ZYXEL

PMG1005-T20C

GPON SFU with 1-port GbE LAN

The Zyxel PMG1005-T20C GPON SFU with 1-port GbE LAN comes with one GPON uplink and one GbE LAN downlink to serve as a simple bridge to offer Gigabit data access to subscribers. Comparing with other FTTH solutions, the Gigabit Passive Optical Networking (GPON) features Point-to-Multi-Point (P2MP) architecture that enables service providers or system integrators to provide Gigabit broadband access with the least CAPEX investment to make it very competitive and popular among operators.

Incorporating the Zyxel PMG1005-T20C brings more flexibility for system integrators to deploy their service networks as GPON networks allow containing various deployment scenarios within one single service site. Instead of deploying a specific type of home gateway, the two-box solution allows system integrators to provide multiple product combinations to fulfill different scenario requirements through the same user interface.

The Zyxel PMG1005-T20C is fully compliant with the ITU-T G.984 GPON standard and making it brilliant choice as an entry-level GPON Single Family Unit (SFU).

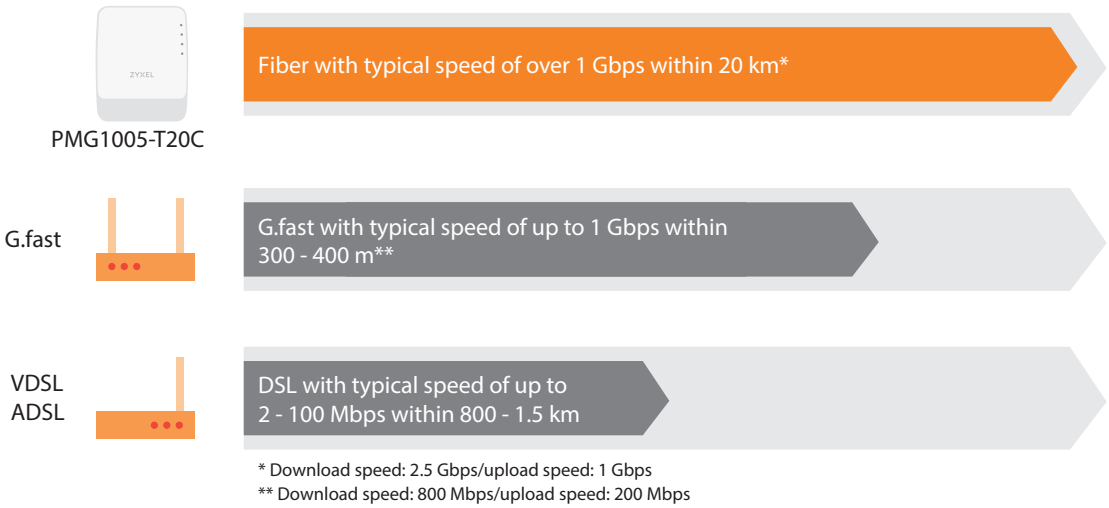
- Gigabit data access via fiber
- Simple bridge design for flexible deployment

