



AX7501-B Series

Dual-Band Wireless AX6000 10G Fiber IAD with SFP+

Zyxel's BBF.247 certified AX7501-B Series Dual-Band Wireless AX6000 10G Fiber IAD with SFP+ provides 10G service for active fiber or XGS-PON networks. Compliant with the latest Wi-Fi 6 (11ax) standard, AX7501-B Series delivers premium fiber services with optimized bandwidth to increase network capacity and the number of simultaneous streams, allowing more subscribers to enjoy superior connectivity with extremely low latency.

Benefits

Maximized deployment flexibility through fiber

The AX7501-B Series features a reserved SFP+ cage to support both 10G active fiber and XGS-PON technologies. The maximized flexibility allows seamless migration from today's Gigabit to next generation 10G symmetric fiber networks.

Wi-Fi 6 (11ax) technology for superior performance and coverage

The AX7501-B Series supports the latest Wi-Fi 6 (11ax) standard to offer lightning-fast throughputs of up to 6000 Mbps* and wireless speeds of up to 4.8 Gbps* on the 5 GHz band and 1.1 Gbps* on 2.4 GHz.



Integrated internet services via 10G fiber



Wi-Fi 6 (11ax) 4x4 + 4x4 for superior performance and coverage



SFP+ supports both passive and active fiber



Zyxel MPro Mesh® Solutions (compliant with EasyMesh standards)



Zyxel Execution Environment (ZyEE) for Linux Containers



Remote management via OMCI and TR-369/TR-069



Zyxel-developed OPAL for superior flexibility and faster time-to-market

TR-369/TR-069/OMCI remote management for lower OPEX

Compliant with TR-369/TR-069/OMCI standard, the AX7501-B Series significantly simplifies deployment complexity and lowers operating and maintenance costs with its remote management capabilities.

Premium MPro Mesh® for whole-home coverage**

Featuring EasyMesh fully compliant Zyxel MPro Mesh® Solutions, the AX7501-B Series enhances your subscribers' experience by providing self-adapting, easy-to-manage whole-home Wi-Fi coverage, while reducing your service OPEX.

Seamless migration with OPAL software

The AX7501-B Series is available with Zyxel OPAL – our mature, modular software platform. The software incorporates a set of field-proven applications and allows you to easily manage your customer's premium services or seamlessly migrate and upgrade them to new technology – all with the advantage of reduced development time for you and great service for your customers.

Delivering future-proof services with Zyxel ZyEE Linux kernel-based container

The AX7501-B Series supports Zyxel Execution Environment (ZyEE), which is a secure and future-proof Linux kernel-based execution environment, also known as a container. ZyEE creates a predictable environment isolated from other applications for software developers and service providers to develop, enable, install, and uninstall third-party applications without risking the core operating system. ZyEE's portability and scalability enhance software development agility by providing broader compatibility with various hardware environments. In addition, the compact and structurally simple ZyEE optimizes system computing resources. With ZyEE, service providers can deliver new features to subscribers with reduced time-to-market while remotely managing services through existing ACS servers.

Specifications

System specifications

Wireless standards

- 802.11 b/g/n/ax 2.4 GHz
- 802.11 a/n/ac/ax 5 GHz

XGS-PON compliance

- Complies with ITU-T G.9807.1/G.988 GPON
- Complies with class N1/N2
- DS/US speeds: 9.95328/9.95328 Gbps
- Wavelength: 1577 nm (DS) & 1270 nm (US)
- Physical distance reach up to 20 km

10G AE compliance

- Complies with class B+ type PMD
- DS/US speeds: 10.3125/10.3125 Gbps
- Wavelength: 1330 nm (DS) & 1270 nm (US)
- Physical distance reach up to 10 km

Ethernet (LAN) features

- Full duplex IEEE 802.3x
- MAC address learning
- IPv6 address transparent

Networking features

- IEEE 802.1D transparent bridge
- IEEE 802.1D basic spanning tree
- Static route/DNS route/policy route
- Static routing, dynamic routing

- Routing Information Protocol (RIP)
- DNS entry
- Dynamic DNS
- Internet Group Management Protocol (IGMP)
- VLAN group
- Interface grouping

