



## Indian Cable Company Delivers Internet Service with ZyXEL Optical Solution

From ZyXEL we received extremely competent assistance from Sankar, Manoj, and Bhairave with sales, pre-sales, and post-sales respectively. They slogged with us in the field, help us build the right technology platform and even trained our people to be proficient enough to instruct our LCO partners. We've regularly participated in Kerala Cable Operator Association's yearly event along with ZyXEL and have built strong brand equity for both of us in the state. We appreciate ZyXEL's "outside the box" thinking in both technology and customer support. They've been outstanding so far, and that's why we've been together for the last 5 to 6 years, in spite of so many competitors offering us lucrative options. We wish them all the best and look forward to a bright future together

**R.Prathapchandran**  
Managing Director  
Kings Broadband Pvt. Ltd.

### Overview

#### Customer Name

Kings Broadband Pvt. Ltd.

#### Customer Industry

Cable and Internet Service Provider

#### Challenges

- Support a robust telecom infrastructure
- Provide a completely managed solution
- Provide high return on investment
- Local presence & reliability from vendor
- Good support & service infrastructure from vendor
- Investment protection with proven technology
- Good product specifications & high-end technologies
- Reasonable price & features
- Low total cost of ownership

#### Solutions

- 8-port GEAPON Optical Line Termination
- GEAPON Optical Network Unit
- 24-port Gigabit L3 Switch with 10GbE Uplink

#### Benefits

- Better service delivery
- Achieve project requirements
- Future cost savings with new solution
- Reasonable cost for the solution
- Flexible solution that is "future-proof"

### Background

Kings Broadband was founded in 1993 as a basic cable TV operator in Balaramapuram, India. Within the first 10 years of operation, the company became a major headend for signal distribution of CATV. Today, they have more than 50 franchisees for CATV distribution and a total end-customer

base of around 100,000. The company is also a category-A ISP licensee in India, servicing the entire state of Kerala with their own fiber, providing Internet bandwidth to various smaller Internet service providers (ISPs) and local cable operators (LCOs).



Kings Broadband established a footprint in Internet service by acting as authorized franchisee of Sify Broadband in 2002. Later, they registered as limited company under India's Registrar of Companies to expand Internet service and provide last-mile access solutions that carried over the philosophy of "always on" connectivity in the provision of highly reliable Internet connectivity. It was a logical step forward. Under the broadband segment, the company has

## Challenges

Being a cable operator, Kings Broadband was initially new to Internet technologies, but was very systematic about planning its business for the long-term. In 2010, few ISPs in the region were clear on the long-term implications of Internet technologies.

People were primarily using SDH backbone borrowed from a few telecom service providers. They then accessed the metro Ethernet backbone and were unmanaged for the last mile. The cost of cabling and power pulling was prohibitive. Moreover, because networks were unmanaged at the last mile, ISPs encountered major uptime commitment issues

## Solutions and Benefits

Internet bandwidth originating from Sify was terminated on a router connected to our XGS series switch. From the switch, it continued to the optical line terminal from which the single-mode single-core fiber went out in each direction to cover the entire suburban area. Thus, the network initially covered a small area. Eventually, more fiber switches and OLTs were added to the network, which extended from the suburbs to the cities to districts to the whole state.

Today, Kings Broadband has a contract with the government of Kerala to provide rural broadband connectivity throughout the state. The company also received a unified category-A ISP license from the Telecom Regulatory Authority of India (TRAI) and has more than 400+ LCOs as subscribers through them.

The technical team of Kings Broadband was trained on fiber deployment, but had not trained on PON technology. During the initial deployment, ZyXEL assisted with the solution and associated technology. This involved a significant amount of pre and post interaction with the customer, including their tech team, commercial team, and business team. ZyXEL staff also assisted Kings Broadband when introducing their customers (the LCOs) to the new technology.