Datasheet PMG1005-T20C

Benefits

High-speed Gigabit offers seamless triple-play services

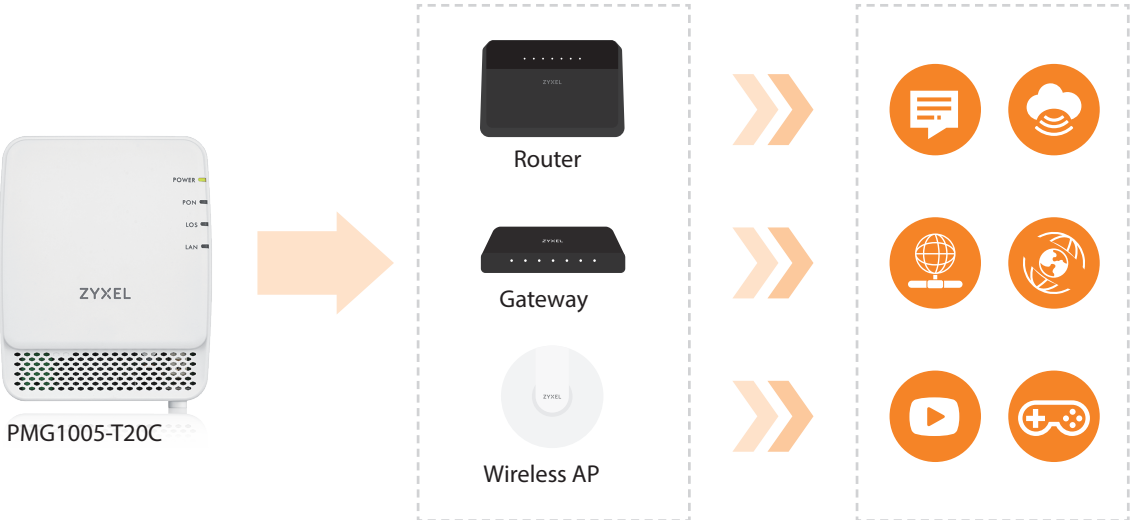
As broadband wireline access technology evolves, it increases not only the number of subscriptions, but also the need for bandwidth capacity by each individual home or enterprise unit. The high-bandwidth services, such as 4K/8K HD video streaming, cloud-based data storage and more, have become a trend and significantly changed users' behavior. In the meantime, they also triggered the strong demand for higher access speed to migrate to the Gigabit era. The Zyxel PMG1005-T20C GPON SFU with 1-port GbE LAN is a simple bridge that enables service providers to address Gigabit data access for subscribers under the P2MP structure and to realize high-quality triple-play services such as voice, data, and video over fiber optics.



* Download speed: 2.5 Gbps/upload speed: 1 Gbps
** Download speed: 800 Mbps/upload speed: 200 Mbps

Same user experience with advanced product combinations

With the P2MP structure, service providers are able to provide various service packages to fulfill different user requirements into single deployment sites with the most cost-effective product combinations. The Zyxel PMG1005-T20C can perform as a Layer-2 Optical Network Terminal (ONT) followed by any Layer-3 devices such as routers, WiFi APs, and home gateways, and more depending on individual subscriber's preference. Since the WLAN technology and other gateway interface requirements evolve rapidly, using a two-box solution reserves space for service providers to substitute the second box with the same user interface if the users keep using the PMG1005-T20C as their GPON access terminal.



Specifications

System Specifications

GPON Features
- Comply with ITU-T G.984/G.988 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
  - G.988 ONU management and control interface (OMCI) specification
- Comply with class B+ type PMD
- Transmission rate: 2.488 Gbps (DS)/1.244 Gbps (US)
- Wavelength: 1490 nm (DS) & 1310 nm (US)
- Physical distance reach to 20 km
- Dynamic Bandwidth Allocation (DBA)
- Configurable AES DS and FEC DS/US
- GPON Encapsulation Method (GEM) supports Ethernet packet
- Supports GEM header removal/ insertion and data extraction/ segmentation (GEM SAR)
- Flexible mapping between TCON and GEM port
- Support up to 8 T-CONTs with 32 GEM ports
- 8 priority queues (US) on each GPON T-CONT

Layer 2 Networking Features
- MAC address learning
- MAC filtering
- Multicast transparent
- IPv6 address transparent
- PPPoE pass-through

Multicast
- IGMP v1/v2/v3 snooping
- IGMP immediate leave
- IPv6 MLD v1/v2 snooping

VLAN Functional Specifications
- VLAN IEEE 802.1Q
- Protocol-based VLAN support
- 1:1 VLAN, N:1 VLAN, VLAN transparent bridge
- LAN port-based VLAN tag add and tag removal
- Q in Q VLAN

QoS
- Per-port QoS and CoS mapping according to IEEE 802.1q and IEEE 802.1p priority
- Rate limitation
- Flow mapping base on 802.1p/VLAN ID
- SP/WRR/SP+WRR

Management
- Standard OMCI (ITU-T G.984.4)
- Telnet (CLI)
- Web GUI (HTTP)
- Firmware upgrade via FTP/TFTP/ HTTP

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

Power Consumption

- 3.262 watt max.

