

ZyXEL ES-4024A V3.50(TV.0)C0

Release Note/Manual Supplement

Date: January 11, 2005

This document describes the features in the ES-4024A product for its 3.50(TV.0)C0 release.

Support Platforms:

ZyXEL ES-4024A V3.50(TV.0)C0 supports models: Dimension ES-4024A

Version:

ZyNOS Version: V3.50(TV.0) | 01/11/2005

BootBase Version: V1.00 | 12/01/2004

Default Bootbase Setting:

ZyNOS Version	V3.50(TV.0) 01/11/2005 16:10:58
Bootbase Version	V1.00 12/01/2004 19:26:29
Vendor Name	ZyXEL Communications Corp.
Product Model	ES-4024A
ZyNOS Code Model	RAS ES4024A
HTP Code Model	Unknown
ZyNOS ROM address	bfc60000
System Type	6
MAC Address	00A0C5012345
Default Country Code	FF
Boot Module Debug Flag	01
RomFile Version	11
RomFile Checksum	5d37
ZyNOS Checksum	cef2
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
DA 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00	
00 00 00 00 00 00 00 00 00-00 41 13 00 00 00	

Features:

1. MAC address learning
2. Support IEEE 802.1D transparent bridge
3. Support IEEE 802.1Q tagged VLAN
4. Support IEEE 802.1X
5. Support IEEE 802.1W
6. Support IEEE 802.3AD
7. IGMP snooping
8. Support IEEE 802.1p
9. Automatic age out
10. Link Aggregation
11. Port Mirroring

12. Bandwidth Control
13. MAC Filtering
14. 64 IP routing domains
15. Support routing protocol: RIP v1/v2
16. Support routing protocol: DVMRP
17. Support routing protocol: OSPF
18. Support VRRP
19. Support DHCP server, relay
20. Firmware upgrade and configuration backup/restore.
21. Remote manageable.
22. SNMP manageable. RFC1213 MIBII(system, interface), RFC 1493 Bridge MIB, RFC1643 Ethernet MIB, RFC1757 Four group of RMON, RFC2674 Bridge MIB extension and SNMP traps.
23. WEB manageable

Known Issue:

1. Changing some settings (VLAN, link aggregation, or other complex settings) will cause system suspended when **continuously** sending **unresolved source packets** of **1Mbps 64-Byte length**. This situation will be recovered after stopping the traffic.

Limit of Settings:

1. IP routing domain: 64
2. 802.1Q static VLAN: 256
3. Static MAC forwarding: 32
4. Filtering: 32
5. Bandwidth Control: 64
6. Mirroring: 32
7. DHCP: 16
8. Static route: 8
9. OSPF area: 4
10. OSPF virtual link: 32
11. VRRP router entry: 14

Revision History:

V3.50(TV.0)C0 (01/11/2005)
First Public version.

Firmware Upgrade:

The ES-4024A uses FTP to upgrade firmware in run-time through its built-in FTP server. You can use any FTP client (for example, [ftp.exe](#) in Windows) to upgrade ES-4024A. The upgrade procedure is as follows:

Upgrade ES-4024A FW:

```
C:\> ftp <ES-4024A IP address>
User : <Enter>
Password: 1234
230 Logged in
ftp> put 350TV0C0.bin ras
ftp> bye
```

Where

- User name : just press <Enter>
- Password : the management password, 1234 by default
- 350TV0C0.bin : the name of firmware file you want to upgrade
- ras : the internal firmware name in ES-4024A

Configuration Upgrade:

The ES-4024A uses FTP to upgrade configuration in run-time through its built-in FTP server. You can use any FTP client (for example, [ftp.exe](#) in Windows) to upgrade ES-4024A. The upgrade procedure is as follows:

Upgrade ES-4024A configuration:

```
C:\> ftp <ES-4024A IP address>
User : <Enter>
Password: 1234
230 Logged in
ftp> put 350TV0C0.rom rom-0
ftp> bye
```

Where

- User name : just press <Enter>
- Password : the management password, 1234 by default
- 350TV0C0.rom : the name of configuration file you want to upgrade
- rom-0 : the internal configuration name in ES-4024A

