



Maximize your return on FWA investment

UMP Fixed Wireless Access

A photograph showing the silhouettes of two cellular towers against a vibrant sunset sky. The towers are made of dark metal lattice and are equipped with various antennas and equipment. The sky transitions from deep purple at the top to bright orange and yellow at the horizon.

Unified Management Platform

OVERVIEW

Fixed Wireless Access (FWA) is a great opportunity for Communications Service Providers (CSPs) to extend their network coverage and offer broadband services in more rural areas. Recently, FWA is an area of opportunity for emerging private LTE networks, especially in the US where the Federal Communications Commission (FCC) established the Citizens Broadband Radio Service (CBRS) allowing the use of 3550-3700 MHz mid-band spectrum for commercial use. It's also an area of upcoming 5G and CBRS Alliance OnGo deployments – in short, this is where CSPs are innovating right now.

However, for any FWA deployment to be successful, operators will still need to:

- Focus on finding the right device vendor, as devices that frequently lose signal might put the FWA trial at risk
- Face the common device management challenges, from manually rolling out firmware upgrades to groups of customers to managing the costs of customer support operations. In particular, due to the wireless nature of FWA deployments, ensuring top-class monitoring of the quality of customer service should be their number-one priority.

AVSystem offers a solution to both aspects:

- CSPs can point CPE vendors to AVSystem's [TR-069 Test tool](#) to verify that the devices will meet the highest industry standards, eliminating one of the biggest technological risks before the commercial launch of their FWA solution
- CSPs can use our platform for efficient device management, i.e. safe large-scale firmware upgrades. **Most importantly, with FWA-specific insights from service monitoring and NMS integrations, the customer care and NOC departments can quickly solve and prevent customer problems with the use of the UMP Fixed Wireless Access solution.**

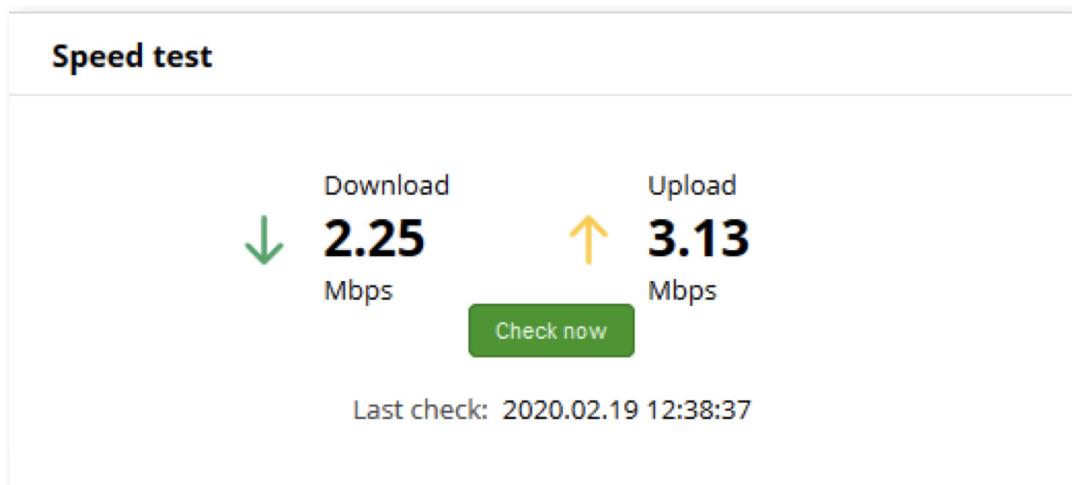
REDUCE YOUR MEAN TIME TO REPAIR (MTTR)

Challenge

Choosing a wireless communication technology comes with the benefit of higher customer market penetration than the typical cable, DSL or fiber access technologies. However, it also comes with the challenge of significantly more varying signal strength and quality. The single most important aspect of the FWA deployment is to observe the transmitting devices (i.e. eNodeBs for LTE) for signal congestion or even outages that could affect a great number of customers.

