

# Product Specification

## A-GEAR P3310 series

### High-Performance Cabinet OLT



#### 1 Introduction

A-GEAR P3310 complies with IEEE802.3ah and P.R.C intercommunication standard, YD/T 1475-2006, supports CTC20/2.1, automatically discovers and cooperates with ONUs of different manufacturers.

A-GEAR P3310 OLT supports the symmetric uplink/downlink 1.25Gbps PON transmission rate, efficient bandwidth usage and Ethernet services, helping carriers to provide reliable services to their users.

Its coupling ratio, 1:64, and its support of different hybrid ONU networks minimize the carrier's investment.

A-GEAR P3310 has strong functions and QoS guarantee , and supports SLA and DBA.

#### 2 Main Advantages

A-GEAR P3310 is an optical network device series that is suitable for the current market; one A-GEAR P3310 supports up to four EPON systems, so it has the following advantages:

- EPON: P3310 supports IEEE802.3ah and PRC Community Industry Standard (YD/T 1475-2006).
- System's capacity: The modularized PON card of A-GEAR P3310 can support one to four EPON systems simultaneously, up to 256 ONUs and the 1/64 coupling ratio.
- Uplink interface: Its flexible design supports various MAN interface type groups. The optical ports or the electrical ports are selected according to network conditions.
- Device size: A 1U device occupies a little space and consumes little power, decreasing the function cost of the services.
- Protecting the bus optical fiber: A-GEAR P3310 supports that the link can be automatically switched to protect the optical fiber when trouble occurs in the optical fiber.
- It is highly reliable and powered by two power sources.

### 3. Main Characteristics

- It adopts the point-to-multipoint network topology, effectively collects separate Ethernet services and aggregates them on the MAN node. It connects the upper-layer devices through the GE interface and can be connected to the existing network smoothly.
- The Dynamic Bandwidth Allocation (DBA) mechanism enables all users to share the 1Gbps bandwidth reasonably, guaranteeing a reliable QoS.
- The Rapid Spanning Tree Protocol (RSTP) enables the redundant interconnection between OLT and backbone network. EAPS 50ms
- They support the IGMP multicast and efficiently utilize the bandwidth. They support the multicast VLAN.
- It supports the broadcast of IPTV, voice and data simultaneously.
- It has rich OAM functions such as configuration, alarm, performance monitoring, trouble isolation and security management. At the same time, it supports the CLI/GUI management, which is easy to use.

### 4. Technical Parameters

Attributes	P3310
System's capacity	Maximum coupling ratio, 1:64 32G backplane bandwidth
Interface	6 GE ports (2 gigabit RJ45 ports, 2 combo ports, 2 gigabit optical ports) 4 fixed EPON ports
PON interface	A 1Gbps transmission rate with downlink and uplink symmetry Average luminous power on the PON port: +2dbm ~ +7dbm Optical acceptance sensitivity of the PON port: not less than -30dBm Security: ONU authentication mechanism Network coverage diameter: 30 kilometers
Standard	IEEE802.3ah IEEE 802.1D, Spanning Tree IEEE 802.1Q, VLAN IEEE 802.1w, RSTP IEEE 802.3ad physical link static/dynamic aggregation (LACP) Ethernet – II, Ethernet-SNAP IEEE 802.3ad VLAN Stacking( Q in Q)
L3 functions	Supporting static route
QoS	Backpressure flow control (half duplex) IEEE 802.3x flow control (full duplex) IEEE p802.1p, CoS; WR, SP and FIFO Supporting the Mark/Remark priority of 802.1P/DSCP Limiting the uplink/downlink rate based on each ONU Supporting DBA and SLA

**A-GEAR World Wide Manufacturing**

Attributes	P3310
VLAN	Port-based VLAN GVRP IEEE802.1Q VLAN relay Supporting QinQ and flexible QinQ
Multicast	IGMP v1/v2/v3 IGMP Snooping Multicast VLAN and limited multicast
Reliability	Unidirectional Link Detection (UDLD) Hot swap of the EPON optical module on the expanded slot EAPS fast loopback protection function Optical path protection of EPON
Network security	Limiting the maximum number of users on each port Port isolation Controlling the storm of packets Flow-based ACL access control function Transmission data encryption on the PON interface
Configuration management	Various management modes such as CLI, Web, SNMP, TELNET and cluster RMONv1, group 1, group 2, group 3 and group 9 SSHv1/v2 Upgrading the software and the bootrom through TFTP and FTP Local or the server's syslog logs Command prompt in English or in Chinese Network testing tools such as ping and traceroute Debug output
Physical Characters	442mm(W) x315mm(D) x 44mm(H) Installation: A 19-inch cabinet Weight: 2kg
Environment requirements	Working condition: 0°C ~ 55°C; 10%-85% no condensation Storage condition: -40°C ~ 80°C; 5%-95%; no condensation
Power Source	Input voltage: AC100-240V Input frequency: 47-63Hz Supporting power input from two power sources Input current: 1A/230V Power consumption: Up to 40W

## 5. Order Information

Model	Description
<b>A-GEAR P3310</b>	OLT device with 4 PON ports (1 console port, 1 out-band 10/100M port, 4 fixed PON ports (excluding the OLT SFP optical module), 2 gigabit combo ports, 2 gigabit SFP optical ports, 2 gigabit electric ports, AC 90-264V power supply, single power source, 19-inch cabinet shape)
<b>A-GEAR P3310-DC</b>	OLT device with 4 PON ports (1 console port, 1 out-band 10/100M port, 4 fixed PON ports (excluding the OLT SFP optical module), 2 gigabit combo ports, 2 gigabit SFP optical ports, 2 gigabit electric ports, DC36-72V power supply, single power source, 19-inch cabinet shape)
<b>A-GEAR P3310-2AC</b>	OLT device with 4 PON ports (1 console port, 1 out-band 10/100M port, 4 fixed PON ports (excluding the OLT SFP optical module), 2 gigabit combo ports, 2 gigabit SFP optical ports, 2 gigabit electric ports, AC90-264V power supply, two power sources, 19-inch cabinet shape)
<b>A-GEAR P3310-2DC</b>	OLT device with 4 PON ports (1 console port, 1 out-band 10/100M port, 4 fixed PON ports (excluding the OLT SFP optical module), 2 gigabit combo ports, 2 gigabit SFP optical ports, 2 gigabit electric ports, DC36-72V power supply, two power sources, 19-inch cabinet shape)
<b>OLT-GSFP-20</b>	OLT SFP module, 20km, 1490nm TX wavelength, 1310nm RX wavelength, SC interface