



Equipment above: AN5121-4GP

Equipment below: AN5121-4G

Note: The actual product shall prevail.

# AN5121 Series PON Optical Network Unit Datasheet

## Product Overview

The AN5121 series products are FTTH / FTTV GPON ONUs developed by FiberHome for access to networks in indoor and outdoor environments. They provide services such as broadband, video monitoring, HD video-on-demand and Wi-Fi hot spot deployment.

The AN5121 series can be deployed flexibly. They can be mounted on a table, on a wall, or on a pole outdoors, meeting different installation requirements in various scenarios.

The AN5121-4GP supports the PoE function to provide power supply for remote devices via network cables. This function lowers the cost and simplifies the deployment for remote devices.

## Product Highlights

- Supports multiple mounting modes, PoE power supply, and flexible installation and deployment.
- Supports 802.1x and type B protection switching, highly secure and reliable.
- Provides 6 kV lightning protection and aluminum high-strength shell, applicable to harsh environment.

## Product Specifications

Category	Item	AN5121-4GP	AN5121-4G
Mechanical parameters	Dimensions (H × W × D)	40 mm × 182 mm × 122.5 mm	
	Weight	约0.658 kg	约0.622 kg
Power supply parameters	Voltage	DC 54 V	DC 12 V
	Current	≤ 2.4 A	≤ 1 A
Power consumption parameters	Static power consumption	3 W	3 W
	Maximum power consumption	3.8 W	3.8 W
	PoE output power consumption	≤ 105.4 W <sup>Note 1</sup>	—
Environment parameters	Working temperature	-40°C to 55°C	<ul style="list-style-type: none"> <li>Indoor: -40°C to 55°C</li> <li>Outdoor: -40°C to 70°C</li> </ul>
	Storage temperature	-40°C to 70°C	
	Ambient humidity	5% to 95% (non-condensing)	
	Atmospheric pressure (altitude)	70 kPa to 106 kPa (-60 m to 4000 m) In areas with an altitude between 1800 m and 4000 m, the operating temperature of the equipment decreases by 1°C when the altitude increases by 220 m.	
Lightening protection parameters	—	<ul style="list-style-type: none"> <li>Lightening protection for power supply and service interfaces. EMC complies with CISPR 22 and CISPR 24 standards.</li> <li>AC power supply: 6 kV in the common mode and 6 kV in the differential mode</li> <li>GE ports: 6 kV in the common mode and 1.5 kV in the differential mode</li> </ul>	
Mounting mode		Can be mounted on a workbench, a wall or a pole.	
Note 1: With different power adapters, the PoE power supply specifications supported by the AN5121-4GP are as follows.			
Power Adapter		Maximum PoE Port Specification	Maximum PoE Output Power
54 V / 114 W		30 W × 3 + 15.4 W × 1	105.4 W
54V / 54W		15.4 W × 3	46.2 W
		30 W × 1 + 15.4 W × 1	45.4 W

## Interface Specifications

Item	Network Side Interface	Client Side Interface
Interface	GPON × 1	GE × 4
Interface type	SC / UPC	RJ-45
Interface rate	Uplink: 1.25 Gbit/s; downlink: 2.5 Gbit/s	Auto negotiation to rates 10 / 100 / 1000 Mbit/s
Maximum frame length	1518	1518
Applicable standard	ITU-T G.984	IEEE 802.3z
Interface function	<ul style="list-style-type: none"> <li>Supports authentication modes including physical identifier authentication, password authentication and logical SN authentication</li> <li>Supports encryption of downlink data using the AES-128 algorithm.</li> <li>Provides the BOB design.</li> <li>Supports the following protection types: <ul style="list-style-type: none"> <li>→ Type B (single homing)</li> <li>→ Type B (dual homing) (supported in the L2 forwarding mode)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Supports the full-duplex / half-duplex working mode.</li> <li>Supports the performance statistics for Ethernet ports.</li> <li>Supports rate control and MAC address limit for LAN ports</li> <li>Supports the user MAC address whitelist</li> <li>Supports automatic configuration of MDI / MDIX.</li> <li>Supports ring network detection.</li> <li>The AN5121-4GP supports the PoE function.</li> </ul>

## Functions and Features

### Multicast

- Supports IGMP Snooping.
- Supports IGMP V2/V3.
- Supports IGMP Proxy.
- Supports MLD Snooping.
- Supports MLD V1/V2.

### QoS and ACL

- Supports the ACL function, which means traffic matching according to the ACL rules.
- Provides QoS measures and supports three scheduling modes: SP, WRR and SP + WRR.
- Supports queue mapping. The services can be mapped to queues with different priorities based on the 802.1P priority and the DSCP priority.
- Supports the flow rate control based on the flow classification rule and re-marking of the priority.
- Supports bandwidth rate control based on the ONU, and guarantees the services with higher priorities.
- Supports rate control for the Ethernet interface.

### L2 Management

- Supports line identifiers.
- Supports transparent transmission of BPDUs.
- Supports LLDP; supports discovering and detecting the types of the devices connected to user-side GE ports.
- Supports VLAN protocols IEEE 802.1p and 802.1Q.
- Supports VLAN stacking and QinQ.
- Supports transparent transmission and 1:1 translation of VLAN tags.
- Supports multicast packets carrying VLAN tags.
- Supports adding / stripping VLAN tags based on Ethernet ports.

### Security

- Supports limiting the number of port MAC addresses.
- Supports suppressing broadcast storm on user ports and uplink ports.
- Supports protection against various network attacks (including ARP, ICMP, DOS, and BPDU attacks).
- Be compliant with 802.1x and supports the authentication in EAP-MD5 / PEAP mode.
- Supports filtering MAC / IP addresses.
- Supports binding static MAC addresses.
- Supports firewall.

### L3

- Supports NAT address conversion.
- Supports IPv4 / IPv6 dual-stacking.
- Supports PPPoE / static IP / DHCP.
- Supports DDNS / DMZ / DNS / NAPT.
- Supports static routing.
- Supports addresses in multiple network segments and routing, and forwarding for virtual interfaces.
- Supports port mapping.
- Supports ALG function based on FTP service.
- Be compliant with UPnP IGD 1.0 and UPnP.
- Supports the ARP function.

### Intelligent Operation and Maintenance

- Manages ONUs locally via the Web-based network management system: You can log into the ONU via a user LAN port to view the ONU information and modify ONU settings such as logical SN and password.
- Manages ONUs remotely by Telnet, including viewing ONU status and printing debugging information
- Be compliant with OMCI.
- Supports the DHCP line identifier.
- Supports PPPoE+.

### PoE

The AN5121-4GP supports the following PoE functions:

- Be compliant with IEEE 802.3af and 802.3at
- Automatic detection and classification of PDs
- Automatic shutdown of PoE in case of over-voltage, over-current and over-temperature