SNA8816T 16 Port Gepon OLT System Description:

The SNA8816T is a GEPON OLT system based on IEEE802.3ah Gigabit EPON standard. It comes with maximum 16 GEPON ports, which can connect up to 1024 GEPON ONUs at 1:64 Fiber Ratio. It is a Telecom Grade GEPON OLT system designed for ISPs offering high quality, high speed and high stability internet services(such as IPTV, VoIP and Data Transmission services) to Subscribers.

Main Advantages:

Generally, a normal 16 port GEPON OLT supports only layer 2 access network features. But unlike the normal GEPON OLT, the SNA8816T supports rich Layer 2, 3, 4 network features which enables you apply it in Layer 2 access network and in Layer 3 aggregation network.

- Support IPv4 and IPv6, suitable for applying in both IPv4 and IPv6 based Networks
- Support SLA (Service Level Assignment) and DBA (Dynamic Bandwidth Assignment), enhancing QOS.
- Support main power supply and backup power supply work in 1+1 mode, ensuring high stability of network.
- Support 1:64 Fiber Ratio at 20Km transmission distance, can connect up to 512 remote ONUs.
- Comes with 8 Gigabit Fiber/Ethernet uplink ports, ensuring high bandwidth support for each Gepon Port.
- Support IEEE802.1Q VLAN, QinQ, VLAN translation, enhancing highly applicable VLANs for different environments.
- Support STP, RSTP, MSTP spanning tree protocols, suitable for applying in different network environments.
- Support Anti-ARP spoofing/flooding, IP Source Guard, Port Isolation, etc, enhancing security levels.
- Support IPv4 and IPv6 Multicast, support IGMP V1, V2 and MLD V1, V2
- Support EAS and EARP based Loop detection, can recover link in 50ms
- Support LACP based link protection, can recover link in 10ms.
- Support Layer 2/3 full line speed for GE and Gepon ports, ensuring no packet losses.

Gepon Parameters:

- Support IEEE802.3ah Gigabit Epon standard,
- Support 20Km transmission distance over Single Fiber
- Support 8 Gepon downstreaming ports, support 1:64 fiber splitting ratio, can connect up to 512 ONUs
- Support encrypted Triple Churning for upstreaming and downstreaming
- Support China Telecom Standard CTC 2.0, 2.1, 3.0
- Support DBA Dynamic Bandwidth Assignation,
- Support ONU auto detection and reporting illegal ONU registrations
- Support auto-inspection for received optical fiber power.
- Support 1.25Gbps GEPON transmission, Wavelength of Gepon SC: Uplink: 1310nm, Downlink: 1490nm
- Support CATV over EPON application, CATV wavelength at 1550nm.

- Average Optical Transmitting Power for the Gepon SC Port: +2dbm to +7dbm
- Optical reception sensibility of the Gepon SC Port: -30dBm
- Max Optical Fiber Ratio: 1:64 at 20Km transmission distance
- Support Standard OAM and expandable OAM management features
- Support upgrading ONUs remotely in batches.

Hardware Features:

- Fully Compatible with IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3ah standard
- Support 8 GEPON SC ports, 1.25Gbps transmission rate.
- Support 8* Gigabit SFP uplink interfaces + 8*10/100/1000Base-Tx combo
- Support Hot Swap of GEPON SFP Transceivers
- Support EAPS fast loopback protection and GEPON Optical Path protection.
- MAC address table: 16K
- VLAN Table: 1-4094
- Power Supply: Main Power Supply + Backup Power supply
- AC Power Supply: AC: 90~264V, 50/60Hz
- DC: -36~-72V
- SNA8800T 8 Port OLT chassis height: 1U

Hardware Specifications:

Model NO.	SNA8816T 16 Port GEPON OLT	
Hardware	Hardware Capacity	
	Hardware Standards	IEEE802.3, IEEE802.3u, IEEE802.3z, IEEE802.3ah standard
	GEPON Ports	16 GEPON SC ports
	Uplink Ports	8 Gigabit SFP Slots, and/or 2*10G SFP+ interfaces
	Cooling System	1U Chassis with Cooling Fans equipped inside
	Switching Capacity	128Gbps
	MAC Address Table	32K
	VLAN Table	**1-4094**
	Hot Swap	Support Hot Swap of GEPON SFP Transceiver
	Flash	**128Mb**
	Memory	1Gbps
	Routing Table	12K

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	Power Supply	▪ Redundant Power Supply: 110-240V AC, 50/60Hz ▪ Support optional DC Power Supply ▪ Power Consumption: <100w
	Gepon Characters	▪ Support IEEE802.3ah Gigabit Epon standard, ▪ Support max of 16 Gepon SC ports for downlinking, ▪ Support the transmission rate of 1.25Gbps ▪ Wavelength of Gepon SC ports: Uplink: 1310nm, Downlink: 1490nm ▪ Average Optical Transmitting Power for the Gepon SC Port: +2dbm to +7dbm ▪ Optical reception sensibility of the Gepon SC Port: -30dBm ▪ Max Optical Fiber Ratio: 1:64 ▪ Support CTC 2.0, 2.1, 3.0 China Telecom Gigabit Epon standard ▪ Support Standard OAM and expandable OAM management features ▪ Support Encryption for uplinking and downlinking data ▪ Support upgrading a single ONU or to multiple ONUs simultaneously and remotely by the System administrator ▪ Support ONU authentication, can report illegal ONU registering events

