

## Multi-service XG-PON 10G Access OLT

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### AP8X04 Series



- **ITU-T G.987/G.988 compliant**
- **Supports 4 × XFP 10G XG-PON interface**
- **4 × 10 GE SFP+ interface**
- **1RU compact platform**
- **Maximum 1:256 coupling ratio**
- **1+1 power redundancy**
- **1 × console interface**
- **Full-load power consumption ≤ 80W**

Ascent's AP8X04 XG-PON series Platform are scalable multi-services 1RU high performance OLT (optical line terminal) platform with high density 160G switching functionality, which provides Network Operators and Services Providers with a flexible and central management point for next generation 10G XG-PON services in Fiber to The Home/Business (FTTH & FTTB) networks.

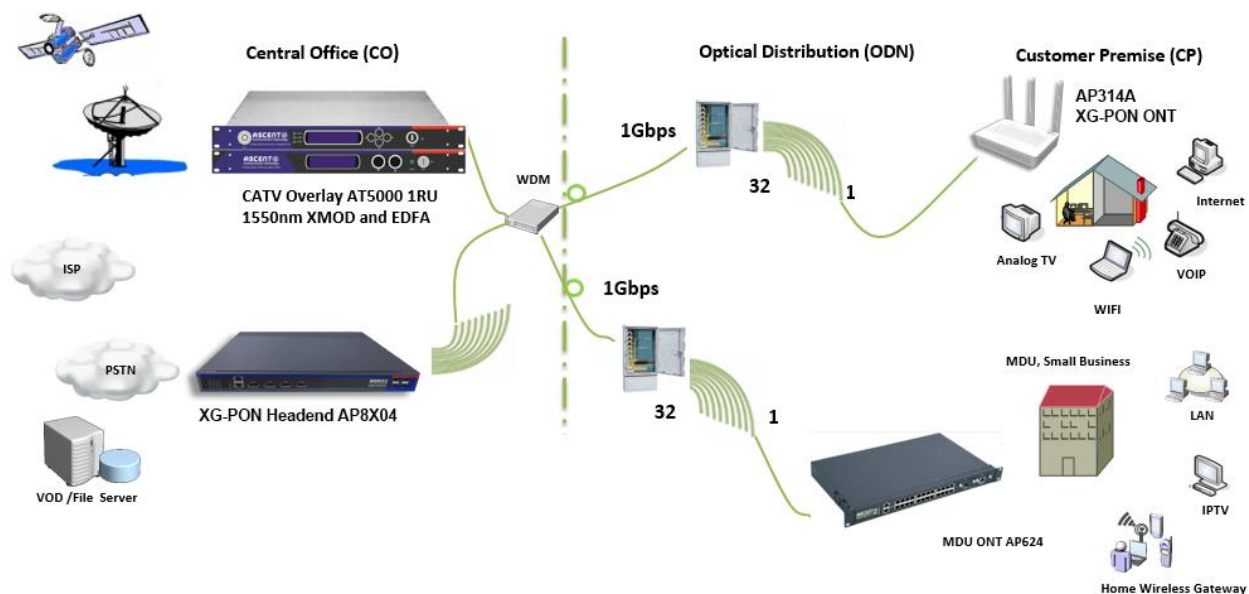
AP8X04 XG-PON support downlink 10 Gbps and uplink 2.5 Gbps PON transmission rate, efficient bandwidth usage, and Ethernet services to help carriers provide reliable services to their users. It features a coupling ratio up to 1:256, supports many different hybrid ONU networks, and can co-exist on the same fiber with GPON network.

AP8X04 provides 4 × downlink 10G GPON XFP interfaces, and 4 × 10G interface which can be configured as gigabit interface. It meets ITU-T G.984 standards, and offers carrier-class reliability and complete security functions. It is suitable for long-distance optical fiber equipment and has excellent management, maintenance, and monitoring capabilities. With its convenient 1RU form factor, it is a cost-efficient XGPON solution for network operators.

