ZyXEL GS1920-48 V4.10(AANZ.5)C0

Release Note/Manual Supplement

Date: May. 5, 2015

This document describes the features in the GS1920-48 product for its 4.10(AANZ.5)C0 release.

Support Platforms:

ZyXEL GS1920-48 V4.10(AANZ.5)C0 supports models: ZyXEL GS1920-48.

Version:

OS Version: V4.10(AANZ.5) | 05/05/2015 16:46:07
BootBase Version: V1.00 | 11/15/2013 13:59:34

Default Bootbase Setting:

ZyNOS Version	V4.10(AANZ.5)	05/05/2015 16:46:07
Bootbase Version	V1.00	11/15/2013 13:59:40
Serial Number	xxxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	GS1920-48
ZyNOS Code Model	GS1920
ZyNOS ROM address	b40a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB000033
MAC Address Quantity	51
Default Country Code	FF
Boot Module Debug Flag	00
CPLD Version	N/A
RomFile Version	27
RomFile Checksum	1bc5
ZyNOS Checksum	bfe2
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
02 50 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.   44 Auto MDI/MDI-X 10Base-T/100Base-TX/1000Base-T
2.   4 dual personality GbE
3.   2 100/1000 Base-X SFP interface for uplink
4.   Locator LED
5.   16K layer 2 MAC addresses table
6.   Jumbo frame length 9K
7.   IEEE 802.1w , RSTP
8.   IEEE 802.1s , MSTP
9.   ZyXEL MRSTP

10. Rule-based bandwidth control
11. Port-based egress traffic shaping
12. IEEE 802.3x flow control.
13. DSCP to 802.1p priority mapping
14. Port-based VLAN
15. Protocol-based VLAN
16. IP subnet based VLAN
17. IEEE 802.1Q Static VLANs
18. IEEE 802.1Q dynamic VLANs
19. VLAN trunking
20. GVRP
21. IEEE 802.3ad LACP
22. Port mirroring
23. Support rate limiting, minimum step 64K both ingress and egress
24. Broadcast Storm Control
25. Layer 2 MAC filtering
26. Layer 3 IP filtering
27. Layer 4 TCP/UDP socket filtering
28. DHCP snooping
29. DHCP client
30. DHCP relay/DHCP relay per VLAN
31. DHCP option 82
32. IGMP v1/v2/v3 snooping
33. Static multicast forwarding
34. 802.1x port authentication
35. Port Security
36. Static MAC filtering/forwarding
37. Multiple RADIUS servers
38. Multiple TACACS+ servers
39. AAA by RADIUS / TACACS+
40. Intrusion Lock
41. MAC Freeze
42. ARP Inspection
43. Static IP/MAC/Port binding
44. Policy-based security filtering
45. IEEE 802.1Q VLAN port isolation
46. IP Source Guard
47. Guest VLAN
48. ACL packet filtering
49. PPPoE IA and option 82
50. CPU protection
51. Recovery mechanism for Error disable port/reason
52. Loop guard
53. Dual configuration files
54. Dual images
55. IGMP snooping fast leave
56. IGMP snooping statistics
57. IGMP throttling
58. SNMP v1, v2c, v3
59. SNMP trap group
60. Interface related trap can be enable/disable by port
61. ICMP echo/echo reply
62. Syslog
63. DHCPv6 client and relay
64. NDP: host
65. IPv6 address stateless auto-configuration
66. ZyXEL clustering management
67. Management through SNMP or Web management
68. Firmware upgrade by WEB / FTP
69. Configuration saving and retrieving by WEB / FTP

70. Configure Clone
71. Daylight Saving
72. NTP
73. Service Access Control Timeout
74. IEEE 802.1AB LLDP
75. IEEE 802.1AB LLDP-MED
76. Password encryption
77. User access right
78. ZyXEL ESBU common MIB
79. Green Ethernet
80. Cable diagnostics
81. Support PoE Fault Trap
82. MAC aging time
83. MAC-based VLAN
84. Voice VLAN
85. Private VLAN
86. MLD snooping proxy
87. ZyXEL One Network (ZON)
88. ZyXEL Neighbor Management

Enhanced Features:

None

Bug Fix:

1. **[System]** Copy running-config cause DUT CPU high and records lots of port link down/up logs.
2. **[System]** "Show tech-support" that will make switch crash or hang.
3. **[System]** "Show tech-support" or "show tech-support memory" via ssh (uses putty) will cause DUT crash.
4. **[System]** System crash with exception on eventCmdProc or Memory cookies destroyed.
5. **[System]** System will encounter socket error, when socket leakage.
6. **[System]** Run RompagerPOCCookie, RompagerPOCCookies2 will cause DUT crash.
7. **[System]** When all port's transceiver-ddmi inserts, the switch may happen CPU High every hours.
8. **[System]** "Show tech-support" cannot display "show run config" via web
9. **[MGMT]** Ping to switch but no response when doing firmware upgrade.
10. **[MGMT]** Switch cannot access via HTTPs by Chrome.
11. **[MGMT]** Cpu threshold cannot be set over 20.
12. **[WebGUI]** Configure VLAN Port Setting by WebGUI, selecting one of acceptable frame types to "*", the selected item cannot be applied for all ports.
13. **[Port]** When enable igmp-snooping, traffic may not be able to forward on port 28.
14. **[LLDP]** Fix the incompatibility issue with some IP Phones that will cause the switch loss of management.
15. **[802.1x]** Dynamic VLAN Assignment approved for VLAN10 in the Juniper server, but VLAN100 approved in the switch.
16. **[STP]** Fix switch may drop BPDU packets.

