Product Briefing

*Required

***Model Name**	PMG5622GA
***Product Name**	Dual-Band Wireless AC/N GPON HGU with 4-port GbE LAN
***Product Introduction**	The Zyxel PMG5622GA is a next-generation Dual-band Wireless ONT Home Gateway Unit (HGU) with RF overlay. The PMG5622GA is fully compliant with the GPON ITU-T G.984.x standards and Wireless IEEE 802.11 ac/n to provide ultra-high speed fiber access along with 4-ports GbE LAN for wired connectivity, 2-port FXS port for VoIP services, one USB 2.0 port, one coaxial cable output for CATV service in addition to a Wireless LAN with 2x2 11ac and 2x2 11n configurations. In recent years, the demand for broadband bandwidth has been growing dramatically. By adopting DOCSIS 3.0, Gigabit downstream throughput is no longer an issue for operators; however the limited upstream capacity prohibits operators from offering high added value or innovative interactive services such as YouTube, online streaming and more. Since the downstream spectrum is mostly dominated by various video services with DOCSIS technology, only a small portion of bandwidth can be allocated to High-speed Internet (HSI) services. This makes the per-bit cost to be significantly higher in a DOCSIS/Hybrid Fiber Coaxial (HFC) network comparing to GPON networks. Due to the fact that DOCSIS 3.1 is incompatible with

	existing DOCSIS 3.0, operators must replace the existing CMTS and modems, rebuild the network for US capacity and reassign license frequency once they decide to migrate to the latest standard. The transition takes a vast amount of cost and time, not to mention service interruptions. On the contrary, the investment for a GPON infrastructure is sustainable for future bandwidth expansions as it can be reused for the next-generation 10 GPON deployments and has better upgradability than DOCSIS 3.1 as well. Comparing to expensive HFC topologies, the GPON network topology can also significantly minimize operating and maintenance costs. It's not just because that the passive Outside Plant (OSP) architecture doesn't need take power feeding into consideration, the fiber optical cable is less sensitive to the temperature variation than traditional copper coaxial cable as well – which makes investments on the infrastructure to sustain longer. Another key benefit for operators to consider GPON as an option for migration is the extra 1550 nm wavelength band support. With the band, the Zyxel PMG5622GA is capable of carrying the legacy CATV signal to enjoy uninterrupted benefits from the return of current assets. Apart from adopting the latest 802.11ac technology to expand dual-band concurrent wireless connection, the Zyxel PMG5622GA also enhances its WiFi circuit design to ensure superior, stable wireless performance on both 2.4 GHz and 5 GHz bands while maintaining backward compatibility with any IEEE 802.11 b/g/n WiFi-

	certified device. Also, the ultra-thin design minimizes the housing height to 32 mm with brushed finished surface. It not only makes the PMG5622GA an advanced optical terminal Home Gateway Unit, but also a delicate, elegant decoration for the interior space.
***Key Features**	 Unlimited possibility with GPON fiber  RF overlay enables traditional CATV video services through the GPON network  Superior coverage with unique concurrent dual-band wireless circuit design  Lower OPEX with Zyxel OMCI & APS
***Benefits**	**Unlimited possibility with GPON fiber** Internet evolves rapidly as more and more services and applications keep on their pace of innovation. With continuous growth of smart homes, high-definition TV, virtual reality and augmented reality, the need for higher transmission speed is growing quickly as well. To meet the bandwidth demand, GPON is an essential technology to help service providers satisfying bandwidth demands not only for now, but also for the future. Unlike traditional copper- or coaxial-based infrastructures with one-time investment on fiber, service providers can now deploy an all IP-based, future-proof network with

