Delivering GPON Fiber Internet Service to Residential Neighborhoods

UFiber GPON products combine ease of use with price/performance value

UF-OLT and UF-Nano client devices are simple to configure and quick to deploy

Monitor and manage GPON networks using intuitive UNMS™ software

Founded in 2004, Radynet has been a Wireless Internet Service Provider (WISP) for over a decade in the Czech Republic. In addition to internet service, Radynet offers IPTV, VoIP, and network installation services.

An established user of Ubiquiti® wireless equipment, Radynet has approximately 150 wireless deployments serving 3000 customers, mostly homes and small offices, in the Pilsen (Plzeň) Region. The company uses airMAX® AC products for new residential customers and UniFi® devices for corporate customers.

Aware of the limits of wireless, Radynet initiated its first fiber deployment to take advantage of an opportunity: the local municipality had plans to bury power cables in Nezvěstice, a town near the city of Pilsen.

Radynet asked permission to place fiber cables alongside the power cables, and fortunately, the municipality agreed. The municipality excavated a trench that was 2 km in length, and both power and fiber cables were buried together (Radynet covered the additional costs for fiber-only trenching).

"The municipality excavated a trench around 2 km long, which allowed us to connect 71 family houses and 64 flats."

Libor Sedlak, Managing Director, Radynet

GPON PRODUCT SELECTION

For the first venture into fiber service, Radynet researched different fiber technologies and standards, ultimately choosing GPON (Gigabit Passive Optical Networking) for its cost-effectiveness.

During product testing, Radynet evaluated fiber products from various manufacturers, including the new UFiber GPON products from Ubiquiti Networks. The best choice proved to be UFiber GPON, whose quick and easy setup offers a significant advantage for deployment.

"We were impressed by the simplicity of setup of the UFiber GPON in comparison with other brands."

Libor Sedlak, Managing Director, Radynet

Laying down protective hosing

UBIQUITI® NETWORKS

GPON DEPLOYMENT

A spool of microtubing

PROJECT TIMELINE

- Year 1, May 2015 - 2016: Paperwork, planning, and permits
- Year 2, May 2016 - August 2016: Excavation and trenching
- Year 2, October 2016: Construction of central office
- Year 2, November 2016: First customer connected via UFiber GPON
- Year 3, August 2017: A total of 71 single-family houses and 64 flats (apartments), connected via UFiber GPON

Laying down cables in a trench

Fiber distribution point
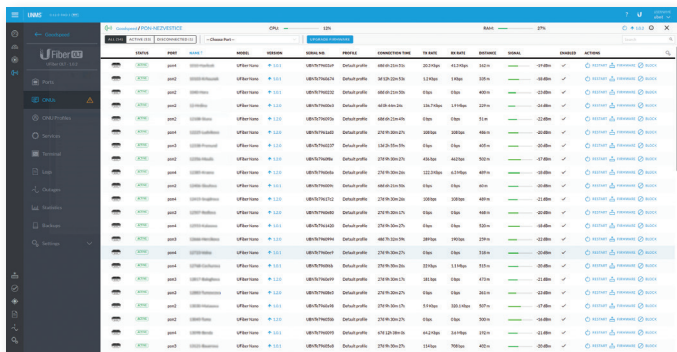
UFIBER IN ACTION

Radynet deployed the following UFiber GPON products:

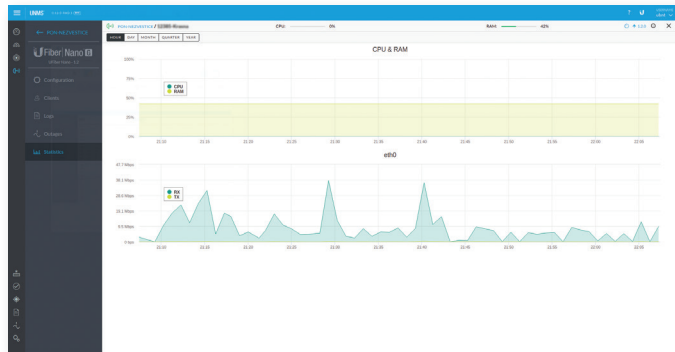| Model	Number	Purpose
UF-OLT	1	Optical Line Terminal (OLT) installed on provider premises
UF-Nano	60	Optical Network Unit (ONU) CPE installed on customer premises

UF-Nano installed in a home

CENTRALIZED CONTROL

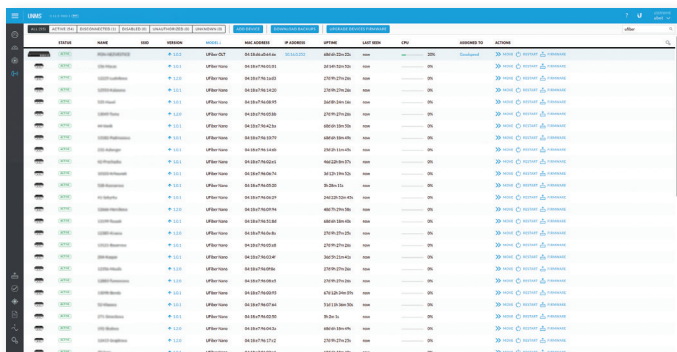*List of UFiber Nano™ clients on the ONUs screen of the UFiber OLT*

Statistics screen of a UFiber Nano client

UBIQUITI NETWORK MANAGEMENT SYSTEM

Radynet uses the Ubiquiti Network Management System (UNMS), a comprehensive management controller, to easily monitor network activity and manage all registered devices, including the UF-OLT and UF-Nano clients.

Featuring an intuitive graphical UI, UNMS offers convenient device configuration, network monitoring, firmware upgrades, and configuration backups. It can also manage other Ubiquiti products, including airMAX and EdgeMAX® devices.

Devices screen of UNMS

For networks spanning multiple geographical sites, UNMS allows centralized management of Ubiquiti devices, so mass configuration changes and remote firmware upgrades are readily deployed. Plus, it is available as a mobile app for installing devices from your smartphone or tablet.

"The UFiber GPON network has been under full load for around half a year. During that period we had only a single problem which was caused by a broken fiber cable. Apart from that this network needs no service and works smoothly."

Libor Sedlak, Managing Director, Radynet

FUTURE COMPANY GROWTH

Radynet plans to deploy more fiber with UFiber GPON in existing service locations and will also build out new wireless sites, extending the boundaries of their current coverage areas.

Visit Radynet at www.radynet.cz

For more case studies, visit www.ubnt.com/customers