

ZYXEL

Your Networking Ally



GPON: Solutions for Today and Tomorrow

GPON
Solution Brief

A future-proof platform enabling faster, and better broadband services

Fiber networks provide virtually unlimited bandwidth to multiple services simultaneously, and GPON is the ultimate solution for the current and next-generation network needs.

The Zyxel GPON End-to-End solution helps service providers to resolve performance issues and reduce maintenance costs caused by the outdated equipment.

Not only does it fix ongoing problems, it's also fully customizable and scalable to meet future challenges with temperature-hardened remote cabinets, interchangeable broadband access line cards and chassis in different capacity.

GPON enables MSO to maintain analog and digital TV coax networks, and it gradually migrates coax customers to new fiber networks with GPON RF-Overlay and extended IPTV services as well.

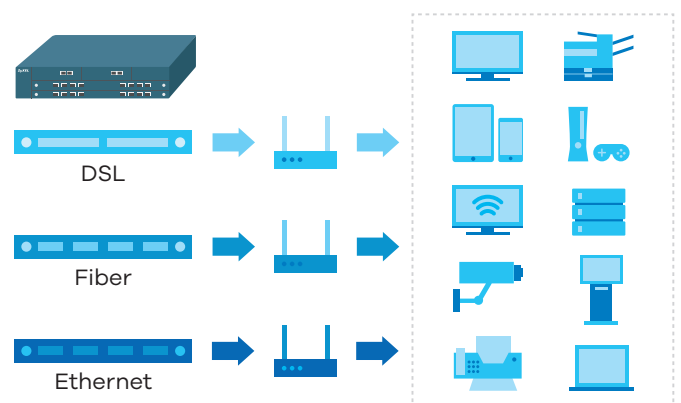
Ready for Today, and Tomorrow

Service providers don't need to double the investment migrating from copper DSL to fiber. The Zyxel GPON End-to-End solution does not just enable the services over DSL, but also keep total investment under control for competitive new revenues.



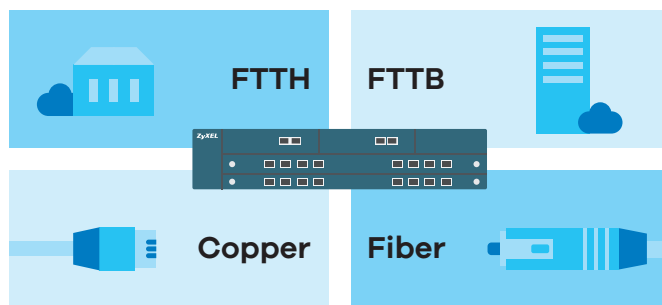
Flexibility to Pay as You Grow

Service providers don't need to double the investment migrating from copper DSL to fiber. The Zyxel GPON End-to-End solution does not just enable the services over DSL, but also keep total investment under control for competitive new revenues.



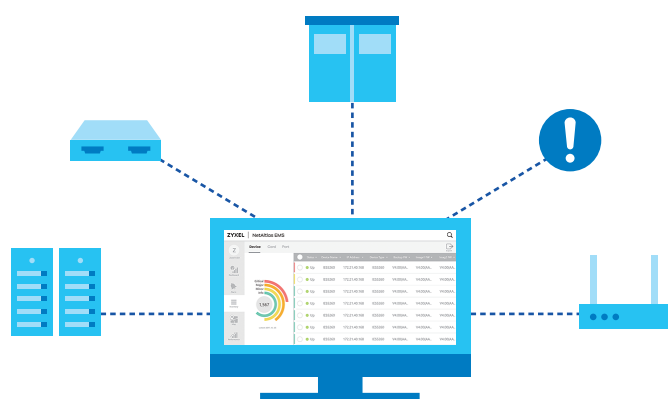
Unified Access Opens Up the Choices

Feel free to choose from DSL, Ethernet or fiber access network for your deployment needs. No matter you're considering from technical, logistics or cost aspect, the solution adapts to the type of services and provides more options for the subscribers to select the data plan they see fit.



Simplify Your Operations with Zyxel NetAtlas EMS

Through the intuitive graphic user interface, the NetAtlas EMS eases and accelerates deployments, enables efficient operations of large network environments and streamlines the provisioning process. It also centralizes fault and element management for the devices deployed on the network.



