys filter set log [type 0-3= none   match  notmatch   both ]	Set the log type (it could be 0-3 =none, match, not match, both)	Menu 21 filter sets
	sys filter set actmatch[type 0-2 = checknext   forward   drop]	Set the action for match	Menu 21 filter sets
	sys filter set actnomatch [type 0-2 = checknext   forward   drop]	Set the action for not match	Menu 21 filter sets
	sys filter set offset [#]	Set offset for the generic rule	Menu 21, it’s for generic filter
	sys filter set length [#]	Set the length for generic rule	Menu 21, it’s for

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			generic filter
	sys filter set mask [#]	Set the mask for generic rule	Menu 21, it's for generic filter
	sys filter set value [(depend on length in hex)]	Set the value for generic rule	Menu 21, it's for generic filter
	sys filter set clear	Clear the current filter set	Menu 21
	sys filter set save	Save the filter set parameters	
	sys filter set display [set#][rule#]	Display Filter set information. W/o parameter, it will display buffer information.	
	sys filter set freememory	Discard Changes	
	sys snmp disp	Display SNMP parameters	Menu 22
	sys snmp get [community]	Set the community string of get	Menu 22 SNMP
	sys snmp set [community]	Set the community string of set	Menu 22 SNMP
	sys snmp trusthost [IP address]	Set the IP address of trusted host	Menu 22 SNMP
	sys snmp trap community [community]	Set the community string of trap	Menu 22 SNMP
	sys snmp trap destination [IP address]	Set the destination address of trap	Menu 22 SNMP
	sys snmp discard	Discard changes	
	sys snmp clear	Clear Working Buffer	
	sys snmp save	Set the SNMP parameters	Menu 22 SNMP
	sys password [new password]	Set system password [save immediately]	Menu 23 system password
	sys baud [1-5]	Index 12,3 will be 38400,19200, 9600, 57600, 115200 bps [save immediately]	Menu 24.2.2 console speed
	sys server load	Load setting before editing	
	sys server access [ftp telnet web] [access type]	Set the server access type to be 0: ALL, 1: None, 2:LAN only, 3:WAN only	Menu 24.11 remote management
	sys server port [ftp telnet web] [port]	Set the server port number	Menu 24.11 remote management
	sys server secureip[ftp telnet web] [address]	Set the server security IP address	Menu 24.11 remote management
	sys server disp [1]	Display server settings, [1] means display buffer	
	sys server save	Save the embedded server (remote management) parameters	
	wlan load	Load system parameters into working buffer	Menu 3.5 for Wireless LAN
	wlan disp	Display the working buffer	Menu 3.5 for Wireless LAN
	wlan essid [name]	Set the wireless ESSID	Menu 3.5 for wireless LAN
	wlan hideessid [on off]	Set to hide ESSID or not	Menu 3.5 for wireless LAN
	wlan chid [#=1~13]	Set channel ID 1-13	Menu 3.5 for wireless LAN
	wlan threshold rts [value]	Set the RTS threshold value	Menu 3.5 for wireless LAN
	wlan threshold fragment [value]	Set fragment threshold	Menu 3.5 for wireless LAN
	wlan wep type [none 64 128]	Set the wep type to be none, 64bit or 128bits	Menu 3.5 for wireless LAN
	wlan wep key set [key set#1-4] [key value]	Set wep key value	Menu 3.5 for wireless

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			LAN
	wlan wep key default [key set # 1-4]	Set default key set value	Menu 3.5 for wireless LAN
	wlan macfilter enable	Enable mac filter	Menu 3.5.1 for wireless LAN
	wlan macfilter disable	Disable mac filter	Menu 3.5.1 for wireless LAN
	wlan macfilter action [allow deny]	Set the action type of filter	Menu 3.5.1 for wireless LAN
	wlan macfilter set [set# 1-12] [mac address]	Set the mac address of filter	Menu 3.5.1 for wireless LAN
	wlan clear	Clear Working Buffer	
	wlan save	Save wireless MAC filter parameters	