Known Issue:

1. Ingress rate limit of TCP traffic might have inaccuracy with some criteria.
2. Fake IP traffic cannot be filtered when a static IP binding existed.
3. The cable length resolution of Cable Diagnostic is about +-15 meter.
4. The fault distance of Cable Diagnostic displays wrong information when no cable inserted.
5. When RSTP is enabled with ring topology, LACP can't be activated at the same ports.

Limitation of Settings:

1.	802.1Q Static VLANs	1K
2.	Static MAC forwarding entry	256
3.	MAC filtering entry	256
4.	Cluster member	24
5.	Protocol based VLAN entries per port	7
6.	Port-security max address-limit number	16K
7.	Syslog server entry	4
8.	IP source guard entry	512
9.	IP subnet based VLAN entry	16
10.	DHCP snooping binding table	16K
11.	Multicast group	1024
12.	ACL	256
13.	DHCP Entry	16
14.	Trunk groups	8
15.	Per trunk group port number	8
16.	MSTP instance	0-15
17.	MAC-based VLAN	50
18.	Voice VLAN OUI entry	6
19.	ZON neighbor per-port maximum clients	10

Firmware Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Firmware:

```
C:\> ftp <GS1920-48 IP address>
User : admin
Password: 1234
230 Logged in
ftp> put 410AANZ5C0.bin ras-0
ftp> bye
```

```
Where
  • User name: the management user name, admin by default.
  • Password: the management password, 1234 by default.
  • 410AANZ5C0.bin: the name of firmware file you want to upgrade.
  • ras-0: the internal firmware name in GS1920-48 (store at first
      flash).
  • ras-1: the internal firmware name in GS1920-48 (store at second
      flash).
```

Configuration Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Configuration:

```
C:\> ftp <GS1920-48 IP address>
User name: admin
Password: 1234
```

```
230 Logged in
ftp> put 410AANZ5C0.rom rom-0
ftp> bye
```

Where
- User name: the management user name, admin by default.
- Password: the management password, 1234 by default.
- 410AANZ5C0.rom: the name of configuration file you want to upgrade.
- rom-0: the internal configuration name in GS1920-48.

ZyXEL GS1920-48 V4.10(AANZ.4)C0

Release Note/Manual Supplement

Date: Sep. 16, 2014

This document describes the features in the GS1920-48 product for its 4.10(AANZ.4)C0 release.

Support Platforms:

ZyXEL GS1920-48 V4.10(AANZ.4)C0 supports models: ZyXEL GS1920-48.

Version:

OS Version: V4.10(AANA.4) | 09/16/2014 16:04:59
BootBase Version: V1.00 | 11/15/2013 13:59:34

Default Bootbase Setting:

ZyNOS Version	V4.10(AANA.4)	09/16/2014 16:04:59
Bootbase Version	V1.00	11/15/2013 13:59:40
Serial Number	xxxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	GS1920-48
ZyNOS Code Model	GS1920
ZyNOS ROM address	b40a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB000033
MAC Address Quantity	51
Default Country Code	FF
Boot Module Debug Flag	00
CPLD Version	N/A
RomFile Version	27
RomFile Checksum	1bc5
ZyNOS Checksum	32e8
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
02 50 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:

89. 44 Auto MDI/MDI-X 10Base-T/100Base-TX/1000Base-T
90. 4 dual personality GbE
91. 2 100/1000 Base-X SFP interface for uplink
92. Locator LED
93. 16K layer 2 MAC addresses table
94. Jumbo frame length 9K
95. IEEE 802.1w , RSTP
96. IEEE 802.1s , MSTP
97. ZyXEL MRSTP
98. Rule-based bandwidth control

99. Port-based egress traffic shaping
100. IEEE 802.3x flow control.
101. DSCP to 802.1p priority mapping
102. Port-based VLAN
103. Protocol-based VLAN
104. IP subnet based VLAN
105. IEEE 802.1Q Static VLANs
106. IEEE 802.1Q dynamic VLANs
107. VLAN trunking
108. GVRP
109. IEEE 802.3ad LACP
110. Port mirroring
111. Support rate limiting, minimum step 64K both ingress and egress
112. Broadcast Storm Control
113. Layer 2 MAC filtering
114. Layer 3 IP filtering
115. Layer 4 TCP/UDP socket filtering
116. DHCP snooping
117. DHCP client
118. DHCP relay/DHCP relay per VLAN
119. DHCP option 82
120. IGMP v1/v2/v3 snooping
121. Static multicast forwarding
122. 802.1x port authentication
123. Port Security
124. Static MAC filtering/forwarding
125. Multiple RADIUS servers
126. Multiple TACACS+ servers
127. AAA by RADIUS / TACACS+
128. Intrusion Lock
129. MAC Freeze
130. ARP Inspection
131. Static IP/MAC/Port binding
132. Policy-based security filtering
133. IEEE 802.1Q VLAN port isolation
134. IP Source Guard
135. Guest VLAN
136. ACL packet filtering
137. PPPoE IA and option 82
138. CPU protection
139. Recovery mechanism for Error disable port/reason
140. Loop guard
141. Dual configuration files
142. Dual images
143. IGMP snooping fast leave
144. IGMP snooping statistics
145. IGMP throttling
146. SNMP v1, v2c, v3
147. SNMP trap group
148. Interface related trap can be enable/disable by port
149. ICMP echo/echo reply
150. Syslog
151. DHCPv6 client and relay
152. NDP: host
153. IPv6 address stateless auto-configuration
154. ZyXEL clustering management
155. Management through SNMP or Web management
156. Firmware upgrade by WEB / FTP
157. Configuration saving and retrieving by WEB / FTP
158. Configure Clone

