

# Product Specification

## A-GEAR P2024

### 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 P2024 is an ONU product in the present market, which supports up to 24 RJ45 ports and 1 PON port. It has the following advantages:

- EPON: P2024 supports IEEE802.3ah and PRC Community Industry Standard (YD/T 1475–2006).
- System's capacity: The standard configuration of P2024 has 24 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-

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connecting network has Ethernet loopback interrupted, and resume the loop when the loop disappears.

- They support the multicast VLAN.
- It prevents the attacks from ARP virus and shockwave virus, supports the binding of IP and MAC, and supplies DHCP snooping.
- 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	P2024
Interface	24 fixed Combo interfaces (10/100/1000BASE-T) 1 fixed PON port
System's capacity	Maximum coupling ratio, 1:64 A 16K MAC table 32G backplane bandwidth
PON interface	A 1Gbps transmission rate with downlink and uplink symmetry Hi-sensible optical receiver: 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)
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
VLAN	Port-based VLAN IEEE802.1Q VLAN relay Supporting QinQ and flexible QinQ

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Attributes	P2024
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 ARP invasion prevention
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 size	Installation: Standard cabinet Chassis' size (W*H*D): 442*208*44mm
Environment requirements	Working condition: 0 °C ~ 60 °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 Input current: 1A/230V Power consumption: Up to 30W

### 5. Order Information

Model	Description
P2024	1 PON interface (SC), 24 FE ports, AC 220V