ZYXEL
COMMUNICATIONS

DX4510-B Series

AX6000 WiFi 6 VDSL2 Bonding Gateway

The Zyxel DX4510-B Series AX6000 WiFi 6 VDSL2 Bonding Gateway supports the latest dual-band wireless 11ax standard, enabling service providers to deliver superior connectivity with extreme low-latency.

Benefits

CAF II Performance Testing Support

The Zyxel DX4510-B Series supports optimized TR-143 protocol to facilitate FCC mandated CAF II Performance Testing.

WiFi 6 technology for superior lag-free performance

Supporting the latest dual-band WiFi 6 technology, the DX4510-B Series offers speeds of up to 4804 Mbps* with the 5 GHz band and 1148 Mbps* with the 2.4 GHz band. Integrating uplink MU-MIMO and OFDMA technology, the DX4510-B Series empowers service providers to deliver premium internet connectivity for multi-streaming data access with extremely low latency.

Deliver high-performance service with low crosstalk

The DX4510-B Series supports VDSL2 vectoring up to profile 17a with reduced crosstalk, allowing service providers to improve network performance and service range.

- WiFi 6 (11ax) for superior performance and coverage
- Supports downlink MU-MIMO for increased network capacity
- VDSL2 supports vectoring up to profile 17a
- Zyxel MPro Mesh™ Solutions (compliant with EasyMesh standards)
- Remote management via TR-069 and TR-181 i2
- Comprehensive QoS for enhanced triple-play experience
- NAT firewall with SPI and DoS for enhanced security
- 1 GHz dual-core processor with dedicated quad-core routing accelerator

Remote management through TR-069 and TR-181 i2

With support for TR-069 for simplified remote configuration, firmware upgrades, and diagnosis and TR-181 issue-2 for enhanced visibility on the LAN network, the DX4510-B Series facilitates superior customer service with optimized OPEX.

Premium MPro Mesh™ for whole-home coverage

Featuring EasyMesh fully compliant Zyxel MPro Mesh™ solution, the Zyxel DX4510-B Series enhances your subscribers' experience by providing self-adapting, easy-to-manage whole-home WiFi coverage, while reducing your service OPEX.

Specifications

System specifications

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

Wireless transfer rates
- Transmit:
  - 802.11ax (2.4 GHz): up to 1148 Mbps
  - 802.11ax (5 GHz): up to 4804 Mbps

VDSL and ADSL compliance
- VDSL
  - G.993.1 VDSL
  - G.993.2 VDSL2, Band 997, 998, Over POTS
  - Supports VDSL profiles: 8a/b/c/d, 12a/b, 17a, 35b (single line)
  - G.vector
- ADSL
  - G.992.1 (G.dmt)
  - G.992.2 (G.lite)
  - ANSI T1.413 compliant
  - G.992.3 (ADSL2)
  - G.992.5 (ADSL2+)
  - Supports G.INP

Router and bridge features
- IEEE 802.1D transparent bridge & basic spanning tree
- PPPoE (RFC 2516)
- PPPoA (RFC 2364)
- MAC encapsulation routing/IPoE
- Network Address Translation (NAT)
- NAT virtual server (port forwarding)
- DHCP client/server/relay with DHCP option 43/60/61/125
- DNS proxy/dynamic DNS
- Static/policy route
- IGMP v1/v2/v3
- IPv4/IPv6

WLAN features
- Wireless Protected Setup (WPS)
- WiFi Multimedia (WMM)
- WPA 2.0
- WPA2-PSK
- WPA3-SAE
- Security type
- Multi SSID: up to 4
- MU-MIMO

VLAN/QoS
- 802.1Q tag/tag based VLAN
- Supports flexible traffic classification

Firewall & security
- Generic packet filter
- Denial-of-Service (DoS) attack prevention
- Parental control

Management
- Web/HTTP: 3 level log-in via SSH or Telnet
- Firmware upgrade via web/TFTP/FTP/TR-069 RPC method
- Text based configuration
- Configuration backup/update/restore default via Web
- Configurable access control for remote management (interface and port number)
- DSL forum TR-069, TR-098, TR-181, TR-111 and TR-181 i2
- SNMP v1, v2
- Supports Rom-D
- UPnP port forwarding rules on page

Hardware specifications

WAN
- One 1GbE RJ-45 port

Wireless
- 2.4 GHz: 4x4 MIMO antenna array
- 5 GHZ: 4x4 MIMO antenna array

DSL
- One RJ-14

Ethernet
- Four 1GbE RJ-45 ports

USB
- One USB 2.0 host

Button
- Reset
- WPS

LEDs indicators
- Power
- DSL
- WAN
- Internet
- LAN
- USB
- WiFi 2.4G/WPS
- WiFi 5G/WPS

Power consumption

- 12V DC/3A
- Max 36 watt

Physical specifications

- Item dimensions (WxDxH):
  175 x 60 x 245 mm
  (6.88" x 2.36" x 9.64")
- Item weight: 546 g (1.20 lb.)
- Packing dimensions (WxDxH):
  345 x 232 x 65 mm
  (13.58" x 9.13" x 2.55")
- Packing weight: 995 g (2.19 lb.)