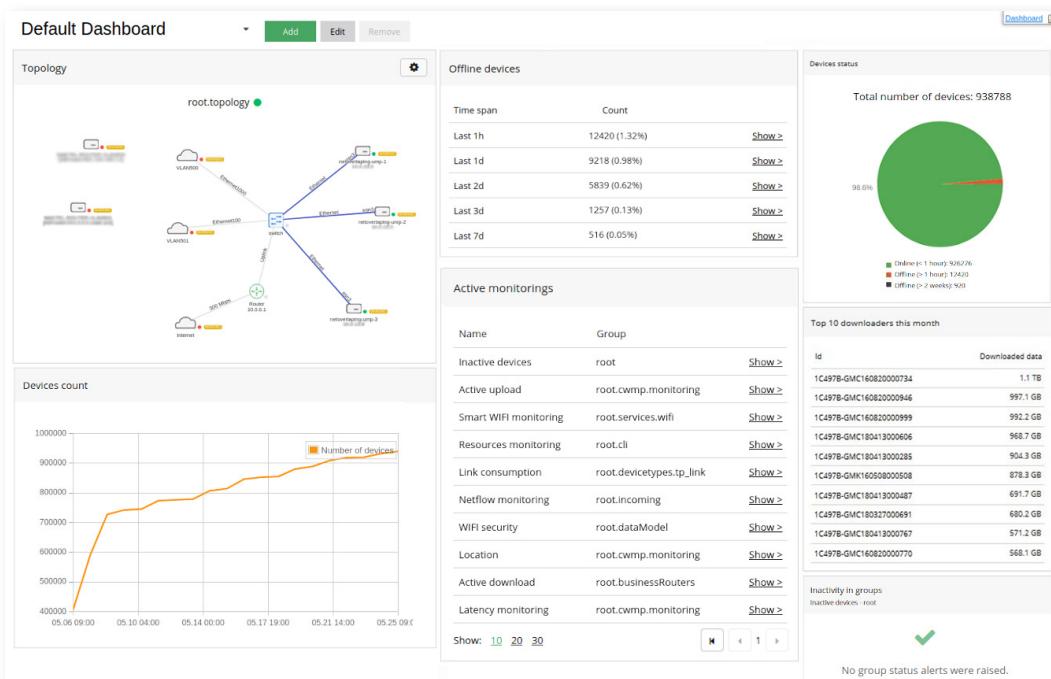
Working with UMP Fixed Wireless Access

Visualization of key performance indicators (KPIs) is the key strength of the UMP Fixed Wireless Access solution. Upon entering the main system dashboard, you can see the list of the worst performing BTSes or the most often rebooting devices and act right away. What's more, you can also view the map visualization of customer devices geographically grouped with their eNodeBs. Each neighboring transmitting cell is displayed along with its uplink/downlink utilization and performance alerts. And if you need external integration with external NMS or even MME directly, we've got you covered!



Benefits

The platform allows you to easily manage one of the biggest risks of an FWA deployment – you get deep insight into network performance, user experience and service quality. You can quickly find the root cause of access-layer problems and significantly reduce your mean time to repair (MTTR).



DELIVER HIGHER CUSTOMER EXPERIENCE WHILE REDUCING YOUR OPERATIONAL EXPENSES

Challenge

It's a common challenge among telecoms to hire and train experts with in-depth understanding of the radio access network (RAN) in 4G & 5G. Especially when using additional technologies like CBRS with Spectrum Access System (SAS). What's more, although TR-069 is the most commonly used protocol for LTE deployments, the technology-specific signal parameters are not standardized, which becomes troublesome when managing devices from multiple vendors.

Working with UMP Fixed Wireless Access



Our team integrates all your FWA device types to provide you with easy device firmware upgrades and service monitoring.



Then, the platform gathers more than 30 E-UTRAN signal parameters (i.e. RSRP, RSRQ, SINR, CINR) and categorizes information about their cells into several easy-to-understand KPI metrics.