159. Daylight Saving
160. NTP
161. Service Access Control Timeout
162. IEEE 802.1AB LLDP
163. IEEE 802.1AB LLDP-MED
164. Password encryption
165. User access right
166. ZyXEL ESBU common MIB
167. Green Ethernet
168. Cable diagnostics
169. Support PoE Fault Trap
170. MAC aging time
171. MAC-based VLAN
172. Voice VLAN
173. Private VLAN
174. MLD snooping proxy
175. ZyXEL One Network (ZON)
176. ZyXEL Neighbor Management

Enhanced Features:

None

Bug Fix:

1. [MGMT] The switch crashes when getting the IPv6 address with max length and clicking IPv6 index via the web GUI.
2. [MGMT] Fix the incompatibility issue with Microsoft Windows OS 8.1 LLDP that will cause the switch loss of management.
3. [MGMT] Fix the web loss of management on the switch.

Known Issue:

1. Ingress rate limit of TCP traffic might have inaccuracy with some criteria.
2. Fake IP traffic cannot be filtered when a static IP binding existed.
3. The cable length resolution of Cable Diagnostic is about +-15 meter.
4. The fault distance of Cable Diagnostic is less than 1 meter without cable inserted.
5. When RSTP is enabled with ring topology, LACP can't be activated at the same ports.

Limitation of Settings:

20.	802.1Q Static VLANs	1K
21.	Static MAC forwarding entry	256
22.	MAC filtering entry	256
23.	Cluster member	24
24.	Protocol based VLAN entries per port	7
25.	Port-security max address-limit number	16K
26.	Syslog server entry	4
27.	IP source guard entry	512
28.	IP subnet based VLAN entry	16
29.	DHCP snooping binding table	16K
30.	Multicast group	1024
31.	ACL	256
32.	DHCP Entry	16
33.	Trunk groups	8
34.	Per trunk group port number	8
35.	MSTP instance	0-15
36.	MAC-based VLAN	50

| 37. | Voice VLAN OUI entry | 6 |
| 38. | ZON neighbor per-port maximum clients | 10 |

Firmware Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Firmware:

```
C:\> ftp <GS1920-48 IP address>
User : admin
Password: 1234
230 Logged in
ftp> put 410AANZ4C0.bin ras-0
ftp> bye


Where
```
  - User name: the management user name, admin by default.
  - Password: the management password, 1234 by default.
  - 410AANZ4C0.bin: the name of firmware file you want to upgrade.
  - ras-0: the internal firmware name in GS1920-48 (store at first flash).
  - ras-1: the internal firmware name in GS1920-48 (store at second flash).

Configuration Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Configuration:

```
C:\> ftp <GS1920-48 IP address>
User name: admin
Password: 1234
230 Logged in
ftp> put 410AANZ4C0.rom rom-0
ftp> bye


Where
```
  - User name: the management user name, admin by default.
  - Password: the management password, 1234 by default.
  - 410AANZ4C0.rom: the name of configuration file you want to upgrade.
  - rom-0: the internal configuration name in GS1920-48.

ZyXEL GS1920-48 V4.10(AANZ.3)C0

Release Note/Manual Supplement

Date: Aug. 20, 2014

This document describes the features in the GS1920-48 product for its 4.10(AANZ.3)C0 release.

Support Platforms:

ZyXEL GS1920-48 V4.10(AANZ.3)C0 supports models: ZyXEL GS1920-48.

Version:

OS Version: V4.10(AANA.3) | 08/20/2014 10:50:09
BootBase Version: V1.00 | 11/15/2013 13:59:34

Default Bootbase Setting:

ZyNOS Version	V4.10(AANA.3)	08/20/2014 10:50:09
Bootbase Version	V1.00	11/15/2013 13:59:40
Serial Number	xxxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	GS1920-48
ZyNOS Code Model	GS1920
ZyNOS ROM address	b40a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB000033
MAC Address Quantity	51
Default Country Code	FF
Boot Module Debug Flag	00
CPLD Version	N/A
RomFile Version	27
RomFile Checksum	1bc5
ZyNOS Checksum	91a7
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
02 50 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.   44 Auto MDI/MDI-X 10Base-T/100Base-TX/1000Base-T
2.   4 dual personality GbE
3.   2 100/1000 Base-X SFP interface for uplink
4.   Locator LED
5.   16K layer 2 MAC addresses table
6.   Jumbo frame length 9K
7.   IEEE 802.1w , RSTP
8.   IEEE 802.1s , MSTP
9.   ZyXEL MRSTP

