

# AN5221-F24UP XGS-PON Optical Network Unit Datasheet

## Overview

The AN5221-F24UP is a XGS-PON ONU providing data service access and power over Ethernet (PoE) for FTTB and FTTC applications. The 24 PoE-capable GE ports visibly reduce the cost in wiring and management of user terminals. The product provides information, communication, and entertainment services in multiple data forms for subscribers in residential communities and enterprises.

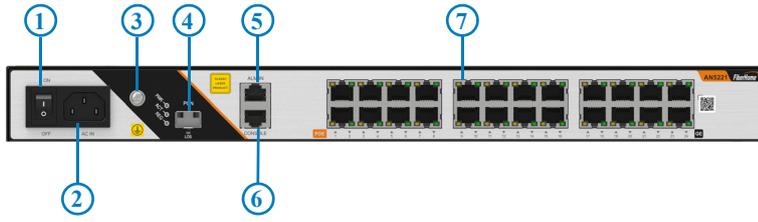
It can be flexibly deployed: placed on a plane, secured on a wall, or mounted in a cabinet as needed.

## Highlights

- Multiple mounting modes, power over Ethernet, easy installation, and flexible deployment
- Highly reliable, with IEEE 802.1x-compliant authentication and Type B protection switching
- High-class lightning protection for stable operation

## Appearance and Specifications

### AN5221-F24UP



- ① Power switch
- ② Power interface
- ③ Earth ground screw
- ④ PON port
- ⑤ ALM IN port
- ⑥ CONSOLE port
- ⑦ GE ports

Classification	Item	Specification
Mechanical parameters	Dimensions (H × W × D)	43.5 mm × 440 mm × 225 mm
	Weight	About 3.45 kg
Power supply	Voltage	220 V AC
	Current	≤ 6 A
Power consumption	Static power consumption	25.2 W
	Maximum power consumption	37.2 W
PoE	Maximum PoE output power	<ul style="list-style-type: none"> <li>● Per port: 30 W</li> <li>● Overall: 390 W</li> </ul>
PoE port	Standard	IEEE 802.3af/at
	Maximum current	PoE: 350 mA; PoE+: 600 mA
	PSE output voltage	PoE: 44 V to 57 V; PoE+: 50 V to 57 V
Environment	Operating temperature	-30°C to 55°C
	Storage temperature	-40°C to 80°C
	Ambient humidity	5% to 95% (non-condensing)
Lightning protection		<ul style="list-style-type: none"> <li>● Lightning protection for power supply and service ports, compliant with EMC standards CISPR 35 and CISPR 55035</li> <li>● Power supply: 6 kV in both common and differential modes</li> <li>● GE ports: 4 kV in common mode and 0.5 kV in differential mode</li> </ul>
Mounting mode		Plane mounting, wall mounting and cabinet mounting
Network side interface	Quantity	1 × XGS-PON port (housing a pluggable optical module)
	Type	SC/UPC
	Rate	Upstream: 9.953 Gbit/s; downstream: 9.953 Gbit/s
	Standard	ITU-T G.9807.1
	Functions	<ul style="list-style-type: none"> <li>● Encryption based on the AES-128 algorithm</li> <li>● Type B protection</li> </ul>
User side interface	Quantity	24 × GE ports
	Type	RJ-45
	Rate	Auto-negotiated to 10 / 100 / 1000 Mbit/s
	Standard	IEEE 802.3
	Functions	<ul style="list-style-type: none"> <li>● Configuration of Ethernet port rate, port enabling, negotiation mode, and flow control using Pause frames</li> <li>● Port-specific rate control and MAC address limit</li> </ul>
		<ul style="list-style-type: none"> <li>● Statistics of Ethernet port performance</li> <li>● Automatic configuration of MDI / MDIX</li> <li>● Loop detection</li> <li>● PoE</li> </ul>

## Functions and Features

### Multicast

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

### QoS and ACL

- ACL
- 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-specific bandwidth control to guarantee services with a higher priority

### Layer 2 Management

- Transparent transmission of OSFP / BPDU / EAP packets
- LLDP
- IEEE 802.1p and 802.1Q
- Transparent transmission and translation of VLAN tags
- VLAN stacking and VLAN QinQ
- VLAN-specific traffic control

### Security

- Protection against various network attacks (including ARP, ICMP, DoS, and BPDU attacks)
- Packet filtering; suppression of unknown unicast, unknown multicast, and broadcast packets
- User MAC / IP address white / black list
- DHCP anti-spoofing; filtering / binding of MAC / IP addresses
- Alarms for power failure, fiber disconnection, and loops on ports

### PoE & Fans

- IEEE 802.3af and 802.3at
- Forced / automatic power supply of ports
- Automatic detection and classification of PDs connected to PoE ports
- Priority setting for power supply of ports and priority-based power scheduling
- Automatic shutdown of PoE in case of overvoltage, overcurrent and overtemperature
- Automatic or manual speed control for fans
- Fan failure alarms

### Intelligent OAM

- Management through OMCI
- Local management via web, where ONU settings like logical SN and password can be modified
- Remote management through Telnet on a local PC, where ONU status can be displayed and debugging information can be printed
- Remote and local upgrade
- DHCP line identification
- PPPoE+