



### Layer 2 functions

Port configuration	<ul style="list-style-type: none"> <li>Auto-negotiation</li> <li>Flow Control</li> <li>Port Mirror: TX/RX/BOTH; Many-to-1 monitor</li> <li>CPU Mirror</li> <li>Traffic statistics</li> </ul>
Link Aggregation	<ul style="list-style-type: none"> <li>Static link aggregation</li> <li>LACP (Dynamic Trunk/Static Trunk)</li> <li>Algorithm based on Source/Destination MAC</li> <li>Algorithm based on Source/Destination IP</li> </ul>
MAC Table	<ul style="list-style-type: none"> <li>Aging Time</li> <li>Static MAC address</li> <li>Dynamic MAC address management</li> </ul>
VLAN	<ul style="list-style-type: none"> <li>4094 Active VLANs</li> <li>4094 VID</li> <li>802.1Q Tag VLAN</li> <li>Port VLAN</li> <li>Protocol VLAN</li> <li>MAC VLAN</li> <li>Voice VLAN</li> <li>802.1ad Q-in-Q tunneling</li> <li>Private VLAN (Protected port)</li> <li>GARP/GVRP</li> </ul>
ACL	<ul style="list-style-type: none"> <li>256ACLs</li> <li>L2, L3 e L4</li> <li>Time-based ACL</li> <li>IP ACL</li> <li>MAC ACL</li> <li>MAC-IP ACL</li> <li>User-Defined ACL</li> <li>ICMPv6</li> </ul>
Spanning tree	<ul style="list-style-type: none"> <li>802.1D Spanning Tree Protocol (STP)</li> <li>802.1w Rapid Spanning Tree Protocol (RSTP)</li> <li>802.1s Multiple Spanning Tree Protocol (MSTP)</li> <li>Loop Guard</li> <li>Root Guard</li> <li>TC-BPDU Guard</li> <li>BPDU Guard</li> <li>BPDU Filter</li> </ul>
Ring Protection	<ul style="list-style-type: none"> <li>&lt;20ms G.8032 ERPS Ring</li> <li>Fast Ring</li> <li>LINKOH Ring, &lt; 20ms</li> </ul>
Multicast	<ul style="list-style-type: none"> <li>256 groups</li> <li>IGMP v1/v2/v3 Snooping, Fast Leave</li> <li>MLD Snooping</li> <li>Multicast VLAN</li> <li>IGMP filter</li> <li>MVR</li> <li>Multicast Routing</li> </ul>
QOS	<ul style="list-style-type: none"> <li>8 mapping IDs to 8 level priority queues</li> <li>CoS port-based</li> </ul>

## Management Function List

	<p>CoS 802.1p-based          CoS DSCP-based          Scheduling algorithms SP, WRR, SP+WRR          Storm Control (Broadcast, Multicast, Unknown Unicast)          Bandwidth control per port          SWRR, DWRR for Scheduling          Flow Redirect          Precedence          TOS          Rate Limiting (Ingress/Egress)          Stri Priority</p>
Security Features	<p>Port Security          MAC address filter          ARP Association (Manual, ARP scanning, DHCP snooping)          ARP Protection          AAA          DAI          DoS (Denial of Service)          Classification of packages based on: End.MAC, IP End, TCP / UDP Ports,          Protocol Type;          802.1x Authentication (port-based e MAC-based)          TACACS/TACACS+ Authentication          RADIUS Authentication          DHCP Filter          Guest VLAN          SSLv2/SSLv3/TLSv1          SSHv1/SSHv2          Restriction of WEB access based on: IP Address, And. MAC and Port;          Port Isolation          Loopback detection</p>
Management	<p>SNMP v1/v2c/v3 with Full Private MIBs          RMON 4 groups          WEB (HTTP/HTTPS)          CLI (Telnet, Console, SSHv1/v2)          Firmware upgrade via console/web/TFTP          Configuration Backup/Reload          Dual Firmware          LLDP          Configuration Export/Import          CDP Aware          OAM (IEEE802.3ah)          CFM (IEEE802.1ag)          sFlow          Telnet Client</p>
Synchronization, IEEE1588	<p>Support IEEE1588v2 transparent clock</p>
Other Features	<p>DNS Client          DHCP Relay          DHCP Client          DHCP Snooping          DHCP Option 66          DHCP Option 67          DHCP Option 82          NTP/SNTP Client</p>

## Management Function List

	UPNP UDLD
PoE management	Total PoE power budget control Per port PoE function enable/disable PoE admin-mode control PoE port power feeding priority Per PoE port power limitation PD classification detection PD alive check PoE schedule Soft-reboot PoE Non-stop
Maintenance	Cable Diagnostics Ping SFP DDM (Digital Diagnostics Monitoring) Thermal protection System log (Local and Remote) Memory and CPU Monitoring Tracert/ Tracert 6

### Layer 3 functions

Static Routing	IPv4 Unicast: Static Routing (Software and Hardware Base) IPv6 Unicast: Static Routing (Software and Hardware Base)
IPV6	IPv6 neighbor discovery (ND) Path maximum transmission unit (MTU) discovery Internet Control Message Protocol (ICMP) version 6 TCPv6/UDPv6 Ping6 Telnet(v6) Http/Https Interface IPV6 ACL IPV6
Dynamic Routing	RIP V1/V2 OSPF V2/V3 VRRP V2 IPv4 ISIS IPv4 BGP

**Remarks:** If Non-PoE model, then there is no PoE management function.