VLAN functional specification

- VLAN IEEE 802.1Q
- CoS IEEE 802.1p
- QinQ VLAN

QoS

- 802.1p priority
- SP/WRR/SP+WRR
- Broadcast storm control

WLAN

- Wireless Protected Setup (WPS)
- WPA/WPA2 (Wi-Fi protected access)
- Supports multiple SSID (up to 4)

Security

- Static Packet Inspection (SPI) firewall
- MAC/IP/URL addresses filtering

VoIP

- Voice functionality:
 - Codec: G.711 a/u, G.722, G.726
 - DTMF tone: detection and generation

Phone features

- Internal call
- T.30/T.38/G.711 fax mode, call waiting, call forwarding (no condition, busy, no answer)
- Call transferring (blind, consult OnHold, attendant)
- Call hold/call retrieve
- Three-way conference
- Second call/adding an outgoing call
- Switch between 2 active calls

Management

- WEB/TELNET (CLI)
- OMCI (G.988)/TR-069/TR-369
- Firmware upgrade via FTP/TFTP/HTTP

USB

- File sharing

Hardware specifications

Wireless

- Four internal antennas (2.4 GHz)
- Four internal antennas (5 GHz)

WAN

- One SFP+ cage for XGS-PON/active/fiber/Ethernet transceiver

Ethernet LAN

- 10GbE LAN: one 10000/1000/100 Mbps with R-J45 port
- 1GbE LAN: four 1000/100 Mbps with RJ-45 ports

VoIP

- Two FXS ports RJ-11 (6P2C)

USB

- One USB 3.0 host

Button

- One power on/off
- One WLAN on/off button
- One WPS on/off push button
- One reset button

Status LED indicators

- Power/system
- Fiber
- Internet
- 10GbE LAN
- Ethernet
- WLAN 2.4G
- WLAN 5G
- Phone
- USB

Power consumption

- 12 V DC 3.5 A
- 42 Watt max

Physical specifications

- Item dimensions (LxWxH): 250 x 187 x 32 mm (9.84" x 7.36" x 1.26")
- Item weight: 473 g (1.043 lb.)
- Packing dimensions (LxWxH): 273 x 207 x 92 mm (10.75" x 8.15" x 3.62")
- Packing weight: 1084 g (2.390 lb.)

Environmental specifications

Operating environment

- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 10% to 90% RH (non-condensing)

Storage environment

- Temperature: -30°C to 70°C (-4°F to 158°F)
- Humidity: 10% to 95% RH (non-condensing)

