

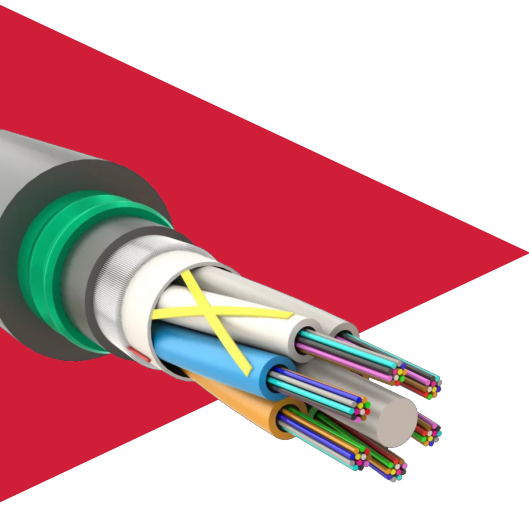


Fiber Optic Distributed Acousting Sensing



Advanced Security Through Real-Time
Monitoring Solutions

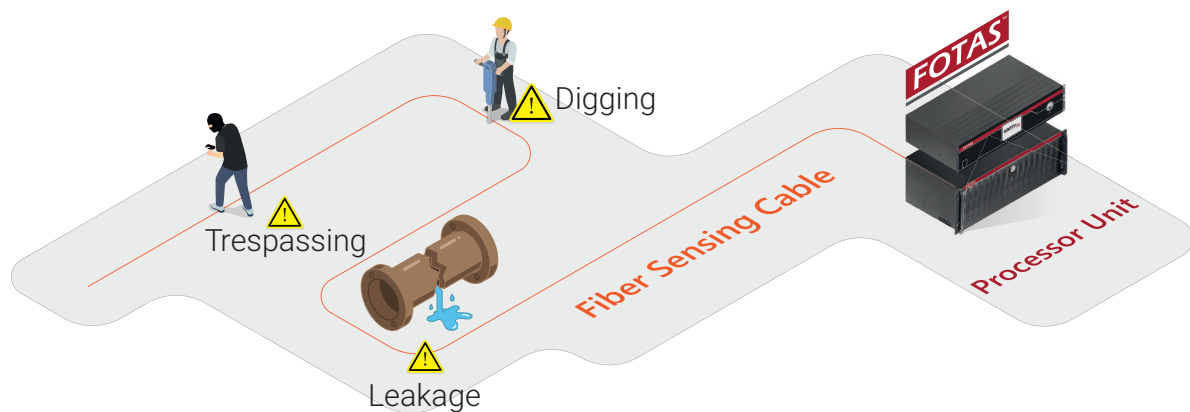
FOTAS™



Transform Security and Monitoring with Distributed Acoustic Sensing (DAS)

FOTAS DAS (Fiber Optic Distributed Acoustic Sensing System) is an advanced security technology capable of real-time detection and monitoring over long distances.

This system utilises fiber optic cables as passive sensors to detect mechanical and acoustic effects, identifying third party intrusions.



Why Choose Distributed Acoustic Sensing (DAS)?

Wider coverage area compared to traditional sensor systems.

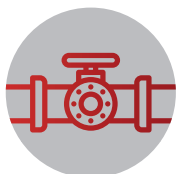
AI-powered analysis to reduce false alarm rates.

Passive sensing technology, requiring no electrical power.

Long lifespan, durability, and low maintenance requirements.

Resistant to environmental factors and immune to electromagnetic interference.

Key Applications



Pipeline Security

Detects third-party interventions and leakage.



Leak Detection

Detects potential leakage, sabotage, and unauthorised intrusions.



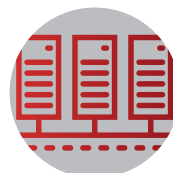
Perimeter Security

Protects critical facilities including airports, power plants, and prisons.



Border Security

Monitors illegal crossings along national borders.



Telecom Infrastructure Monitoring

Identifies third-party interventions and excavations affecting fiber networks.

Key Benefits

Real-Time Monitoring & Precision

- provides coverage up to 100 km with pinpoint location accuracy, down to 4 metres.