**Voice Related Command**

Command						Description
voice						
config						
	rtp					
		index			<index>	Select RTP index.
		sortingbuffer			<index> <0:0ms 1:10ms 2:20ms>	Disable or enable receive sorting buffer(default 10 ms)
		rtcpinterval			<index> <ms>	Change the RTCP transmission interval(default 0)
		packetize			<index>g711<0:10ms 1:20ms 2:30ms> g729<0:10ms 1:20ms 2:30ms>	Change the transmit packetized period(default 20ms)
		save			<index>	Save the configured value
		display			<index>	Display the configured value.
		dumpCfg				Display working buffer value.
		free				Free working buffer.
	ps tn					
		index			<index>	Select the PSTN index
		phonebook			<index> <0~32 digits/blank>	Signaling the phone number
		prefixcode			<index> <1:enable   0:disable>	Disable or enable the prefix code
		active			<index> <1:active   0:in-active>	Disable or enable the speed dial
		save			<index>	Save the configured value
		display				Display the configured value.
		dumpCfg			<index>	Display working buffer value.
		free				Free working buffer.
	signal					
		index			<index>	Select SIP index.
		active			<index> <0:off 1:on>	Active/in-active this setting.
		register			<index> <autolenter exit>	Change the registrar type
		registertimeout			<index> <second>	Setup registration timeout value. (default 3600 sec)
		registerresendtime			<index> <second>	Setup registration resend timeout value.



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		sessiontimerActive			<index> <0:off 1:on>	Active/in-active sessiontimer
		sessiontimeout			<index> <30-3600 second>	Setup session timeout value(default 300 sec)
		minse			<index> <20-1800 second>	Setup minimum session timeout value.
		retransmitT2			<index> <4 8 16 32sec>	Not support yet
		serveraddress			<index> <ip address>	Signaling server address
		serverport			<index> <1024-65535>	Signaling server port (default 5060)
		registeraddress			<index> <ip address>	Signaling register address
		registerport			<index> <1024-65535>	Signaling register port(default 5060)
		userid			<index> <0-96 chars>	Signaling SIP user-id
		password			<index> <0-96 chars>	Signaling SIP password
		urltype			<index> <siptel>	SIP URL type
		port			<index> <1024-65535>	Signaling port
		phonenumber			<index> <0-32 chars>	Signaling phone number
		domain			<index> <1-128 chars>	Setup domain of SIP service
		dtmf			<index> <rfc2833 pcmlsipinfo rfc2833like>	Setup DTMF key type.
		pri_compression			<index> <0:G711mul8:G711A 18:G729>	Change the primary compression type
		sec_compression			<index> <0:G711mul8:G711A 18:G729>	Change the secondary compression type
		portrange			<index> <start port> <end port> (40000~65535)	RTP/RTCP port range setting
		transport			<index> <udpl tcp>	Setup SIP transport type.
		callerid			<index> <disable enable>	Disable or enable the caller id feature for VoIP.
		auto redialpstn			<index> <disable enable>	Disable or enable the auto redial
		phoneselect			<index><phone port 0:All><0:No 1:Yes>	Setup incoming call mapping to phone port.
		vlangtag			<index> <disable enable>	Enable/disable VLAN Tag in VoIP packet.
		tpid_vlangtag			<index> <TPID value (4 Byte)>	Setup VLAN Tag - TPID.
		vid_vlangtag			<index> <VID value (3 Byte)>	Setup VLAN Tag - VID.
		priority_vlangtag			<index> <TCI value (0-7)>	Setup VLAN Tag - TCI.
		diffservrtp			<index> <0-7>	Setup DiffServRtp for QoS.
		diffservsip			<index> <0-7>	Setup DiffServSip for QoS.
		mwiaactive			<index> <0:off 1:on>	Disable or enable the voice message
		mwitimeout			<index> <minute>	Setup mwi expiration time
		rfc3325			<index><1: privacy call using RFC3325, 0: privacy call using draft-01>	Disable or enable the rfc3325
		prack			<index> <0:off 1:on>	Active/in-active prack message

