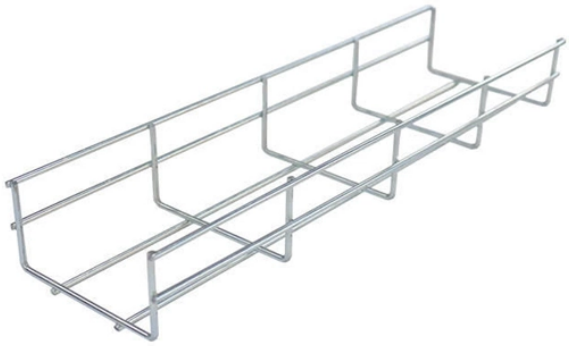
GDR Telecom Site Energy Systems

Security Level Classification of Fiber Optic Sensors



Overview

These systems transform ordinary fiber optic cables into sophisticated sensing networks capable of detecting, locating, and classifying intrusion attempts along perimeters spanning tens or even hundreds of kilometers, all from a single monitoring point. Distributed fiber optic intrusion sensor systems provide continuous monitoring of perimeters up to 100km with a single interrogator unit, eliminating blind spots in security coverage. FSI sensors have been successfully deployed on fences and alongside physical data networks at the most critical sites in the world. Our. The SUBMERSE1 project explores Fiber Optic Sensing (FOS) as a tool for diverse research fields, applying the technology's ability to detect subtle acoustics, strain as well as slight pressure and temperature changes along underwater fibre optic cables. Data products can be derived by applying AI. From the latest generation Aura Ai-X technology to Aura Ai-XS for shorter perimeters, FFT has a fibre optic intrusion detection and sensing solution for every application, including CCTV fibre optic cable systems and fence security setups. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) 9.

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These systems utilize distributed optical fiber sensing technologies including DAS, DVS, and DTS to detect and classify intrusion attempts with precision accuracy of 1-2 meters.

In this White Paper, SUBMERSE argues for adopting high security standards for sensitive data processing, outputs, and research data sharing, via the TRE approach, claiming it will advance FOS ...

The findings support the effectiveness of integrating fiber optic sensing capability and machine learning to provide accurate intrusion detection and classification, with profound applications for enhancing ...

With event classification updates, continuous cyber assurance testing and automatic system monitoring and maintenance – FFT ATLAS ensures the optimal performance of your intrusion detection system.

Fiber SenSys®, Inc., (FSI) is the market-leading manufacturer of fiber-optic intrusion detection systems for outdoor perimeters and physical data networks. FSI sensors have been successfully deployed on ...

In this paper, a robust event classification system using supervised neural networks together with a level crossings (LCs) based feature extraction algorithm is presented for the detection ...

In this study, we have explored the application of hybrid deep learning for vibration signal classification using optical fiber sensors, achieving remarkable results in smart perimeter security ...

The first sensor fabricated is a fiber optic floor mat pressure sensor used to detect the weight of an intruder. In the development of this sensor, which operates on the principle of microbend fiber loss, ...

Using tens of parameters extracted from DAS signals, the detected events can be classified with a confidence rate of more than 90% as: Drilling. Excavating. Blasting. Fence/wall climbing. FOGuard ...

Contact Us

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