At the time the solution was deployed, GEAPON was a lesser-known technology. Today, each and every cable operator

connected more than 400 operators directly or indirectly in the Kerala region.

Since 2010, Kings Broadband has upgraded to newer technologies like GEAPON for last-mile access, providing the entire region with fast, stable Internet access, as well as innovative solutions for both individual and corporate customers.

and huge maintenance costs.

Mr. Prathapa Chandran, the managing director of KBB, had a vision from the beginning to start as an ISP and build a trouble-free network. In his effort to create a network free from congestion and limitations, he began a search for new technologies that were robust, resilient, proven, and still cost-effective to deliver better service to the entire state of Kerala.

After initial demo and field trials, Kings Broadband chose ZyXEL for its reliability, local presence, and timely support.

in Kerala knows that the technology for them is GEAPON and the vendor to provide it is ZyXEL.

A significant amount of hard work has been provided by ZyXEL's sales, pre-sales and post sales teams, as well as technical assistance and troubleshooting, both onsite and offsite. This is what builds customer confidence.

Apart from technology, it took the hard work of various teams, a "walk that extra mile for customer satisfaction" attitude, and an excellent relationship with management by the front-end sales team to build a long-term association with Kings Broadband.

Even today, we continue classroom sessions for various LCOs and smaller ISPs with the customer.

The major factor behind the selection of ZyXEL was the reliability of its products. The cost-effectiveness and flexibility of solution, as well as local RMA and technical support were the other benefits in selecting ZyXEL over the competition.

"We wanted to build a network that was free from common anomalies like extending power cabling across the network, last-mile unmanageability, huge manpower maintenance requirements, low up-time commitment, low resiliency, high latency, network broadcast and collision, packet dropping, among other problems. From day one, we

wanted to utilize robust and reliable service provider technology, which was scalable enough to build a statewide network and yet was also cost effective, even for rural broadband. We preferred the GEPON concept from ZyXEL over the metro Ethernet network offered by vendors like

Cisco, HP, and Juniper. We also considered MSAN solutions from ATI and Zhong, but in light of the future expandability, we wanted an optical over a copper solution. Said Mr. R. Prathapchandran, Managing Director of Kings Broadband Pvt. Ltd.

## Product Used



### OLT-1308S-22 8-port GEPON Optical Line Termination

- 8 GEPON SFP open slots with DDMI support
- 1000BASE-PX20 SFP for 20 km distance support
- 2 Gigabit Combo + 2 GE SFP uplink ports compliant with IEEE 802.3/u/ab
- up to 4 trunking ports for uplink
- Support up to 64 ONUs per PON interface
- Support FEC
- Support AES or triple churning encryption
- Support 4 LLIDs per ONU
- 16K MAC addresses table
- Management through console, Telnet, SNMP, or web management
- Firmware upgrade FTP
- Configuration saving and retrieving
- Overheat detection
- LED indications for link status
- AC/DC power input for redundancy
- PON port redundancy
- Hot swappable for fan module and PON modules
- 24 Gbps Switching Fabric capacity