Physical Specifications

- Item dimensions (WxDxH): 109.4 x 83.6 x 36.5 mm (4.3" x 3.29" x 1.44")
- Item weight: 113 g (0.25 lb.)
- Packing dimensions (WxDxH): 131 x 130 x 95 mm (5.16" x 5.12" x 3.74")
- Packing weight: 342 g (0.75 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)

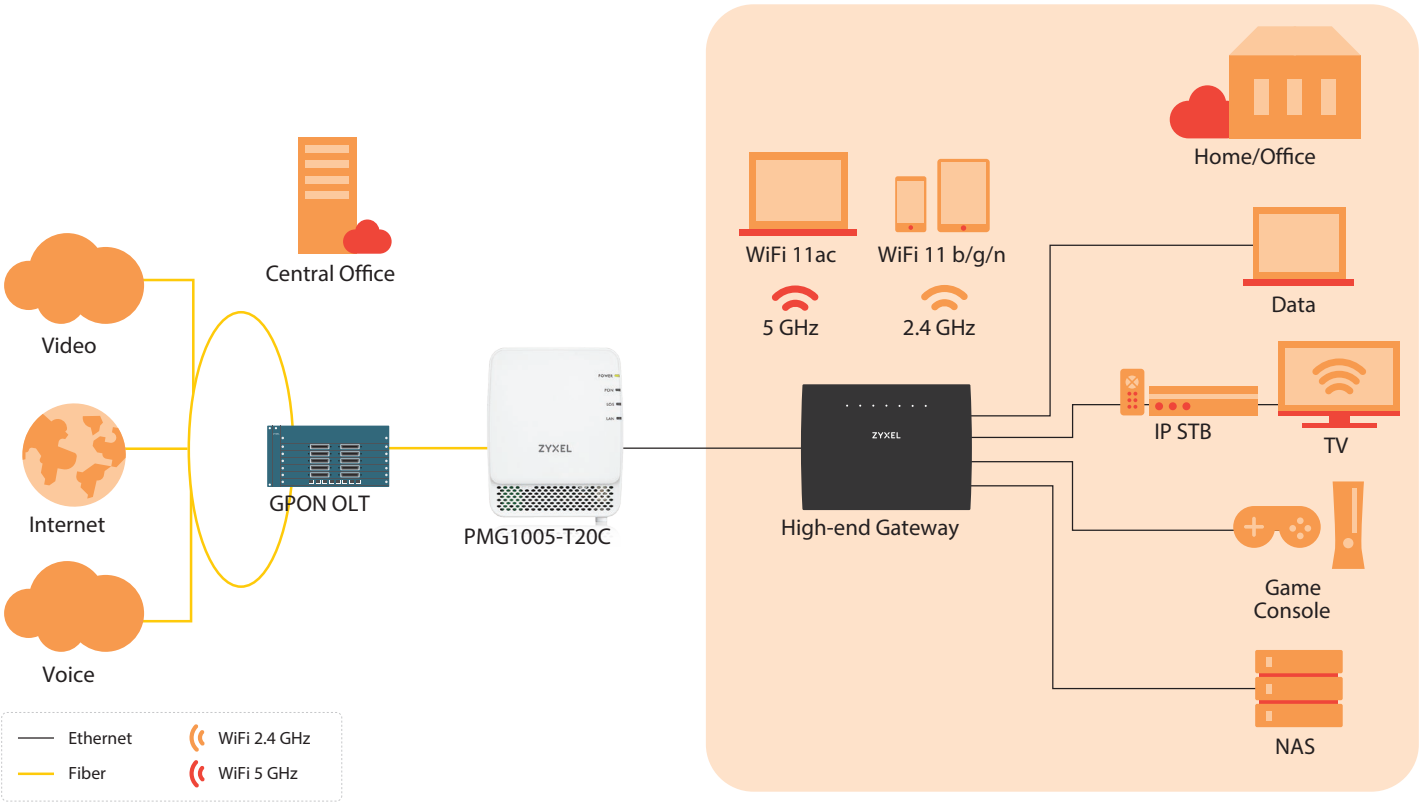
Certification

- EMC: CE
- Safety: CE LVD
- Energy saving: ErP

Package Contents

GPON SFU
- Power adapter
- Ethernet cable
- Safety warning & DoC letter
- Quick start guide

Application Diagram



Interface description