



16 GPON Ports

Support 2048 ONTs

V1.1.6

ITU-T
G.984x
GPON ONT

2.5Gbps
Downstream

Enhanced
Layer 2-7
Switching

Dual
power supply

IPv6

SGT8016B 16 Port GPON OLT:

SGT8016B is a small capacity and enhancement mode cassette GPON OLT, meeting the requirements of ITU-T G.984/G.988, possessing super GPON access capacity, carrier-class reliability and the complete security function. It can satisfy long-distance optical fiber access requirement on account of its excellent management, maintenance and monitoring capability, abundant service features and flexible network mode. SGT8016B can be used with NGBNVIEW network management system so as to provide users with the perfect solution.

SGT8016B provides 16 * downlink GPON port, 8 *GE combo port or 2* 10G SFP+ port. The height is only 1U for easy installation and space saving. SGT8016B is suitable for Broadcast three in one, video surveillance network, enterprise LAN, Internet of Things, etc.

Main Characters

- ITU-T G.984.x standard, interoperable with Chima and most popular GPON ONTs
- Offers 16*GPON SC Ports, support 2048 subscriber ONTs at 1:128 Splitting Ratio
- Offers 8*Gigabit SFP and 8*Gigabit Tx combo uplink ports, Optionally 2*10GE SFP + uplink ports.
- Dual AC or Dual DC or 1AC+1DC Redundant Power supply
- 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.984.x 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 2048 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. SGT8016B
 Offers 16* GPON downstream ports
 Offers 8*GE SFP/Tx combo upstream ports
 Optionally offers 2*10G SFP+ upstream ports
 Redundant dual AC, dual DC or 1AC+1DC power supplies:
 AC: Input 90 ~ 264V, 47 ~ 63Hz;
 DC: Input -36V ~ -72V;
 Switching Capacity: 140Gbps
 IPv4 & IPv6 Switching Througput: 104Mpps
 Power consumption: ≤110W
 Product Measurement: 440mm×44mm×380mm
 Product Weight: ≤3kgs
 Live Leds for all interfaces

Product features

Item	SGT8016B	
PON Features	ITU-TG.984.x standard Maximum 60 Km PON transmission distance access 128 terminals for single fiber PON Uplink and downlink triple churning encrypted function with 128Bits ONU terminal legitimacy certification, report illegal ONU registration DBA algorithm, the particle is 250kbps Standard OMCI management function ONU batch software upgrade, fixed time upgrade, real time upgrade PON port optical power detection	
L2 Features	MAC	Port MAC Limit 32K MAC (packet exchange chip cache 2MB, external cache 720 MB)

L2 Features	VLAN	4K VLAN entries Port-based/MAC-based/protocol/IP subnet-based QinQ and flexible QinQ (StackedVLAN) VLAN translate & add SVLAN
	Spanning Tree	STP Remote loop detecting
	Port	Bi-directional bandwidth control Static link aggregation and LACP(Link Aggregation Control Protocol) Port mirroring
Security Features	User's Security	Port Isolation MAC address binding to the port and MAC address filtering
	Device Security	System rate-limited SNMP management Security IP login through Telnet Hierarchical management and password protection of users
Service Features	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 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
Reliability	Loop Protection	Loopback-detection
Reliability	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
SGT8016B	SGT8016B GPON OLT, with 16*GPON Ports, 2 *10GE or 8 *GE uplink ports
SGTP01PWR100AC	SGT8016B AC Power Supply Module, 100W, 110-220V AC
SFP-GPON-T20	GPON SFP Transceiver, 1310Tx/1490Rx, SC/UPC, 20Km, Class B+
SGTU-10G-2-SFP+	SGT8016B Uplink Switching Board, 2*10G SFP+ slots