



Zyxel takes KTPL's GPON network to the next level in a residential city

As an infrastructure partner of BSNL, a top internet service provider in India, KTPL was searching for a high-level GPON Solution to upgrade their existing FTTH deployment and to facilitate their service to users. With industry-leading technology, Zyxel was able to provide KTPL with the necessary equipment for fast internet access with uninterrupted voice communication.

Originally KTPL used a typical LAN network that wasn't able to provide large residential areas with high-speed connectivity and simultaneous voice services. At the same time, existing FTTH deployment suffered without an Element Management System (EMS). This required troubleshooting and diagnostics to be done on the user site, which therefore increased the company's OPEX.

Zyxel's GPON End-to-End Solution, including OLT2406, OLT1408A, multi-functional ONTs PMG5317-T20A and PMG1005-T20A gave KTPL a perfect answer to their current challenges. With its easy installation and without additional infrastructure, such as cable cabinets, Zyxel's GPON Solution successfully helps KTPL save CAPEX and OPEX. Zyxel's power-efficient and weather-hardened OLTs saved KTPL significant utility costs. Also, Zyxel's performance-driven ONTs have enabled KTPL to provide ultra-fast internet connectivity and uninterrupted voice communication through fiber.

KTPL's challenges

- Large residential areas
- Insufficient network access
- Inconvenient installation
- Insufficient management and monitoring instruments

Zyxel solutions

- Zyxel NetAtlas EMS with multi-site networking access and easy management
- Zyxel 16-port chassis-based OLT2406 with four PON line cards serves up to 2K FTTH subscribers
- Zyxel OLT1408A - a pizza-box type OLT with split ratios of up to 1:128
- Multi-functional ONT PMG5317-T20A with the support of internet, wireless and VoIP
- Two-box Solution with PMG1005-T20A as GPON access terminal

By deploying PMG5317-T20A in a school, KTPL was able to provide the teachers and students with the fast and steady WiFi they required. This makes Zyxel's GPON Solution perfect for FTTH deployment.

Zyxel's NetAtlas EMS simplified and accelerated the Solution deployment, enabling the efficient operation of large and diverse network environments. Now KTPL uses Zyxel NetAtlas EMS to do provisioning, inventory and fault management from the central site. Alarming and log functions of NetAtlas EMS help to find faults in the network and troubleshoot in a much shorter period of time.

The Solution made it straightforward for the KTPL to upgrade the existing fiber backhaul. By using EMS, KTPL becomes able to manage all the OLTs from the central site and get logs/reports on a regular basis. Due to the high split ratio and standalone type of the OLT, KTPL reduced its CAPEX and the simple installation with remote configuration via NetAtlas EMS had a significant reduction on its OPEX. Also, Zyxel reduced the installation cost because its ONTs are just plug-and-play, with all the services provisioned by the central administration.

Core benefits

- Upgrade of the existing fiber network by simply adding Zyxel's equipment
- Remote configuration, fault diagnosis and performance monitoring of the OLTs and ONTs from the central site via NetAtlas
- High-speed internet, uninterrupted voice service, and steady WiFi connectivity via PMG5316-T20A
- Reduction of facility expenses due to compact device size and the standalone type of OLT
- Easy installation and minor changes to customers' existing infrastructure
- OLT2406 deployed in central sites to cover residential cities
- OLT1408A deployed in a remote sites for rural areas needing high-speed connection
- PMG1005-T20A plays as GPON terminal which reserves space and enables flexibility
- Possible future network expansion

Featured products



OLT2406
2U 6-slot
Temperature-Hardened OLT

- 16 ITU-T G.984-compliant GPON ports; each port supports up to 128 ONTs
- 4 PON port per line card, and 4 10GbE + 2 GbE uplink ports
- 2 management and switching cards plus 2 DC power modules for redundancy
- Temperature-hardened



OLT1408A
8-port GPON OLT

- 8 ITU-T G.984-compliant GPON ports; each port supports up to 128 ONTs
- 4 x 10GbE/2.5GbE/GbE ports (SFP+/SFP, fiber)
- Dual power module plus battery charger
- Temperature-hardened



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

- Gigabit data access via fiber
- OMCI remote management
- Field-proven interoperability with Zyxel OLTs