Certification

- CE
- RoHS (Restriction of Hazardous Substances) Directive certification

Package contents

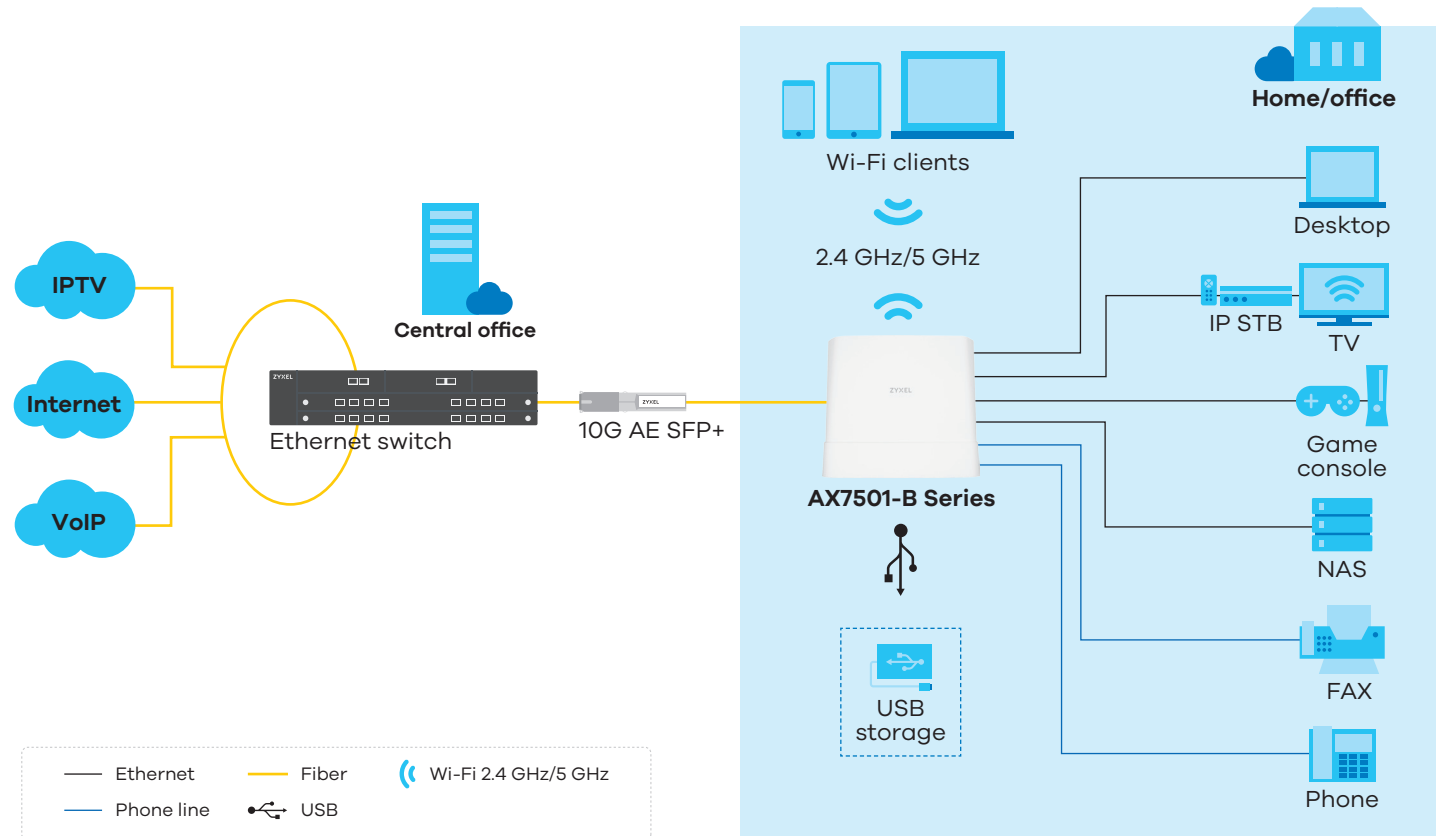
- 10G fiber IAD
- Power adapter
- Ethernet cable
- Phone cable
- Quick Start Guide
- Safety warning card
- Wall mount screw

* The maximum data rates is a theoretical value. The actual data rates depend on the network environment.

