FiberHome

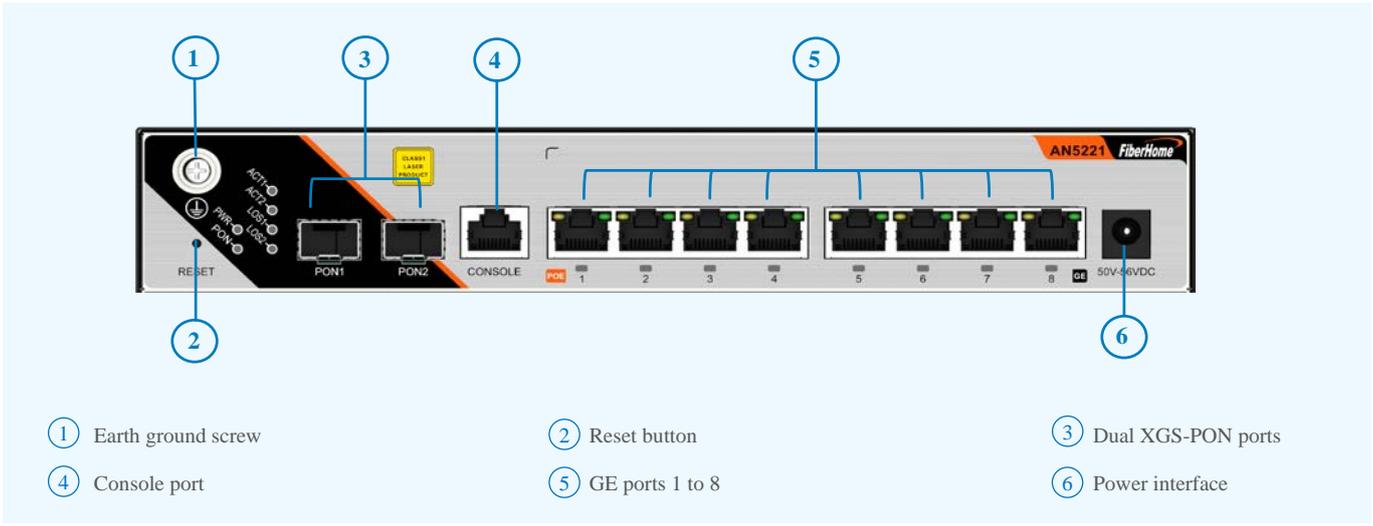**AN5221-F8UPX**

AN5221-F8UPX
XGS-PON Optical Network Unit

The AN5221-F8UPX is a PON ONU processing data services and providing power over Ethernet (PoE). It provides eight downstream GE ports, supporting Type C protection and dual-PON access based on XGS-PON. It can apply to scenarios requiring high stability, such as factories, hospitals, and wisdom classrooms. Besides, it can provide PoE for devices such as cameras, APs, and access control systems, considerably cutting down the cabling and management costs in deploying terminal devices.

Appearance

As a box-shaped device, the AN5221-F8UPX can be easily installed and secured.

| ① Earth ground screw | ② Reset button | ③ Dual XGS-PON ports |
| ④ Console port | ⑤ GE ports 1 to 8 | ⑥ Power interface |

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The AN5221-F8UPX is located between OLTs and user terminal devices in a network.

- Connects to upstream OLTs through dual PON ports based on XGS-PON using optical fibers.
- Connects to downstream user terminals using network cables, providing PoE for devices such as cameras, optical APs, and access control systems.
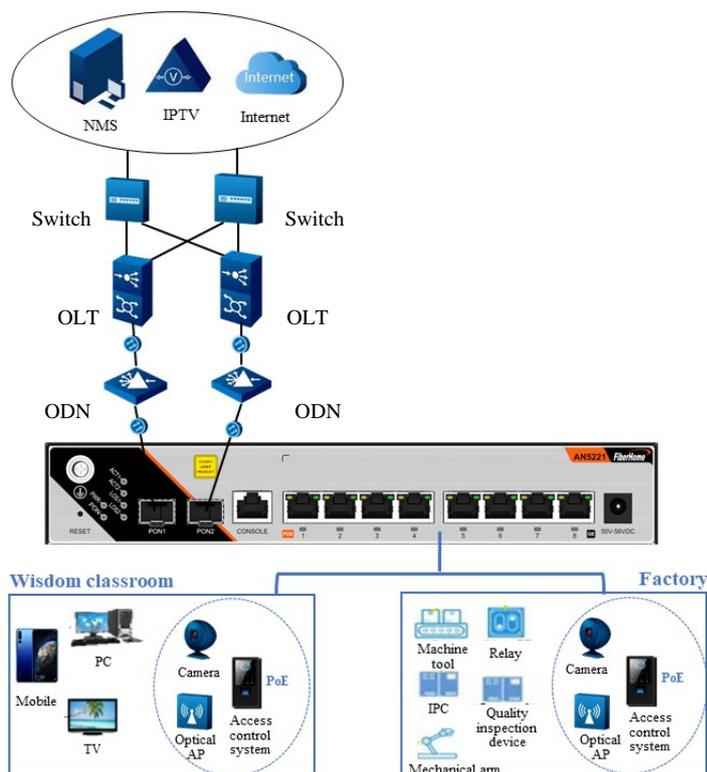
Highlights

