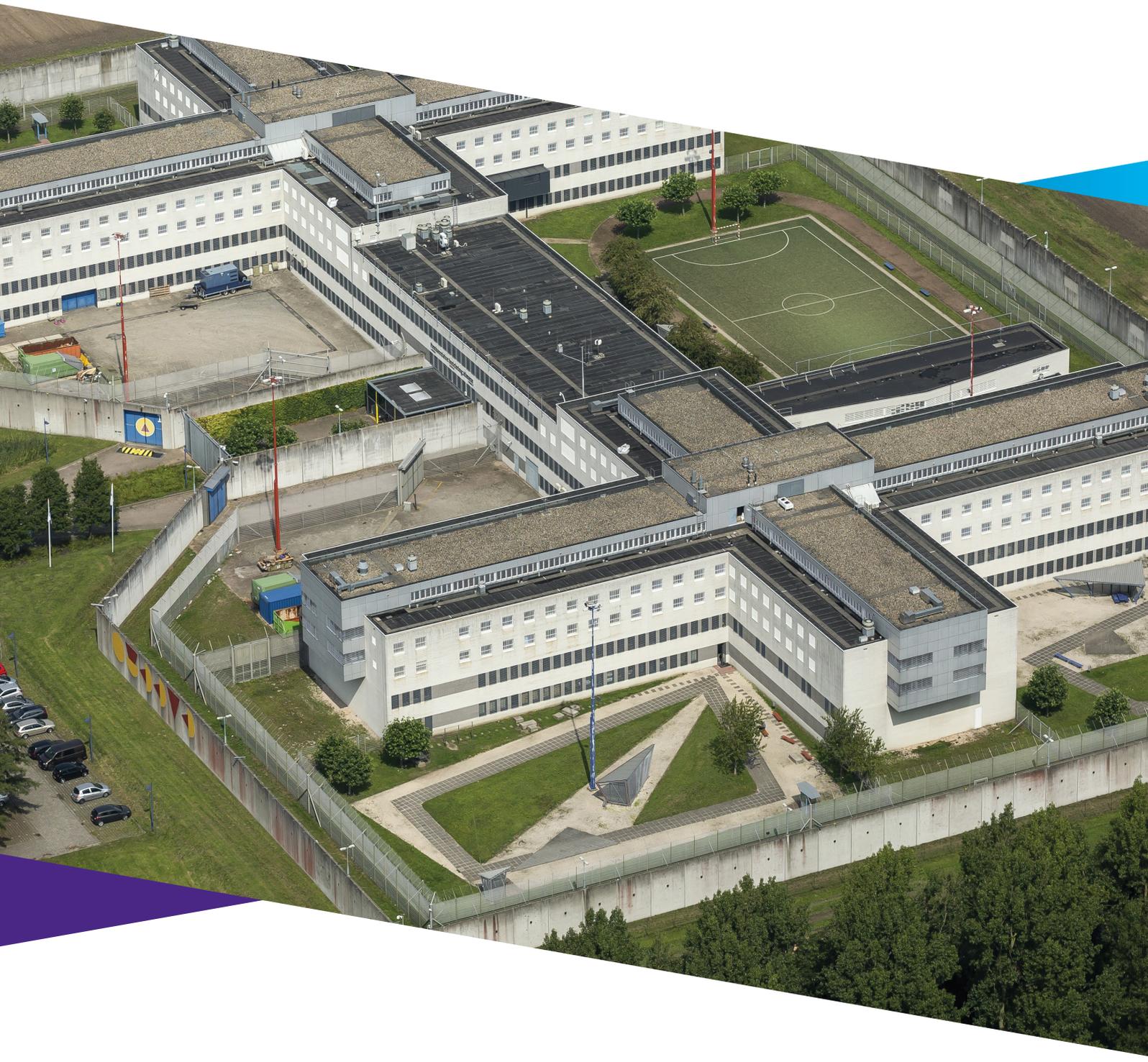


NITRO Fiber Sensing for Protection

Harness the power of fiber sensing technology to protect
your critical infrastructure and assets



NITRO Fiber Sensing is a solution that enables owners and operators of critical infrastructure, border and security agencies to protect their assets. From threat detection, identification and localization, to proximity warning and anomalies.

In an interconnected world, safeguarding critical infrastructure, perimeters and borders is paramount. From pipelines to power grids, bridges to tunnels, and national borders our societies rely on these vital systems. Ensuring integrity and robustness requires innovative solutions that can provide comprehensive monitoring, real-time data, and insight.

NITRO Fiber Sensing applications for protection provide cutting-edge solutions designed to revolutionize security and protection across numerous industries. By harnessing the power of optical fibers and fiber sensing technologies, this state-of-the-art solution offers comprehensive monitoring capabilities with real-time data and trend analysis. Enabling real-time detection and location of threats, intrusions, anomalies along perimeters, borders and critical infrastructure. From enhancing security to ensuring regulatory compliance, it empowers with unprecedented visibility, ensuring your operations are secure and compliant.

