



**Firmware Release Note**

**P650R-31**

**Standard version**

**Release 3.40(GT.4)C0**

**Date:**  
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# **ZyXEL P650-R31 Standard Version release 3.40(GT.4)C0 Release Note**

**Date:** Dec 12, 2003

## **Supported Platforms:**

ZyXEL P650R-31

## **Versions:**

ZyNOS Version : V3.40(GT.4) | 12/12/2003 18:58:54  
Bootbase Version : V1.11 | 3/4/2003 10:26:13

## **Notes:**

## **Known Issues:**

## **Features:**

### **Modifications in V 3.40(GT.4)C0 | 12/12/2003**

1. Change to FCS

### **Modifications in V 3.40(GT.4)b1 | 10/30/2003**

2. [BUG FIXED]  
Symptom: VPN can't pass through router with NAT Traversal turns on  
Condition: Setup a VPN connection with NAT Traversal turns on and establish a connection. It will be failed.
3. [BUG FIXED]  
Symptom: The bp->extFlags is not cleared, so the wrong flag will affect the packet flow.
4. [BUG FIXED]  
Symptom: PPPOE can't be dialed quickly more than 30 seconds after idle timeout.  
Condition: Only use CHT real line can reproduce this problem.

### **Modifications in V 3.40(GT.3) | 9/09/2003**

1. Change FCS version

### **Modifications in V 3.40(GT.3)b2 | 8/29/2003**

1. [FEATURE ENHANCED]  
Symptom: Merge VC auto hunting feature
2. [FEATURE ENHANCED]

- Symptom: Add CI command "ip adjmss [<mss>]" to adjust TCP mss value
3. [FEATURE ENHANCED]  
Symptom: Enhance SPTGEN feature  
Condition:
    - 1) Add RIP direction and version for SMT menu4.
    - 2) Add active and protocol option for SMT menu15 (NAT).
    - 3) Extend filter set from 1 to 2 set.
    - 4) Support ADSL opencmd function.
  4. [BUG FIX]  
Symptom : Can't play XBox Live via NAT router.
  5. [BUG FIXED]  
Symptom: If the traffic for Polycom camera pass our router, the router would be reboot.
  6. [BUG FIXED]  
Symptom: The system will reboot in 10M half-duplex mode under big traffic

**Modifications in V 3.40(GT.3)b1 | 5/28/2003**

1. [FEATURE ENHANCED] Add Time Zone web-page in Advanced Setup panel.
2. [BUG FIXED]  
Symptom: Web Diagnostic Bug  
Condition: In Diagnostic page input IP Address, then press "Enter" system will reset to default romfile.
3. [BUG FIXED]  
Symptom: If setting 1483/Router at ATUR and 1483/Bridge at ATUC and ping the ATUR wan IP from ATUC, the system would reboot.  
Condition: If setting 1483/Router at ATUR and 1483/Bridge at ATUC and ping the ATUR wan IP from ATUC, the system would reboot.
4. [FEATURE ENHANCED] Add/modify 4 CI commands:
  - 1)sys romreset <1:reboot|2:no reboot>
  - 2)sys atsh /\* add Flash and DRAM size \*/
  - 3)sys atwe <mac address> <country code> <debug flag> <feature bits> < 1:reboot|0:no reboot>
  - 4)sys stdio 0 [seconds]

**Modifications in V 3.40(GT.2)C0 | 5/19/2003**

1. Change FCS version

**Modifications in V 3.40(GT.2)b1 | 5/7/2003**

1. Update modem code to 3.9.122
2. [FEATURE CHANGED] Use AT command "atld" without enabled debug flag
3. [FEATURE ENHANCED] Add WAN feature (in Advance Panel) and improve wizard configuration in web-pages.
4. [BUG FIXED]  
Symptom: Protected "rom-0" file, when user no login.  
Condition: Protected "rom-0" file, when user no login.
5. [BUG FIXED]  
Symptom: DHCP client doesn't release the IP address when the IP address is expired

Condition: System is configured in "enet encap" (DHCP client), and sometimes DHCP server doesn't response in a period of time, when the lease time is expired system should release WAN IP address

**Modifications in V 3.40(GT.1)C0 | 12/2/2002**

1. [BUG FIXED]  
Symptom: Bad DNS packets cause system reboot.  
Condition: Bad DNS packets cause system reboot.
2. [BUG FIXED]  
Symptom: LAN external loopback failed in HTP.  
Condition: LAN external loopback failed in HTP.