Artificial Intelligence

- the system supports hybrid installation for both buried and fence applications, utilising deep learning AI models to classify events such as digging, walking, vehicle movement, intrusion, climbing, and fence cutting.

False Alarm Prevention

Algorithms - smart filtering system reduces false notifications by eliminating environmental noise.

Durability & Maintenance Requirements

- 20+ years of sensor lifespan with passive sensing, ensuring low maintenance costs.

Integration with Existing Systems

- compatible with security platforms such as Genetec Security Center, Milestone XProtect, and other third-party security applications.

Web Interface - user-friendly experience through a Web 2.0-based interface.

Integration Support - easily integrates with different security systems through ONVIF camera support, SMTP, SNMP, REST API, and SDK compatibility.

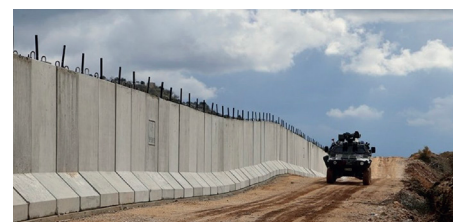
Alarm Notification System - sends real-time alerts via email and SMS.

Security Installation Design Options

Fence-Mounted Installation - ideal for detecting climbing or cutting activities on fences in perimeter security

Buried Installation - suitable for early warning detection and classification of TPI (Third Party Intrusions) approaching fiber optic cables. It detects excavation activities and human movement. It can perform leak detection and PIG tracking in pipeline monitoring.

Hybrid Installation - combination of fence mounted and buried methods, providing dual detection zones for customized alerts.



Reliable Architecture

Single or Dual Channel - can operate with single or dual fiber optic cores, ensuring redundancy and reliability.

Cut Resilience - remains fully operational for sensing, even in the event of a fiber optic cable cut, thanks to its dual-channel architecture that ensures continuous and reliable monitoring.

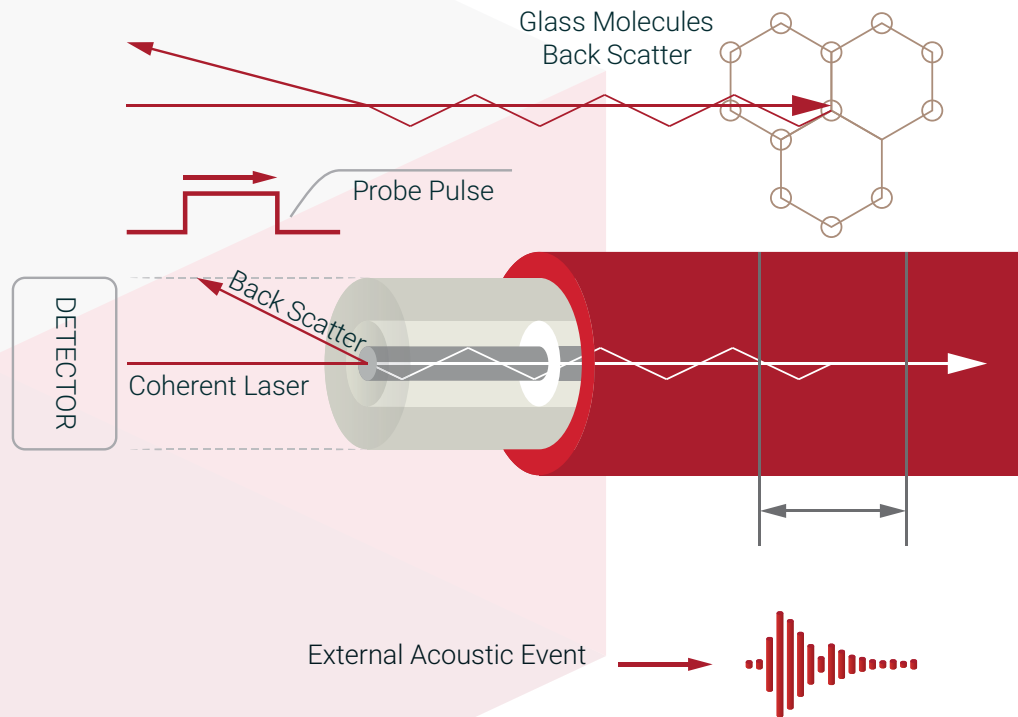
Fault Tolerance - resilient to component failures, enhancing reliability.

