AN4121-CM
Desktop Optical AP

Flexible Access ●

POTS, wired and wireless access

Smart Wi-Fi ●

Dual-band Wi-Fi 7

Flexible Deployment ●

Desktop- and wall-mountable

About the Device

The AN4121-CM developed by FiberHome is a desktop Wi-Fi ONU (also known as optical AP) supporting Wi-Fi 7. It provides a symmetric 2.5G GPON upstream port on the network side, and three GE ports, one 2.5GE port, one POTS port, one USB interface and dual-band Wi-Fi 7 interface on the user side.

Featuring flexible deployment, the AN4121-CM can be placed on a desktop or mounted on a wall, catering to installation requirements in various scenarios.

Highlights

Diverse Service Interfaces

- Supports symmetric 2.5G GPON access.
- Provides POTS, wired and wireless interfaces.

E-mail： marketing@fiberhome.com

Gigabit Wireless Coverage

- Provides dual-band Wi-Fi 7 interface.
- Delivers a gigabit wireless network experience.

Flexible Deployment

- Supports placement on a desktop or mounting on a wall.

Application

The AN4121-CM desktop Wi-Fi ONU can serve as an all-optical sub-gateway for government and enterprise networks. When paired with a primary gateway for government and enterprise use, it delivers wired and wireless network coverage for small and medium-sized enterprises (SMEs). This setup facilitates a comprehensive all-optical networking solution, providing corporate users with services such as wired / wireless Internet access, high-definition video streaming, and voice telephony.

- Networking scenario: The AN4121-CM desktop optical AP typically connects to a primary gateway, forming an all-optical solution tailored for small and medium-sized businesses alongside the primary gateway.
- Application features: The AN4121-CM provides a variety of interfaces, meeting comprehensive service demands such as wired access, Wi-Fi coverage, and voice telephony.
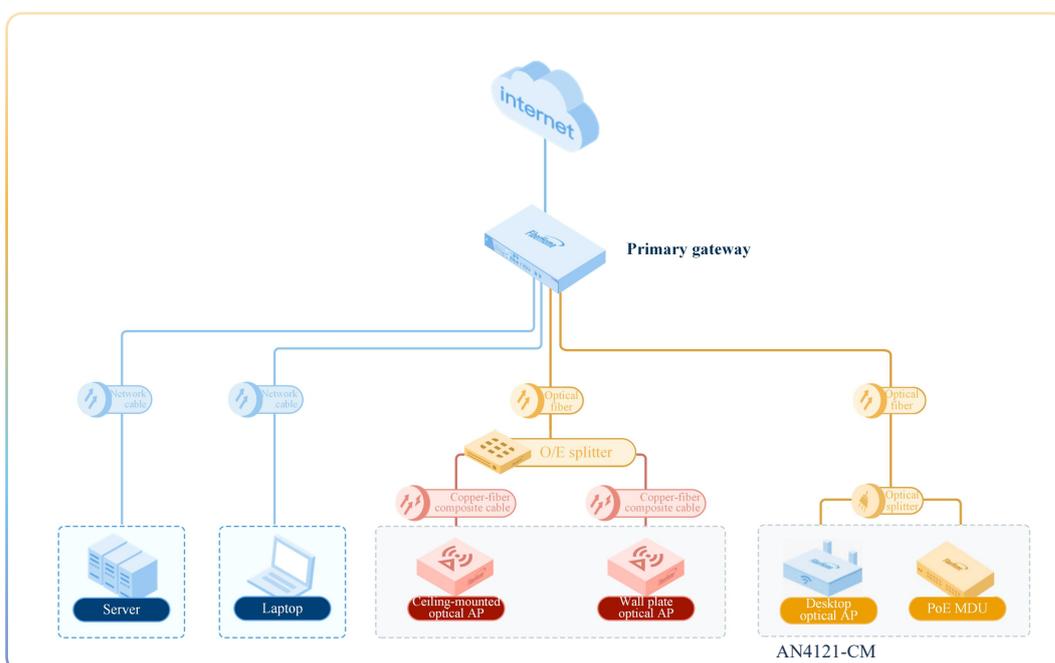
Specifications

Classification	Item	Specification
Overall specifications	Network side interface	Symmetric 2.5G GPON
	User side interface	1 × 2.5GE + 3 × GE + 1 × POTS + 2.4 GHz & 5GHz Wi-Fi 7 + 1 × USB2.0
	Overall power supply	Power adapter: 12 V DC, 1.5 A
	Operating temperature	-10°C to 50°C
	Operating humidity	5% to 95%RH (non-condensing)
Network side interface	Configuration	Symmetric 2.5G GPON
	Port type	SC interface
	Port rate	Downstream: 2.488 Gbit/s; upstream: 2.488 Gbit/s
	Function	Optical fiber access
LAN port	Configuration	1 × 2.5GE + 3 × GE
	Port type	RJ-45
	Port rate	Auto-negotiated to 10 / 100 / 1000 / 2500 Mbit/s
	Standard	IEEE 802.3
	Function	• Adding / stripping of VLAN tags based on Ethernet ports • MAC address limit • MAC address learning
POTS port	Configuration	1 × POTS
	Port type	RJ-11
	Function	• Encoding / decoding compliant with G.711A/u, G.729a/b and G.722 • DTMF
Wi-Fi interface	Configuration	Wi-Fi 7
	Air interface rate	688 Mbit/s (2.4 GHz), 2882 Mbit/s (5 GHz)
	Standard	IEEE 802.11be (2.4G & 5G)
	Function	• 2×2 MU-MIMO (2.4G & 5G) • Channel bandwidth: 20/40/80/160 MHz • Wi-Fi Multi Media (WMM) • Multi-SSID
DC power interface	Function	12 V DC/1.5 A power input (standard power adapater)

Features

Ethernet Service

VLAN transparent transmission	1:1 VLAN translation
Adding / stripping of VLAN tags based on Ethernet ports	Line identifiers

Security

MAC / IP address filtering	802.1x authentication
Protection against various network attacks (including ARP, ICMP and DoS attacks)	IPv6 / IPv4 firewall

Smart O&M

Web UI management: allows login to the web management page to check device status.	Remote platform management: displays the device status information and more.
Collective management through a primary gateway	

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-specific bandwidth control to guarantee services with high priority	Rate control on Ethernet ports
WAN rate control	

Wi-Fi

IEEE 802.11 b/g/n/ax/be (2.4G)	IEEE 802.11 a/n/ac/ax/be (5G)
OFDMA and 4096 QAM modulation	Automatic selection of channels
Security authentication through WPA, WPA2 and WPA3	Up to 64 user connections
20/40 MHz bandwidth mode for the 2.4G frequency band	20/40/80/160 MHz bandwidth mode for the 5G frequency band

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