ZyXEL

New Revenue Streams from Fiber Optical Services

- **Integrated Internet services through fiber optics**
- **2.4 GHz 11n (2x2) for superior performance and coverage**
- **Advanced QoS ensures quality of triple-play services**
- **Provisioning and management through TR-069 and OMCI**

PMG5318-B20B is a GPON ONT that provides high-speed fiber access combines with residential gateway, VoIP and wireless features. It is compatible for optical ITU-T G.984 and wireless IEEE 802.11n environment.

Benefits

Integrated Internet services through fiber optics

The ZyXEL PMG5318-B20B Wireless N GPON HGU with a 4-port GbE Switch provides various integrated services through a single optical fiber for customers to support prevalent deployments of triple-play services such as data, video/high-definition television (HDTV), VoIP and interactive games.

2.4 GHz 11n (2x2) for superior performance and coverage

The ZyXEL PMG5318-B20B features 802.11n technology to provide an ultimate solution for both speed and coverage. With 802.11n wireless data rates of up to 300 Mbps, the PMG5318-B20B provides stable, reliable wireless connections for high-speed data and multimedia applications. The 802.11n technology empowers the device to eliminate dead zones and to extend coverage while retaining backward compatibility with any IEEE 802.11 b/g/n Wi-Fi certified device.

Advanced Quality of Service ensures quality of triple-play services

As higher bandwidth and greater efficiency of Ethernet cannot ensure effective delivery of high-quality voice, data and video across a GPON network, service providers can freely design their Quality of Service (QoS) policies and prioritize mission-critical services such as IPTV and VoIP based on their service plan offerings. This increases network efficiency and productivity to enable service providers to offer a real multi-play solution that meets the needs of residential users.

PMG5318-B20B
Wireless N GPON HGU with 4-port GbE Switch

300 Mbps 802.11n
802.11n 300 Mbps | Fiber | TR-069

Provisioning and management through TR-069 along with OMCI

The ZyXEL PMG5318-B20B can be connected to a GPON OLT to provide network operators with management and provision functions that support ONT Management and Control Interface (OMCI) as well as TR-069 management functions. As a result, the operation and maintenance of the PMG5318-B20B are extremely easy and efficient.

Specifications

System Specifications

GPON Compliance
• Comply ITU-T G.984 GPON standard:
  ▪ G.984.1 general characteristics
  ▪ G.984.2 physical Media Dependent (PMD) layer specifications
  ▪ G.984.3 transmission convergence layer specifications
  ▪ G.984.4 ONT management and control interface specification
• Support DS/US transmission rate to 2.488 Gbps/1.244 Gbps
• Wavelength: 1490 nm downstream & 1310 nm upstream
• Comply with class B+ type PMD
• Physical distance reach to 20 km
• Support Dynamic Bandwidth Allocation (DBA)
• GPON Encapsulation Method (GEM) supports Ethernet packet
• Supports GEM header removal/insertion and data extraction/segmentation (GEM SAR)
• Configurable AES DS and FEC DS/US
• Support up to 8 T-CONs each with priority queues (US)

Voice Functionality
• Codecs: G.711 a/u, G.723, G.726
• DTMF tone: Detection and generation

Phone Features
• Internal call
• T.38 FAX relay, T30
• Call waiting
• Call forwarding (No condition, Busy, No answer)
• Call transferring (Blind, ConsultOnHold, Attendant)
• Call hold/call retrieve
• Three-way conference
• Second call/adding an outgoing call
• Switch between 2 active calls

VLAN/QoS
• Support flexible traffic classification
• Port-based VLAN/802.1Q
• DSCP/802.1P

Wireless
• IEEE 802.11n 2.4 GHz with up to 300 Mbps data rate
• Wireless Protected Setup (WPS)
• WEP data encryption (64/128 bit)
• WPA/WPA2 (Wi-Fi protected access)
• Multiple SSID (up to 4)
• VLAN per SSID

Router/Bridge Features
• IGMP v1/v2/v3
• Network Address Translation (NAT)/Network Address Port Translation (NAPT)
• DHCP
• DNS

Security
• Generic packet filter
• Firewall/DMZ

USB
• File sharing

Hardware Specifications
• WAN/PON: One Giga optical interface (SC/APC)
• Phone: Two FXS phone ports RJ-11
• LAN: Four 10/100/1000 Mbps Ethernet ports RJ-45
• USB: Two USB 2.0 hosts
• WLAN button: A tact switch
• WPS button: A tact switch
• Reset: A tact switch. One reset/restore factory default button
• Power switch: Push-push type button
• Wireless: Two external 3 dBi antennas (2.4 GHz)
• LEDs indicators:
  ▪ Power
  ▪ PON
  ▪ Internet
  ▪ USB 1 - 2
  ▪ LAN 1 - 4
  ▪ Phone 1 - 2
  ▪ WiFi/2.4G
• Power supply: 12 V DC 1.5 A

