

SG8800 Series High-density Terabit Core Switching OLT

Data Sheet

SG8800 series are designed for high-density access switching integrated platform which

combine multi-service and high-density 10G xPON OLT requirement, they are deployed

for high-density xPON OLT as carrier broadband access network.SG8800 series have the

unique half-size slot service cards for the highest density EPON/GPON/10GE/10GEPON

port and terabit switching net can provide the ability of 40/100G future upgrade switching

and smooth upgrade access platform. SG8800 series have the first innovation processing

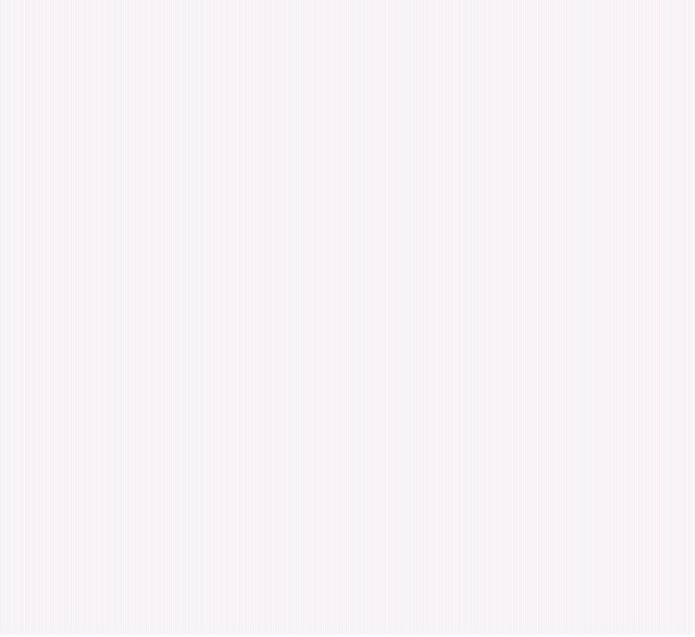
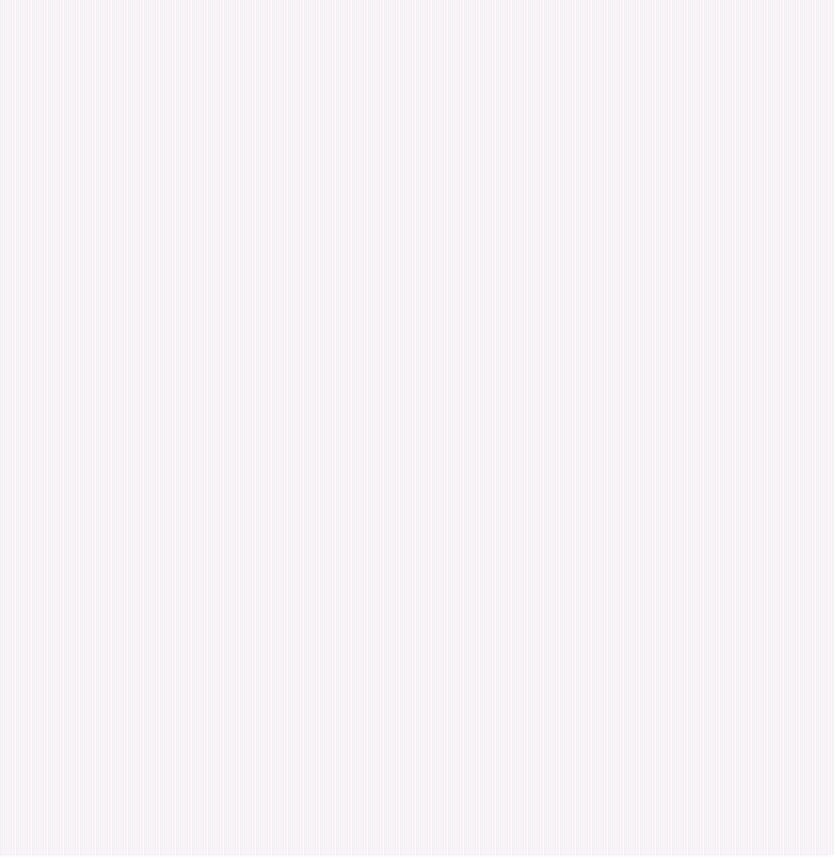
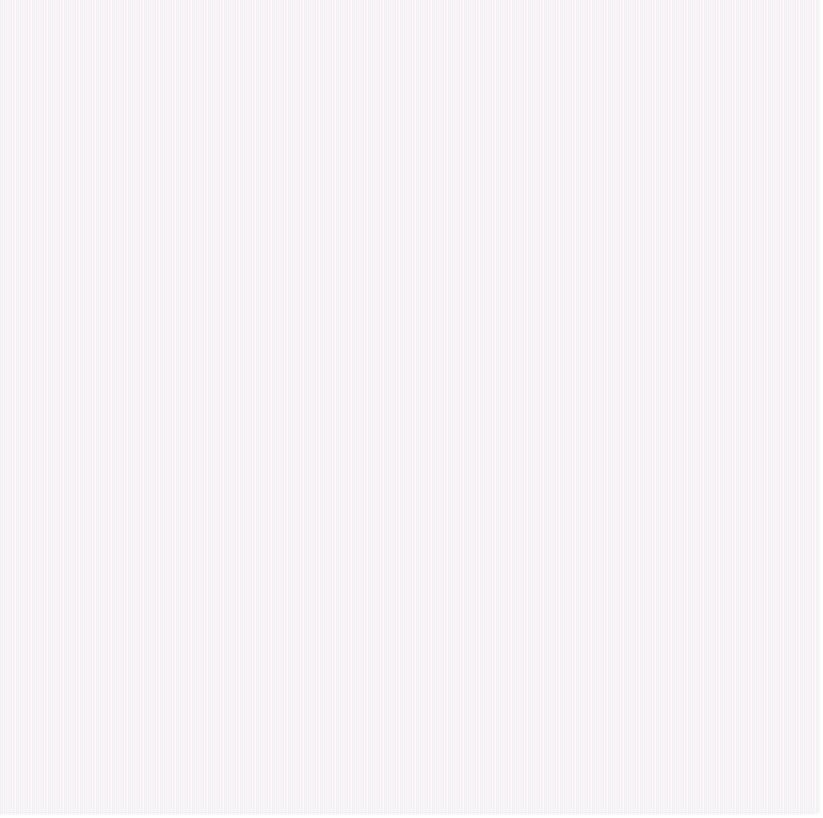
architecture with fully distributed based on 64-bit multi-core processors and high

