

AN5221-F8UP XGS-PON Optical Network Unit Datasheet

Overview

The AN5221-F8UP is an FTTB / FTTH XGS-PON ONU independently developed by FiberHome for indoor network access. Designed with eight GE / PoE / PoE+ service ports, it provides broadband Internet access, safeguarding, monitoring, and high-definition video services for enterprise zones, bringing about superior service experience.

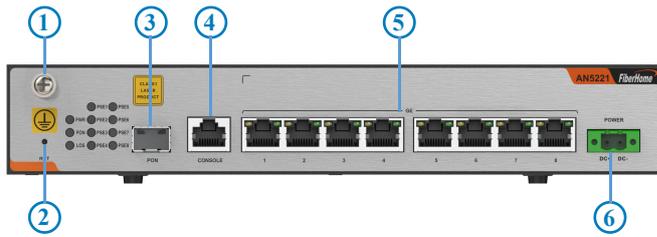
It can be flexibly deployed: placed on a plane, secured on a wall, or mounted in a cabinet as needed. Capable of PoE / PoE+, the AN5221-F8UP can feed power to devices like cameras and APs through network cables, thus they can be deployed more easily with lower cost.

Highlights

- Noise-free, suitable for classrooms, dormitories, and other places sensitive to noises
- Easy to install and flexible to deploy with multiple mounting modes; capable of PoE / PoE+
- Highly reliable, with IEEE 802.1x-compliant authentication and Type B protection switching
- Well-adapted to environments, with high-grade lightning protection (4 kV for service ports, and 6 kV for power supply ports) and high-strength metal housing

Appearance and Specifications

AN5221-F8UP



- ① Earth ground screw
- ② Switch for restart
- ③ XGS-PON port
- ④ Console port
- ⑤ GE ports
- ⑥ Power input interface

Classification	Item	Specification
Mechanical parameters	Dimensions (H × W × D)	43.5 mm × 260 mm × 185 mm
	Weight	1.36 kg
Power consumption parameters	Static power consumption	5 W (non-PoE output)
	Maximum power consumption	10 W (non-PoE output)
PoE specifications	Maximum output power	Maximum output power per port: 30 W
Per PoE port	Standard	IEEE 802.3af/at
	Maximum current	600 mA
	PSE output voltage	<ul style="list-style-type: none"> ● PoE: 44 V to 57 V ● PoE+: 50 V to 57 V
Environment parameters	Operating temperature	-10°C to 55°C
	Storage temperature	-40°C to 80°C
	Ambient humidity	5% to 95% (non-condensing)
Lightning protection parameters		<ul style="list-style-type: none"> ● Lightning protection for power supply and service ports, complaint with the EMC standards CISPR 35 and EN 55035 ● Power supply: 6 kV in both common and differential modes ● GE ports: 4 kV in common mode and 0.5 kV in differential mode
Mounting modes		Plane mounting, wall mounting and cabinet mounting
Network side interfaces	Quantity	1 × XGS-PON port (housing a pluggable optical module)
	Type	SC/UPC
	Rate	Upstream: 10 Gbit/s; downstream: 10 Gbit/s
	Standard	ITU-T G.9807.1
	Functions	<ul style="list-style-type: none"> ● Encryption based on the AES-128 algorithm ● Type B protection
User side interfaces	Quantity	8 × GE ports (capable of PoE / PoE+)
	Type	RJ-45
	Rate	Auto-negotiated to 10 / 100 / 1000 Mbit/s
	Standard	IEEE 802.3
	Functions	<ul style="list-style-type: none"> ● Full-duplex / half-duplex working mode ● Statistics of Ethernet port performance ● Rate control and MAC address limit based on LAN ports
		<ul style="list-style-type: none"> ● User MAC address white list ● Automatic configuration of MDI / MDIX ● Loop detection ● PoE

Functions and Features

Multicast

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

QoS and ACL

- ACL: Traffic is analyzed and processed according to ACL rules.
- QoS with three scheduling modes: SP, WRR and SP+WRR
- Queue mapping: Packets are mapped to different queues according to their 802.1p / DSCP priority.
- Traffic rate control and priority remarking based on traffic classification rules
- ONU-based bandwidth control to guarantee services with high priority
- Rate control on Ethernet ports

Layer 2 Management

- Line identifiers
- Transparent transmission of BPDUs
- LLDP: User devices connected to GE ports can be detected and identified.
- IEEE 802.1p and 802.1Q
- VLAN stacking and QinQ
- Transparent transmission and 1:1 translation of VLAN IDs
- VLAN tags carried by multicast packets
- Adding / stripping of VLAN tags based on Ethernet ports

Security

- Limit on number of MAC addresses per port
- Broadcast storm suppression on user ports and upstream ports
- Protection against various network attacks (including ARP, ICMP, DOS, and BPDU attacks)
- Authentication based on IEEE 802.1x and EAP-MD5/PEAP
- MAC / IP address filtering
- Binding static MAC addresses
- Firewall

PoE

- IEEE 802.3af and 802.3at
- Automatic detection and classification of PDs
- Automatic shutdown of PoE in case of overvoltage, overcurrent or overtemperature
- Alarm function

Intelligent OAM

- Web-based network management, allowing login to the ONU via a user LAN port to view information of the ONU and modify its settings like logical SN and password
- Remote management through Telnet on a local PC, where ONU status can be displayed and debugging information can be printed
- Management by an OLT through OMCI
- DHCP line identifiers
- PPPoE+