FOTAS DAS utilises Optical Time-Domain Reflectometry (OTDR) technology to detect acoustic and mechanical disturbances around fiber optic cables. This technology works by sending laser pulses through the cables. The light signals are scattered back due to microscopic irregularities within the fiber.

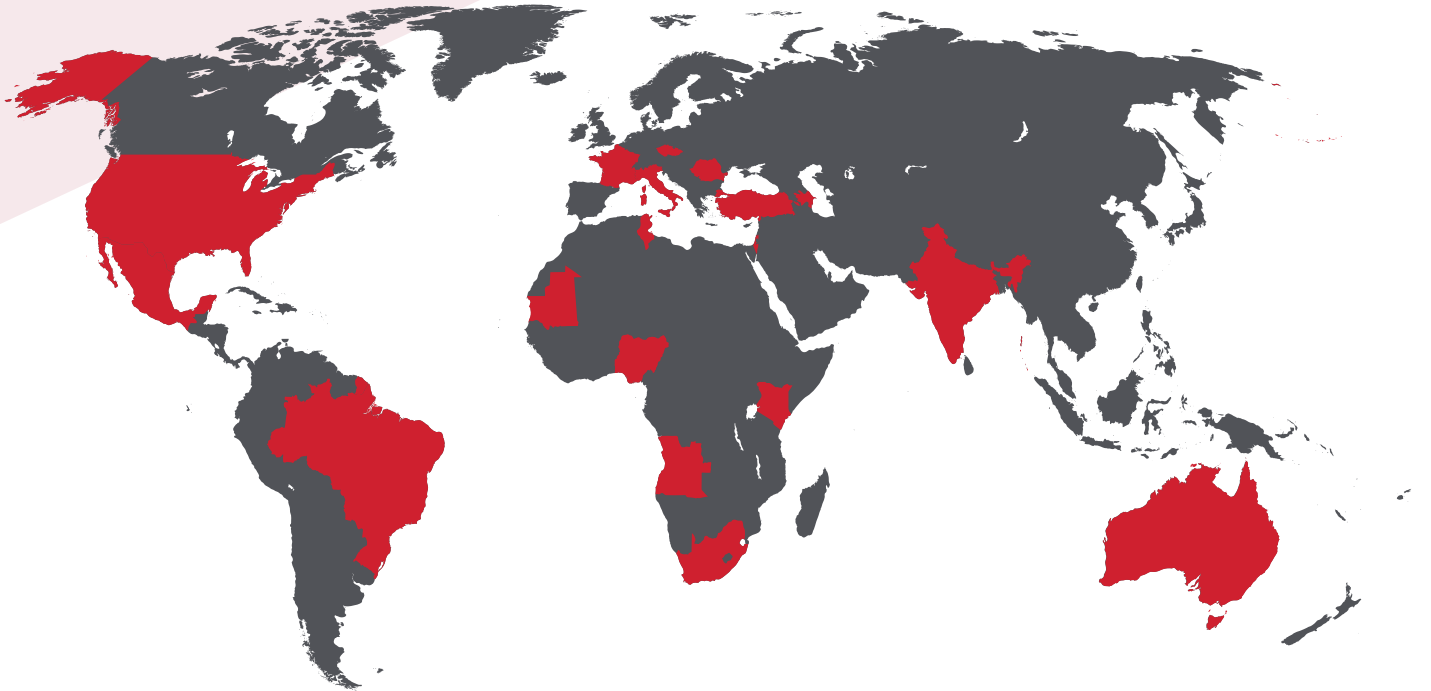
When a vibration or acoustic change occurs near the cable, the phase of the backscattered light undergoes minor shifts. These changes are analysed in real time to determine the source of the mechanical disturbances. AI algorithms process this data to classify the type of event.

Unlike conventional sensors, this approach allows the entire cable to function as a sensor, providing continuous and uninterrupted monitoring over large areas.

Understanding the Technology



Our Global Presence



Contact Us

Ready to enhance your facility's safety and monitoring capabilities? Reach out to our team for a free consultation or demonstration.

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