Environmental specifications

Operating environment

- Temperature:
  0°C to 45°C (32°F to 113°F)
- Humidity:
  10% to 90% RH (Non-condensing)

Storage environment

- Temperature:
  -30°C to 70°C (-22°F to 158°F)
- Humidity:
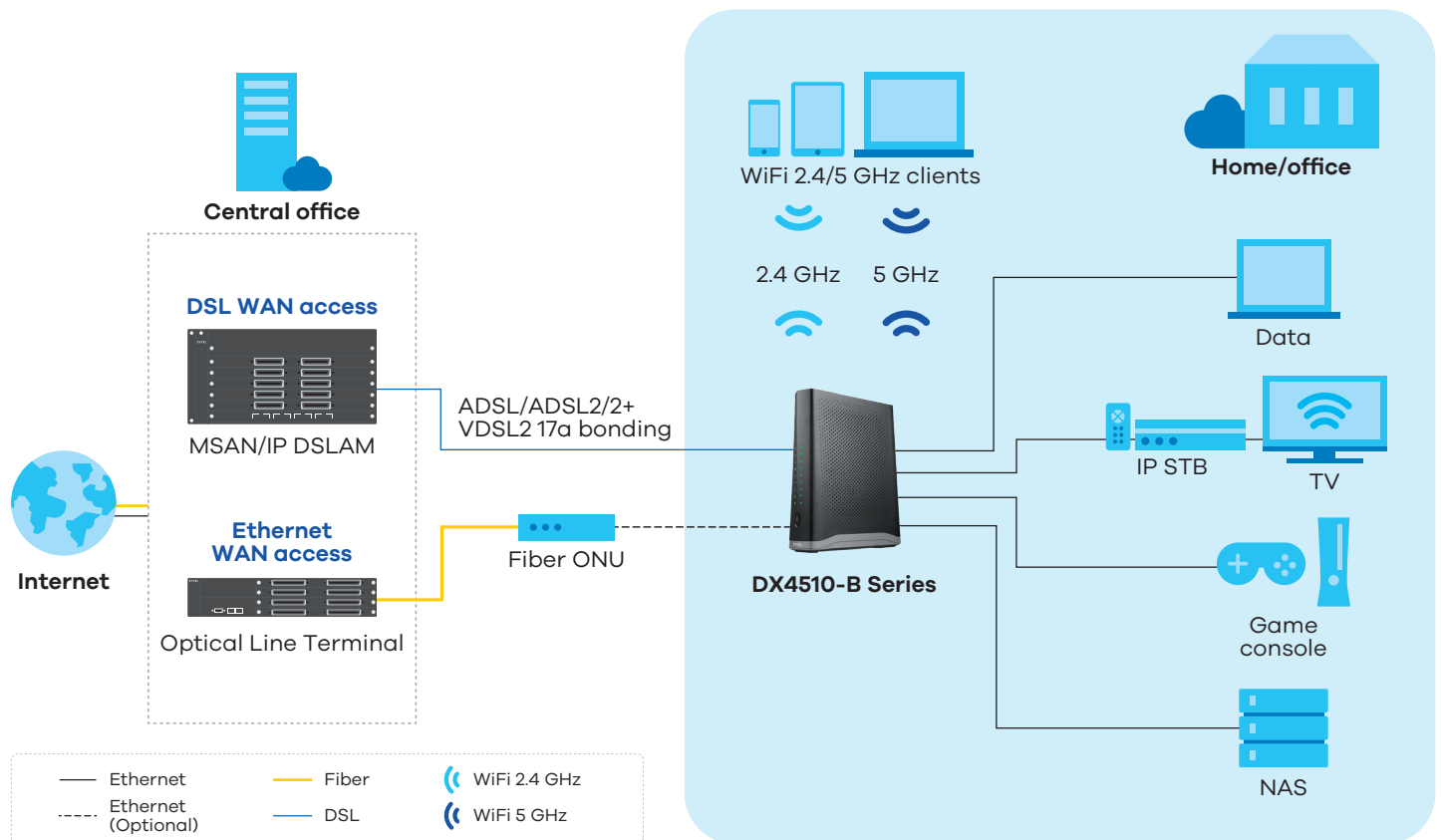 10% to 95% RH (Non-condensing)

Certification

- EMC: FCC, IC

Package contents

- Wireless gateway
- Power adapter
- Ethernet cable
- RJ-14 cable
- Quick Start Guide

* The maximum wireless data transfer rate is derived from IEEE standard 802.11 specifications. Actual data transfer rate will vary from network environment including: distance, network traffic, building site materials/construction, interference from other wireless devices, and other adverse conditions.

Application diagram

Interface description

WPS button

Power jack
Reset
USB port
GbE WAN port

GbE LAN ports

DSL port

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Datasheet DX4510-B Series

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