Benefits

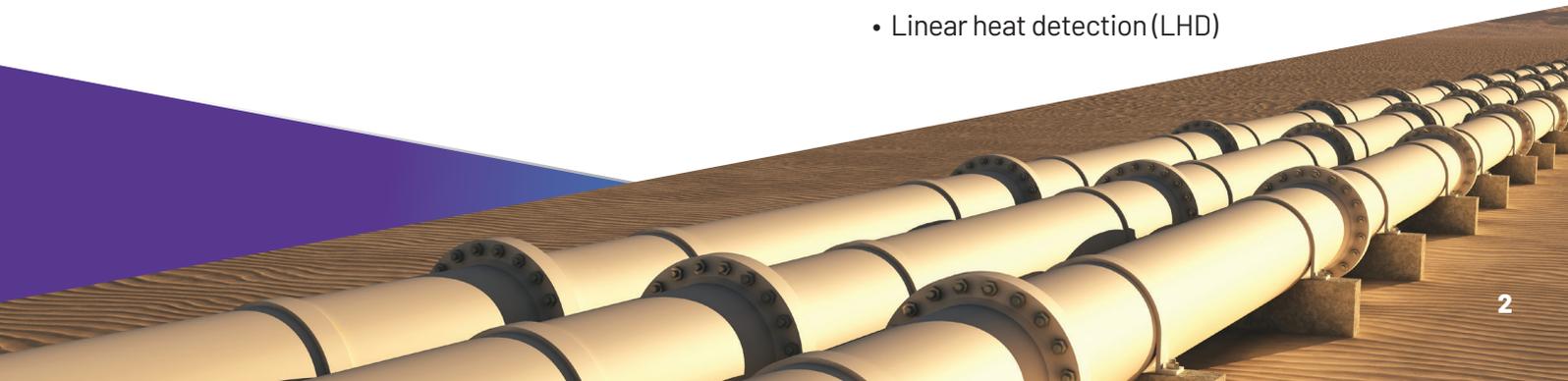
- Prevent unauthorized access
- Protection of critical infrastructure
- Rapid response to threats
- Enable informed decision-making
- Avoid financial penalties (compliance to KRITIS and NIS2 regulations)

Features

- Real-time perimeter monitoring
- Threat detection, identification, and localization (to within 2 meters)
- People and vehicle detection
- Intrusion, trespass, fence cutting and climbing
- Tunneling and excavation
- Distributed Acoustic Sensing (DAS)
- Distributed Temperature Sensing (DTS)
- Distributed Temperature and Strain Sensing (DTSS)

Applications

- Border and perimeter security
- Critical infrastructure protection
- Oil, gas, water and chemical pipelines
- Power cables and utilities
- Linear heat detection (LHD)





NITRO Fiber Sensing provides a suite of compelling advantages, from continuously monitoring critical infrastructure to detecting threats in real time. Whether it is a proximity alert or unauthorized access, operators receive immediate alerts for rapid response to minimize damage and prevent disruptions. Providing continuous, real-time surveillance over extensive areas without the need for visual monitoring, making it ideal for securing perimeters of critical infrastructure, national borders, or sensitive sites.

**Perimeter
Defense
Reinforced**

Installed along infrastructure perimeters Distributed Acoustic Sensing (DAS) provides unmatched sensitivity to vibrations and disturbances caused by people and vehicles. Offering precise detection and localization of unauthorized approaches or entries. Ideal for safeguarding expansive areas like military bases, airports, port facilities, gas distribution stations, power cables and substations. Eliminating blind spots and enhancing perimeter security.

**Robust Pipeline
Monitoring**

Detecting vehicles, people, intrusions, physical tampering or attacks is vital. Early detection capability is crucial for preventing environmental hazards and ensuring uninterrupted operations, especially in remote and hard-to-access locations. DAS allows real-time monitoring of pipelines. By deploying specialized fiber optic cables along the pipeline, abnormal vibrations or acoustic signals can be detected. Operators receive instant alerts, enabling timely action to prevent major damage or identify potential threats.

Autonomous Threat Detection

By detecting threats from nearby construction activities or malicious actions you can safeguard sensitive areas and infrastructure with precision and reliability. By embedding optical fibers in the vicinity of vulnerable sites you can capture any physical disturbances, such as vibrations and acoustic signals caused by nearby construction or unauthorized intrusions. With the ability to automatically distinguish between ordinary environmental noise and potential threats, enabling real-time alerts that facilitate prompt response.

Identification and Tracking

The ability to automatically identify an event or activity as soon as it occurs is critical to deciding on the correct kind of response (if any). Furthermore, tracking of events allows for on-going monitoring of a situation to decide if any escalation is required. Through the use of advanced edge computing, machine learning and heuristic detection algorithms developed through many years of field experience DAS can be used to identify and track a wide range of acoustic signals from multiple sources. Able to distinguish between people walking, vehicle movement, fence climbing and mechanical versus manual digging, while tracking multiple events/activities simultaneously, providing a high degree of confidence in any alerts and notifications.

Cable Infrastructure and Data Center Interconnect (DCI) Protection

DCI and data transmission cables are equally critical. DAS can be deployed over new or existing fiber optic communication links to detect and localize acoustic events, such as people and vehicle movement or unauthorized manual or mechanized digging that might represent a risk of cable damage. Enabling operators to swiftly respond to risks, threats and incidents, ensuring uninterrupted service.





Border Surveillance Enhanced

Utilize fiber optic cables to monitor extensive and remote border areas efficiently to provide proximity warnings, identify unauthorized people and vehicle movements. Reducing the reliance on extensive human patrols, lowering costs and improving national border security against unauthorized crossings. Integrating with and enhancing existing surveillance systems to accelerate response times.

Overall, NITRO Fiber Sensing is revolutionizing critical infrastructure security, enhancing your ability to protect borders, perimeters, pipelines, cables, and other vital assets. As threats evolve, so does our defense.

Visit viavisolutions.com/fibersensing to learn more about distributed fiber optic sensing.

VIAVI Care Support Plans

Increase your productivity for up to 5 years with optional VIAVI Care Support Plans:

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- Maintain your equipment for peak performance at a low, predictable cost. For more Information: go to viavisolutions.com/viavicareplan



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