Once the customer calls, even less experienced operators can take a glance at a custom-built LTE panel, click to perform live-touch for real-time monitoring, and run a set of diagnostics to deal with the situation in a matter of seconds.

Benefits

UMP Fixed Wireless Access delivers expert knowledge in an automated fashion, allowing operators to easily deliver award-winning customer experience. At the same time, you drastically cut down time and cost of staff onboarding and operations center expenses.

LTE Parameters

⟳ Refresh LTE Parameters

NAME	VALUE	STATUS
RSRQ	<div style="width: 70%;">██████</div> -7.2 dBm	GOOD
RSRP	<div style="width: 10%;">██████████</div> -118.2 dBm	POOR
SINR	<div style="width: 15%;">██████</div> -7.2 dBm	ACCEPTABLE
Signal Quality 9	<div style="width: 15%;">██████</div> -7.2%	ACCEPTABLE

NAME	VALUE
WAN type	LTE
WAN IP	192.168.0.100
PLMN	311400
PCI	120
Bandwidth	20MHz
State	Connected

Refresh legend:

Last hour Last day Older than a day

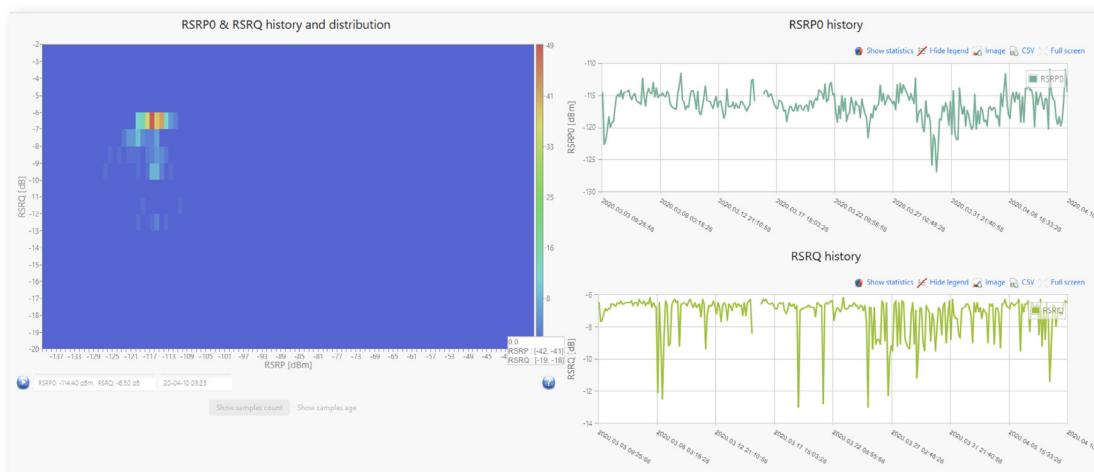
TURN TECHNICAL QOS INSIGHT INTO REVENUE-GENERATING STRATEGIES

Challenge

With the uncertainty about signal performance and without the proper tools, it requires tremendous amounts of manual effort to assess how a particular customer is doing. What's more, very often, customers not satisfied with your services will not inform you directly about issues they experience.

Working with UMP Fixed Wireless Access

The platform provides fully automated latency and packet loss monitoring, speed tests and QoS trend analysis. What's more, apart from real-time emergency alerting, at the end of each month you receive an auto-generated advanced report based on fine-grained radio status data samples.



Benefits

Thanks to comprehensive QoS and QoE assessment, you can improve your network usage. On top of that, the platform automatically provides you with advanced reporting delivering technical and business insights that help bring your revenue-generating strategies to the next level.

Combine Fixed Wireless Access with UMP Smart Workflows

To ensure quality of service, automated monitoring triggers various alerts. The alerts can be raised per customer or per group of customers based on predefined thresholds and parameters configurable by the operator. The alerts have different levels and priorities (e.g. INFO, ERROR) to guarantee flexibility and enhance the operator's experience. What's more, the operator can also make use of alert browsers (maps, tables, charts).