performance AISC. They can provide IPv4/IPv6 wire-speed transferring capacity and be

widely used on the IP MANs of carriers, WANs and MANs of enterprises, egress, core

layer, and convergence layer of enterprise

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□ 1+1 master control redundancy,1+1power supply

redundancy

□ 7U compact design, half-size serve slots

□ IPv4/IPv6 and MPLS hardware line speed

□ 4U compact design, half-size serve slots

SG8800-4

□ Hot plug fan chassis, intelligent speed and

temperature control

□ 6slots，2 main control cards,4 line cards

□ Maximum support 32\*GPON and 32\*GE

□ Support EPON/10GEPON mixed insertion for

future new cards

□ 1.6Tbps widely backplane capacity and smooth

upgrade to 40G/100G

□ IPv4/IPv6 and MPLS hardware line speed

forwarding

□ The whole power consumption less than 350W

SG8800-8

□ 1+1 master control redundancy,1+1power supply

redundancy

□ Hot plug fan chassis, intelligent speed and

temperature control

□ 10slots，2 main control cards,8 line cards

□ Maximum support 64\*EPON and 64\*GE

□ Support EPON/10GEPON mixed insertion for future

new cards

□ 3.2Tbps widely backplane capacity and smooth

upgrade to 40G/100G

SG8800-16

forwarding

□ 15U compact design, half-size serve slots

□ 1+1 master control redundancy,2+2power supply

redundancy

□ Hot plug fan chassis, intelligent speed and

temperature control

□ 18slots，2 main control cards,16 line cards

□ Maximum support 128\*EPON and 128\*GE

□ Support EPON/10GEPON mixed insertion for future

new cards

□ 6.4Tbps widely backplane capacity and smooth

upgrade to 40G/100G

□ IPv4/IPv6 and MPLS hardware line speed

forwarding

□ The whole power consumption less than1200W

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Product Specification:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | | **SG8800-4** | | **SG8800-8** | **SG8800-16** |
| Back-plane Capacity | | >1.6Tbps | | >3.2Tbps | >6.4Tbps |
| Switching Capacity | | 960Gbps | | 1.6Tbps | 3.2Tbps |
| Throughput | | 720Mpps | | 1440Mpps | 2860Mpps |
| (IPv4/IPv6) | |
| Number of slots | | 6 | | 10 | 18 |
| Number of service | | 4 | | 8 | 16 |
| board slots | |
| Service | EPON | 32\*EPON,24\*GE | | 64\*EPON,48\*GE | 128\*EPON,96\*GE |
| GPON | 32\*GPON,32\*GE | | 64\*GPON,64\*GE | 128\*GPON,128\*GE |
| Port |
| Switch | 96\*GE,32\*10GE | | 192\*GE,64\*10GE | 384\*GE,128\*10GE |
| Redundancy Design | | 1+1 power redundancy | | 1+1 power redundancy | 2+2 power redundancy |
| 1+1 main control | | 1+1 main control | 1+1 main control |
| redundancy | | redundancy | redundancy |
| Power Supply | | AC: 90～260V，50～ | 60 | z; |  |
| DC: -36V～-72V; | |
| Power Consumption | | ≤300W | | ≤680W | ≤1200W |
| Outline Dimensions | | 442mm×176mm×420m | | 442mm×310mm×420mm | 442mm×664mm×420mm |
| (mm) (W\*D\*H) | | m | |
| Weight (In Maximum | | ≤15kg | | ≤25kg | ≤45kg |
| Configuration) | |
| Environmental | | Working temperature: 0C～40C | | | |
| Storage temperature: -40C～70C | | | |
| Parameter | |
| Relative humidity: 10%～90%，no condensing | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Attributes** | | **SG8800 series** | |
| PON Features | EPON | IEEE 802.3ah EPON | |
| China telecom/Unicom | GPON standard |
| 20Km for single fibber | |
| Access 64 terminals for single fibber PON | |
| Uplink and downlink triple churning encrypted function | |
| ONU terminal legitimacy certification, report illegal ONU registration | |
| DBA algorithm | |
| Standard OAM and extended OAM | |
| ONU batch software upgrade, fixed time upgrade, real time upgrade | |
| PON transmit and inspect receiving optical power | |

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| --- | --- | --- |
|  | GPON | Satisfy ITU -T standard |
| TR-101 compliant solution for FTTx OLT applications |
| High splitter rate, each PON port supports 32\*ONU, 96\*T-CONT |
| Maximum transmission distance of 20KM |
| Support uplink FEC, downlink FEC(Forward Error Correction) |
| ONU identifier authentication: SN /SN+PASSWD |
| Bandwidth allocation mechanism |
| 5 types of T-CONT bandwidth |
| Static Bandwidth Allocation |
| Dynamic Bandwidth Allocation |
| GPON feature parameter |
| 4096 port-IDs per GPON MAC (Downstream and Upstream) |
| 1024 Alloc -IDs per GPON MAC (Upstream ) |
| L2 Features | MAC | MAC Black Hole |
| Port MAC Limit |
| VLAN | 4K VLAN entries |
| Port-based/MAC-based/IP subnet-based VLAN |
| Port-based QinQ and Selective QinQ (StackVLAN) |
| VLAN Swap and VLAN Remark and VLAN Translate |
| GVRP |
| Based on ONU service flow VLAN add, delete, replace |
| Spannin | IEEE 802.1D Spanning Tree Protocol (STP) |
| IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) |
| g tree |
| protocol | IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP) |
| Port | Bi-directional bandwidth control |
| Static link aggregation and LACP(Link Aggregation Control Protocol) |
| Port mirroring and traffic mirroring |
| Security | User | Anti-ARP-spoofing |
| Anti-ARP-flooding |
| IP Source Guard create IP+VLAN+MAC+Port binding |
| Port Isolation |
| MAC address binds to port and port MAC address filtration |
| security |
| IEEE 802.1x and AAA/Radius authentication |
| TACACS+ authentification |
| dhcp anti-attack flood attack automatic suppression |
| Features |
| ONU isolation control |
| Device | Anti-DOS attack(such as ARP，Synflood, Smurf, ICMP attack), ARP detection, |
| worm and Msblaster worm attack |
| SSHv2 Secure Shell |
| security | SNMP v3 encrypted management |
| Security IP login through Telnet |
| Hierarchical management and password protection of users |

