

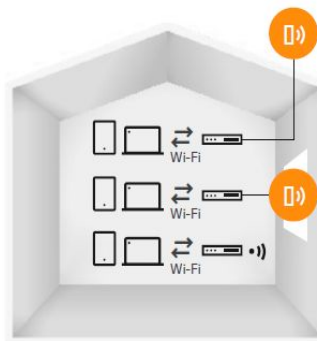
The Elisa Polystar Analytics and Management Platform for Wireless ISPs:

- A single platform supporting:
 - Service Management
 - Network and Service Operations
 - Customer Care and Account Management
 - Network Engineering
 - Marketing
- A single platform to cover:
 - Voice (VoLTE),
 - Data
 - Video Streaming
- Affordable platforms for smaller ISPs
- Drive down operational costs, with automation driven by Machine Learning:
 - Cell power during under-utilized times
 - Zero touch Operations
- Fault prediction
- Highlight and identify users affected by network or service issues in real-time
- Intelligent Root Cause Analysis for problems
- Capacity Management for system infrastructure
- Rollout Automation
- Real-time call trace and protocol analysis
- Record packet streams with the ability to store large amounts of data for offline analysis.
- Exceptional call tracing for complex call flows.

Cubro supports Elisa Polystar's Analytics Solution for Wireless ISPs: Ensuring Service Quality and Customer Support

Fixed Wireless Access (FWA) is an alternative means of providing internet connectivity that uses wireless network technology rather than fixed lines. Fixed wireless internet service providers (WISPs) deliver reliable, affordable broadband to customers in fixed locations such as residences, businesses, and schools. Networks can be built and upgraded virtually overnight at a fraction of the cost of wired-only or satellite technologies.

5G fixed wireless access is an ideal alternative mainly for residential customers as users get speeds at a competitive price, with no installation issues. Also, in many developing countries, it is not economically viable to build fixed broadband infrastructure.



Guaranteed QoS Fixed Wireless Access

Managed device (CPE), indoor or outdoor.

Price plan based on sold data rate.
Subscription tied to known location.

Amid the COVID-19 crisis, fixed wireless access (FWA) solutions have witnessed increased demand and fill in fiber broadband networks. This results from a sudden and widespread explosion in telecommuting by employees across the world who can work from home.

Half of all service providers in every region now offer FWA

In Western Europe, almost all service providers have an FWA offering (98 percent).

Source: Ericsson Fixed Wireless Handbook, 4th Edition

The Elisa Polystar platform

The Network Build and rollout for a fixed wireless access service is a large element of the total costs but, once built, new connections need to be managed.

To make these investments pay, operators must ensure that they minimize operational costs – while, at the same time, providing new levels of agile performance to meet the changing needs of users.

Elisa Polystar Analytics enables Communication Service Providers (CSPs) to detect and resolve network issues or poor performance before end-customers are affected.

Cubro Visibility solutions interface Elisa Polystar Analytics into ISP Core Networks

Cubro products copy relevant data from any part of the network and the copied data is then optimized and passed to the Elisa Polystar Management and Analytics system in the format required to ensure there are no monitoring ‘blind-spots’.

As a result, the Elisa Polystar system has full visibility of all relevant network traffic to execute all of its function completely and efficiently.

<p>MANAGEMENT</p> <ul style="list-style-type: none"> High-level insights into network and service performance for key services Trend analysis on quality/usage to trigger investigations Immediate understanding of how problems impact customers 	<p>MARKETING</p> <ul style="list-style-type: none"> Understand subscribers by analysing behavioural and usage patterns Measure effectiveness of new launches and market campaigns Build new partnership opportunities with OTTs and other providers 	<p>CUSTOMER CARE AND ACCOUNT MANAGEMENT</p> <ul style="list-style-type: none"> Real-time Insights into customer complaint handling, reducing Mean Time To Repair (MTTR) Qualitative data and measures to understand customer experience in the field Corporate/VIP SLA monitoring for account management Incident monitoring to understand the impact of a network-wide incident on a single corporate group or account 	<p>NOC & SOC TEAMS</p> <ul style="list-style-type: none"> AI-driven real-time insights into network and service performance, and affected subscribers Automated network operations Ad-hoc analytics & data mining Easy to use tools to identify and locate the root cause of a problem 	<p>NETWORK ENGINEERING</p> <ul style="list-style-type: none"> Detailed insights into sub-subscriber usage per location, supporting cost effective rollout of network capacity and services Automated network optimisation and energy savings Insights into customer experience, supporting impact analysis of every network change
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Cubro Network Packet Broker products provide access to the native network traffic that the Elisa Polystar Management and Analytics platform can understand and execute against, by various mechanisms such as decapsulation, tunnel removal. Since packets are collected from multiple locations, any duplicate packets are removed, and other advanced processing is applied on the filtered, aggregated packets before sending to the Polystar platform.

Removing network traffic blind spots means that IT services uptime and IT network security is improved because the risk of undiscovered network service performance and/or security problems is significantly reduced.



Cubro Packet Broker: Cost effective ASIC based filtering and aggregation, with industry leading performance.

Header modification, Packet slicing; VLAN, MPLS, GRE add/remove; Session aware load balancing; VNI, GTP inner IP filtering.



Cubro Omnia: Additional CPU for IMSI Filtering, GTP/SIP correlation, Deduplication, Data Masking, REGEX Filtering, Netflow Probe, and other advanced capabilities.



Cubro Fiber Optic Taps: 19" 1/3 RU
8 link or 4 link version
Singlemode or Multimode
For any bandwidth or signal type, Up to 400 Gbit.