**Modifications in V 3.40(GT.1)b4 | 11/22/2002**

1. [BUG FIXED]  
Symptom: Cell lost at the upstream.  
Condition: Cell lost at the upstream.

**Modifications in V 3.40(GT.1)b3 | 11/19/2002**

1. [BUG FIXED]  
Symptom: Ping and TFTP functions sometimes do not work.  
Condition: Ping and TFTP functions sometimes do not work.
2. [BUG FIXED]  
Symptom: We can not save CBR/VBR setting in the web configuration.  
Condition: We can not save CBR/VBR setting in the web configuration.

**Modifications in V 3.40(GT.1)b2 | 11/7/2002**

1. [BUG FIXED]  
Symptom: 8 VCs bridge mode does not work.  
Condition: When we send the 1518 bytes packets from AX4000 in 8 VCs bridge mode, the system can't transmit and receive any packets.
2. [BUG FIXED]  
Symptom: When you set PPPoA/PPPoE nailed-up mode and change the encapsulation mode, you will not dial out again.  
Condition: When you set PPPoA/PPPoE nailed-up mode and change the encapsulation mode like PPPoA/LLC -> PPPoA/VC, you will not dial out again.
3. [BUG FIXED]  
Symptom: DDNS does not work at 1483 mode.  
Condition: When the encapsulation is 1483 and we change the ip setting for this channel, the ddns would not change the ip address for this domain name.

**Modifications in V 3.40(GT.1)b1 | 10/31/2002**

1. [FEATURE ENHANCED] Add UPNP Feature.
2. [FEATURE ENHANCED] Add Traffic Redirection Feature (detected by ADSL Line)
3. [BUG FIXED]  
Symptom: The command "atba5" does not work in debug mode.  
Condition: The command "atba5" does not work in debug mode.

4. [BUG FIXED]  
Symptom: When we change the console baud rate, the system will display garbage.  
Condition: Change the console baud rate in the debug mode.
4. [BUG FIXED]  
Symptom: We cannot configure DDNS in SMT.  
Condition: We cannot find any field to configure DDNS in SMT.
5. [FEATURE ENHANCED] Add the Core Checksum function.
6. [FEATURE ENHANCED] Add the PPPoA idle timeout function.
7. [BUG FIXED]  
Symptom: The web page displays the incorrect modem code version.  
Condition: The web page displays the incorrect modem code version.
8. [BUG FIXED]  
Symptom: ATM loopback test fail in web configuration.  
Condition: ATM loopback test fail in web configuration.
9. [FEATURE CHANGED] Modify the default rom file for standard version.

**Modifications in V 3.40(GT.0)c0 | 10/09/2002**

1. Rename version from 3.40(GT.0)b9.

**Modifications in V 3.40(GT.0)b9 | 10/04/2002**

1. [BUG FIXED] The Web ATM status error display.
2. [BUG FIXED] No prompt to clear error log in TELNET session and could lead user not to clear log.
3. [BUG FIXED] Can't perform ATM loopback in Web diagnostic page.