10. Rule-based bandwidth control
11. Port-based egress traffic shaping
12. IEEE 802.3x flow control.
13. DSCP to 802.1p priority mapping
14. Port-based VLAN
15. Protocol-based VLAN
16. IP subnet based VLAN
17. IEEE 802.1Q Static VLANs
18. IEEE 802.1Q dynamic VLANs
19. VLAN trunking
20. GVRP
21. IEEE 802.3ad LACP
22. Port mirroring
23. Support rate limiting, minimum step 64K both ingress and egress
24. Broadcast Storm Control
25. Layer 2 MAC filtering
26. Layer 3 IP filtering
27. Layer 4 TCP/UDP socket filtering
28. DHCP snooping
29. DHCP client
30. DHCP relay/DHCP relay per VLAN
31. DHCP option 82
32. IGMP v1/v2/v3 snooping
33. Static multicast forwarding
34. 802.1x port authentication
35. Port Security
36. Static MAC filtering/forwarding
37. Multiple RADIUS servers
38. Multiple TACACS+ servers
39. AAA by RADIUS / TACACS+
40. Intrusion Lock
41. MAC Freeze
42. ARP Inspection
43. Static IP/MAC/Port binding
44. Policy-based security filtering
45. IEEE 802.1Q VLAN port isolation
46. IP Source Guard
47. Guest VLAN
48. ACL packet filtering
49. PPPoE IA and option 82
50. CPU protection
51. Recovery mechanism for Error disable port/reason
52. Loop guard
53. Dual configuration files
54. Dual images
55. IGMP snooping fast leave
56. IGMP snooping statistics
57. IGMP throttling
58. SNMP v1, v2c, v3
59. SNMP trap group
60. Interface related trap can be enable/disable by port
61. ICMP echo/echo reply
62. Syslog
63. DHCPv6 client and relay
64. NDP: host
65. IPv6 address stateless auto-configuration
66. ZyXEL clustering management
67. Management through SNMP or Web management
68. Firmware upgrade by WEB / FTP
69. Configuration saving and retrieving by WEB / FTP

70. Configure Clone
71. Daylight Saving
72. NTP
73. Service Access Control Timeout
74. IEEE 802.1AB LLDP
75. IEEE 802.1AB LLDP-MED
76. Password encryption
77. User access right
78. ZyXEL ESBU common MIB
79. Green Ethernet
80. Cable diagnostics
81. Support PoE Fault Trap
82. MAC aging time
83. MAC-based VLAN
84. Voice VLAN
85. Private VLAN
86. MLD snooping proxy
87. ZyXEL One Network (ZON)
88. ZyXEL Neighbor Management

Enhanced Features:

None

Bug Fix:

1. Download tech-support all cause DUT crash.

Known Issue:

1. Ingress rate limit of TCP traffic might have inaccuracy with some criteria.
2. Fake IP traffic cannot be filtered when a static IP binding existed.
3. The cable length resolution of Cable Diagnostic is about +-15 meter.
4. The fault distance of Cable Diagnostic is less than 1 meter without cable inserted.
5. When RSTP is enabled with ring topology, LACP can't be activated at the same ports.

Limitation of Settings:

1.	802.1Q Static VLANs	1K
2.	Static MAC forwarding entry	256
3.	MAC filtering entry	256
4.	Cluster member	24
5.	Protocol based VLAN entries per port	7
6.	Port-security max address-limit number	16K
7.	Syslog server entry	4
8.	IP source guard entry	512
9.	IP subnet based VLAN entry	16
10.	DHCP snooping binding table	16K
11.	Multicast group	1024
12.	ACL	256
13.	DHCP Entry	16
14.	Trunk groups	8
15.	Per trunk group port number	8
16.	MSTP instance	0-15
17.	MAC-based VLAN	50
18.	Voice VLAN OUI entry	6
19.	ZON neighbor per-port maximum clients	10

Firmware Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Firmware:

```
C:\> ftp <GS1920-48 IP address>
User : admin
Password: 1234
230 Logged in
ftp> put 410AANZ3C0.bin ras-0
ftp> bye
```

```
Where
  • User name: the management user name, admin by default.
  • Password: the management password, 1234 by default.
  • 410AANZ3C0.bin: the name of firmware file you want to upgrade.
  • ras-0: the internal firmware name in GS1920-48 (store at first
      flash).
  • ras-1: the internal firmware name in GS1920-48 (store at second
      flash).
```

Configuration Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Configuration:

```
C:\> ftp <GS1920-48 IP address>
User name: admin
Password: 1234
230 Logged in
ftp> put 410AANZ3C0.rom rom-0
ftp> bye
```

```
Where
  • User name: the management user name, admin by default.
  • Password: the management password, 1234 by default.
  • 410AANZ3C0.rom: the name of configuration file you want to upgrade.
  • rom-0: the internal configuration name in GS1920-48.
```

ZyXEL GS1920-48 V4.10(AANZ.2)C0

Release Note/Manual Supplement

Date: July. 18, 2014

This document describes the features in the GS1920-48 product for its 4.10(AANZ.2)C0 release.

Support Platforms:

ZyXEL GS1920-48 V4.10(AANZ.2)C0 supports models: ZyXEL GS1920-48.

