

Fibre Optic Sensing System

Submarine Cable
Monitoring

Perimeter
Security

Oil and Gas
Pipeline Monitoring

Structural
Monitoring

Transportation
Security

Core Products

- Distributed Acoustic Sensing (DAS) Interrogators
- Distributed Temperature Sensing (DTS)
- Real-Time Monitoring Platform
- Event Classification through Deep Learning

Capabilities

- Site assessment and system design
- Security assessment
- Project Management
- Equipment supply, installation, testing and commissioning
- Digital platform setup
- 3rd party integration and commissioning
- Operation & Maintenance services
- Product and Technical support

The Terra Sol OX-DAS series Distributed Acoustic Sensing (DAS) interrogator employs advanced Coherent Phase-Sensitive Optical Time-Domain Reflectometry (Coherent ϕ -OTDR) technology, using optical fibre cable as the sensing medium.

By launching coherent laser pulses into the sensing fibre and analysing the Rayleigh back-scattered light returned along the fibre optic cable, the Terra Sol OX-DAS series detects vibration and acoustic signals at every point along the cable with pinpoint accuracy, while achieving a sensing range of up to 80 kilometres.

Application

Submarine Cable Monitoring: Leverages Distributed Acoustic Sensing (DAS) technology to provide 24/7 surveillance of submarine communication cables. Detects third-party tapping, anchor dragging, and fishing activities, ensuring the integrity and security of critical undersea infrastructure.

Perimeter Security: Monitors the perimeters of critical infrastructure such as transportation depots, military installations, oil & gas infrastructure, data centres, high-secure sites amongst others, to detect unauthorized entry or intrusion.

Oil and Gas Pipeline Monitoring: Enables continuous surveillance of pipelines to prevent security breaches such as accidental or deliberate damage and even the integrity of the pipelines due to leakages or theft.



Real-Time

Accurate

Secure