But the main question remains – what does the operator do after they receive an alarm notification? Our premium solution offers predefined workflows providing device repair actions at a single click of a button... or even in a fully automated fashion! Check out how our [UMP Smart Workflows](#) integration can make your fixed wireless access deployment even more successful.



UMP

Unified Management Platform (UMP) is a highly scalable and flexible multi-protocol system for provisioning, management and monitoring of various types of devices. As an industry-proven device management platform with experience of more than 100 deployments all over the world, UMP offers many powerful mechanisms that allow efficient management of any type of devices via various protocols.

Using AVSystem's UMP platform you get:

- Zero-touch service activation for all access technologies with the use of TR-069 or any other management protocol
- Efficient customer problem solving with dedicated graphical interfaces for customer care / network operations centers / field engineers
- Quality of Experience with diagnostics, monitoring, reporting, dashboards and AI-driven anomaly detection for both single devices and groups of customers
- Premium solutions for [enterprise-grade routers](#), [wifi optimization](#), [UMP Smart Workflows](#), fixed wireless access, [DOCSIS](#) and many more
- Device and platform integration services, on-site training, 24/7 SLA-guaranteed premium support and any CRM/NMS/OSS/BSS integration
- Highest security: cloud / on-premises deployments, regularly passed security audits, TLS on all system entry-points, data redundancy and tested upgrades.

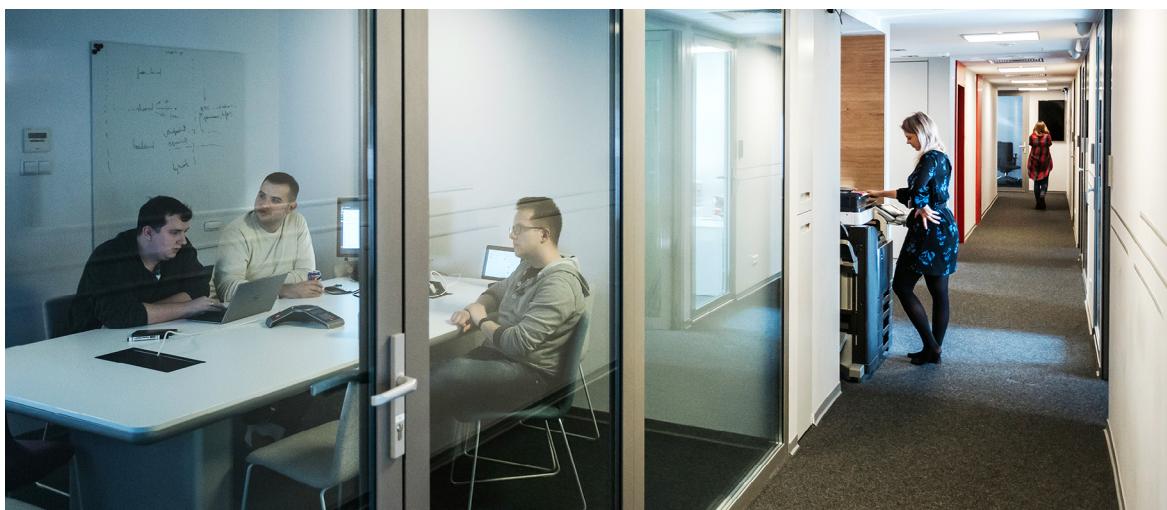
Your next step

If you want to learn more about UMP Fixed Wireless Access or UMP itself, contact us at sales@avsystem.com.

ABOUT AVSYSTEM

No IoT deployment is successful without proper device management—this is what AVSystem stands for.

With more than 100 deployments all over the world, AVSystem is an expert in its field. We help companies around the world deliver better quality of service thanks to our top-class device management solutions. We also focus on WiFi VAS & indoor location as well as other systems for SDN and NFV. Apart from creating software, we actively participate in the standardization process of the LwM2M standard to enable secure device management and service orchestration in the IoT ecosystem. 100+ large companies worldwide prove the superiority of AVSystem's technology.





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