Version:

OS Version: V4.10(AANZ.2) | 07/18/2014 16:13:31
BootBase Version: V1.00 | 11/15/2013 13:59:34

Default Bootbase Setting:

ZyNOS Version	V4.10(AANZ.2)	07/18/2014 16:13:31
Bootbase Version	V1.00	11/15/2013 13:59:40
Serial Number	xxxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	GS1920-48
ZyNOS Code Model	GS1920
ZyNOS ROM address	b40a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB000033
MAC Address Quantity	51
Default Country Code	FF
Boot Module Debug Flag	00
CPLD Version	N/A
RomFile Version	27
RomFile Checksum	1bc5
ZyNOS Checksum	63cb
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
02 50 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.   44 Auto MDI/MDI-X 10Base-T/100Base-TX/1000Base-T
2.   4 dual personality GbE
3.   2 100/1000 Base-X SFP interface for uplink
4.   Locator LED
5.   16K layer 2 MAC addresses table
6.   Jumbo frame length 9K
7.   IEEE 802.1w , RSTP
8.   IEEE 802.1s , MSTP
9.   ZyXEL MRSTP

10. Rule-based bandwidth control
11. Port-based egress traffic shaping
12. IEEE 802.3x flow control.
13. DSCP to 802.1p priority mapping
14. Port-based VLAN
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18. IEEE 802.1Q dynamic VLANs
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22. Port mirroring
23. Support rate limiting, minimum step 64K both ingress and egress
24. Broadcast Storm Control
25. Layer 2 MAC filtering
26. Layer 3 IP filtering
27. Layer 4 TCP/UDP socket filtering
28. DHCP snooping
29. DHCP client
30. DHCP relay/DHCP relay per VLAN
31. DHCP option 82
32. IGMP v1/v2/v3 snooping
33. Static multicast forwarding
34. 802.1x port authentication
35. Port Security
36. Static MAC filtering/forwarding
37. Multiple RADIUS servers
38. Multiple TACACS+ servers
39. AAA by RADIUS / TACACS+
40. Intrusion Lock
41. MAC Freeze
42. ARP Inspection
43. Static IP/MAC/Port binding
44. Policy-based security filtering
45. IEEE 802.1Q VLAN port isolation
46. IP Source Guard
47. Guest VLAN
48. ACL packet filtering
49. PPPoE IA and option 82
50. CPU protection
51. Recovery mechanism for Error disable port/reason
52. Loop guard
53. Dual configuration files
54. Dual images
55. IGMP snooping fast leave
56. IGMP snooping statistics
57. IGMP throttling
58. SNMP v1, v2c, v3
59. SNMP trap group
60. Interface related trap can be enable/disable by port
61. ICMP echo/echo reply
62. Syslog
63. DHCPv6 client and relay
64. NDP: host
65. IPv6 address stateless auto-configuration
66. ZyXEL clustering management
67. Management through SNMP or Web management
68. Firmware upgrade by WEB / FTP
69. Configuration saving and retrieving by WEB / FTP

70. Configure Clone
71. Daylight Saving
72. NTP
73. Service Access Control Timeout
74. IEEE 802.1AB LLDP
75. IEEE 802.1AB LLDP-MED
76. Password encryption
77. User access right
78. ZyXEL ESBU common MIB
79. Green Ethernet
80. Cable diagnostics
81. Support PoE Fault Trap
82. MAC aging time

Enhanced Features:

1. MAC-based VLAN
2. Voice VLAN
3. Private VLAN
4. MLD snooping proxy
5. ZyXEL One Network (ZON)
6. ZyXEL Neighbor Management
7. LLDP enabled by default

Bug Fix:

1. LACP sync fail but still can ping to device from LACP port.
2. Set MIB traceroute IP address entry, the IP address could not set successfully.
3. In web page, when setting ipv6 and dhcpv6 client information refresh minimum to 4294967295 seconds, it could not apply successfully.
4. In spanning tree and static trunk environment, the host's mac will be learned to wrong port.
5. Send two LLDP packets (with system description length = 255) to an LLDP enabled port will cause DUT crash.
6. User can't be authorized when privilege of account is Cisco attribute and privilege level is 15.
7. LLDP-MED doesn't work with some IP phones.
8. When enable trunk and group two or more ports, and then just link up one of these ports, DUT sends out those LLDP packets which is in the trunk group from the link-up port.
9. If subtype of remote Port ID is mac-address. It can't be showed on LLDP remote device information.
10. When we use ipv6 link-local URL to access the switch web UI on windows XP, pages with indirect URL are inaccessible. User cannot access the error.html when configuration is wrong.
11. When enabled IGMP snooping, IGMP general query received by DUT will be replaced with its own source mac.
12. Fix IGMP snooping group-specific queries(GSQ) with source MAC address 00: 00: 00: 00: 00: 00.

Known Issue:

1. Ingress rate limit of TCP traffic might have inaccuracy with some criteria.
2. Fake IP traffic cannot be filtered when a static IP binding existed.
3. The cable length resolution of Cable Diagnostic is about +-15 meter.
4. The fault distance of Cable Diagnostic is less than 1 meter without cable inserted.

Limitation of Settings:

1. 802.1Q Static VLANs   1K
2. Static MAC forwarding entry   256
3. MAC filtering entry   256

4.	Cluster member	24
5.	Protocol based VLAN entries per port	7
6.	Port-security max address-limit number	16K
7.	Syslog server entry	4
8.	IP source guard entry	512
9.	IP subnet based VLAN entry	16
10.	DHCP snooping binding table	16K
11.	Multicast group	1024
12.	ACL	256
13.	DHCP Entry	16
14.	Trunk groups	8
15.	Per trunk group port number	8
16.	MSTP instance	0-15
17.	MAC-based VLAN	50
18.	Voice VLAN OUI entry	6
19.	ZON neighbor per-port maximum clients	10