**Modifications in V 3.40(GT.0)b8 | 09/25/2002**

1. [FEATURE CHANGED] Add no logo request for China.
2. [FEATURE CHANGED] Add dying gasp recover that if dying gasp exceeds specified counter, system will reset.
3. [BUG FIXED] Create default romfile to correct some wrong settings.
4. [BUG FIXED] Fix f/w upload problem through Web configuration.
5. [BUG FIXED] Fix bug that the first letter of string "My Password=" is covered by exceeded length of the previous field in SMT4.
6. [BUG FIXED] The system may reset from fatal error log when line link up, the cause is due to double free data buffer.
7. [BUG FIXED] Change the PPP encapsulation to PPPoA.
8. [BUG FIXED] Modify "sys romreset" to query user if want to restore default romfile.
9. [BUG FIXED] Add Web help pages.

**Modifications in V 3.40(GT.0)b7 | 09/13/2002**

1. [BUG FIXED] Fix HTP SAR loopback test problem which no DMA can be triggered.

**Modifications in V 3.40(GT.0)b6 | 09/12/2002**

1. [BUG FIXED] In PPPoE connection, if the dynamic WAN IP address is different from

the previous one, the ping packet to WAN could not get reply for the source IP address is still the previous one.

**Modifications in V 3.40(GT.0)b5 | 09/11/2002**

1. [BUG FIXED] When power on router, the exception occasionally happens due to periodical SAR timeout reset in case of cell rate calculation by zero speed before line link up.

**Modifications in V 3.40(GT.0)b4 | 09/04/2002**

1. [BUG FIXED] ADSL link up/down cause mbuf buffer leakage and no data can be transferred.
2. [BUG FIXED] Web configuration could cause system crash.
3. [BUG FIXED] HTP Ctrl initialization fail problem.
4. [BUG FIXED] ADSL link up/down cause mbuf buffer leakage and no data can be transferred.
5. [BUG FIXED].Can't open multiple VC connections in routing mode.
6. [FEATURE CHANGED] Add SAR reassembly timeout to prevent affecting throughput while cell lost occurs.
7. [FEATURE CHANGED] HTP UART internal loopback testing.

**Modifications in V 3.40(GT.0)b3 | 08/19/2002**

1. [BUG FIXED] SAR reassembly big packet problem which could cause system crash.
2. [BUG FIXED] MAC reset problem which could cause FTP throughput degradation and discontinuous PING.

**Modifications in V 3.40(GT.0)b2 | 08/15/2002**

1. [FEATURE CHANGED] Change modem code from 3.8.164 to 3.8.163 for line quality verification.
2. [FEATURE CHANGED] Adjust gain values in autoexec.net after system reboot. User should update rom file.
3. [BUG FIXED] SAR Rx DMA problem that results in no packet received.

**Modifications in V 3.40(GT.0)b1 | 08/08/2002**

1. [FEATURE CHANGED] Add dying gasp support.
2. [FEATURE CHANGED] Add PPPoE connection LED indication.
3. [FEATURE CHANGED] Add Reset Button implementation.
4. [FEATURE CHANGED] CI command to display SAR MIB counter.
5. [BUG FIXED] Check rate adaption when Ctrl-E responses signal lost, it causes line to drop immediately.
6. [BUG FIXED] Can't get the correct modem version.
7. [BUG FIXED] DHCP can't work if we setup DHCP service.
8. [BUG FIXED] Can't telnet from PC to P650R-31 \* PCE OS WIN98, WIN2000, or WINXP , when key the password then the link will be break off.
9. [BUG FIXED] Occasionally user can't ping router successfully in Win2000/XP. The bug could cause ether driver can't send packet.

**Modifications in V 3.40(GT.0)a1 | 07/12/2002**

1. [NEW FEATUER] Add VBR support in SMT menu4 and menu11.6.