SYSTEM

sys	ixe2424 log	level	[0-4]		Set IXE driver log level
sys	ixe2424 log	list			List all IXE log modules
sys	ixe2424 log	module	<module_id>	<on/off>	Enable / disable log on specific IXE module
sys	ixe2424 log	switch	< on off >		Log all modules to tracelog. (Current display to console directly)
sys	ixe2424 show_int_count				Display IXE interrupt counter
sys	ixe2424 clear_int_count				Clear IXE interrupt counter
sys	ixe2424 wreg	<addr>	<value>		Write to a register
sys	ixe2424 rreg	<addr>			Read from a register
config	save				Save configuration

MEMORY

sys	memory	<address>	<length>		Dump value in system memory
sys	ixe2424 memdump	<start_addr>	<length>		Dump the memory map that ix2424 mapped to

PHYSICAL

sys	ixe2424 lbt	intlbt	<port All>	[Count]	Internal loop back test on given port or All ports.
sys	ixe2424 lbt	extlbt	<port All>	[Count]	External loop back test on given port or All ports.
sys	ixe2424 pktcnt	<port>			Display port statistic counter
sys	ixe2424 pktcntclear	<port>			Reset port statistic counter
sys	ixe2424 port	<portID>	<enable disable>	<Speed>	Port setup
	<FlowCtrl>				
sys	ixe2424 phyread	<portID>		[<phyAddr>]	Read PHY register
sys	ixe2424 phywrite	<portID>	<phyAddr>	<data>	Write PHY register

SWITCH L2

sys	ixe2424dbm		mac	cnt	[port]	Display number in L2 DBM
sys	ixe2424dbm		mac	list	[port]	Display entries in L2 DBM
sys	sw	driver		count	disp	Show the switch NDIS level counters(CPU interface)
sys	sw	driver		count	clear	Clear the switch NDIS level counters(CPU interface)
sys	sw	garp	status			Show garp timer status
sys	sw	garp	timer	<join timer>	<leave timer>	Set garp timer
<leave all timer>						
sys	sw	gvrp	status			Show gvrp status
sys	sw	gvrp	enable			Enable gvrp function
sys	sw	gvrp	disable			Disable gvrp function
sys	sw	qos	defpri		<port> [0..7]	Set the default ingress User Priority for this port <port>
sys	sw	qos	map		0..7 [queue]	User Priority to Traffic Class mapping.
sys	sw	rstp	disp			Show RSTP status
sys	sw	rstp	bridge	enable		Enable RSTP
sys	sw	rstp	bridge	disable		Disable RSTP
sys	sw	rstp	bridge	priority	<priority>	System Priority
sys	sw	rstp	bridge	maxAge	<max age>	Max age timer
sys	sw	rstp	bridge	helloTime	<hello time>	Hello Timer
sys	sw	rstp	bridge	forwardDelay	<forward delay time>	Forward delay time