Firmware Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Firmware:

```
C:\> ftp <GS1920-48 IP address>
User : admin
Password: 1234
230 Logged in
ftp> put 410AANZ2C0.bin ras-0
ftp> bye


Where
```
  - User name: the management user name, admin by default.
  - Password: the management password, 1234 by default.
  - 410AANZ2C0.bin: the name of firmware file you want to upgrade.
  - ras-0: the internal firmware name in GS1920-48 (store at first flash).
  - ras-1: the internal firmware name in GS1920-48 (store at second flash).
```

## *Configuration Upgrade:*

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

### Upgrade GS1920-48 Configuration:

```
C:\> ftp <GS1920-48 IP address>
User name: admin
Password: 1234
230 Logged in
ftp> put 410AANZ2C0.rom rom-0
ftp> bye
```

Where
- User name: the management user name, admin by default.
- Password: the management password, 1234 by default.
- 410AANZ2C0.rom: the name of configuration file you want to upgrade.
- rom-0: the internal configuration name in GS1920-48.

ZyXEL GS1920-48 V4.10(AANZ.1)C0

Release Note/Manual Supplement

Date: May. 21, 2014

This document describes the features in the GS1920-48 product for its 4.10(AANZ.1)C0 release.

Support Platforms:

ZyXEL GS1920-48 V4.10(AANZ.1)C0 supports models: ZyXEL GS1920-48.

Version:

OS Version: V4.10(AANZ.1) | 05/21/2014 10:58:10
BootBase Version: V1.00 | 11/15/2013 13:59:34

Default Bootbase Setting:

ZyNOS Version	V4.10(AANZ.1)	05/21/2014 10:58:10
Bootbase Version	V1.00	11/15/2013 13:59:40
Serial Number	xxxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	GS1920-48
ZyNOS Code Model	GS1920
ZyNOS ROM address	b40a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB000033
MAC Address Quantity	51
Default Country Code	FF
Boot Module Debug Flag	00
CPLD Version	N/A
RomFile Version	27
RomFile Checksum	1bc5
ZyNOS Checksum	5ded
SNMP MIB level & OID	0601020304050607080910111213141516171181920
Main Feature Bits	C0
Other Feature Bits	
02 50 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.   44 Auto MDI/MDI-X 10Base-T/100Base-TX/1000Base-T
2.   4 dual personality GbE (100/1000Base-X SFP + 100/1000Base-T, Auto MDI/MDI-X) interfaces for uplink
3.   2 100/1000 Base-X SFP interface for uplink
4.   PWM Fan module (1 fans)
5.   Support 100M/1000M mini GBIC interface
6.   LED indications for link status (Locator LED)
7.   16K layer 2 MAC addresses table
8.   9K jumbo frame

9. IEEE 802.1w Rapid Spanning Tree Protocol, RSTP
10. IEEE 802.1s Multiple Spanning Tree Protocol, MSTP
11. MRSTP
12. 802.1p with 8 CoS per port. SPQ, WRR, and WFQ, SPQ/WFQ combination capable
13. Rule-based bandwidth control (ingress traffic metering/dropping 64Kb stepping)
14. Port-based egress traffic shaping
15. IEEE 802.3x flow control.
16. DSCP to 802.1p priority mapping
17. Port-based VLAN
18. Protocol-based VLAN [exclusive with Guest VLAN]
19. IP subnet based VLAN [exclusive with Guest VLAN]
20. IEEE 802.1Q tag-based VLAN
21. IEEE 802.1Q Static VLANs
22. IEEE 802.1Q dynamic VLANs
23. GVRP for dynamic registration
24. IEEE 802.3ad LACP LACP algorithm of Source-MAC/Source-IP/Destination-MAC/Destination-IP/Source-Destination-MAC/Source-Destination-IP (per system support choose 4 hash algorithm)
25. Port mirroring (mirror for CPU port)
26. Support rate limiting, minimum step 64K both ingress and egress
27. Broadcast Storm Control 1pps stepping (Broadcast, Multicast, DLF storm control)
28. Layer 2 MAC filtering
29. Layer 3 IP filtering
30. Layer 4 TCP/UDP socket filtering
31. Support rate limit per IP/TCP/UDP per port
32. DHCP client
33. DHCP relay/DHCP relay per VLAN
34. DHCP option 82
35. IGMP snooping per VLAN (IGMPv1/v2/v3 up to 16 VLAN user configurable), up to 1K groups
36. Static multicast forwarding
37. 802.1x port authentication
38. Port Security
39. Static MAC filtering/forwarding
40. Multiple RADIUS servers
41. Multiple TACACS+ servers
42. AAA by RADIUS / TACACS+ (Backup round robin mode TACACS+ server)
43. 802.1x VLAN and bandwidth assignment by RADIUS
44. Intrusion Lock
45. MAC Freeze
46. DHCP snooping
47. ARP Inspection
48. Static IP/MAC binding
49. Policy-based security filtering
50. IEEE 802.1Q VLAN port isolation
51. IP Source Guard
52. Guest VLAN (port based/MAC based)[5 MAC Per port, exclusive with protocol-based & IP subnet-based VLAN]
53. ACL packet filtering (IPv4/IPv6)
54. PPPoE-IA (with option82)
55. CPU protection (ARP/IGMP/BPDU, inactive port/inactive reason/rate-limitation)
56. CPU protection, Error disable over rate limit with lower priority
57. Recovery mechanism for error-disabled port/reason
58. IEEE 802.1D transparent bridging
59. Loop guard
60. Dual configuration files
61. Dual RAS images
62. VLAN trunking
63. L2 Multicast
64. IGMP snooping (v1,v2,v3)
65. IGMP snooping fast leave

66. IGMP snooping statistics
67. IGMP snooping immediate leave
68. IGMP throttling
69. IGMP proxy mode & snooping mode selection
70. Configurable IGMP snooping timer and priority
71. IGMP snooping group client (add client up time field for display)
72. SNMP v1, v2c, v3
73. SNMP trap group
74. SNMP interface related trap can be enable/disable by port
75. ICMP echo/echo reply
76. Syslog
77. RFC 2464 IPv6 over Ethernet
78. RFC 4291 IPv6 addressing architecture
79. RFC 4213 Dual stack
80. RFC 4884 ICMPv6
81. RFC 1981 Path MTU
82. RFC 5905 Minimum Path MTU size of 1280
83. RFC 4861 Neighbor Discovery
84. Encapsulation for minimum PMTU size of 1500
85. DHCPv6 client and relay
86. NDP: host
87. IPv6 address stateless auto-configuration: host and router
88. ZyXEL clustering management (iStacking)
89. Management through SNMP or Web management
90. Firmware upgrade by WEB / FTP
91. Configuration saving and retrieving by WEB / FTP
92. Configure Clone
93. Daylight Saving
94. NTP
95. Service Access Control Timeout
96. IEEE 802.1ab Link Layer Discovery Protocol, LLDP
97. IEEE 802.1ab LLDP-MED
98. Password encryption
99. User access right
100. RFC 1757   RMON group 1,2,3,9 MIB
101. RFC 1066   TCP/IP-based MIB
102. RFC 1213, 1157 SNMPv2c/v3 MIB
103. RFC 1493   bridge MIB
104. RFC 1643   Ethernet MIB
105. RFC 2011,2012,2013   SNMP MIB
106. RFC 2233   SMI MIB
107. RFC 2358   Ethernet-like MIB
108. RFC 2674   bridge MIB extension
109. RFC 2819, 2925 Remote management MIB
110. RFC 4293   MIB for IP
111. RFC 4292   IP forwarding table MIB
112. RFC 4022   MIB for TCP
113. RFC 4113   MIB for UDP
114. ZyXEL ESBU common MIB
115. Standard Ping MIB, IP address format 192 168 1 1 -> c0 a8 01 01
116. Green Ethernet (Port 49、50 not support)
117. Cable diagnostics
118. Support PoE Fault Trap
119. Self adjust fan speed control
120. MAC Quantity in MRD
121. MAC aging time

Enhanced Features:

None

Bug Fix:

1. Improve the manufacturing efficiency, no feature changed.

Known Issue:

1. Policy rule: for the ARP/RARP packet, policy rule qualifies the sender MAC address, not the source MAC address.
2. IP source guard: creates a legal static IP source binding first, and then send illegal IP traffic (the same MAC address but different IP address). DUT cannot filter the illegal IP traffic.
3. Green Ethernet: short reach does not support display short reach status.
4. RSTP: enable RSTP and connect with D-Link, DUT would run STP state machine.
5. MSTP: When set port to be non-edge port, the port's MSTP state changes immediately from discarding->forwarding.
6. Cable diagnostic: the accuracy of cable diagnostic is +15m ~ -15m. And plug out the cable line, the value of distance to fault would not be 0.00.

Limitation of Settings:

1. 802.1Q Static VLANs   1K
2. Static MAC forwarding entry   256
3. MAC filtering entry   256
4. Cluster member   24
5. Protocol based VLAN entries per port   7
6. Port-security max address-limit number   16K
7. Syslog server entry   4
8. IP source guard entry   512
9. IP subnet based VLAN entry   16
10. DHCP snooping binding table   16K
11. Multicast group   1024
12. ACL   256
13. DHCP Entry   16
14. Trunk groups   8
15. Per trunk group port number   8
16. MSTP instance   0-15

Firmware Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Firmware:

