

# Providing Reliable Triple-Play Services over Wireless



“Due to our planned expansion into IP television services across Orion’s client base, we selected the ePMP™ 1000 platform to increase network performance.”

- SLOBODAN  
DJINOVICH, CEO,  
ORION TELEKOM



## Overview

**FORMED FROM THE COMBINATION OF THREE MAJOR ALTERNATIVE INTERNET SERVICE** providers and more than 14 others, Orion Telekom is now the second largest operator and the first alternative provider of landline telephony in Serbia, with more than 100,000 residential broadband subscribers.

For business customers, Orion differentiates on providing superior connectivity using the latest technology and excelling in satisfying demanding clients by constantly introducing new services following global trends and technology. For residential customers, Orion offers bundled services including TV, Internet, and phone, with tiers based on maximum throughput.

## Challenge

**A LEADER IN THE EASTERN EUROPEAN ALTERNATIVE TELECOMMUNICATIONS MARKET,** Orion knows that to win in the competitive market, it has to continuously be better, move faster, and be more reliable than other service providers. Orion needed to deliver a consistent communications package that could be marketed nationwide. These packages would be easy for customers to understand and purchase. It would also make it easy for customers to purchase additional throughput as their demand for capacity increased.

Orion offers a menu of services including single, dual, and triple play. With a strategic alliance with one of the mobile operators, Orion will be able to offer Quad-Play service. For larger customers, Orion offers IP telephony, VPN, and MPLS services, auto-provisioned hosting with website tools and templates, disaster recovery and backup solutions, server or rack housing, latest generation IT security solutions, network design, and a variety of system integration services, including software, hardware, networking, monitoring, and physical installation.

The physical network had to support the “Triple Play” marketing initiative from day one. Because of the tremendous investment of capital and time required, this could not be accomplished by building out the wired or fiber network. Wireless technology was an attractive possibility, but the equipment had to provide high reliability to satisfy customers and support scalability as the subscriber base grew.

The goal was to provide reliable communications for those who were not yet connected.

## Solution

“THE CUSTOMER IS INTERESTED PRIMARILY IN THE SERVICES WE offer, and we build loyalty by offering the service packages they need,” said Nikola Rašajski, Head of the International Department.

Orion had experimented with wireless broadband previously, but equipment constraints on the number of users and throughput were insufficient to offer triple-play services to a large subscriber base. “Our previous equipment could not provide a quality signal to the quantity of subscribers we planned for,” said Rašajski. “The equipment was limited by frequency saturation, noise, and connection problems.”

Orion decided to check out the available technologies.

After researching wireless alternatives, Orion selected the ePMP™ wireless access network solution from Cambium Networks. The system would provide scalable, high-throughput connectivity for Internet, TV, and a landline phone over a wireless connection that could be rapidly deployed.

“We found its performance characteristics well-suited to this service offering and to our network needs, as we grow into larger and denser areas requiring a high-performance solution,” said Slobodan Djinovich, CEO, Orion Telekom.

ePMP PTP Solutions	
Frequency	2.4 GHz, 5 GHz
Throughput	220 Mbps
Synchronization	GPS Synchronization
Quality of Service	Multi-Level Prioritization Scheme
Loading per Access Point	120 Subscribers per AP

## Results

### WITH EPMP SUCCESSFULLY INTEGRATED INTO ITS NETWORK

infrastructure, Orion’s IPTV solution is now offered to current customers and makes it possible for Orion to reach out to new markets. With the addition of IPTV to its portfolio, Orion quickly established itself as the first provider in Serbia to offer triple-play services with ambitious plan to become Quad-Play operator in early 2016.

“We are now able to offer carrier grade quality of service over wireless broadband,” said Rašajski. “This is what our customers wanted, and it shows in our business numbers. Our Annual Revenue Per User (ARPU) has increased to 20 Euros per user per month, our customer churn rate is lower, and retention is higher.”

### Triple Packs

TV + Internet + Phone 10 Mbps
TV + Internet + Phone 20 Mbps
TV + Internet + Phone 50 Mbps
TV + Internet + Phone 100 Mbps

Marketing Triple Packs of Connectivity

## About ORION Telekom

<http://www.oriontelekom.rs>

Orion Telekom was founded in 2010 with the aim of developing alternative communications resources and providing the highest possible quality of fixed-line telephony and Internet services to residential and business users in Serbia.

### Why ORION chose Cambium Networks

- **High-speed connectivity** to support IPTV services
- **GPS Synchronization** to make efficient use of limited spectrum and enable frequency re-use
- **Rapid deployment** to expand the network and open revenue streams

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Network performance satisfied customers, and word quickly spread. Orion was able to connect thousands of customers in a matter of months. As the subscriber base grew, the network continued to perform well because the system is GPS synchronized to reduce self-interference and provides the ability to re-use spectrum in adjacent areas.

“Currently we have installed more than 100 base stations with a total of more than 230 access point sectors in 12 cities in Serbia and 50 base stations with 75 access point sectors in 20 locations in neighboring country of Montenegro” said Rašajski. “The Cambium equipment has met our expectations regarding throughput, reliability, and the number of customers. Others may think this is impossible, but we did it.”



ePMP Access Point modules

Orion now has higher capacity to offer to all clients to meet increasing demand. In addition, software provides positive control to prioritize traffic and manage capacity. Customers are satisfied and are able to upgrade their capacity when they need to.



Managing the network from a central location

“What we were able to accomplish in half a year with Cambium Networks engineers assisting with network design, integration, and optimization exceeded our expectations,” says Djinovich. “We now have the ability to provide our customers the highest quality service, with a stable connection that supports IPTV over the wireless network.”

“Our cooperation with Cambium networks is moving towards the strategic partnership model involving Orion providing the system integration and monitoring services for the Cambium Networks allowing Cambium Networks to offer “turnkey” solution to their customer in near future period.” said Nikola Rašajski.