## Key Features

- ITU-T G.987/G.988 compliant
- Supports 4 × XFP 10G XG-PON interface
- 4 × 10 GE SFP+ interface
- 1RU compact platform
- Maximum 1:256 coupling ratio
- 1+1 power redundancy
- 1 × console interface
- Supports dual-AC, dual-DC, and AC/CD power supply. The power supply features a modular design and is hot-swappable and meets the EMC-3 standard
- Full-load power consumption ≤ 80W

## Application Diagram



## Specifications

### Product Specifications

Item	Description
Switching Capacity	160 Gbps
Forwarding Capacity (IPv4/IPv6)	119.04 Mpps
Service Port	4 × 10G XGPON port 4 × 10 GE SFP+ port
Redundancy Design	Built-in dual power supply, including AC, dual DC, AC+DC, single AC, single DC
Power Supply	Supports two power slots, power supply can be plugged in AC: input 100 V to 240 V, 47/63 Hz DC: input 36 V to 72 V
Power Consumption	≤80 W
Dimensions (W×D×H)	437 mm × 44 mm × 280 mm
Weight (Fully-Loaded)	≤5 kg
Operating Temperature	-10 °C to +55 °C
Storage Temperature	-40 °C to +70 °C
Relative Humidity	10 % to 90 %, non-condensing

### Service Features

Item	Description
<b>PON Features</b>	Follow the ITU-T G.984.x standard SN / Password / SN + Password / LOID / LOID Password / LOID + LOID Password Multiple ONU terminal authentication modes DBA algorithm, granularity 64 Kbit/s Standard OMCI ONU software batch upgrade Optical parameters detection on PON interfaces
<b>L2 Features</b>	
MAC	MAC Black Hole Port MAC Limit 128K MAC address
VLAN	4K VLAN entries Port QinQ and flexible QinQ (StackedVLAN) VLAN Swap and VLAN Remark
Spanning Tree	STP/RSTP/MSTP Remote loop detecting
Port	Bi-directional bandwidth control Static link aggregation and LACP (Link Aggregation Control Protocol) Port mirroring

## Security Features

### User's Security

Anti-ARP-spoofing  
Anti-ARP-flooding  
IP Source Guard  
Port Isolation  
MAC address binding to the port and MAC address filtering  
IEEE 802.1x  
AAA/Radius Authentication

### 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

### Network Security

Hierarchical management and password protection of users  
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  
IP + VLAN + MAC + Port binding  
Port-based broadcast/multicast suppression and auto-shutdown risk port  
DHCP Option82 and PPPoE+ upload user's physical location

## IP Routing

### IPv6

SA/DA Classification  
MLD Snooping

## Service Features

### ACL

Standard and extended ACL  
Time Range 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.

### QoS

CAR (Committed Access Rate), Traffic Shaping and flow statistics  
Packet mirror and redirection of interface and self-defined flow  
Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Remark  
Super queue scheduler based on port or self-defined flow. Each port/flow supports 8 \* priority queue and scheduler of SP, WRR and SP+WRR.

### Multicast

IGMPv1/v2/v3  
IGMPv1/v2/v3 Snooping  
IGMP Filter  
IGMP Fast leave  
IGMP Proxy

## Reliability

### Loop Protection

Loopback-detection

Link Protection	RSTP/MSTP LACP
Device Protection	VRRP host backup 1+1 power hot backup
<b>Maintenance</b>	
Network Maintenance	Port real-time, utilization and transmit/receive statistic based on Telnet LLDP 802.3ah Ethernet OAM RFC 3164 BSD syslog Protocol Ping and Traceroute
Device Management	CLI, Console port, Telnet SNMPv1/v2/v3 RMON (Remote Monitoring)1, 2, 3, 9 groups MIB NTP PONView network management

## Ordering Information

Product Name	Product Description
AP8X04-XGP-CH	AP8X04 GPON 1RU Switch chassis, XGPON OLT (4 * downlink 10G XGPON XFP interface, 4 uplink 10G SFP + port interface) Dual PS Slots. (excluding SFP and PS module)
AP8X04-PWR-AC	Power supply AC100~240V-180W for AP8X04
AP8X04-PWR-DC	Power supply DC36~72V-180W for AP8X05

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