```
C:\> ftp <GS1920-48 IP address>
User : admin
Password: 1234
230 Logged in
ftp> put 410AANZ1C0.bin ras-0
ftp> bye


Where
  • User name: the management user name, admin by default.
```

- `Password:` the management password, 1234 by default.
- `410AANZ1C0.bin:` the name of firmware file you want to upgrade.
- `ras-0:` the internal firmware name in GS1920-48 (store at first flash).
- `ras-1:` the internal firmware name in GS1920-48 (store at second flash).

Configuration Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

Upgrade GS1920-48 Configuration:

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C:\> ftp <GS1920-48 IP address>
User name: admin
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ftp> put 410AANZ1C0.rom rom-0
ftp> bye


Where
```
- `User name:` the management user name, admin by default.
- `Password:` the management password, 1234 by default.
- `410AANZ1C0.rom:` the name of configuration file you want to upgrade.
- `rom-0:` the internal configuration name in GS1920-48.

ZyXEL GS1920-48 V4.10(AANZ.0)C0

Release Note/Manual Supplement

Date: Dec. 25, 2013

This document describes the features in the GS1920-48 product for its 4.10(AANZ.0)C0 release.

Support Platforms:

ZyXEL GS1920-48 V4.10(AANZ.0)C0 supports models: ZyXEL GS1920-48.