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| --- | --- | --- |
|  | Network | User-based MAC and ARP traffic examination |
| Restrict ARP traffic of each user and force-out user with abnormal ARP traffic |
| Dynamic ARP table-based binding |
| Supports IP+VLAN+MAC+Port binding |
| L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of |
| security | user-defined packet |
| Port-based broadcast/multicast suppression and auto-shutdown risk port |
| URPF to prevent IP address counterfeit and attack |
| DHCP Option82 and PPPoE+ upload user’s physical location |
| Plaintext authentication of OSPF, RIPv2 and MD5 cryptograph authentication |
| IP Routing | IPv4 | ARP Proxy |
| DHCP Relay |
| DHCP Server |
| Static route |
| RIPv1/v2 |
| OSPFv2 |
| IPv6 | ICMPv6 |
| ICMPv6 redirection |
| DHCPv6 |
| ACLv6 |
| OSPFv3 |
| RIPng |
| Configured Tunnel |
| 6to4 tunnel |
| IPv6 and IPv4 Tunnels |
| Service | ACL | Standard and extended ACL |
| Time Range ACL |
| Packet filter providing filtering based on source/destination MAC address, |
| source/destination IP address, port, protocol, VLAN, VLAN range, MAC |
| address range, or invalid frame. System supports concurrent identification at |
| most 50 service traffic |
| Support packet filtration of L2～L7 even deep to 80 bytes of IP packet head |
| QoS | Rate-limit to packet sending/receiving speed of port or self-defined flow and |
| provide general flow monitor and two-speed tri-color monitor of self-defined |
| Features |
| flow |
| Priority remark to port or self-defined flow and provide 802.1P, DSCP priority |
| and Remark |
| CAR(Committed Access Rate), Traffic Shaping and flow statistics |
| Packet mirror and redirection of interface and self-defined flow |
| Super queue scheduler based on port and self-defined flow. Each port/ flow |
| supports 8 priority queues and scheduler of SP, WRR and SP+WRR. |
| Congestion avoid mechanism，including Tail-Drop and WRED |

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|  | Multicast | IGMPv1/v2/v3 |
| IGMPv1/v2/v3 Snooping |
| IGMP Filter |
| MVR and cross VLAN multicast copy |
| IGMP Fast leave |
| IGMP Proxy |
| PIM-SM/PIM-DM/PIM-SSM |
| PIM-SMv6、PIM-DMv6、PIM-SSMv6 |
| MLDv2/MLDv2 Snooping |
| MPLS | NPLS LDP |
| Reliability | Loop | EAPS and GERP (recover-time <50ms) |
| protectio | Loopback-detection |
| n |
| Link | FlexLink (recover-time <50ms) |
| RSTP/MSTP (recover-time <1s) |
| protectio |
| LACP (recover-time <10ms) |
| n |
| BFD |
| Device | VRRP host backup |
| Double fault-tolerant backup of host program and configuration files |
| 1+1 main control panel hot backup |
| protectio |
| n | 1+1 power hot backup |
| Fan redundancy |
| Maintenance | Network | Telnet-based statistics |
| RFC3176 sFlow |
| LLDP |
| maintena |
| 802.3ah Ethernet OAM |
| nce |
| RFC 3164 BSD syslog Protocol |
| Ping and Traceroute |
| Device | Command-line interface（CLI）, Console, Telnet and WEB configuration |
| System configuration with SNMPv1/v2/v3 |
| manage |
| RMON (Remote Monitoring)1/2/3/9 groups of MIB |
| ment |
| NTP(Network Time Protocol) |

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