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		fakesipactive			<index> <0:off 1:on>	Active/in-active FAKE WAN IP service.
		fakesipservaddr			<index> <ip address>	Setup FAKE WAN IP service IP Address
		fakesipservport			<index> <port>	Setup FAKE WAN IP service port
		outboundactive			<index> <0:off 1:on>	Active/in-active Outbound proxy service.
		outboundaddr			<index> <ip address>	Setup Outbound proxy service. IP Address
		outboundport			<index> <port>	Setup Outbound proxy service. port
		outboundkaactive			<index> <0:off 1:on>	Active/in-active Outbound proxy service keep alive
		outboundkaintvl			<index> <second>	Setup Outbound proxy service keep alive Interval
		stunactive			<index> <0:off 1:on>	Active/in-active STUN service.
		stunservaddr			<index> <ip address>	Setup STUN server IP Address.
		stunservport			<index> <port>	Setup STUN server port number.
		ringbackactive			<index> <0:off 1:on>	Disable or enable early media
		ringbacktone			<index> <tone>	Select early media tone
		musiconholdactive			<index> <0:off 1:on>	Disable or enable music on hold
		musiconholdtone			<index> <tone>	Select music on hold tone
		callfwd			<index> <1-2>	Select call forward table
		mixermode			<index><0: Local / 1: Remote>	Select 3-way conference mixermode
		transafterconf			<index><0:off 1:on>	ON/OFF transfer conference
		rfc3263			<index> <0:off 1:on>	Disable or enable the rfc3263
		featuresenable			<index> <0~1>	ON/OFF feature bits
		Save			<index>	Save the configured value
		display			<index>	Display the configured value.
		dumpCfg				Display working buffer value.
		Free				Free working buffer.
	dsp					
		index			<index>	Select DSP index.
		echocancellation			<index> <enable disable>	Disable or enable the echo cancellation
		jittersize			<index> <0~90>ms	Change the jitter buffer size for DSP
		start			<index> <loop ground>	Change the pots type.
		vad			<index> <enable disable>	Disable or enable the VAD
		dialtype			<index> <pstn tone pulse>	Change the dialing type
		dialtonetype			<index> <ntt pdt>	Change the dial tone type
		dialshortinterval			<index> <0~256 sec>	Change the short dialing interval . If the digital interval is smaller than dialshortinterval , the device will call the phone number, No

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						matter whether you have pressing finishing or not
		diallonginterval			<index> <0~256 sec>	Change the long dialing interval , if the first digital time over diallonginterval The device will send busy tone
		flashmaxinterval			<index> <0~65535 msec>	Setup flash key max interval, If press flash key interval < fxoflashmax ,device will neglect the flash key and hang up.
		flashmininterval			<index> <0~65535 msec>	Setup flash key min interval. If press flash key interval < flashmininterval ,device will neglect the flash key.
		inputvolume			<index> <-14~14>	Change the input volume gain
		outputvolume			<index> <-14~14>	Change the output volume gain
		receivetone			<index> <irlsir>	Change the receive tone type.
		sipselect			<index><phone port0:All><0:No1:Yes>	Select SIP index and Disable or enable the SIP
		callwaitingtime			<index> <0~128 sec>	Setup call waiting time
		cidtype			<index><0:During Ring 11: Prior Ring>	Call ID display moment
		cidpayload			<index><0:FSK11:DTMF>	Setup DTMF payload type
		cidfskstartinterval			<index> <0~65535 msec>	Setup FSK start interval. This commands actually generate extra 200ms delay. ex: set to 0 ms -> 200ms set to 200ms -> 400 ms
		ciddtmfstartinterval			<index> <0~65535 msec>	Setup DTMF start interval. This commands actually generate extra 200ms delay. ex: set to 0 ms -> 200ms set to 200ms -> 400 ms
		cidringtimeout			<index> <0~65535 msec>	Setup call id ring time out. This commands actually generate extra 200ms delay. ex: set to 0 ms -> 200ms set to 200ms -> 400 ms
		featuresenable			<index> <0~7>	ON/OFF feature
		save			<index>	Save the configured value
		display			<index>	Display the configured value.
		dumpCfg				Display working buffer value.
		free				Free working buffer.
	phbook					
		index			<index>	Select phone book index.
		active			<index> <1:active0:inactive>	Active/in-active this setting.
		orignum			<index> <0~32 digits>	Setup phone number for this index of phone book.

