



224 GPON Ports

Support 28672 ONTs

V1.1.1

ITU-T G.988
GPON ONT

2.5Gbps
Downstream

720Gbps
Switching
Capacity

Dual
Power Supply

8*10GE
Uplink Port

SGT9700B 224 Port GPON OLT:

SGT9700B 10U chassis is high density universal OLT which can support both GPON and EPON application, it adopts the advanced technology and ASIC chip. The single OLT card in SGT9700B can support up to 16 PON (GPON or EPON) ports, single chassis can support up to 224 PON ports and can manage up to 28672 remote ONUs. Besides the 14 universal PON slots, it supports multiple 1 plus 1 redundancy pair slots including two Switching & Controller slots, two Uplink slots and two Power slots, which enhances the system reliability and stability.

SGT9700B is fully compliant with related ITU-T and IEEE standards, can interwork with different types of ONU from different vendors. The system has high reliability and stability. SGT9700B supports network management via CLI and SNMP, with good user interface, easy to operate. It is the best suitable for service provider to deploy PON OLT in central office.

Main Characters

- ITU-T G.988 standard, interoperable with Chima and most popular GPON ONTs
- Offers 16*GPON SC Ports, High splitter rate, each PON port supports up to 224 ONTs and 1K T-CONT
- Offers 16 *10GE uplink ports
- 2 DC power slots with 1 plus 1 redundancy
- Comprehensive GPON DBA capabilities, dynamic assignment of bandwidth
- IPv4 and IPv6 ready, suitable for applying in both IPv4 and IPv6 based Networks
- IEEE802.1Q VLAN, QinQ, VLAN translation, highly applicable in HFC networks
- Enhanced L2-7 Switching features, support STP, QOS, ACL, etc.
- Standard OMCI management function
- ONU batch software upgrade, fixed time upgrade, real time upgrade
- PON port optical power detection

Technical Parameters

GPON Parameters

ITU-T G.988 GPON standard, 1310nm upstream & 1490nm downstream
 Support G.984.1, G.984.2, G.984.3, G.984.4, G.988 GPON & OMCI protocols
 TR-101 compliant solution for GPON OLT applications
 1:128 Splitting Ratio, support max 28672 subscriber GPON ONTs
 Max transmission distance: 60Km
 SN or SN+Password methods for ONT identifier and authentication
 T-cont bandwidth, static bandwidth and dynamic bandwidth allocation
 4096 port-IDs per GPON MAC in upstream and downstream directions.
 1024 allocated IDs per Gpon MAC in upstream direction
 Fiber Transmission cable: G.652 Single mode optical fiber cable
 Enhanced GPON debug and diagnostic functions.
 Support SR Dynamic Bandwidth Allocation (DBA), 1Kbit/s
 Support Forward Error Correction (FEC)
 128bit triple churning encryption for both upstream and downstream
 Verification of legal subscriber ONT, illegal subscriber ONT report
 ONT Firmware upgrade: massive upgrade, timed upgrade, realtime upgrade
 Transmission and Receiving optic power detection at PON port
 Support Dying Gasp

Hardware Parameters

Model NO. SGT9700B
 Uplink Interface:
 2 uplink slots with 4 ports 10GE in each uplink card;
 Up to 24 ports 10GE uplink or system
 Up to 224 ports GPON per system
 Dual DC power slots with 1 plus 1 redundancy
 DC: Input -40.5V ~ -72V;
 Switching Capacity: 720Gbps
 IPv4 & IPv6 Switching Throughput: 104Mpps
 Power consumption: ≤2264W
 Product Measurement:
 440mm×248mm×466mm
 Live LEDs for all interfaces

Product features

| Item | SGT9700B |
|--------------|--|
| PON Features | ITU-TG.988 standard Maximum 60 Km PON transmission distance access 128 terminals for single fiber PON Support of 5 types T-CONT bandwidth profile Support of multiple ONU authentication mechanism: LOID, SN (GPON), Password, or related combination. |