➤ High Reliability

- Dual-PON access based on XGS-PON, ensuring reliability of user services
- Dual-PON access to reduce the risk in service interruption due to failure of one link

➤ Flexible Application

- Easily placed on a plane, or mounted on a wall or in a cabinet
- PoE-capable to enable simple deployment
- Versatile user-side ports for connection to various terminals

➤ High Stability

- High-grade lightning protection
- High-strength metal housing to adapt to harsh environments
- Type C protection for high security

➤ Smart O&M

- Quick service provisioning and simplified O&M through unified FiberHome web network management system
- Centralized management by OLTs
- Remote and local upgrade

Specifications

Category	Item		Description	
Mechanical parameters	Dimensions (H × W × D)		43.5 mm × 260 mm × 185 mm	
	Weight		Approx. 1.36 kg	
Power consumption	Static power consumption (all the broadband ports are deactivated)		Approx. 10 W (non-PoE output)	
	Maximum power consumption (all the broadband ports are activated)		17 W (non-PoE output)	
PoE	Maximum PoE output power		• Per port: 30 W • Overall: 120 W	
Environment	Operating temperature		-10ºC to 55ºC	
	Storage temperature		-40ºC to 70ºC	
	Ambient humidity		5% to 95% (non-condensing)	
Network side interfaces	XGS-PON ports	Port type	SC/UPC, supporting pluggable optical modules	
		Port rate	Uplink: 10 Gbit/s; downlink: 10 Gbit/s，	
		Standard	ITU-T G.9807.1	
		Protection type	Type C	
User side interfaces	Port count		GE × 8 (PoE-capable)	
	Port type		RJ-45	
	Port rate		Auto-negotiated to 10 / 100 / 1000 Mbit/s	
	Standard		IEEE802.3, IEEE802.3u, IEEE802.3ab	
	Functions		• Automatic configuration of MDI / MDIX • Limit on MAC address quantity	• Transparent transmission of VLAN IDs based on Ethernet ports • Loopback detection • PoE
Optical modules	Type		N1	
	Tx optical power		4 dBm to 9 dBm	
	Receiving sensitivity		< -28 dBm	
Mounting modes			Plane mounting, wall mounting and cabinet mounting	

Features

Multicast

- IGMP Snooping
- IGMP V2 / V3
- MLD Snooping
- MLD V1 / V2
- Multicast VLAN tags and transparent transmission

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-specific bandwidth control to guarantee services with high priority

Layer 2 Management

- Transparent transmission of BPDUs
- Transparent transmission of EAP packets
- Transparent transmission of OSPF packets
- LLDP; detecting types of devices connected to user-side GE ports

Security

- Protection against various network attacks (including ARP, ICMP, DoS, and BPDU attacks)
- 802.1X authentication system based on PEAP and TLS/TTLS/EAP-MD5
- MAC / IP address filtering
- Static MAC address binding
- Port-based loopback detection
- Alarms for device power failure, fiber disconnection and port loopback

PoE

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

Smart O&M

- Unified FiberHome web network management system, allowing operations such as displaying configurations, modifying ONUs' logic SNs and passwords, upgrading software, and restarting devices on web pages
- Maintenance functions such as displaying logs and fault diagnosis records to provide reference for fault isolation
- Remote management through Telnet such as displaying ONU status and printing debugging information
- OMCI for centralized management by OLTs
- Displaying optical module information and CPU / memory usage