ZyXEL ES3500-24HP
V4.00(AADE.6)C0

Release Note/Manual Supplement

Date: Nov. 28, 2016

This document describes the features in the ES3500-24HP product for its 4.00(AADE.6)C0 release.

Support Platforms:

ZyXEL ES3500-24HP V4.00(AADE.6)C0 supports models: ZyXEL ES3500-24HP

Version:

OS Version: V4.00(AADE.6) | 11/28/2016
BootBase Version: V1.00 | 04/12/2012

Default Bootbase Setting:

OS Version	V4.00(AADE.6) | 11/28/2016 15:22:14
Bootbase Version	V1.00 | 04/12/2012 17:14:19
Serial Number	xxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	ES3500-24HP
OS Code Model	ES3500
OS ROM address	bd0a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB00001D
MAC Address Quantity	29
Default Country Code	FF
Boot Module Debug Flag	FF
RomFile Version	E8
RomFile Checksum	7d15
OS Checksum	54bc
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
02 3E 00 00 00 00 00 00-00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00-00 13 00 00 00 00	

Main Features:

1. IEEE 802.1ag Connective Fault Management, CFM
2. IEEE 802.1AB Link Layer Discovery Protocol, LLDP
3. IEEE 802.1ax Link Aggregation Control Protocol, LACP
4. IEEE 802.1D transparent bridging
5. IEEE 802.1X Standard for port-based Network Access Control, PNAC
6. IEEE 802.1W Rapid Spanning Tree Protocol, RSTP
7. IEEE 802.1s Multiple Spanning Tree Protocol, MSTP

8. IEEE 802.1Q tag-based VLAN
9. IEEE 802.1Q VLAN port isolation
10. IEEE 802.3/3u 10BASE5 10 Mbit/s (1.25 MB/s) over thick coax. / 100BASE-TX, 100BASE-T4, 100BASE-FX Fast Ethernet at 100 Mbit/s (12.5 MB/s) w/autonegotiation
11. IEEE 802.3AD 802.1QinQ, Double Tagging for VLAN Stacking
12. IEEE 802.3ah OAM
13. IEEE 802.3at PoE Plus
14. IEEE 802.3x flow control for full duplex
15. RFC 1213 MIB II
16. RFC 1493 Bridge MIB (Management Information Base)
17. RFC 1643 Ethernet MIB
18. RFC 1757 Four group of RMON
19. RFC 1981 Path MTU Discovery for IPv6
20. RFC 2674 VLAN MIB
21. RFC 2698 Two Rate Three Color Marker, trTCM
22. RFC 3046 DHCP Relay Agent Information Option (DHCP option 82)
23. RFC 3176 sFlow
24. RFC 4022 MIB for the Transmission Control Protocol
25. RFC 4113 MIB for the User Datagram Protocol
26. RFC 4293 MIB for IP
27. RFC 4292 IP Forwarding Table MIB
28. RFC 4541 IGMPv2/IGMPv3 and MLD snooping
29. IPv6 Management/Host
30. DHCPv6: client and relay
31. ICMPv6
32. MLD snooping proxy
33. IPv6 address stateless auto-configuration: host
34. Support IPv6 in classifier
35. MAC address learning
36. MAC aging time
37. MAC filtering
38. MAC forward
39. MAC freeze
40. MAC search
41. GVRP (GARP VLAN Registration Protocol)
42. Port-based VLAN
43. VLAN search
44. Selective QinQ
45. VLAN Translation (Egress/Ingress)
46. Protocol-based VLAN
47. IP subnet based VLAN
48. Configurable multicast VLAN
49. Support MVR up to 5 multicast VLANs
50. Guest VLAN
51. Private VLAN
52. Independent IGMP snooping and MVR setting.