### ONU-6100B Series GEPON Optical Network Unit

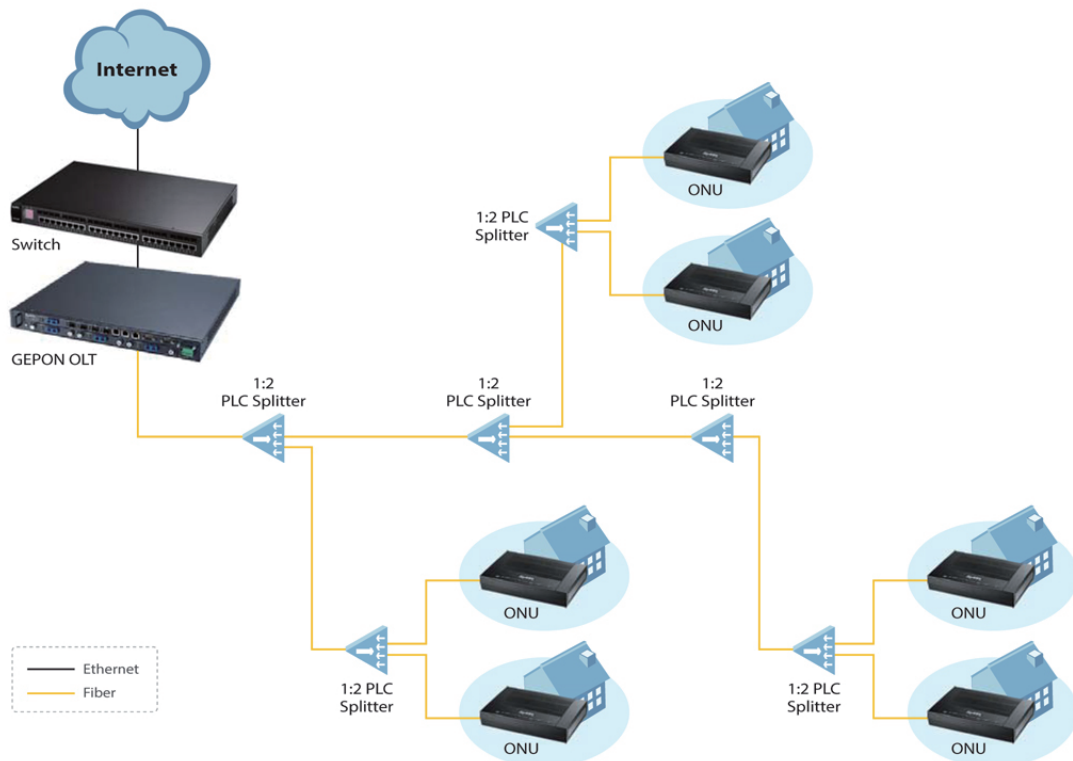
- 1 GEPON interface with SC type connector (IEEE 802.3ah)
- LAN interface: 1 auto MDI/MDI-X 10/100/1000 Mbps port
- Wavelength: 1310 nm for upstream and 1490 nm for downstream
- Power: 12 VDC @ 1.5A



## XGS-4528F 24-port Gigabit L3 Switch with 10GbE Uplink

- Fully managed Layer 3 switching solution
- High performance switching with 10GbE uplink connectivity
- Resilient networking with RSTP, MSTP, MRSTP, ECMP and VRRP support
- RIP, RIPv2, DVMRP and OSPF for advanced routing applications
- Advanced security with multilayer (L2/L3/L4) ACL, Guest VLAN and CPU protection
- CoS, DSCP, IGMP snooping v1, v2, v3 and MVR for convergence Future-proofed with IPv6 support

## Diagram



### About ZyXEL Communications

ZyXEL Communications Corp., founded in 1989 and headquartered in Taiwan, is the leading provider of complete broadband access solutions. As one of the early modem manufacturers, ZyXEL has gone through transformations in the fast-paced networking industry. Delivering cutting-edge communications innovations to more than 400,000 businesses and more than 100 million consumers throughout the world, today ZyXEL is one of the few companies in the world capable of offering complete networking solutions for Telcos, small to medium-sized businesses, and digital home users for a wide range of deployment scenarios. Telco solutions include Central Office Equipment, Customer Premise Equipment, Wired and Wireless Access Network Devices, and Carrier Switches. SMB and Enterprise solutions include Unified Security Gateways, LAN Switches, WLAN, and IP Telephony. Digital Home solutions include Network Connectivity Devices and Multimedia Solutions.

The company has 1000 employees and distributors in 70 countries, reaching more than 150 regional markets. The ZyXEL Communications Corp. includes 35 subsidiaries and sales offices and two research and development centers worldwide. For more information, visit the company's Website, <http://www.zyxel.com>.

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