sys	sw	rstp	bridge	version	<STP:0 RSTP:2>		Operation Mode
sys	sw	rstp	port	enable	<Port_NO>		Enable this port under RSTP protocol
sys	sw	rstp	port	disable	<Port_NO>		Disable this port under RSTP protocol
sys	sw	rstp	port	pathCost	<Port_NO>		Cost of this path
sys	sw	rstp	port	priority	<Port_NO>		Priority
sys	sw	rstp	port	edgePort	<Port_NO>		If this port is an edge port
sys	sw	rstp	port	p2pLink	<Port_NO>		Whether the Port concerned can only be connected to exactly one other Bridge or can be connected to two or more Bridges
sys	sw	rstp	port	mcheck	<Port_NO>		802.1w chapter 17.18.10
sys	sw	vlan1q	port	status	<port>		Show port <port> VLAN information.
sys	sw	vlan1q	port	defaultVID	<port>		Set defaultVID<VID> of this port<port>.
					<VID>		
sys	sw	vlan1q	port	accept	<port>	<all tagged>	Set acceptable frame type of this port.
sys	sw	vlan1q	port	gvrp		<port>	Enable/disable the gvrp function of this port <port>.
					<enable disable>		
sys	sw	vlan1q	svlan	cpu	<VLAN ID>		Set VLAN ID of cpu.
sys	sw	vlan1q	svlan	setentry	<name>	<vid> <port> <adctl> <tagctl>	Set static entry.<VID>
sys	sw	vlan1q	svlan	delentry	<VID>		Delete static entry<VID>
sys	sw	vlan1q	svlan	active	<VID>		Active the static entry with <VID>
sys	sw	vlan1q	svlan	inactive	<VID>		Inactive the static entry with <VID>
sys	sw	vlan1q	svlan	list			Show the static entry table.
sys	sw	vlan1q	vlan	list			Show vlan1q current table.
sys	sw	vlan1q	status				Show vlan1q status
sys	sw	class	disp				Display class setting
sys	sw	class	l2set	<src port>	<src MAC>		Set src/dest port/MAC combination
				<src vid> <dest port> <dest MAC> <dest vid> <ptcl type>			
sys	sw	class	del	<class id>			Delete this class
sys	sw	mac	ageSet	<timeout>			Set aging timeout
sys	sw	mac	ageView	<timeout>			Show current aging time
sys	sw	mac	static	disable			Clear current run-time static MAC settings
sys	sw	mac	static	display	[<mac> <vid>]		Display run-time static MAC status
sys	sw	mac	static	set	<port>	<mac> <vid>	Set static MAC of the port
sys	sw	mac	static	del	<port>	<mac> <vid>	Delete static MAC of the port
sys	sw	trunk	disable				Clear current trunk settings
sys	sw	trunk	display	[<groupId>]			Display trunk status
sys	sw	trunk	set	<group>	<#ports>		Set trunking group
sys	sw	trunk	del	<group>			Del trunking group
sys	sw	mirror	disable				Clear current mirror settings
sys	sw	mirror	display				Display current mirror status
sys	sw	mirror	port	<port>			What port mirror to
sys	sw	mirror	applyidx		<Class ldx>		Apply class to mirroring
				<input output both>			
sys	sw	mirror	del	<Class ldx>			Delete mirroring class
sys	sw	filter	disable				Clear current filter settings
sys	sw	filter	display				Display current filter status
sys	sw	filter	applyidx		<class ldx>		Apply class to filter
sys	sw	filter	del	<Class ldx>			Delete filtering class
sys	sw	bw	disable				Clear current bandwidth control settings
sys	sw	bw	display				Display current bandwidth control status
sys	sw	bw	applyidx		<Class ldx>	<Max BW>	Apply class to bandwidth control

sys	sw	bw	del	<Class Idx>		Delete bandwidth control class
sys	sw	bmstorm		disable		Clear current broadcast storm settings
sys	sw	bmstorm	type	<dir>	<type>	Broadcast/Multicast/Both
sys	sw	bmstorm	basis	<type>		Pkt / Byte
sys	sw	bmstorm	display	[<index>]		Display ports setting
sys	sw	bmstorm	interval	[<value>]		Set/display monitor interval
sys	sw	bmstorm	set	<port>	<threshold>	Threshold:# of pkt can be passed in the interval
<dir>						Direction:ingress/egress
sys	sw	bmstorm	del	<index>		Disable on this port
sys	sw	ingress	set	<port>	<enable disable>	Set ingress check on the port
sys	sw	ingress	get	<port>		Get ingress check state on the port
sys	sw	ingress	viewAll			Get ingress check state on all ports
sys	sw	dot1x	enable			Enable dot1x
sys	sw	dot1x	disable			Disable dot1x
sys	sw	dot1x	status			Show dot1x global status
sys	sw	dot1x	port	enable	<portNo>	Enable this port
sys	sw	dot1x	port	disable	<portNo>	Disable this port
sys	sw	dot1x	port	reAuth	<portNo>	Re-authentication
off>					<on	
sys	sw	dot1x	port	period	<portNo>	Re-authentication period
<value>						
sys	sw	dot1x	port	status	<portNo>	Port status
sys	sw	dot1x	set	auth		Set authentication method
				<profile radius>		
sys	sw	dot1x	set	control	<port-no>	Set port authentication status
<auto auth unauth>						
sys	sw	dot1x	set	radius	server [IP]	Server IP
sys	sw	dot1x	set	radius	secret	Secret Key
					[secret]	
sys	sw	dot1x	set	radius	port [port]	Server Port
sys	sw	dot1x	set	radius	show	Display server setting
sys	sw	dot1x	set	profile	add <username>	Add a user profile
<passwd>						
sys	sw	dot1x	set	profile	del <idx>	Delete a user profile
sys	sw	dot1x	set	profile	list	List profile setting
sys	sw	lacp	agg			Display aggregation information for LACP
sys	sw	lacp	port	enable	<Port NO>	
sys	sw	lacp	port	disable	<Port NO>	
sys	sw	lacp	port	status	<Port NO>	
sys	sw	lacp	port	actorAdm	activity	
				[Port_NO] [0:passive 1:active]		
sys	sw	lacp	port	actorAdm	display	
				[Port_NO]		
sys	sw	lacp	port	actorAdm	key	
				[Port_NO] [key]		
sys	sw	lacp	port	actorAdm	priority	
				[Port_NO] [priority]		
sys	sw	lacp	port	actorAdm	timeout	
				[Port_NO] [0:long_timeout 1:short_timeout]		
sys	sw	lacp	status			
sys	sw	lacp	keymgnt		[on off]	
sys	sw	lacp	sysPriority		[Priority]	

