Layer 2 switch.

Layer 2 which operates in data link layer of OSI reference model. It uses the mac address to communicate within the device from the same network. Layer 2 switch is a single broadcast domain. It only can communicate within the same network only. Layer 2 switch is faster as compare to layer 3 switch. Where faster means quickly transfer the packet to its destination.

Features and types of layer 2 switch are::

1. Store and forward:

Whenever the data reaches to the switch first it store the data and check whether there is error in the data or not if it doesn’t find any error in the message then it forward to the destination.

It has a high reliability.

1. Cut through switch

In cut through there in no error checking so it is fast. Data is directly forward to its destination.

1. Fragment free cut through switch

Switch store then forward the data while frame gets any error .

Layer 3 switch

Layer 3 switch can do both switching and routing. It uses ip address to link different subnet together using a dynamic routing protocol. Layer 3 switch is a multiple broadcast domain. Device can communicate within or outside the network. It takes time to examine the data packet before sending to their destination.

The benefits of layer 3 switch are:

* Simplify security management
* Reduce broadcast traffic volume
* Easier VLAN configuration process
* Support Inter-VLAN routing
* Separate routing tables
* Reduce effort and time in troubleshooting