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Success Story

Zyxel GPON Solution Revives Triple-Play Service at Thai Luxury Villas

INDUSTRY	CUSTOMER	COUNTRY	SOLUTION
Hospitality	Sai Taan Villa Phuket	Thailand	Zyxel GPON Solution

Overview

Challenges

- Resolve signal strength issues from overextended VDSL lines
- Deploy non-corrosive, weather-resistant cabling
- Improve bandwidth for optimal triple-play experience

Solution

- Zyxel GPON Solution

Results

- Faster, more stable connectivity for IPTV, WiFi, and VoIP
- Fiber-optic cable is durable, cost-effective, and covers 20 km
- Easily scalable and built for future growth

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Background

Sai Taan Villa Phuket is a property development that was established in 2007. Comprising 50 private villas featuring luxurious pools and other amenities, the 90,000-square-meter estate is a stone's throw from the popular Bangtao Beach and five-star Laguna resort complex and golf club. Each villa contains three or four bedrooms, a lounge, dining room, spacious kitchen, and maid quarters. The centerpiece of each villa is the outdoor swimming pool, which rests among a patio bar, master restroom, sun-shielded sala with lounge chairs, and impeccably manicured gardens. Looking for your first taste of the wonders of Thailand? Sai Taan Villa is the place to start.

Challenges

The villas had been wired with VDSL in order to deliver triple-play service to residents and guests. Although its max downstream speed of more than 50 Mbps is normally enough to keep up with the content-rich websites and high-definition streaming services that users adore, the VDSL signal was being hampered by the great distance between the central office and many of the villas. Sai Taan weighed several factors when looking for a way to resolve the dilemma: price point, features, reliability, and vendor support. Not only did Phutech, a Zyxel partner, check all these boxes, they introduced a novel plan to getting Sai Taan's network back on track.

Solutions and Benefits

Dropped signals. Sluggish speeds. Overextended and corrosive wiring. All of these sources of network frustration evaporated in the Thai sun with a single, easy-to-implement Zyxel GPON solution. The revamped network architecture delivers stable, high-bandwidth connectivity to the entire expansive property. The distance between the main office and villas is no longer a problem; the GPON fiber-optic cable can provide up to 20 kilometers of service without drop-off.

Zyxel's chassis-based **OLT2406 optical line terminal** is the hub of the end-to-end GPON solution. The temperature-hardened, two-unit OLT features dual power modules for redundancy and hot-swappable slots to quash downtime. In order to deliver broadband data, voice, and IP television service, the OLT connects with the **PMG5318-B20C**, a fiber-optic router with a built-in switch.

Not only does the versatile device serve as the gateway for wireless access points installed within the villa, it has a direct link to a set-top box for smooth IPTV streaming at gigabit speed.

Residents and guests at Sai Taan Villa Phuket can now bask in the pristine, high-def glow of their favorite shows while traversing the web at breakneck speeds. And did we mention it's the epitome of futureproof? The network's non-corrosive fiber can easily survive the caustic tropical environment, so it won't need to be replaced as often as copper wiring. Since Sai Taan has the option of bandwidth upgrades at any time—without additional hardware deployments—Zyxel's GPON solution is truly the scalable, forward-thinking investment that redefines modern, high-tech hospitality.

