

ZYXEL



PMG1005-T20A

GPON Optical Network Unit with 1-port GbE LAN

As demands to bandwidth services surge, forecasts suggest that consumers would need 100 Mbps bandwidth in general by 2020 with video driving the needs. It's not all about entertainments: governments worldwide recognize the socioeconomic benefits from broadband and many have set national broadband targets. End users need access to the latest generation of broadband services while operators need to stay ahead of the competition.

A PON is a network architecture that brings fiber cabling and signals to homes using a point-to-multipoint scheme that enables a single optical fiber to serve multiple premises. As encryption mechanisms maintain data security in this shared environment, the architecture uses passive (unpowered) optical splitters to reduce the cost of equipment comparing to point-to-point architectures.

The GPON standard is different from other PON standards to achieve higher bandwidth and higher efficiency with larger variable-length packets. GPON offers efficient packaging of user traffic with frame segmentation allowing higher quality of service (QoS) for delay-sensitive voice and video communications traffic. The Zyxel PMG1005-T20A, a GPON optical network unit with 1-port GbE LAN, is a simple fiber home bridge that provides end users with a high-speed performance experience in a cost-effective way.



Integrated Internet services through fiber



High-speed data access



QoS ensures service quality



OMCI remote management

Benefit

Integrated Internet services through fiber

The Zyxel PMG1005-T20A Single Family Unit (SFU) features ITU-T G.984-compliant GPON port and integrates a one-port 10/100/1000 Mbps Ethernet switch. It is a fiber network edge device offering high-performance and long-reach connection services, which allows subscribers to bridge the most popular fiber services with optimized bandwidth from telcos/service providers as well as various applications from the wired LAN.

Ultra high-speed data access

The Zyxel PMG1005-T20A offers optical fiber technology for telecom carriers to address increasing service demands and to deliver much higher speeds over fiber optic lines. It provides high-speed data access along with a residential gateway for customers to support prevalent deployments of triple-play services such as video, data, voice over IP, high-definition television (HDTV) and interactive games.

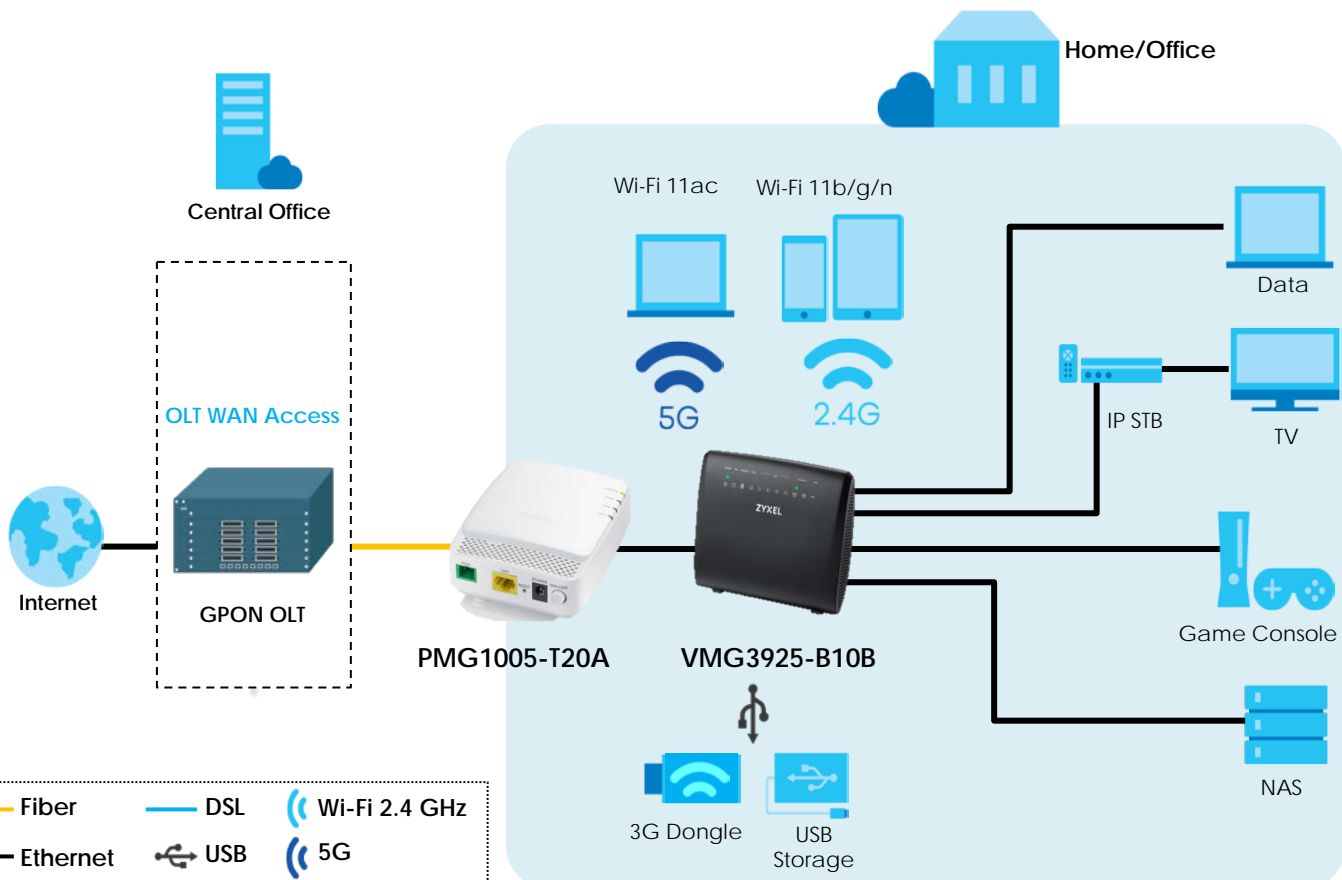
Advanced QoS for ensured service quality

