

OP7500 Series GPON OLT



OP7500 series are designed for high-density access switching integrated platform which combine multi-service and high-density 10G switching requirement. As the new generation of smart equipments for the telecommunications integrated access network, it could build GPON/10GE general platform and have the features of small size, huge capacity, high density and powerful performance, which could supply high quality sustainability solution for Broadband Access, Transmission of Mobile Data Base Station, CPN (Customer Premise Network), E-Commerce and so on.

Product Features

- 4U compact design, half-size serve slots
- 1+1 master control redundancy,1+1power supply redundancy
- Hot plug fan chassis, intelligent speed and temperature control
- 6slots, 2 main control cards,4 line cards
- Maximum support 32*GPON and 24*GE
- 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

Product Specification

Item	OP7500-04
Backplane capacity	>1.6Tbps
Switching capacity	960Gbps
Throughput(IPv4 /IPv6)	720Mpps
Number of slots	6

Number of service board slots	4	
Service port	GPON	32*GPON,32*GE
	SWITCH	96*GE,48*10GE
Redundancy design	1+1 power redundancy 1+1 main control redundancy	
Power supply	AC : 90~260V , 50~60Hz ; DC : -36V~-72V ;	
Power consumption	≤300W	
Outline dimensions (mm) (W*D*H)	442mmx176mmx420mm	
Weight (in maximum configuration)	≤15kg	
Environmental parameter	Working temperature : 0°C~40°C Storage temperature : -40°C~70°C Relative humidity : 10%~90% , no condensing	

Business Features

Attributes		OP7500 series
PON features	EPON	IEEE 802.3ah EPON China telecom/Unicom GEPON 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

	GPON	<p>Satisfy ITU-T standard</p> <p>TR-101 compliant solution for FTTx OLT applications</p> <p>High splitter rate, each PON port supports 128*ONU ,512*T-CONT</p> <p>Maximum transmission distance of 60KM</p> <p>Support uplink FEC, downlink FEC(Forward Error Correction)</p> <p>Periodically update AES encryption</p> <p>ONU identifier authentication :SN/PASSWD/SN+PASSWD</p> <p>Bandwidth allocation mechanism</p> <p>4 types of T-CONT bandwidth</p> <p>Static Bandwidth Allocation</p> <p>Dynamic Bandwidth Allocation</p> <p>Fiber link inspection</p> <p>4 types of TYPE A/B/C/D line protection mechanism</p> <p>GPON feature parameter</p> <p>4096 port-IDs per GPON MAC (Downstream and Upstream)</p> <p>1024 Alloc-IDs per GPON MAC (Upstream)</p>
L2 features	MAC	<p>MAC Black Hole</p> <p>Port MAC Limit</p> <p>MAC address limitation based on ONU</p>
	VLAN	<p>4K VLAN entries</p> <p>Port-based/MAC-based/IP subnet-based VLAN</p> <p>Port-based QinQ and Selective QinQ (StackVLAN)</p> <p>VLAN Swap and VLAN Remark and VLAN Translate</p> <p>GVRP</p> <p>Based on ONU service flow VLAN add, delete, replace</p>
	Spanning tree protocol	<p>IEEE 802.1D Spanning Tree Protocol (STP)</p> <p>IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)</p> <p>IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP)</p> <p>ONU remote loop detecting alarm</p>
	Port	<p>Bi-directional bandwidth control</p> <p>Static link aggregation and LACP(Link Aggregation Control Protocol)</p> <p>Port mirroring and traffic mirroring</p>
Security features	User security	<p>Anti-ARP-spoofing</p> <p>Anti-ARP-flooding</p> <p>IP Source Guard create IP+VLAN+MAC+Port binding</p> <p>Port Isolation</p> <p>MAC address binds to port and port MAC address filtration</p> <p>IEEE 802.1x and AAA/Radius authentication</p>

		TACACS+ authentication dhcp anti-attack flood attack automatic suppression ONU isolation control
	Device security	Anti-DOS attack(such as ARP ·Synflood, Smurf, ICMP attack), ARP detection, worm and Msblaster worm attack SSHv2 Secure Shell SNMP v3 encrypted management Security IP login through Telnet Hierarchical management and password protection of users
	Network security	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 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 BGPv4 packets and MD5 cryptograph authentication
IP routing	IPv4	ARP Proxy DHCP Relay DHCP Server Static route RIPv1/v2 OSPFv2 BGPv4 Strategy route Route policy
	IPv6	ICMPv6 ICMPv6 redirection DHCPv6 ACLv6 OSPFv3 RIPng BGP4+ Configured Tunnel ISATAP

		6to4 tunnel IPv6 and IPv4 Tunnels
Service features	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 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
	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	L3 MPLS VPN L2 VPN: VLL (Martini, Kompella) MCE MPLS OAM
Reliability	Loop protection	EAPS and GERP (recover-time <50ms) Loopback-detection
	Link protection	FlexLink (recover-time <50ms) RSTP/MSTP (recover-time <1s)

	on	LACP (recover-time <10ms) BFD
	Device protection	VRRP host backup Double fault-tolerant backup of host program and configuration files 1+1 main control panel hot backup 1+1 power hot backup Fan redundancy
Maintenance	Network maintenance	Telnet-based statistics RFC3176 sFlow LLDP 802.3ah Ethernet OAM RFC 3164 BSD syslog Protocol Ping and Traceroute
	Device management	Command-line interface (CLI) , Console, Telnet System configuration with SNMPv1/v2/v3 RMON (Remote Monitoring)1/2/3/9 groups of MIB NTP(Network Time Protocol) GN.Link II Server NGBNView network management

Purchase Information:

Product name	Product description
OP7500-04	6slots(4*service slots,2*main control slots,1*hot plug fan disk, no main control boards, no power supply)
OP7500-MSU-A0	OP7500-04, main control boards, NGEEngine™ I switch routing engine
OP7500-PWR-AC	OP7500,750W AC power supply module
OP7500-PWR-DC	OP7500,750W DC power supply module
OP7500-GP-08MA	OP7500,GPON line cards,8*GPON SFP,8*1000BaseX SFP, metropolitan version
OP7500-SW-24GB	OP7500, switch routing service card,24*1000BaseX SFP interface
OP7500-SW-24GE	OP7500, switch routing service card,24*10/100/1000BaseT interface
OP7500-08SFP+	OP7500, 8*10G SFP+ Switching module

EMC and Safety

Regulation Compliance

CCC Class B

CE
Safety Regulations UL
Green Standard RoHS

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