Software Specifications:

Layer 2 Features	Protocols	IEEE802.1Q, IEEE802.1P, IEEE802.3X, IEEE802.3ad, IEEE802.1D, IEEE802.1W, IEEE802.1S, IPv4, IPv6
	VLAN	Support 1-4094 VLAN entries Support Port-based/MAC-based/IP subnet-based VLAN Support Port-based QinQ and Selective QinQ (Vlan Stacking) Support VLAN Swap / VLAN Remark /VLAN Translation Suport GVRP Dynamic VLAN registration Support VLAN add, delete and replace based on ONU service flow.
	QOS	Support Rate-limit to sending/receiving packet of each port, or user defined flow. Offers general flow monitor and user-defined flow monitor Support Prioritized remark to port, or to user defined flow. Offers IEEE802.1P, DSCP priority and Remark Support CAR (Committed Access Rate), Traffic Shaping and flow statistics Support Packet mirroring and redirecting of interface or user defined flow Support super queue scheduler based on port and user-defined flow. Each port/Flow supports 8 prioritized queues and scheduler of SP,WRR and SF+WRR. Offerings congestion avoidance mechanism , Supports Tail-Drop and WRED
	Spanning Tree	Support IEEE 802.1D Spanning Tree Protocol (STP) Support IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) Support IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP) Support Remote ONU Loop Detecting alarming
	MAC	Support MAC Black Hole

		Support Port MAC Limitation Offers 32K MAC addresses
	Multicast	IGMP V1, V2, V3, IGMP Snooping,
	Access Control List	Support standard and expandable ACL Support ACL in Time Interval Support packet filter, Source/Destination MAC filter, Source/Destination IP filter, Port Filter, Protocol Filter, VLAN filter, VLAN range filter, MAC Address range filter, Invalid Frame filter, Support up to 50 concurrent service traffic identification Support packet filtration of L2～L7 in 80 bytes of IP packet head
	Port	Support Port Based Bi-directional bandwidth control Static link aggregation and LACP(Link Aggregation Control Protocol) Support Port mirroring and Traffic mirroring
	User Security	Support Anti-ARP-spoofing Support Anti-ARP-flooding Support IP Source Guard create IP+VLAN+MAC+Port binding Support Port Isolation Support MAC address binds to port and port MAC address filtration Support IEEE 802.1x and AAA/Radius authentication
	OLT Security	Support Anti-DOS attack (such as ARP, Synflood, Smurf, ICMP attack), ARP detection, worm and Msblaster worm attack Support SSHv2 Secure Shell Support SNMP v3 encrypted management Support Security IP login through Telnet Support Hierarchical management and password protection of users
	Network Security	Support User MAC and ARP traffic verification Support Restrict ARP traffic per user and kick-out user sends ARP traffic Support Dynamic ARP table binding Support IP/VLAN/MAC/Port binding Support L2 to L7 ACL flow filtration mechanism Support Port broadcast/multicast suppression and auto-shutdown risky port Support URPF to prevent IP address from counterfeit and attack Support DHCP Option 82 and PPPoE+ (Indicating User physical location) Support plaintext authentication of OSPF,RIPv2, BGPv4 packets and MD5 cryptograph authentication
	IPv6 Multicast	Support IPv6 SA/DA Classification Support MLDv2 / MLDv2 Snooping Support PIM-SMv6、PIM-DMv6、PIM-SSMv6
	IPv4 Multicast	Support IGMPv1/v2/v3, IGMPv1/v2/v3 Snooping, IGMP Filter Support MVR and multicast copy over different VLANs Support IGMP Fast leave, IGMP Proxy Support PIM-SM/PIM-DM/PIM-SSM,
	Loop Detect	Support EAPS and GERP (recover-time <50ms) Support Loopback-detection

	Link Protection	Support FlexLink (recover-time <50ms) Support RSTP/MSTP (recover-time <1s) Support LACP (recover-time <10ms) Support BFD
	System Reliability	Ensuring reliability with VRRP (Virtual Router Redundancy Protocol)
Management	sFlow	Support RFC3176 sFlow
	Telnet	Support CLI commands for Telnet management
	SNMP	Support SNMP V1, V2, V3
	NMS	Support SNMP based NMS management
	RMON	Support RMON Group 1, 2, 3, 9
	MIB	Support Private and Public MIB
Working Environment	Humidity	Working: 10%～90% non-condensation / Standby: 5% to 95% non-condensation
	Work Temperature	Working: 0℃ to 65℃ / Standby: -20℃ to 70℃