

Ethernet Switch Setup for Q-Sys

TPLink TL-SG2216, TL-SG2424, and TL-SG2424P

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Firmware:

These are low-cost switches that do not have many advanced features, but do work reliably in maintaining the QoS protection that QLAN requires. The switch does feature IGMP Snooping, but does not have the necessary IGMP Querier which is required to make IGMP work. If you have another device on the network serving as an IGMP v2 Querier, then the IGMP Snooping in this switch works well.

1. The default IP of the switch is 192.168.0.1 and the username and password are both 'admin'. Go the web interface of the switch, once you have adjusted your PC's IP address to be on this subnet.
2. Click on QoS in the left-hand menu and then "DiffServ" beneath that.
3. On the top tabs, click DSCP Priority.
4. Under the 'DSCP Priority Config' section, change 'DSCP Priority' to Enable and click 'Apply.'
5. Now, in the Priority Level section, change every DSCP value from 48 to 63 to be 'CoS5.' You must apply the priority to each DSCP value one-at-a-time and then click 'Apply.'



When this step is complete, the table will show 'CoS5' for all values between 48 and 63.

6. For DSCP value 34, choose 'CoS6' and click 'Apply.'
7. For DSCP value 46, choose 'CoS7' and click 'Apply.'
8. Click on the '802.1P/CoS mapping' tab.
9. Similar to the way you changed the DSCP to Priority previously, change 'Tag-id/CoS-id' 4 and 5 to TC1 and click 'Apply' after each ID.
10. Change 'Tag-id/CoS-id' 6 to 'TC2' and click 'Apply.'

11.

Priority and CoS-mapping Config

Tag-id/CoS-id: Queue TC-id:

Tag-id/CoS-id	Queue TC-id	Tag-id/CoS-id	Queue TC-id
0	TC1	1	TC0
2	TC0	3	TC1
4	TC1	5	TC1
6	TC2	7	TC3

12. Click on the 'Schedule Mode' tab.

13. Change Schedule Mode to 'SP-Mode' and click 'Apply.' (FYI, 'SP-Mode' = Strict Priority)

14. To save the settings, click 'Save Config' in the left-hand menu.

15. You should save a copy of the configuration settings by choosing the 'System Tools' item under the 'System' menu on the left side. Then choose the 'Config Backup' tab.

This switch does not feature an IGMP Querier, which is necessary to allow IGMP Snooping to function properly. Therefore, this guide will not cover how to enable IGMP Snooping. If there is an IGMP v2 Querier somewhere on the VLAN attached to this switch, then IGMP Snooping can be engaged to filter foreign multicast traffic from Q-Sys (and vice-versa).

A word of warning: You must save a copy of your configuration prior to upgrading firmware. The firmware update process returns the switch to the factory defaults. You can easily restore a copy of your configuration after the firmware update to recover your settings.