The Zyxel PMG1005-T20A come equipped with IP QoS features for service providers to freely design QoS policies and to prioritize mission-critical services – such as IPTV – based on their individual service plans. This facilitates network efficiency and productivity that enable service providers to offer a real multi-play solution via fiber optic GPON networks that meet the residential user needs.

ONT Management and Control Interface (OMCI) remote management

Complying with the standard OMCI (G.984.4) between the ONT and OLT, the Zyxel PMG1005-T20A can be connected to the GPON OLT to support the management and provisioning functions for network operators. It offers Web-based management functions as well. As a result, the PMG1005-T20A can be easily operated and maintained with efficiency.

Applications Diagram



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
- 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)

WLAN/QoS

- 802.1Q VLAN tagging/un-tagging
- Support flexible traffic classification
- Support VLAN staking (QinQ)

Networking

- IGMP v1/v2/v3
- IGMP snooping
- IGMP fast leave

Management

- Standard OMCI (G.984.4)
- Web GUI (HTTP/HTTPS)
- Firmware upgrade via FTP/TFTP/HTTP
- Telnet, Web, SSH
- CLI command via telnet/console
- Two-level administration privilege for web configuration
- Configuration backup/restore

Hardware Specifications

- WAN: One Giga optical interface (SC/APC)
- LAN: One 10/100/1000 auto MDI/MDI-X RJ-45
- Reset: One reset/restore factory default button
- Power switch: One push type button
- LEDs indicators:
 - Power
 - Passive Optical Network (PON)
 - LOS
 - LAN
- Power supply: 12 V DC 0.5 A

Physical Specifications

- Item dimensions (WxDxH): 87 x 107 x 29 mm (3.42" x 4.21" x 1.14")
- Item weight: 117 g (0.25 lb.)
- Packing dimensions (WxDxH): 130 x 131 x 95 mm (5.11" x 5.15" x 3.74")
- Packing weight: 294 g (0.64 lb.)

Environmental Specifications

Operating Environment

- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 20% to 85% RH (Non-condensing)

Storage Environment

- Temperature: -20°C to 70°C (-4°F to 158°F)
- Humidity: 10% to 90% RH (Non-condensing)

Certification

- EMC: CE
- Safety: CE LVD

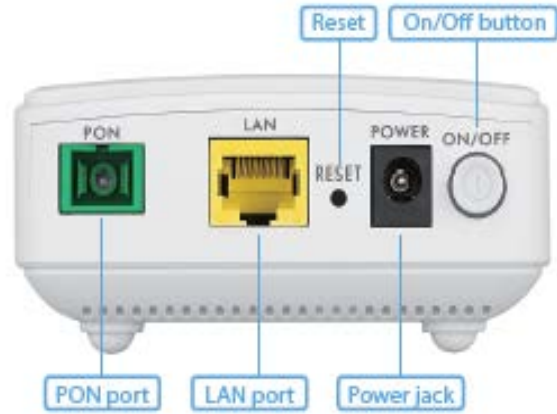
Package Contents

- Device
- Power adapter
- Ethernet cable
- Quick start guide

Front Panel



Rear Panel



For more product information, visit us on the web at www.Zyxel.com

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Datasheet [PMG1005-T20A](#)