Version:

OS Version: V4.10(AANZ.0) | 12/25/2013 17:32:38
BootBase Version: V1.00 | 11/15/2013 13:59:34

Default Bootbase Setting:

ZyNOS Version	V4.10(AANZ.0)	12/25/2013 17:32:38
Bootbase Version	V1.00	11/15/2013 13:59:40
Serial Number	xxxxxxxxxxxxxxx
Vendor Name	ZyXEL
Product Model	GS1920-48
ZyNOS Code Model	GS1920
ZyNOS ROM address	b40a0000
System Type	8
First MAC Address	0019CB000001
Last MAC Address	0019CB000033
MAC Address Quantity	51
Default Country Code	FF
Boot Module Debug Flag	00
CPLD Version	N/A
RomFile Version	27
RomFile Checksum	1bc5
ZyNOS Checksum	d13c
SNMP MIB level & OID	060102030405060708091011121314151617181920
Main Feature Bits	C0
Other Feature Bits	
02 50 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.   44 Auto MDI/MDI-X 10Base-T/100Base-TX/1000Base-T
2.   4 dual personality GbE (100/1000Base-X SFP + 100/1000Base-T, Auto MDI/MDI-X) interfaces for uplink
3.   2 100/1000 Base-X SFP interface for uplink
4.   PWM Fan module (1 fans)
5.   Support 100M/1000M mini GBIC interface
6.   LED indications for link status (Locator LED)
7.   16K layer 2 MAC addresses table
8.   9K jumbo frame

9. IEEE 802.1w Rapid Spanning Tree Protocol, RSTP
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12. 802.1p with 8 CoS per port. SPQ, WRR, and WFQ, SPQ/WFQ combination capable
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22. IEEE 802.1Q dynamic VLANs
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25. Port mirroring (mirror for CPU port)
26. Support rate limiting, minimum step 64K both ingress and egress
27. Broadcast Storm Control 1pps stepping (Broadcast, Multicast, DLF storm control)
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36. Static multicast forwarding
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40. Multiple RADIUS servers
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42. AAA by RADIUS / TACACS+ (Backup round robin mode TACACS+ server)
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44. Intrusion Lock
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51. IP Source Guard
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54. PPPoE-IA (with option82)
55. CPU protection (ARP/IGMP/BPDU, inactive port/inactive reason/rate-limitation)
56. CPU protection, Error disable over rate limit with lower priority
57. Recovery mechanism for error-disabled port/reason
58. IEEE 802.1D transparent bridging
59. Loop guard
60. Dual configuration files
61. Dual RAS images
62. VLAN trunking
63. L2 Multicast
64. IGMP snooping (v1,v2,v3)
65. IGMP snooping fast leave

66. IGMP snooping statistics
67. IGMP snooping immediate leave
68. IGMP throttling
69. IGMP proxy mode & snooping mode selection
70. Configurable IGMP snooping timer and priority
71. IGMP snooping group client (add client up time field for display)
72. SNMP v1, v2c, v3
73. SNMP trap group
74. SNMP interface related trap can be enable/disable by port
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76. Syslog
77. RFC 2464 IPv6 over Ethernet
78. RFC 4291 IPv6 addressing architecture
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81. RFC 1981 Path MTU
82. RFC 5905 Minimum Path MTU size of 1280
83. RFC 4861 Neighbor Discovery
84. Encapsulation for minimum PMTU size of 1500
85. DHCPv6 client and relay
86. NDP: host
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117. Cable diagnostics
118. Support PoE Fault Trap
119. Self adjust fan speed control
120. MAC Quantity in MRD
121. MAC aging time

Enhanced Features:

None

Bug Fix:

None

Known Issue:

1. Policy rule: for the ARP/RARP packet, policy rule qualifies the sender MAC address, not the source MAC address.
2. IP source guard: creates a legal static IP source binding first, and then send illegal IP traffic (the same MAC address but different IP address). DUT cannot filter the illegal IP traffic.
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4. RSTP: enable RSTP and connect with D-Link, DUT would run STP state machine.
5. MSTP: When set port to be non-edge port, the port's MSTP state changes immediately from discarding->forwarding.
6. Cable diagnostic: the accuracy of cable diagnostic is +15m ~ -15m. And plug out the cable line, the value of distance to fault would not be 0.00.

Limitation of Settings:

1.	802.1Q Static VLANs	1K
2.	Static MAC forwarding entry	256
3.	MAC filtering entry	256
4.	Cluster member	24
5.	Protocol based VLAN entries per port	7
6.	Port-security max address-limit number	16K
7.	Syslog server entry	4
8.	IP source guard entry	512
9.	IP subnet based VLAN entry	16
10.	DHCP snooping binding table	16K
11.	Multicast group	1024
12.	ACL	256
13.	DHCP Entry	16
14.	Trunk groups	8
15.	Per trunk group port number	8
16.	MSTP instance	0-15

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Upgrade GS1920-48 Firmware:

```
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User : admin
Password: 1234
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ftp> bye


Where
  • User name: the management user name, admin by default.
```

- Password: the management password, 1234 by default.
- 410AANZ0C0.bin: the name of firmware file you want to upgrade.
- ras-0: the internal firmware name in GS1920-48 (store at first flash).
- ras-1: the internal firmware name in GS1920-48 (store at second flash).

Configuration Upgrade:

The GS1920-48 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 GS1920-48. The upgrade procedure is as follows:

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- Password: the management password, 1234 by default.
- 410AANZ0C0.rom: the name of configuration file you want to upgrade.
- rom-0: the internal configuration name in GS1920-48.