

XEdge Network Intelligence Platform

Continuous Edge Network Monitoring and Testing.
Automated. Remote. Affordable.



Does your network have good connectivity?
Everywhere? Every time?

It's not what the network performance
reports say that matters most – it's what
people actually experience when they use it.

The Data Quality Challenge

Private 5G operators, enterprises, and MNOs using a traditional approach to edge network performance management are faced with challenges. They typically need RF expertise and expensive equipment. What's more, active drive tests on the network are often periodic and easily can miss intermittent issues.

XEdge gives organizations running 4G and 5G business critical private networks and WIFI, the tools to test and continuously monitor device connectivity at a very low cost

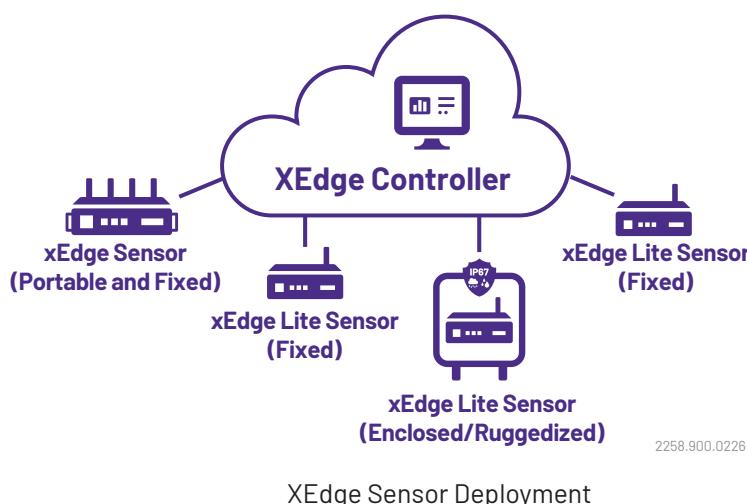
The Solution

XEdge combines autonomous sensors with a centralized controller to deliver continuous monitoring from a user experience perspective.

Think of it like having dedicated measurement engineers deployed across your network - except they're autonomous, working 24/7, and responding to queries on demand.

You can deploy sensors at critical locations (indoors and outdoors) and collect over 200 KPIs automatically.

You'll receive alerts when thresholds are breached and it's easy to prove SLA compliance with the comprehensive data reports.



Typical XEdge Customers

- Private 5G operators – SLA validation without RF expertise
- Mobile network operators – continuous coverage assurance, DAS monitoring
- System integrators – independent proof for managed services
- Enterprises – connectivity assurance for critical locations
- Regulators and government – compliance monitoring, signal detection

XEDGE: PLATFORM COMPONENTS

XEdge Controller

The XEdge Controller is a software platform. Using a centralized dashboard you can schedule tests, set alerts, perform analytics and use and REST API. You can also manage unlimited sensors from a single controller.

XEdge Controller Provides:

-  Cloud SaaS, on-premises, or air-gapped deployment software platform
-  Real-time dashboard with device status and alerts
-  Automated test scheduling and threshold alerting
-  REST API for integration (ServiceNow, Splunk, Grafana)
-  Historical data: 90 days raw, 1 year aggregated
-  Role-based access control and multi-tenancy

XEdge Sensors

- The XEdge sensors are all autonomous hardware probes with 4G/5G modems. They are available in multi-modem with up to four operators (XEdge sensor) or compact single-modem variants (XEdge Lite).
- The sensors can be deployed indoors or outdoors, and can be fixed or mobile, suitable for active walk or drive tests.

XEdge (Full Platform)

- Multi-carrier monitoring unit with 1, 2, or 4 cellular modems. Larger chassis designed for permanent installations, lab environments, and multi-operator DAS monitoring. Supports simultaneous monitoring of up to 4 mobile network carriers.



XEdge Sensor

XEdge Lite

- Compact, low-power sensor for mass deployment. Single modem, lightweight (567 g), PoE-powered. Ideal for dense sensor networks, emergency call monitoring, and cost-sensitive deployments. Measures the same 200+ KPIs as the full XEdge sensors.

XEdge Lite 3G+

- XEdge Lite with a voice gateway extension adds real voice call testing with MOS scoring. Supports VoLTE, VoNR, and legacy 3G voice. Designed for maritime fleets and enterprise voice SLA validation.



XEdge Lite (Enclosed/ruggedized outdoor) Sensor

XEDGE CAPABILITIES

Correlated Data from the Edge

Every XEdge measurement captures RF, application, and location data from the same device, same place, same moment.

This correlation matters: when you see high latency, was it RF degradation or backhaul? XEdge answers this because all the metrics are linked.

Layer	Metrics	AI Value
RF	RSRP, RSRQ, SINR, CQI, PCI	Coverage gaps, interference detection
Application	Latency, throughput, jitter, packet loss	SLA compliance proof
Voice	Call setup time, MOS score	Voice quality SLA
Emergency	000/112/911 success, camp-on status	Regulatory compliance
Location	GPS, cell ID, timestamp	Site-specific audit trail

Active Testing

Beyond passive monitoring, XEdge runs active tests on schedule or on demand:

- Speed tests – TCP/UDP throughput measurement
- Latency probes – ping, jitter, packet loss
- HTTP/HTTPS – response codes, time to first byte
- YouTube QoE – buffering events, resolution, startup time

Voice Quality Testing (MOS)

XEdge Lite 3G+ extension adds real voice quality measurement.

Actual calls with audio injection and recording, processed for MOS scoring.

Supports VOLTE, VoNR, and legacy 3G voice.

- MOS scoring via ViSQOL (included) or POLQA (certified, licensed)
- Ideal for maritime fleets, enterprise voice SLA, regulatory compliance

Multi-Operator Monitoring

- XEdge sensors support up to 4 SIMs simultaneously. Monitor multiple carriers from one device. Essential for neutral host, DAS environments, and competitive benchmarking.

Integration with AI Agents and Automation

XEdge provides structured, time-stamped, geo-tagged data via REST API – ready for your AI/ML platforms, NOC systems, or automation workflows.

External AI agents can command measurements on demand:

- RF scan – response in <5 seconds
- Speed test – response in 30-60 seconds
- Scheduled baseline + event-triggered investigation

All metrics are available via REST API for external AI/ML platforms, AI Agents, NOC integration, and automation workflows

Security and Compliance

- Emergency Call Monitoring: Validate 000/112/911 connectivity continuously. Detect failures within minutes. Pre-registered test numbers prevent callbacks. Full audit trail for regulators.
- Rogue Base Station Detection: Early warning for network anomalies - unknown PLMNs, unexpected cells, unusual signal patterns. Alerts security teams for investigation. Ideal for prisons, government sites, secure facilities.

Deployment Options

Scenario	Configuration
Mass deployment, dense networks	XEdge Lite - compact, low cost
Multi-operator DAS / neutral host	XEdge 4-Modem - 4 carriers simultaneously
Voice quality (maritime, enterprise)	XEdge Lite 3G+ with MOS extension

XEdge in Summary

- Low cost - enables dense sensor networks at scale
- No RF expertise required - IT teams can operate
- Vendor-agnostic - works with any network infrastructure
- API-first - integrates with existing tools and AI workflows
- Autonomous - 24/7 operation without manual intervention

To learn more visit our
XEdge website page.

Please contact your VIAVI representative
for more details on technical specifications
and deployment options.



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