

## Quick Installation Guide

This installation guide gives step-by-step instructions about how to install Express Plus Ethernet Switch: LB9019A-R2

- As with any electric device, you should place the equipment where it will not be subjected to extreme temperatures, humidity, or electromagnetic interference.
- The switch can sit on desktop or any flat surface with adequate space and ventilation. If you want to place it onto a shelf, make sure the shelf can withstand the weight of the switch.
- Connect one end of the cable to the switch and the other end to a desired device when both the power of the switch and end devices is turned off.
- Connect the AC power cord and attach the plug, then turn on the switch. The power LED will come on.

## QoS (Quality of Service) Settings

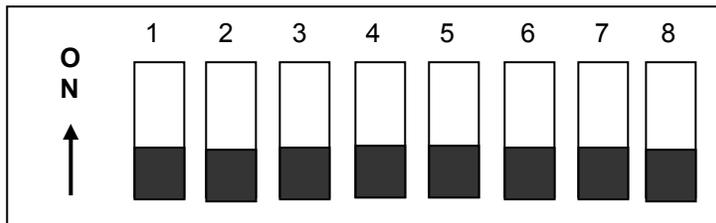


Figure 1: Default Setting of the QoS (Quality of Service) DIP Switch on the Rear Panel

There are three Priority Queues on LB9019A-R2, Normal (N), High (H), and Very High (VH) Queues.

On the rear panel of the switch, there are eight pins on the DIP Switch for QoS (Quality of Service) Settings.

- Toggle ON Pin 1 to enable Port based QoS on Port 1.
- Toggle ON Pin 2 to enable Port based QoS on Port 2.
- Toggle ON Pin 3 to enable Port based QoS on Port 3.
- Toggle ON Pin 4 to enable Port based QoS on Port 4.
- Toggle ON Pin 5 to enable Port based QoS on Port 5.
- Toggle ON Pin 6 to enable Port based QoS on Port 6.
- Toggle ON Pin 7 to enable layer 2 VLAN Tagging QoS.
- Toggle ON Pin 8 to enable layer 3 IP Header QoS.
- There is no DIP Switch pin for Port based QoS on Port 7 through Port 16.

### CUSTOMER SUPPORT INFORMATION

Order toll-free in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: 877-877-BBOX  
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If none of the DIP Switch pins are toggled ON, all packets are sent to the Normal Queue.

If PIN 1 or 2 is ON, Port 1 or 2 is set to VH priority. All packets entering these two ports are sent to Very High Queue.

If PIN 3, 4, 5, or, 6 is ON, the corresponding port is set to H priority. All packets entering these ports are sent to High Queue.

There is no pin for Port 7 through Port 16. These ports have default port-based priority set to Normal. Packets entering these ports are sent to Normal Queue.

If PIN 7 is ON, the 3-bit CoS of tagged VLAN will decide which queue the packet to join. Packets with CoS (Class-of-Service) bits of 000(or 0) are sent to Normal Queue, 001(or 1) to High Queue, and 010 or higher (2 or higher) to Very High Queue.

If PIN 8 is ON, the ToS (Type-of-Service) byte in IP header will decide which queue the packet to join. Packets with ToS value 0-63 are sent to Normal Queue, 64-127 to High Queue, and 128-255 to Very High Queue.

If there is more than one applicable priority setting on a packet, the setting with the highest priority will take effect.

The bandwidth distribution can be observed in the table below:

Priority Queues If Empty	Transmission Bandwidth Allocation		
	Normal (Low) Priority	High Priority	Very High Priority
Normal	X	33%	67%
High	11%	X	89%
Very High	20%	80%	X
None	8%	30%	62%

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