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		forcesipuri		<index> <1-128 chars>	Setup force SIP URI.
		speednum		<index> <0~32 digits>	Setup speed dial number.
		name		<index> <name>	Setup the name for the description.
		type		<index> <0:Proxy 1:NonProxy>	Select Proxy or Non-Proxy type.
		save		<index> Please select the Phone Book index to configure: 1 ~ 10	Save the configured value
		display		<index>	Display the configured value.
		dumpCfg		<index>	Display working buffer value.
		free		<index> <1:active 0:inactive>	Free working buffer.
	common				
		index		<index>	Select common index
		save		<index>	Save the configured value.
		ivrsyspermit		<index><0:not permit ivrsys change, 1:permit ivrsys change>	Play ivr sys data
		specialFlag		<index><special flag h:for help>	bit 0 --> 0: sent rtp after send out 200OK / 1:sent rtp after receive ACK! bit 1 --> 0: respons 200 OK when recieve NOTIFY / 2:follow RFC3265!
		ivrlanguage		<index><0~2>	Sutup ivr language
		pstnfallback		<index><0: Disable PSTN Fallback / 1: Enable PSTN Fallback>	Active/in-active PSTN Fallback Func.
		sipfallback		<index><0: Disable SIP Fallback / 1: Enable SIP Fallback>	Active/in-active SIP Fallback Func.
		dialmethod		<index><0: European [<RR>+Number] / 1: USA [<RR>]	Select dialmethod
		removepound		<index> <0:not removed 1:removed pound>	On/OFF the removed pound
		countrycode		<index><CountryCode h:for help>	Setup CountryCode
		webenable		<index><0~1>	Disable or enable the web
		display		<index>	Display the configured value.
		dumpCfg		<index>	Display working buffer value.
	autopro				
		index		<index>	Select autopro index.
		active		<index> <0:off 1:on>	Active/in-active autopro.
		servaddr		<index> <ip address>	Setup autopro server IP address
		timeout		<index> <second>	Setup timeout
		retry		<index> <second>	Setup retry time
		protocol		<index> <0:TFTP 1:HTTP 2:HTTPS>	Setup autopro protocol
		method		<index> <0:Common 1:Bluewin>	Select the autopro method
		save		<index>	Save the configured value.
		display		<index>	Display the configured value.
		dumpCfg		<index>	Display working buffer value.

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	fxo					
		index			<index>	Select fxo index
		fxolongdial			<index> <Long dial interval(ms)>	Setting DSP first digital to second digital interval time.
		dtmfpausedur			<index> <Short dial interval(ms)>	Setting DSP send each digital interval time.
		dtmfdigitdur			<index> <DTMF Duration(ms)>	DSP sending DTMF duration time through FXO. Setup to 0 will be 500ms
		fxoflashmin			<index> <Flash Min Interval(ms)>	Setup fxo flash key min interval. If press flash key interval < fxoflashmin ,device will neglect the flash key.
		fxoflashmax			<index> <Flash Max Interval(ms)>	Setup fxo flash key max interval, If press flash key interval < fxoflashmax ,device will neglect the flash key and hang up.
		fxolifestable			<index> <LifeLine Stable Interval(ms)>	Setup LifeLine stable interval
		fxophselect			<index> <phone port 10:All><0:No 1:Yes>	Select fxo mapping phone
		save			<index>	Save the configured value.
		display				Display the configured value.
		dumpCfg				Display working buffer value.
	forward					
		index			<index>	Select forward index
		unconditional			<index> <phone number>	Setup unconditional call forward number
		busy			<index> <phone number>	Setup busy tone call forward number
		noanswer			<index> <phone number>	Setup noanswer call forward number
		noans time			<index> <second>	Setup no answer time
		table			<index> <entry_id> <caller> <dest> <type 0:unconditional 1:busy 2:noanswer 3:block 4: accept>	Setup the rule table for call forward.
		clear			<index> <entry   uncond   busy   noans   all > <entry_id for entry>	Clear the call forward rule
		save			<index>	Save the configured value.
		display				Display the configured value.
		free				Free working buffer.