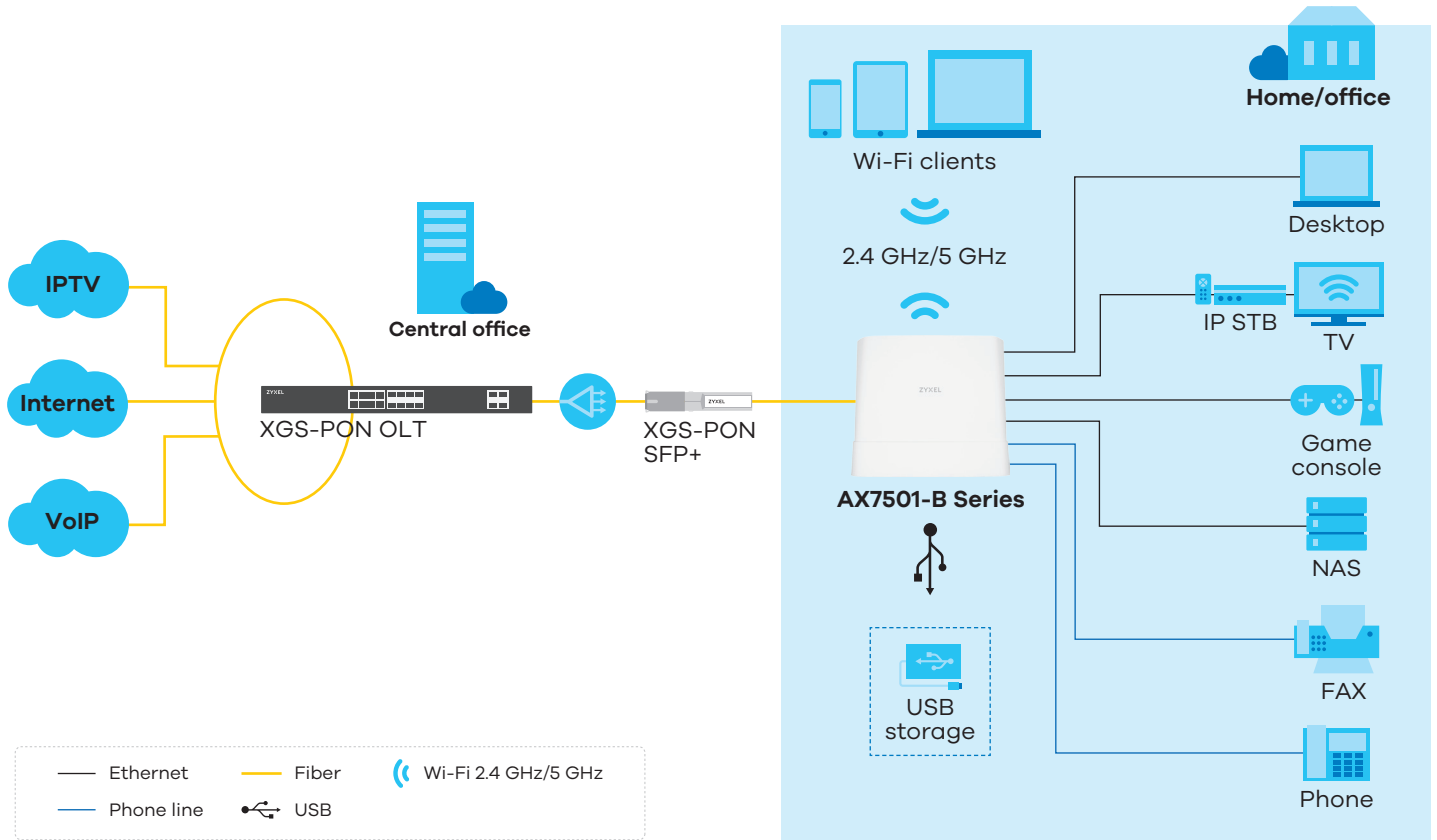
** Combining AX7501-B Series with the WX3401 Wireless Extender is recommended for the ideal mesh network performance.

Application diagram

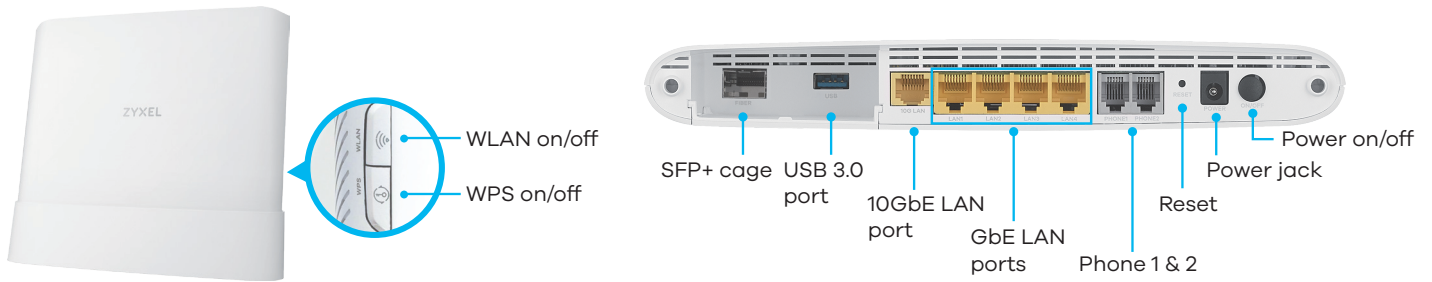
Active fiber application



Passive fiber application



Hardware description



For more product information, visit us on the web at <https://www.zyxel.com/service-provider>

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