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Product Specification
A-GEAR P1006-2FXS
FTTH/O Optical Network Unit (ONU)

1. IIntroduction

Abiding by IEEE802.3ah, A-GEAR P1106-2FXS meets relevant requirements of GEPON OUN regulated in Technical Requirements of YD/T1475-2006—Ethernet-Based EPON and China Telecom EPON Technical Requirements. Through hi-speed EPON access, A-GEAR P1006-2FXS can provide users Internet services and the service of accessing the enterprise network.

2. Main Strengths

- Supports the symmetric uplink/downlink 1Gbps PON transmission rate, efficient bandwidth usage and Ethernet services, helping carriers to provide reliable services to their users.
- Supports P1006-2FXS ONU series hybrid networking, minimizing the cost for the carrier to establish its network.
- Supports SLA and DBA.
- Occupies little space and consumes a little volume of power.

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 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	P1006-2FXS
User trial interface	four fixed 10/100M BASE-T auto-adaptable RJ45 interfaces **2 VoIP audio interfaces** **1 CATV RF interface (optional)**
PON interface	A 1Gbps transmission rate with downlink and uplink symmetry **Network coverage diameter: 30 kilometers** **Type of the optical interface: SC/PC** **Hi-sensible optical receiver: Not less than -26dBm** **Radiation power: 2-7dBm** **Security: ONU authentication mechanism**
Functions of the VoIP interface	Interface type: RJ11 Ring flow voltage: 50±10VAC 30±10H Supporting MGCP and SIP Supporting automatic switchover of active software and standby software Supporting voice encoding/compression technologies such as G.711 A-Law/u-Law, G729A/B, G.723.1-5.3/6.3 and G.726
CATV RF	75Ω, F style (CATV connection) Frequency bandwidth: 47-870MHz Electricity output level: 17dBuV
Standard	IEEE 802.3ah **PRC Community Industry Standard (YD/T 1475-2006)** **IEEE 802.1D, Spanning Tree** **IEEE 802.1Q, VLAN** **IEEE 802.1w, RSTP** **Ethernet – II, Ethernet-SNAP**
VLAN	Port-based VLAN **GVRP** **IEEE 802.1Q VLAN**

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Attributes	P1006-2FXS
QoS	Backpressure flow control (half duplex) **IEEE 802.3x flow control (full duplex)** **Head Of Line (HOL) prevention mechanism** **IEEE p802.1p, CoS** **Four transmission queues on each port are mapped to eight priority values of 802.1p.** **WR, SP and FIFO** **Rate control**
Reliability	Unidirectional Link Detection (UDLD) **Dying-Gasp**
Network security	IEEE 802.1x, port-based access control Supporting the local and remote authentication, EAP termination or transparent transversal **CHAP and EAP authentication** **Limiting the maximum number of users on each port** **Protecting the port** **Controlling the storm of packets**
Management configuration	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 structure	206.0 mm(W) x 135.5 mm(D) x 41.8 mm(H) Installation: desktop Requirements of dust prevention: dust's diameter > 5µm; dust concentration ≤3×104 corpuscle/m3
Heat cooling	The heat generated by the device in a long-time use (24 hours) cannot lead to the degrading of the performance and the deformation of the components.
Environment requirements	Working condition: -5℃ ~ 45℃; 5% ~ 95% no condensation Storage condition: -20℃ ~ 70℃; 5% ~ 95% no condensation
Power Source	Type of the power adapter: the on-off power adapter Input voltage: 110V (240V) 50Hz ±5% **Output voltage: 12W, 1.5A** Fluctuated range of the input voltage: ±20% (domestic); ±10% (international) Fuse: Installing the irrecoverable temperature fuse (or temperature resistance) at the input terminal Over-current protection and overvoltage protection Power consumption: Up to 12W

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Attributes	P1006-2FXS
Dielectric strength	Power source to hull: AC 3000V, lasting one minute **Power source to network port: AC 3000V, lasting one minute**
Thunder prevention	Power source: differential mode 2.5KV, common mode 4KV **Network port: common mode 1KV**
EMC	GB9254-1998(idt CISPR22:1997)

5. Order Information

Model	Description
A-GEAR P1006-2FXS	Desktop ONU, 1 PON interface (SC), 4 FE ports, 2 VoIP ports, plastic hull, AC220V, outside adapter
A-GEAR P1006-2FXS-RF	Desktop ONU, 1 PON interface (SC), 4 FE ports, 2 VoIP ports, 1 CATV RF port, plastic hull, AC220V, outside adapter