Products Used

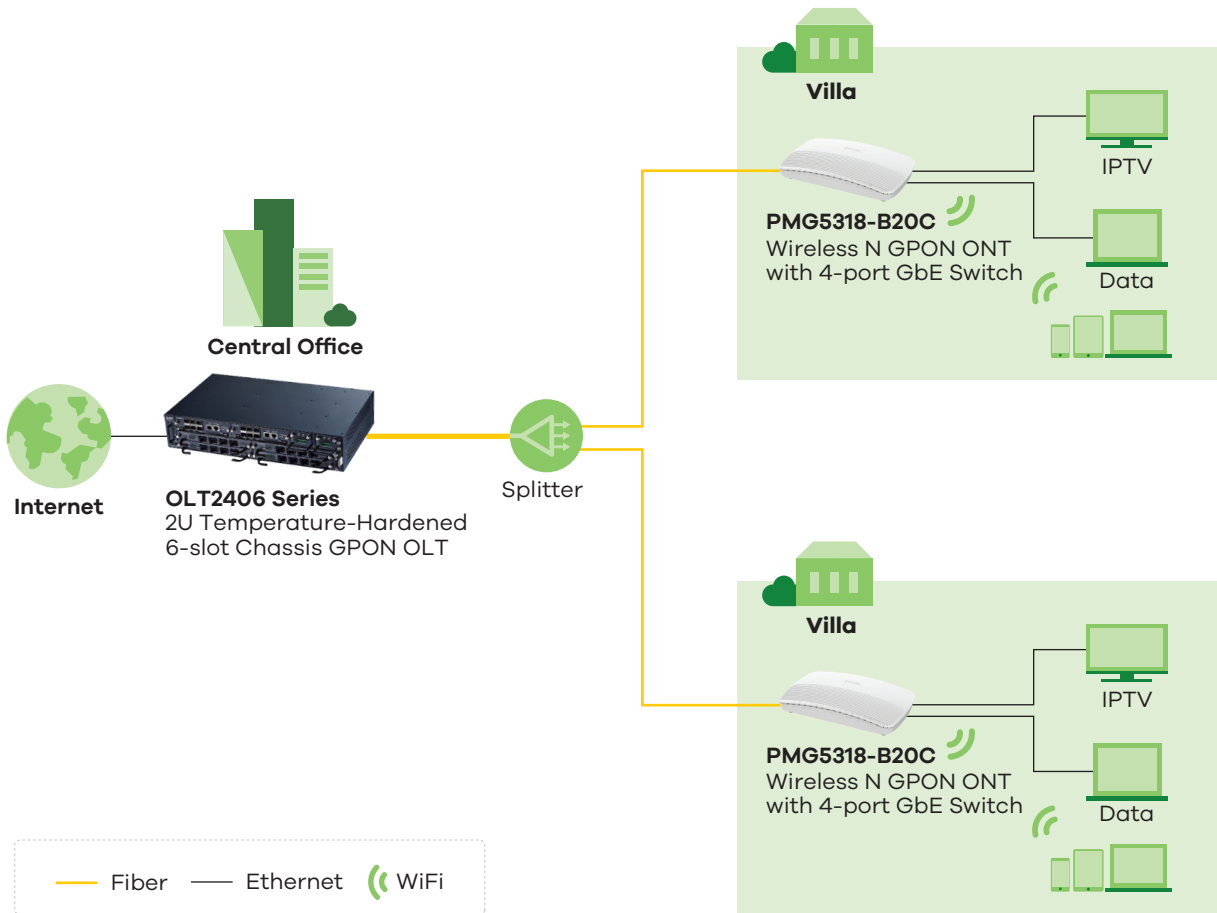## OLT2406 • 2U Temperature-Hardened 6-slot Chassis GPON OLT

- ITU-T G.984-compliant GPON ports; each port can support 64 ONT
- Two management and switch cards plus two power modules for redundancy
- Four 10 GbE or two GbE uplink ports
- 10 GbE backplane bandwidth per line card slot for non-blocking service
- Four PON or GbE ports per line card
- ITU-T G.984.1 type A and type B protection
- Temperature-hardened
- All front-access and hot-swappable

PMG5318-B20C • Wireless N GPON ONT IAD with 4-port GbE Switch

- Integrating various services through fiber optics
- 2.4 GHz 11n (2x2) for superior performance and coverage
- Advanced QoS ensures quality of triple-play services
- Provisioning and management through TR-069 and OMCI

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Diagram

Central Office

Internet

OLT2406 Series
2U Temperature-Hardened
6-slot Chassis GPON OLT

Splitter

Villa

PMG5318-B20C
Wireless N GPON ONT
with 4-port GbE Switch

IPTV

Data

Villa

PMG5318-B20C
Wireless N GPON ONT
with 4-port GbE Switch

IPTV

Data

—— Fiber   —— Ethernet   WiFi

About Zyxel Communications

Focused on innovation and customer-centricity, Zyxel Communications has been connecting people to the Internet for nearly 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users. Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play. Zyxel, Your Networking Ally.