Efficiency for Better Competitiveness

The Zyxel's GPON End-to-End solution has been applied to scenarios such as industries, service providers, smart hotels, school campuses, MSO and video surveillance networks. With extensive experience on broadband gateways, managed switches, UTM and telco-grade multi-service access platform, Zyxel is offering fast-to-deploy, easy-to-use GPON networks for your businesses to keep growing in the fiber generation.

Campus
Hotel
Telco/ISP

MSO
Utilities
Surveillance

2.4G
5G








Product portfolio

GPON OLT

 <p>OLT1404A/ OLT1408A 1U Standalone</p> <ul style="list-style-type: none"> • 4/8 GPON ports • 4x10G + 8x1G + 8x2.5G uplink port • -40°C to 65°C 	 <p>OLT2406 2U OLT</p> <ul style="list-style-type: none"> • 2 MSC slots/4x10G + 2x1G each • 4 UNI slots, 4xGPON • Full redundancy • -40°C to 65°C 	 <p>IES4204 2U OLT</p> <ul style="list-style-type: none"> • 2 MSC slots, 4x10G each • 2 UNI slots, 40xGbE/48xVDSL2/16xGPON • Full redundancy • -40°C to 65°C 	 <p>IES5206 5U OLT</p> <ul style="list-style-type: none"> • 2 MSC slots, 4/8x10G each • 4 UNI slots, 40xGbE/48xVDSL2/16xGPON • Full redundancy • -40°C to 65°C 	 <p>IES5212 8.3U OLT</p> <ul style="list-style-type: none"> • 2 MSC slots, 4/8x10G each • 10 UNI slots, 40xGbE/48xVDSL2/16xGPON • Full redundancy • -40°C to 65°C 	 <p>IES6217 14U OLT</p> <ul style="list-style-type: none"> • 2 MSC slots, 4/8x10G • 15 UNI slots, 40xGbE/48xVDSL2/16xGPON • Full redundancy • -40°C to 65°C 						
4/8-port OLT		16-port OLT		32-port OLT		64-port OLT		160-port OLT		240-port OLT	

GPON ONT

 <p>PMG3000-D20B</p> <ul style="list-style-type: none"> • SFP-type • OMCI 	 <p>PMG1005-T20B</p> <ul style="list-style-type: none"> • Bridge • 1xGbE • OMCI 	 <p>PMG5317-T20B</p> <ul style="list-style-type: none"> • WLAN 2x2 11n • VoIP • Router • 4xGbE • TR069/OMCI 	 <p>PMG5617GA</p> <ul style="list-style-type: none"> • WLAN 2x2 11n/2x2 11ac • VoIP • Router • 4xGbE • TR069/OMCI 	 <p>PMG5622GA</p> <ul style="list-style-type: none"> • RF overlay • WLAN 2x2 11n/2x2 11ac • VoIP • Router • 4xGbE • TR069/OMCI
---	--	--	---	--

Feature matrix

GPON OLT

Model	Optical Line Terminal							
	IES6217	IES5212	IES5206	IES4204	OLT2406	OLT1408A	OLT1404A	
System Overview								
Housing type	Chassis	Chassis	Chassis	Chassis	Chassis	Standalone	Standalone	
Power	-36 to -72V DC	-36 to -72V DC	-36 to -72V DC 100 to 240V AC	-36 to -72V DC 100 to 240V AC	-36 to -72V DC	-36 to -72V DC 100 to 240V AC	-36 to -72V DC 100 to 240V AC	
Operating temperature	-40°C to 65°C	-40°C to 65°C	-40°C to 65°C	-40°C to 65°C	-40°C to 65°C	-40°C to 65°C	-40°C to 65°C	
Operating humidity	10% to 95% RH	10% to 95% RH	10% to 95% RH	10% to 95% RH	10% to 95% RH	10% to 95% RH	10% to 95% RH	
Interface								
NNI	1000BASE-SX/LX	4/8	4/8	4/8	4	4+2	4+8+8	4+8+8
	10000BASE-SX/LX/ZX	4/8	4/8	4/8	4	4	4	4
UNI	PON interface	240	160	64	32	16	8	4
	VDSL2 interface	192x3	192x2	192	96	-	-	-
	GE interface	600	400	160	80	-	-	-
GPON								
Maximum splitter ratio	1:128	1:128	1:128	1:128	1:128	1:128	1:128	
Type B protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
AES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
SFP digital diagnostic management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
QoS Function								
802.1p priority queue	8 queues	8 queues	8 queues	8 queues	8 queues	8 queues	8 queues	
802.1q tag-based VLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
SPQ/WFQ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
DBA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Security Function								
VLAN stacking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
MAC filtering	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
DHCP snooping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
DHCP option 82	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Multicast Function								
IGMP v2, v3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
IGMP fast leave	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Multicast VLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
MLDv1 & MLDv2 snooping and proxy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Management								
SNMP v2c, v3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Web management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
CLI management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
EMS management	NetAtlas EMS	NetAtlas EMS	NetAtlas EMS	NetAtlas EMS	NetAtlas EMS	NetAtlas EMS	NetAtlas EMS	
Physical Specifications								
Dimensions (WxDxH)(mm/in.)	440 x 275 x 622/ 17.32 x 10.83 x 24.49	440 x 275 x 370/ 17.32 x 10.83 x 14.57	440 x 275 x 222/ 17.32 x 10.71 x 8.74	440 x 285 x 89/ 17.32 x 11.22 x 3.5	440 x 250 x 89/ 17.32 x 9.84 x 3.46	440 x 250 x 44/ 17.32 x 9.84 x 1.73	440 x 250 x 44/ 17.32 x 9.84 x 1.73	
Weight (kg/lb.)	25.9/57.1	14.5/31.97	12.9/28.44	6/13.23	6.6/14.55	4/8.82	4/8.82	