PMG5317-T20A
Wireless N GPON IAD with
4-port GbE LAN

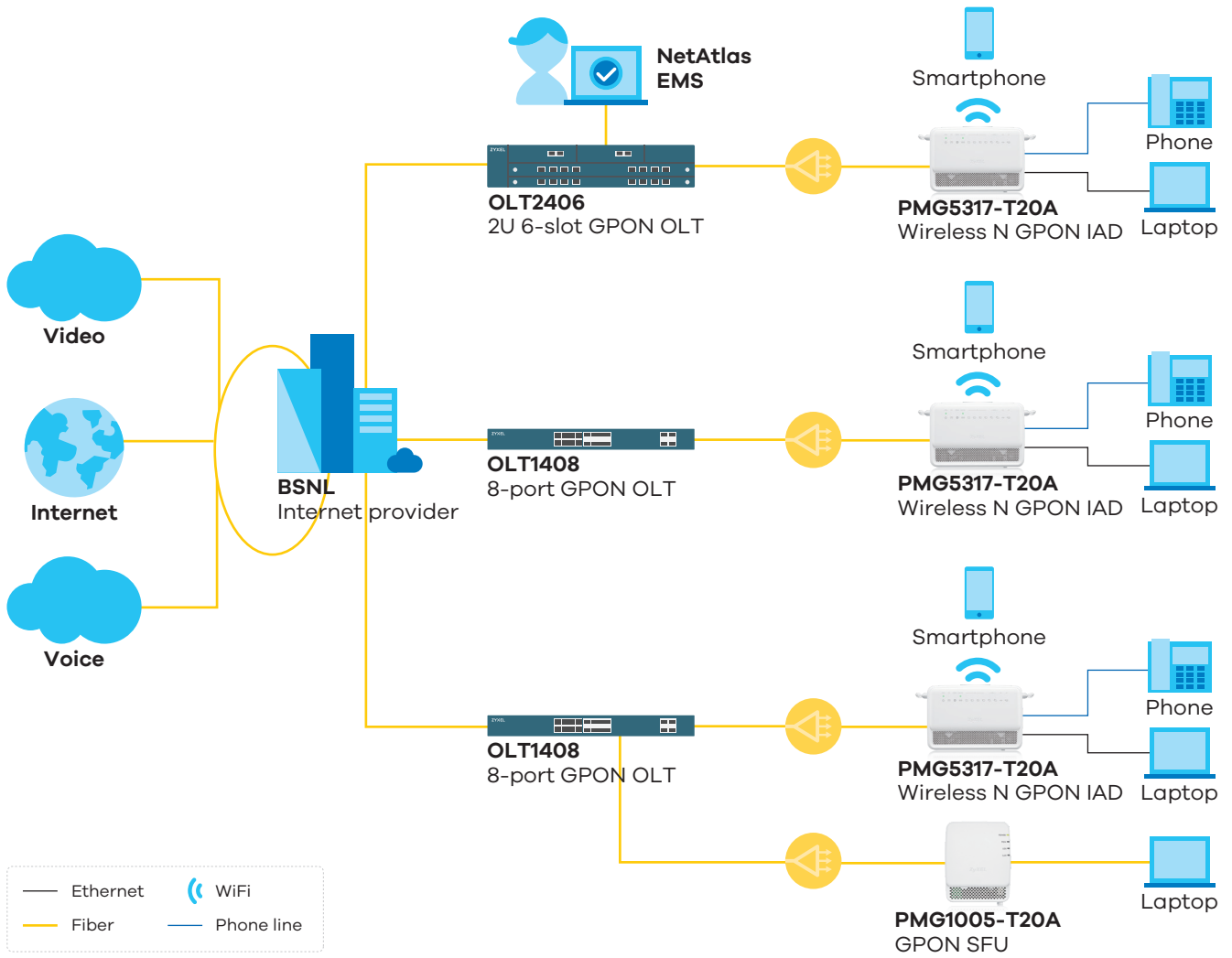
- Integrated internet services through fiber optics
- Modularization of the CPE features set via Zyxel OPAL
- 802.11n WLAN for superior performance and coverage
- Provisioning and management through TR-069 along with OMCI



NetAtlas EMS
NetAtlas Element Management
System

- Advanced system management, network configuration, performance monitoring, fault detection, and security control features
- Up to 3000 NE or 2M DSL ports
- XML/SOAP northbound interface

Application diagram



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Customer story [KTPL](#)

