

# Empowering the digital rail network: EXFO's role in safer, smarter fibre connectivity

## EXFO

As rail operators modernise their infrastructure, fibre optic networks are becoming the critical foundation—not only enabling digital signaling, surveillance systems, IoT integration, and enhanced passenger

connectivity, but also creating opportunities to lease dark fibre assets to third parties. Ensuring these networks meet consistently high-performance standards is essential. Behind the scenes, EXFO plays a pivotal role in this evolution.

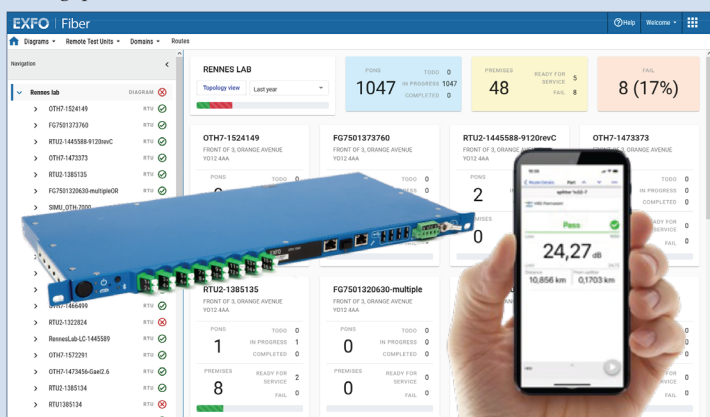
Building on four decades of innovation, EXFO delivers smarter test, monitoring and analytics solutions that help rail operators

deploy, maintain, and monitor fibre networks with speed, precision, and confidence. From initial rollout to ongoing performance assurance, EXFO's purpose-driven equipment, centralised software (cloud-hosted or on-premises), and expert services provide the visibility rail operators need to deploy quickly, minimise downtime, reduce field risk, and keep mission-critical systems running smoothly.

### A solution for the entire fibre network

EXFO's remote fibre testing and monitoring solution delivers test and diagnostic capabilities across the fibre network lifecycle – from build quality assurance (QA) to activation and ongoing monitoring. Whether deploying, troubleshooting, or maintaining the fibre network, engineers can quickly pinpoint fault locations to reduce mean time to repair. With automation and targeted test and monitoring, potential issues are detected

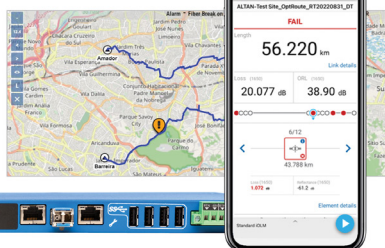
early – before they impact service. Armed with this visibility, engineers can begin fixing problems immediately, without diagnosing in the field, saving time and reducing costs. Operational expenses are further reduced through automated root cause analysis and fewer on-site inspections or field interventions.



Remotely test and monitor across the fiber network lifecycle.



**OTH-7000: Scalable, compact OTDR-based remote test unit designed for fibre-optic network monitoring and troubleshooting.**



### Benefitting staff and engineers

Remote testing also minimises the time engineers spend near active tracks. Accurately tracking the progress and quality of each link during rollout and using a geographic information system (GIS) to locate faults during operation, directly improves safety. Knowing the exact fault location enables targeted dispatch, which is especially vital in poor weather or nighttime conditions. It also ensures that the correct access point permit is applied for and reduces the need for staff to walk trackside.

### EXFO's remote fibre test and monitoring solution helps to:

- **Enhance safety** – reduce trackside exposure through automated remote testing, GIS-based fault location and targeted dispatch during challenging conditions.
- **Support high fibre count deployments** – continuous, automated fibre testing during rollout helps catch issues early, avoid end-of-project rework, and ensure performance from day one.
- **Ensure availability of critical and safety-related systems** – through continuous fibre monitoring that detects degradations early and prevents disruptions to train control, emergency communications, and other vital links.
- **Pinpoint fibre faults fast** – detect and localise issues instantly, even in remote or hard-to-access areas, to reduce repair time and maintain service continuity.
- **Reduce OPEX** – cut manual inspections and accelerate resolution through centralised, automated monitoring and root cause analysis.
- **Enable pro-active maintenance** – detect degradations early and reduce unplanned field interventions.
- **Monetise dark fibre assets** – support SLA compliance through continuous monitoring.

In a sector where safety and uptime are non-negotiable, EXFO helps ensure rail communications networks are not just connected – but built to uphold safety and reliability standards.

Connect with our team