IP

ip	arp	status				Display ARP table
ip	arp	add	<hostid>	ether	<ether addr>	Add static ARP entry
ip	arp	drop	[hostid]	[arpType]		Delete a static ARP entry
ip	arp	flush				Flush ARP table
sys	ixe2424dbm	ip	list			Display entries in L3 DBM
ip	ifconfig	[<if_name>]	[<ipAddr/netmask>]	[vid]		Show / Config interface setting
		[<vid>]				
ip	rtDomain	add	<ip>	<netmask>	<vid>	Add a routing domain
		[save:0 1]				
ip	rtDomain	disp				Show current route domain status
ip	rtDomain	del	<index>			Delete a routing domain
ip	route	add	<dest addr>[/<bits>]	<gateway>		Add a static route
		[<metric>]				
ip	route	drop	<host addr> [/<bits>]			Delete a static route
ip	route	flush				Flush routing table
ip	route	status				Show routing table
ip	route	errcnt	disp			Display error counters of routing
ip	route	errcnt	clear			Reset routing error counters
ip	rip	status				Show current RIP status
ip	rip	mode	<iface>	[in/out]	[mode]	Set RIP direction and mode on iface
ip	traceroute	<host>	[ttl]	[wait]	[queries]	Tracing routing path
sys	sw	class	l3set	<src ip/mask_bits>	<dest	Set L3 class rule
			ip/mask_bits>	<protocol>		

PROTOCOL

ip	dhcp	<vid>	mode			Set DHCP mode
			<server> <relay> <none> <client>			
ip	dhcp	<vid>	server	gateway		Set gateway for DHCP server
			<gatewayIP>			
ip	dhcp	<vid>	server	pool	<startIP>	Set start IP and pool for DHCP server
			<numIP>			
ip	dhcp	<vid>	server	reset		Reset DHCP server
ip	dhcp	<vid>	server	hostname	<hostname>	Set hostname for DHCP server
ip	dhcp	<vid>	server	dnsserver	<dnsIP1>	Set DNS server for DHCP server
			[<dnsIP2>]	[dnsIP3]		
ip	dhcp	<vid>	server	winsserver	<winsIP1>	Set WINS server for DHCP server
			[<winsIP2>]			
ip	dhcp	<vid>	relay	server	<serverIP1>	Set DHCP relay servers
			[serverIP2]			
			[serverIP3]			
ip	dhcpconfig	add	<vid>			Add DHCP configuration for vid
ip	dhcpconfig	del	<vid>			Delete DHCP configuration for vid
ip	dhcpconfig	disp				Show DHCP configuration
sys	sw	class	l4set	<src ip/mask_bits>	<dest	Set L4 class rule
			ip/mask_bits>	<protocol>	<src port>	<dest port>