53. Support IGMP snooping fast leave
54. Support IGMP snooping statistics
55. IGMP throttling
56. Support display IGMP snooping client
57. CLI/MIB for IGMP report-proxy mode
58. DHCP relay/snooping
59. LACP algorithm of Source-MAC/Source-IP/Destination-MAC/Destination-IP
60. Extend to 8 trunk groups (per group with max 8 port number)
61. Integrated multicast services.
62. Static multicast forward
63. 512 multicasting group
64. MRSTP
65. Configurable RSTP/MRSTP oper edge
66. SNMPv3
67. IP source Guard(Static binding, ARP inspection)
68. AAA by RADIUS / TACACS+
69. Multiple TACACS+ servers
70. Multiple RADIUS servers
71. PPPoE-IA
72. PPPoE-IA option 82
73. L2PT (layer 2 protocol tunneling)
74. Loop guard
75. CPU protection (ARP/IGMP/BPDU, inactive port/inactive reason/rate-limitation)
76. Errdisable recovery for err-disabled port/reason
77. Smart isolation
78. Filtering/Mirroring by L2/L3/L4 rules
79. Bandwidth control by L2/L3/L4 rules
80. Management through console, telnet, SNMP or web management
81. Firmware upgrade by FTP/Web/TFTP
82. Configuration download by FTP/Web/TFTP
83. Configuration saving and retrieving
84. Remote configuration merge by TFTP
85. SSHv1/SSHv2/SSL
86. Daylight saving time support
87. Support concurrent telnet sessions up to 9
88. Password encryption
89. Syslog
90. Synchronize system log and syslog
91. SNMP trap group
92. Intrusion lock
93. User access right
94. cluster with dual image & config
95. CLI for dump memory usage
96. CLI for RMON configuration
97. 24 10/100 Base-T interface,
98. 4 Gigabyte dual-personality port (10/100/1000BASE-T & Dual speed 100/1000M SFP)

99. Cable diagnostics
100. Overheat detection (Hardware Monitor)
101. Support PoE/Voltage/Temperature /Fan Speed Fault Trap
102. Support show PoE per port power consumption information, and classification
103. Local console
104. Fan-speed monitoring
105. 16K layer 2 MAC addresses table
106. PWM Fan module
107. Support show transceiver DDMI information
108. LED indications for link status
109. 9K jumbo frame
110. Dual RAS
111. Egress traffic shaping per port at 64Kbps step
112. DHCP Option 82 Profile
113. Support ZON
114. SSL DHparam length from 512 bits to 2048 bits

Bug Fix:

1. Fix RomPager CVE-2014-9222

2. eITS#150901113
   [DHCP]DHCP snooping entries from trust ports should not be learned into DHCP snooping binding table.

3. eITS# 160301288
   [MGMT] Management loss after perform 9 successful or failed telnet/SSH login attempts.

4. eITS# 150601410
   [LLDP] When receiving LLDP packet and enter show running configuration continuously, switch will crash.
   [LLDP] When receiving non-standard LLDP packet, it causes switch crash.

5. eITS#151201303
   [SNMP] Correct the SNMP GETBULK produces results when max-repetition is more than 55.

6. eITS 150500055
   [System] Unexpected power loss cause switch reboot then switch cannot boot successfully.

Known Issue:

1. Storm control has ±1% error ratio.
   When storm control rate set to 0, the first broadcast packet will pass.
2. Port Counter: When packet size over 1520 also count to broadcast/multicast/uni-cast RX packet counter.
3. Policy rules will be overwritten by vlan-mapping, trtcm, private-vlan.
4. Selective Q-in-Q, VLAN translation, subnet-based VLAN, protocol-based VLAN, mac-based VLAN will not follow VLAN tagged/untagged configuration. Packets always tag out.
5. In classification mode, up to five ports that using 802.3at class-4 can be active. (The ES3500-24HP reserve 36W per port (class-4) and the total power budget is 180W). Select consumption mode if you want more ports to be active.
6. Switch counts tagged packet that is less or equal to 64 bytes into error packet.

Limitation of Settings:

1.	VLAN 1Q static entry	1024
2.	Static MAC forwarding entry	256
3.	MAC filtering entry	256
4.	Cluster member	24
5.	IGMP filtering entry	256
6.	IGMP MVR group address entry	256
7.	IGMP MVR VLAN entry	5
8.	Protocol based VLAN entries per port	7
9.	Syslog server entry	4
10.	IP souce guard entry	128
11.	IP subnet based VLAN entry	16
12.	Vlan-stacking Selective QinQ entry	128
13.	Vlan-mapping entry	128
14.	Private-vlan entry	8
15.	TRTCM profile entry	4
16.	Link Aggregation entry	8

Firmware Upgrade:

The ES3500-24HP 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 ES3500-24HP. The upgrade procedure is as follows:

Upgrade ES3500-24HP FW:

```
C:\> ftp <ES3500-24HP IP address>
User : <Enter>
Password: 1234
230 Logged in
ftp> put 400AADE4C0.bin ras-0
ftp> bye
```

Where

- User name : just press <Enter>
- Password : the management password, 1234 by default
- 400AADE4C0.BIN : the name of firmware file you want to upgrade
- ras-0 : the internal firmware name in ES3500-24HP. (store at first flash)
- ras-1 : the internal firmware name in ES3500-24HP. (store at second flash)