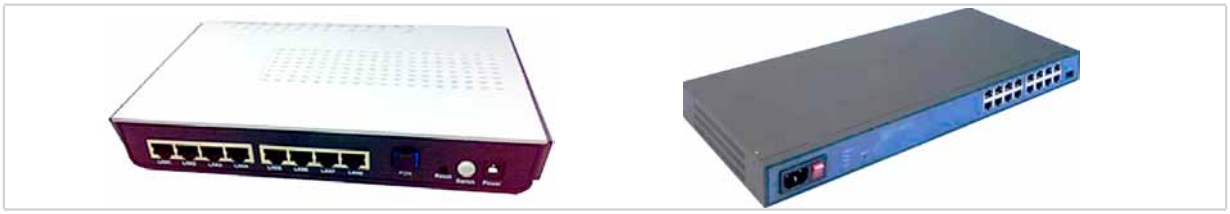
A-GEAR World Wide Manufacturing

# Product Specification

## A-GEAR P2008/P2016

### Optical Multiservice Access Unit—MDU



## 1. Introduction

A-GEAR P2024 is a MDU which complies with IEEE802.3ah and PRC communication industry standard (YD/T 1475–2006). It integrates with the functions of the Ethernet switch and ONU, so when it works together with OLT products an efficient EPON solution can be established. It is well applied on the bidirectional network of broadcast and TV, FTTO or FTTB.

## 2. Main Advantages

A-GEAR P2000 is an ONU product suitable for the present market, which supports 8 to16 RJ45 ports and 1 PON port. It has the following advantages:

- EPON: P2000 supports IEEE802.3ah and PRC Community Industry Standard (YD/T 1475–2006).
- System's capacity: The standard configuration of P2000 has 8 to 16 Ethernet RJ45 ports, realizing the mergence of ONU and the Ethernet switch in the "EPON+LAN" solution.
- Device size: A 1U device occupies a little space and consumes little power, decreasing the function cost of the services.

## 3. Main Characteristics

- These EPON products adopt the point-to-multipoint network topology, effectively collect separate Ethernet services and aggregate them. They provide the standard fast-Ethernet interface (RJ45) on the user side and can be connected to the existing network smoothly.
- Their dynamic bandwidth distribution mechanism enables all users to share the 1Gbps bandwidth reasonably, realizes reliable QoS and guarantees different services in a same network different qualities.
- They support the IGMP multicast and efficiently utilize the bandwidth.
- They support port isolation.
- They support the Ethernet loop detection, automatically judge whether the device-connecting network has Ethernet loopback interrupted, and resume the loop when the

loop disappears.
- They support the multicast VLAN.
- It supports ACL filtration in layer 2 to layer 7.
- It supports remote loopback and remote diagnosis of the network state.
- It has rich OAM function designs, including the configuration, alarm, performance monitoring, fault separation and security management. It not only provides the remote OLT management mode but also supports local console platform management.

## 4. Technical Parameters

| Attributes | P2008 | P2016 |
|---|---|---|
| **Interface** | 8 fixed 10/100BASE-T interfaces<br>1 fixed PON port | 16 fixed<br>10/100BASE-T interfaces<br>1 fixed PON port |
| **System's capacity** | Maximum coupling ratio, 1:64 | |
| **PON interface** | A 1Gbps transmission rate with downlink and uplink symmetry<br>Hi-sensible optical receiver: Not less than –30dBm<br>Security: ONU authentication mechanism<br>Network coverage diameter: 30 kilometers | |
| **Standard** | IEEE802.3ah<br>IEEE 802.1D, Spanning Tree<br>IEEE 802.1Q, VLAN<br>IEEE 802.1w, RSTP<br>IEEE 802.3ad physical link static/dynamic aggregation (LACP)<br>Ethernet – II, Ethernet-SNAP<br>IEEE 802.3ad VLAN Stacking (Q in Q) | |
| **QoS** | Backpressure flow control (half duplex)<br>IEEE 802.3x flow control (full duplex)<br>IEEE p802.1p, CoS<br>WR, SP and FIFO<br>Supporting the Mark/Remark priority of 802.1P/DSCP<br>Limiting the uplink/downlink rate based on each ONU<br>Supporting DBA and SLA | |
| **VLAN** | Port-based VLAN<br>IEEE802.1Q VLAN relay<br>Supporting QinQ and flexible QinQ | |
| **Multicast** | IGMP v1/v2/v3<br>IGMP Snooping<br>Multicast VLAN and limited multicast | |

| Attributes | P2008 | P2016 |
|---|---|---|
| **Reliability** | Unidirectional Link Detection (UDLD)<br>Hot swap of the EPON optical module on the expanded slot<br>EAPS fast loopback protection function<br>Optical path protection of EPON | |
| **Network security** | Limiting the maximum number of users on each port<br>Port isolation<br>Controlling the storm of packets<br>Flow-based ACL access control function<br>Transmission data encryption on the PON interface | |
| **Configuration management** | Various management modes such as CLI, Web, SNMP, TELNET and cluster<br>RMONv1, group 1, group 2, group 3 and group 9<br>SSHv1/v2<br>Upgrading the software and the bootrom through TFTP and FTP<br>Local or the server's syslog logs<br>Command prompt in English or in Chinese<br>Network testing tools such as ping and traceroute<br>Debug output | |
| **Physical size** | Installation: Desktop/standard cabinet | |
| **Environment requirements** | Working condition: 0°C ~ 55°C; 10%-85% no condensation<br>Storage condition: –40°C ~ 80°C; 5%-95%; no condensation | |
| **Power Source** | Input voltage: AC100–240V<br>Input frequency: 47–63Hz<br>Input current: 1A/230V | |

## 5. Order Information

| Model | Description |
|---|---|
| **A-GEAR P2008** | FTTB/O model, 1 PON port (SC), 8 FE ports, built-in power source, AC220V |
| **A-GEAR P2016** | FTTB/O model, 1 PON port (SC), 16 FE ports, built-in power source, AC220V |