	lower management cost. **RF overlay enables traditional CATV video services through GPON networks** The RF overlay technology enables GPON networks to carry legacy CATV signals along with Gigabit data services to guarantee continuous income from the existing investments as traditional CATV services are still a valuable asset for the local MSO. The Zyxel PMG5622GA Dual-Band Wireless AC/N GPON HGU with 4-port GbE LAN adopts a triplexer to separate the 1550 nm wavelength that transmitted along with data signals through single fiber and turns it back into CATV signals. With the Zyxel E2E solution, operators can renew CATV services through OMCI, which enables the operators to update service profiles or renew service packages conveniently with just a click. **Superior coverage with unique concurrent dual-band wireless circuit design** As the number of wireless home devices increases, wireless LAN is becoming the key of resident connectivity and the major factor for service providers to differentiate their services. Since access data rate of the WAN is no longer a bottleneck for end users with GPON technology, operators are looking for higher WiFi transmission speeds to ensure high-speed data and multimedia applications can reach every corner in homes or offices. Leveraging the expertise from the development of Zyxel's professional wireless AP, Zyxel's PMG5622GA not only adopts the latest 802.11ac technology but also comes with optimized WiFi circuit design to

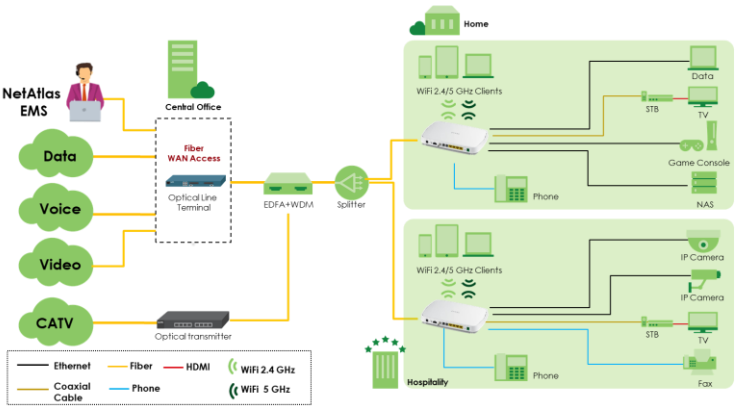
	ensure superior, stable wireless performance on both 2.4 GHz and 5 GHz bands. With Front-end Module (FEM) on board, the PMG5622GA can further enhance the transmission power and receiver linearity to improve the overall wireless coverage for guaranteed seamless WiFi experience that leads to better customer satisfaction. **Lower OPEX with Zyxel OMCI & APS** The Zyxel PMG5622GA Dual-Band Wireless AC/N GPON HGU with 4-port GbE LAN comes with the Zyxel-specific OMCI parameter that works perfectly with Zyxel's own EMS and OLT systems. With the E2E-capable parameters, Zyxel provides not only the standard parameters defined by OMCI, but also some specific parameters that help service providers to diagnose, operate and manage their fiber networks. Together with the Zyxel E2E EMS & OLT system, the Zyxel ONT supports a unique auto-provisioning feature that helps service providers to easily provision WAN and VoIP configurations without the need to send technicians to the field for configuration setups.
Work with Products	OLT2406/IES 5206/OLT 1404/1408
Logos for Box	Certification logos

	
*System Specifications	**GPON Compliance** • Comply ITU-T G.984.1/G.984.2/G.984.3/G.984.4/G.988 GPON standard • Comply with class B+ type PMD • DS/ US speed: 2.488/1.244 Gbps • Wave length: 1490 nm (DS) & 1310 nm (US) • Physical distance reach to 20 km • Dynamic Bandwidth Allocation (DBA) • Configurable AES DS and FEC DS/US • GEM supports Ethernet packet • GEM SAR • 8 priority queues (US) on each GPON T-CONT **Ethernet (LAN) Features** • Full duplex IEEE 802.3x • MAC address learning • IPv6 address transparent **Networking Features** • IEEE 802.1d Transparent bridge • IPv4 NAT/Routing • Static Routing, Dynamic Routing (RIP) • IPv6 with IPv6 Routing; • IPv6 DualStack/DS-Lite • NAT/ NAPT • Port Forwarding • PPPoE client • DHCP Client/ Server • ALG(SIP, RTSP), UPnP • DDNS/DNS server/DNS client **VLAN Functional Specifications** • VLAN IEEE 802.1q

