



## Success Story

Hungarian Engineer Helps Kenyan Orphanage Get Connected with Zyxel LTE Solution



Education



Taita Foundation/  
Bura Orphanage



Hungary/  
Kenya



Zyxel  
LTE  
Solution

## Overview

### Challenges

- Challenging environment requiring remote deployment and management
- Need for dependable and stable performance
- No on-location IT skills

### Results

- Orphanage now has consistent, reliable WiFi access for mobile devices
- Children can access online learning resources and communicate with their supporters and the Taita Foundation in Hungary
- Connects the orphanage to the outside world and gives them access to additional resources, such as online videos and music – there are also plans to use the service for telemedicine

### Solution

- Zyxel LTE7460-M608 4G LTE-A Outdoor Router

"I'd be very happy to use the same product again in Kenya, or in Hungary. I'm very grateful to Zyxel for supporting me on this project."

Barnabás Hegyi  
Engineer

## Background

Barnabás Hegyi, an engineer working for Vodafone Hungary, a subsidiary of the major multinational telecommunications company, had been eager to help with charitable work in Africa for some time. He was given the chance when he heard about the requirement to equip an orphanage supported by the Taita Foundation (<http://www.taita.info/en>) of Hungary in the village of Bura,

350km (217 miles) south of Nairobi, with mobile technology and web access. There are approximately 45 children of varying ages at the orphanage. Most are of school-age; while some of the older children are away at boarding school during term times, the younger ones remain at the orphanage.

## Challenges

There are no fixed land lines in the area that could be used to provide internet access, and until the autumn of 2016, only 2G mobile signals were available. Safaricom, the Kenyan mobile operator and a subsidiary of Vodafone, then upgraded the mobile network in that area to support 3G. This presented an opportunity to provide web access to the orphanage but would mean installing network access equipment and providing devices that the children could use.

With no technicians on site, it would be important for the connectivity to be simple and reliable. Whilst 3G was now

available, the signal quality in Bura was not always consistent or reliable—especially when devices were being used indoors, as the iron sheet roof of the orphanage weakens the signal considerably, especially when it's raining.

Barnabás quickly realised that if the children had to rely on accessing the 3G network directly from a range of mobile devices (laptops, tablets, and smartphones), they would be better served by using an outdoor router with a directional antenna. Devices could connect locally via WiFi to the router, which would enhance the quality of the Internet access available within the orphanage.

## Solutions and Benefits

Zyxel lent a hand, donating its resources and services to create a future-proof WiFi solution using their 4G LTE-A Outdoor Router. It was a perfect fit for the orphanage.

Digital mobile devices were donated by other organisations, and Barnabás raised money to buy access time and data download allowances. By July 2017, he was ready to install the equipment. He spent around four weeks in Kenya, installing, testing, and teaching the staff and children at the orphanage how to use the devices and access web resources.

Zyxel's Czech office provided support throughout the process and continues to be available to Barnabás, who is giving technical support to the orphanage directly. He uses a remote access solution to manage and access the router and devices at the orphanage from afar. Thanks to Zyxel's advanced configuration and support capabilities, Barnabás is able to easily monitor the web and bandwidth usage and continues to raise the necessary funds to support the orphanage's monthly access costs. Internet access has allowed the children to utilize online learning resources, check email, and keep in touch with their supporters in Hungary. They can also enjoy online entertainment, such as videos and music. Additionally, the connection will enable them to receive telemedicine

services that are soon to be made available in Kenya and keep in contact with the Taita Foundation team in Budapest.

"The support from Zyxel was excellent," Barnabás said. "We even had a Skype call with the support guys while I was in Kenya. And the donation of the router was, of course, very important. They brought it to me in Hungary and connected me with the right people in Zyxel. The router itself works great. It is very easy to use, and I had no issues with it at all. Zyxel also provided a mounting kit, so everything was there, and I just needed to install it in the right location. I'd be very happy to use the same product again in Kenya, or in Hungary. I'm very grateful to Zyxel for supporting me on this project."

Barnabás will go on supporting the orphanage and is also planning to develop the digital skills of the children. "I had a great time in Kenya, and we got the work done. And while it might have been useful to have more time there, the teachers are doing a great job and I'll be passing on more information to other volunteers who are due to visit the orphanage. With the reliable Internet access that they now have at the orphanage, we can hopefully go on supporting the children and helping them to learn and improve."

## About Zyxel

Focused on innovation and customer-centricity, Zyxel 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.