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|-------------------|---|--|
| | Support of DBA(Dynamic Bandwidth Allocation) Support ONU firmware batch upgrade Support ONU info upload disable Support bi-direction FEC Support ONU logical distance check Support ONU service batch configuration Support ONU manager IP&DNS set Support TR069 path set Support ONU MAC filter depend on UNI port | |
| System Features | Support fan speed automatic speed regulation and manual speed regulation Support system level temperature alarm and threshold configuration Support 1+1 protection for SXC board Support 1+1 protection for power board Support power saving function for PON ports | |
| L3 Features | DHCP | Support DHCP-Relay Support DHCP-Snooping Support DHCP-Option 82 |
| | VLANIF | Support configuration L3 Port address |
| | ARP | Support Arp-agent |
| | Router Management | Support static router Support default router Support OSPFv2 |
| Ethernet Features | VLAN | 4K VLAN entries Port-based/MAC-based/protocol/IP subnet-based QinQ and flexible QinQ (StackedVLAN) VLAN add, remove, translate per ONU service flow based |
| | Spanning Tree | STP/RSTP Remote ONU loop detecting |
| | Port | Bi-directional bandwidth control Static link aggregation and LACP(Link Aggregation Control Protocol) Port mirroring and traffic mirroring Port SFP reading Port RSSI configuration and warning |

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| | PPPOE | Support PPPOE |
| Router Features | OSPF | Support OSPF dynamic routing link state discovery protocol |
| | Static Router | Support Static router configuration |
| Security Features | User's Security | Port and ONU Isolation MAC address binding to the port and MAC address filtering |
| | Device Security | Support of Anti-Dos attack Support of system rate-limited to protect CPU/RAM |
| | Network Security | User-based MAC traffic examination IP+VLAN+MAC+Port binding L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of user-defined packet Cryptograph authentication |
| Service Features | ACL | Standard and extended ACL Flow classification and flow definition based on source/destination MAC address, VLAN, 802.1p, ToS, DiffServ, source/destination IP(IPv4/IPv6) address, TCP/UDP port number, protocol type, etc packet filtration of L2~L7 deep to 80 bytes of IP packet head |
| | QoS | Rate-limit to packet sending/receiving speed of port CAR(Committed Access Rate), Traffic Shaping and flow statistics Packet mirror and redirection of interface and self-defined flow(ACL) Super queue scheduler based on port or self-defined flow. Each port/flow supports 8 priority queues and scheduler of SP, WRR and SP+WRR. |
| | IPv4 | DHCP Relay Static Routing |
| | IPv6 | DHCPv6 ACLv6 |
| | Multicast | IGMPv1/v2/v3 IGMPv1/v2/v3 Snooping MVR and cross VLAN multicast copy IGMP Fast leave IGMP Proxy MLDv2/MLDv2 Snooping/Proxy |

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|-------------|---------------------|---|
| Reliability | Loop Protection | Loopback-detection |
| | Link Protection | LACP (recover-time <10ms) |
| | Device Protection | 1+1 power hot backup |
| Maintenance | Network Maintenance | Port real-time, utilization and transmit/receive statistic based on Telnet RFC3176 sFlow analysis GPON OMCI RFC 3164 BSD syslog Protocol Ping and Trace route |
| | Device Management | CLI, Console port, Telnet and WEB SNMPv1/v2 NTP NGBN View network management |

Order Information

| Model No. | Product Description |
|-----------------|---|
| SGT9700B | SGT9700B GPON OLT, with 224*GPON Ports, 16 *10GE uplink ports |
| SFP-GPON-T20 | GPON SFP Transceiver, 1310Tx/1490Rx, SC/UPC, 20Km, Class B+ |
| SGTU-10G-2-SFP+ | SGT9700B Uplink Switching Board, 8*10G SFP+ slots |