Physical Specifications
• Item dimensions (WxDxH): 183 x 214 x 55 mm (2.16" x 8.42" x 7.2")
• Item weight: 505.5 g (1.11 lb.)
• Packing dimensions (WxDxH): 225 x 316 x 102 mm (8.85" x 12.44" x 4.01")
• Packing weight: 929 g (2.05 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: -40°C to 70°C (-40°F to 158°F)
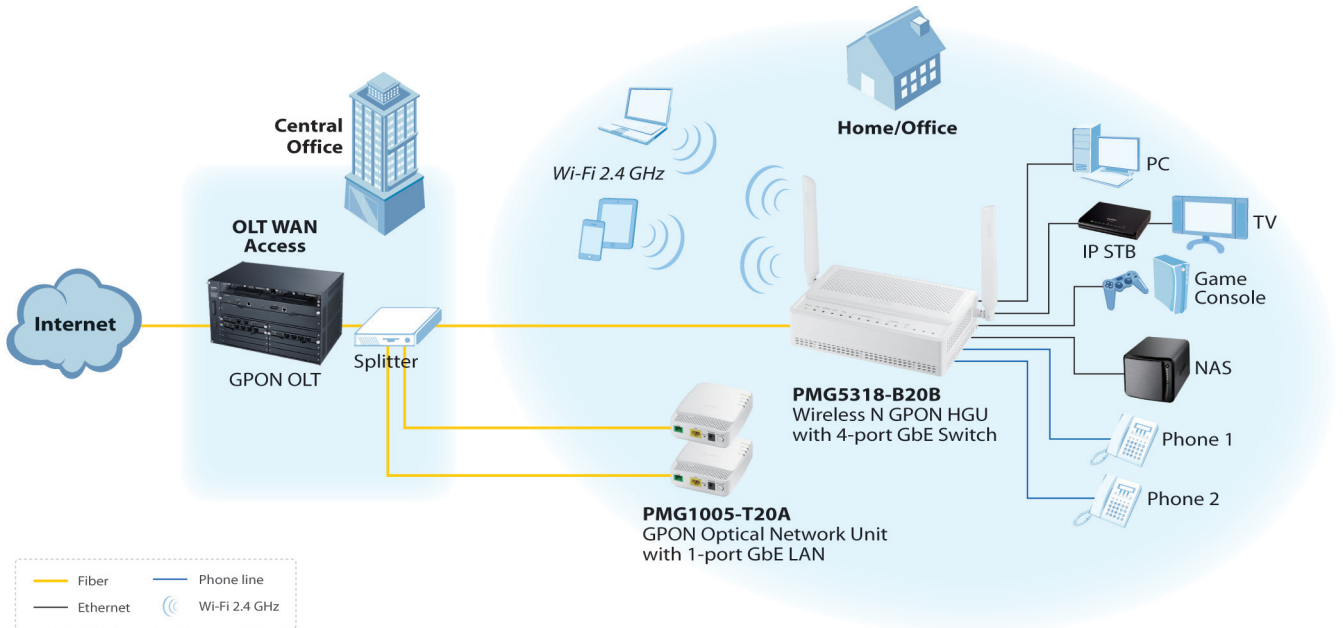• Humidity: 10% to 95% RH (Non-condensing)

Certification
• EMC: CE
• Safety: CE LVD

Package Contents
• Wireless router
• Power adapter
• Ethernet cable
• RJ-11 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.
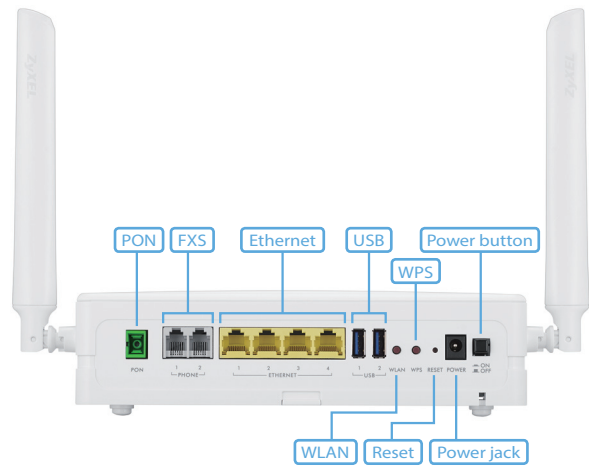
Application Diagram

Central Office

OLT WAN Access

Internet

GPON OLT

Splitter

Wi-Fi 2.4 GHz

Home/Office

PC

TV

IP STB

Game Console

NAS

Phone 1

Phone 2

PMG5318-B20B
Wireless N GPON HGU
with 4-port GbE Switch

PMG1005-T20A
GPON Optical Network Unit
with 1-port GbE LAN

Fiber	Phone line
Ethernet	Wi-Fi 2.4 GHz

Front Panel

Rear Panel

PON   FXS   Ethernet   USB   Power button

WPS

WLAN   Reset   Power jack