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	version					Show the VOIP version
fsm						
	status				<phone   ccm   convert   rtp   ua>	Display the status of fsm.
	convert				<reset disp >	Display convert information or reset convert.
	debug				<phone ccm siplua tx rtp all>	Turn on debug message.
sip						
	tl				<0 1 2 3 ... 7>	SIP debug trace level 0:None 1: All 2: Tx 3:Rx 4: TXRx 5: State 6: Error 7: Warning
	siginit					Init SIP SIG task
	sipinit					Init SIP protocol stack
	sipterm					Delete SIP protocol stack
	sigmakecall				type in phone num	Make Call
	sigbusy				Response Busy Call	Response Busy Call
	sigringback				Response Ring	Response Ring
	sigreg				<index>	Register to SIP server
	sigunreg				<index>	Unregister Sip server.
	regstatus				<index>	Show register's information.
	sigok				pick up a call	pick up a call
	sigbye				drop or cancel a call	drop or cancel a call
	sipclose					Close the SIP
	username					
	proxy				[0:off 1:on]	Use SIP proxy
	contact				<LAN Addr:0 Remote Node# WAN Addr:1-2>	
	ackbranch				<on: the Ack bring branch ID, off: the Ack didn't bring branch ID>	Setup bring branch ID.
	rfc3262				<1: turn on RFC3262, 0: turn off RFC3262>	Disable or enable the rfc3262
	rfc3325				<1: privacy call using RFC3325, 0: privacy call using draft-01>	Disable or enable the rfc3325
	keepalive				<index>	STUN debug command.

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	checkwan				<index>	Display WAN IP/Port for SIP.
	change media				<index> <RTP addr> <RTP port>	RD debug command.
	siglistdump				<index>	RD debug command.
	dl					Set up SIP trace level
	sigmwi				<index>	Send SUBSCRIBE packet
	sigunmwi				<index>	Send UNSUBSCRIBE packet
	disconnect				<index> or 'all'	Disconnect call.
	txmaxsize					Setup the max tx number
rtp						
	bye	[port]	[sessionid]			
	connect				port[0-3] destIp destPort srcPort PT	
	add				port[0-3] destIp destPort srcPort PT	
	table					Display all the current active RTP session
	usage					Display all the used port
	rxtime				<msec>	Setup RX time
	txtime				<msec>	Setup TX time
	dtmf				digit# 1 = 1 digit# 2 = 2 digit# 3 = 3	
	statistics				<index>	Show the statistics
	linktime				<index>	Show the RTP linktime
autopro						
	active					Active/in-active autopro.
	startnow					Start autopro now
	terminate					Terminate autopro.
	itemdisplay					Display all parameter setting value.
	size					Adjust size of buffer (autoPro.data) which store incoming data from tftp server. .
	start					Start autopro
	status					Show current status of auto provision.
	showdata					Show content of buffer

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	ta					(autoPro.data) which store incoming data from tftp server.
	debug				<0:off 1:on>	on/off debug messages of auto-provision.
	httpdebug				<0:off 1:on>	ON/OFF Autopro httpdebug mode
dialplan						
	clear					Clear dial plan in memory
	dial				dial <phone number>	Simulate dialing digits for dial plan parsing
	load					Load dial plan from flash and overwrite dial plan in memory
	save					Save dial plan to flash
	set				set <all dial plans>	Setup dial plan rule
	show					Show dial plan in detail
	switch					ON/OFF dial plan
	debug					ON/OFF dialplan debug mode
logTest						RD debug command.
tebasic						For TE use only.