**Annex A CI Command List**

Command Class List Table		
<a href="#">System Related Command</a>	<a href="#">Exit Command</a>	<a href="#">Ethernet Related Command</a>
<a href="#">WAN Related Command</a>	<a href="#">IP Related Command</a>	<a href="#">Bridge Related Command</a>

System Related Command				<a href="#">Home</a>
Command				Description
sys				
	adjtime			retrive date and time from Internet
	atsh			display MRD field
	callhist			
		display		display call history
		remove	<index>	remove entry from call history
	countrycode		[countrycode]	set country code
	date		[year month date]	set/display date
	domainname			display domain name
	edit		<filename>	edit a text file
	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
	hostname		[hostname]	display system hostname
	log			
		clear		clear log error
		disp		display log error
		online	[on off]	turn on/off error log online display
	stdio	[minute]	[second]	change terminal timeout value
	time		[hour [min [sec]]]	display/set system time
	tredisp	parse, brief, disp		monitor packets
	syslog			
		server	[destip]	set syslog server IP address
		facility	<facilityno>	set syslog facility
		type	[type]	set/display syslog type flag
		mode	[on off]	set syslog mode
	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	[1:reboot 2:no reboot]		restore default romfile
	socket			display system socket information
	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
	xmodemmode	[crc checksum]		select xmodem mode

## 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
		status	<ch_name>	see LAN status
		config	[0 1=auto normal] [0 1=10 100] [0 1=hd fd] <ch-name>	Configure LAN Settings Auto/Normal, 100/10 Mbps, Half/Full Duplex
	version			see ethernet device type

## 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
		ctrlleint		ADSL CTRLLE 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		
		linedata	near	Show ADSL near end noise margin
		linedata	far	Show ADSL far end noise margin
		open		Open ADSL line
		opencmd		Open ADSL line with specific standard
		opmode		Show the operational mode
		perpdata		Show performance information,CRC,FEC, error seconds..
		rdata	[start] [length]	Read DSP CTRLLE registers 512 bytes
		reset		Reset ADSL modem, and must reload the modem code again
		selftest		

		selftest	long	ADSL long loop test
		selftest	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		
		display	shutdown	Show the counter of rate adaptive mechanism happening
		display	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 0xfa to 0x06
		errorsecond		
		errorsecond	switch [1 0]	Turn on/off error sending to DSLAM side
		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
		watchdog	[1 0]	Watchdog for DSP
	atm	test	[fix rand period oam loopback]	Generate ATM traffic
wan	hwsar	disp		Display hwsar packets incoming/outgoing information
		clear		Clear hwsar packets information
		sendoam		Send OAM packets: <vpi> <vci> <f5> <end-to-end> <type:0(AIS) 1(RDI) 2(LoopBack)>
wan	atm	vchunt	add <remotenodeindex> <vpi> <vci>	add new vchunt entry
			remove <remotenodeindex> <vpi> <vci>	remove vchunt entry
			active <yes no>	active vchunt feature
			display	display the setting
			clear	clear the setting buffer
			save	save the setting
			timer <timetocheckoam>	change the time interval
			send	start vchunt
			debug <1 0: on of>	debug tools turn on

## IP Related Command

[Home](#)

Command				Description
ip				
	address		[addr]	display host ip address
	alias		<iface>	alias iface
	aliasdis		<0 1>	disable alias
	arp			
		status	<iface>	display ip arp status
	dhcp		<iface>	
		client		
			release	release DHCP client IP
			renew	renew DHCP client IP
		status	[option]	show dhcp status
	dns			
		query		
		stats		
			clear	clear dns statistics
			disp	display dns statistics
	icmp			
		status		display icmp statistic counter
		discovery	<iface> [on off]	set icmp router discovery flag
	ifconfig		[iface] [ipaddr] [broadcast <addr>  mtu <value> dynamic]	configure network interface
	ping		<hostid>	ping 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

	status			display ip statistic counters
	udp			
		status		display udp status
	tcp			
		status	[tcb] [<interval>]	display TCP statistic counters
	xparent			
		join	<iface1> [<iface2>]	join iface2 to iface1 group
		break	<iface>	break iface to leave ipxparent group
	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

## Bridge Related Command

[Home](#)

Command				Description
bridge				
	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