	• CoS IEEE 802.1p • 1:1 VLAN, N:1 VLAN, VLAN transparent transmission • VLAN tag add/ translation/ removal • QinQ VLAN **QoS** • Traffic classification and tagging via DSCP/VLAN/802.1P-bit • Per-port QoS and CoS mapping according to IEEE 802.1q and IEEE 802.1p priority • SP/WRR/SP+WRR **Multicast** • IGMP v1/v2/v3 • IGMP proxy/snooping • IGMP Fast Leave • IPv6 MLD v1/v2/ proxy/snooping **WLAN** • 802.11ac/a/n (5 GHz, 2x2 MIMO, up to 866 Mbps) • 802.11b/g/n (2.4 GHz, 2x2 MIMO, up to 300 Mbps) • WiFi Multimedia (WMM) • Advanced Encryption Standard (AES), Temporary Key Integrity Protocol (TKIP) • Wireless Protected Setup (WPS) • WPA-PSK/WPA2-PSK (WiFi protected access) • Support Multiple SSID (up to 4) • Up to 32 devices can accessed simultaneously (2.4 GHz: 32 clients; 5 GHz: 32 clients) **VoIP** • Voice Functionality: o Codec: G.711 a/u, G.722, G.726 o DTMF tone: detection and generation • Phone Features:

	o Internal call o T.30/T.38/G.711 fax mode Call waiting o Call forwarding (No condition, Busy, No answer) o Call transferring (Blind, ConsultOnHold, Attendant) o Call hold/call retrieve o Three-way conference o Second call/adding an outgoing call o Switch between 2 active calls **USB** • USB2.0; backward compatible to USB 1.1 (FS/LS) • FTP-based network storage • DLNA/UPnP media server • File sharing **Security** • Static Packet Inspection (SPI) Firewall • Parental control (website blocking and network access period control) • MAC/IP/URL addresses filtering **Management** • WEB (HTTP/HTTPS)/TELNET (CLI) • OMCI (G.984.4)/TR069 CWMP Client • PLOAM • Firmware upgrade via FTP/HTTP/TR069/OMCI • CATV service remote disable/enable via OMCI • Support Zyxel Auto-Provisioning
*Hardware Specifications	• **WAN:** One Giga optical interface SC/APC • **Phone:** Two FXS RJ-11 ports • **LAN:** Four 10/100/1000Mbps Ethernet RJ-45 ports • **UPS:** Power input: DC 12 V, 8 pin connector • **USB:** One USB 2.0 hosts

	• WPS button: A tact switch • Reset: A tact switch. One reset/restore factory default button • Power button: Power On/Off switch (2-stage Lockable Pushbutton) • **LEDs indicators:** Power*1 PON*1 Internet*1 WLAN 2.4G/WPS*1 WLAN 5 G/WPS*1 Phone*2 USB*1 UPS*1 CATV*1 LAN *4 (on connector)
***Power Consumption**	• Power supply: DC 12 V/2 A • Power consumption: Max. 17.8 W
***Physical Specifications**	• Product Dimension(WxDxH): 250 x160 x 35mm (9.84" x 6.29" x 1.37") • Product weight: 485 g (1.07 lb.) • Packing dimensions (WxDxH): 370 x 200 x 50 mm (14.56" x 7.87" x 1.96") • Packing weight: 656 g (1.45 lb.)
***Environmental Specifications**	• **Operating Environment** o Temperature: 0˚C to 45˚C (32˚F to 113˚F) o Humidity: 10% to 90% RH (Non-condensing) • **Storage Environment** o Temperature: -30˚C to 70˚C (-22˚F to 158˚F) o Humidity: 10% to 95% RH (Non-condensing)
***Certification**	• EMC: CE • Safety: CE LVD • Energy Saving: CE ErP
Package Contents	Device Power adaptor

	Ethernet cable RJ11 cable Quick start guide Warranty card
***Application Diagram**	
Front Panel	

Rear Panel	
Others	