GPON ONT

Model	Optical Network Unit				
	PMG5622GA	PMG5617GA	PMG5317-T20B	PMG1005-T20B	PMG3000-D20B
System Overview					
Standard compliance	G.984	G.984	G.984	G.984	G.984
Fiber storage	-	-	-	-	-
Housing type	Wall-mounting	Wall-mounting	Wall-mounting	Wall-mounting	Wall-mounting
Power	12V/2A	12V/2A	12V/1.5A	12V/0.5A	3.3V/0.5A
Power consumption	< 24W	< 24W	< 18W	< 6W	< 2.2W
Operating temperature	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 40°C
Operating humidity	10% to 90%	10% to 90%	10% to 90%	10% to 90%	10% to 90%
Interface					
WiFi	IEEE 802.11n (2x2)/11ac (2x2)	IEEE 802.11n (2x2)/11ac (2x2)	IEEE 802.11n (2x2)	-	-
USB	1	1	1	-	-
PON interface (10 km or 20 km)	20 km	20 km	20 km	20 km	20 km
Maintenance interface (10/100BASE-T)	-	-	-	-	-
RF overlay	Yes	-	-	-	-
LAN interface	4 x 10/100/1000 BASE-T	4 x 10/100/1000 BASE-T	4 x 10/100/1000 BASE-T	1 x 10/100/1000 BASE-T	MSA SFP Footprint for SFP socket
QoS Function					
802.1p priority queue	8 queues	8 queues	8 queues	8 queues	-
802.1q tag-based VLAN	Yes	Yes	Yes	Yes	-
802.3x flow control	Yes	Yes	Yes	-	-
Management					
SNMP v1, v2c	Managed by OLT	Managed by OLT	Managed by OLT	-	-
MIBs II	Managed by OLT	Managed by OLT	Managed by OLT	-	-
Telnet CLI	Yes	Yes	Yes	Yes	-
OAM loop back	Yes	Yes	Yes	Yes	-
Failure alarm detecting function (Power/Linkdown/UNI port status)	Yes	Yes	Yes	Yes	Yes
Security Function					
802.1x authentication	Yes	Yes	Yes	-	-
Encryption	Yes	Yes	Yes	-	-
MAC filtering	Yes	Yes	Yes	-	-
MAC counting	Yes	Yes	Yes	-	-
MAC address table	1K	1K	1K	-	-
Physical Specifications					
Dimensions (WxDxH)(mm/in.)	252 x 162 x 32/ 9.92 x 6.38 x 1.26	252 x 162 x 32/ 9.92 x 6.38 x 1.26	243.3 x 141.7 x 42.9/ 9.57 x 5.57 x 1.68	109.4 x 83.6 x 36.5/ 4.3 x 3.29 x 1.43	74.7 x 14.06 x 12.4/ 2.94 x 0.55 x 0.48
Weight (g/lb.)	435/0.96	345/0.76	388/0.86	113/0.25	10/0.02