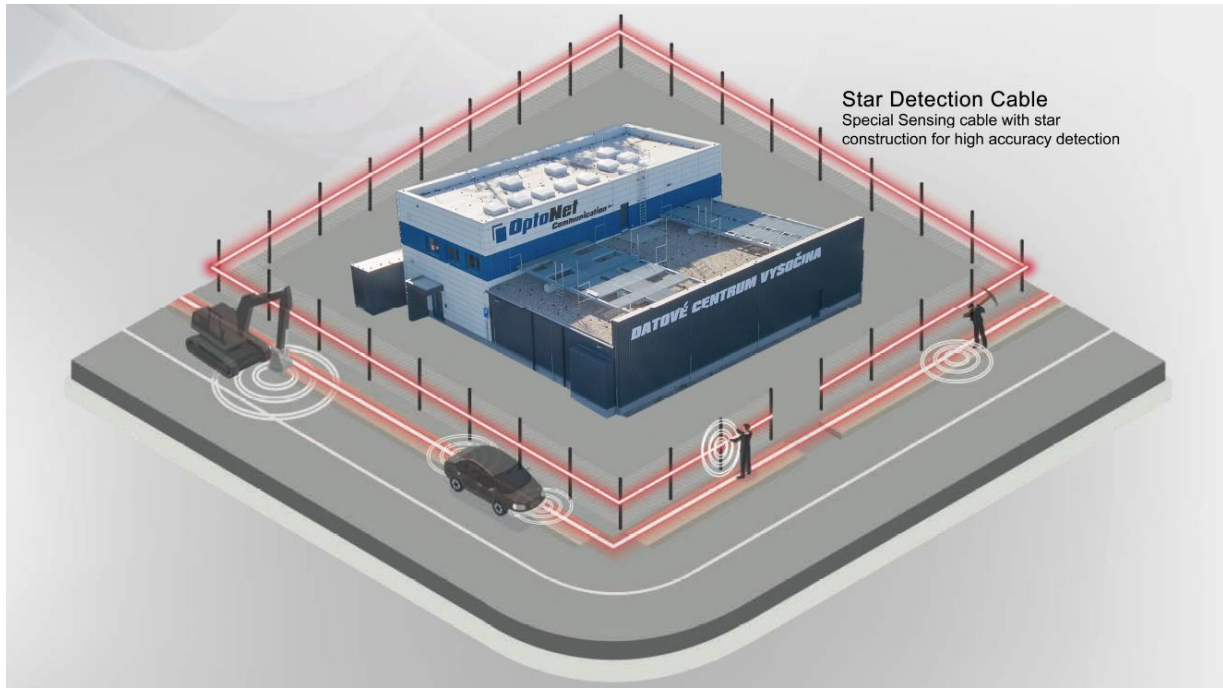


FOTAS

Single or Dual Channel Perimeter Security Fiber Optic Based Acoustic Sensing System



FOTAS is an innovative acoustic sensor that operates on a fiber optic infrastructure, making it highly adaptable to various terrains. Fotas is specifically designed to enhance the security of fences and borders, providing early threat warnings for timely response.

The system utilizes laser beams emitted from a laser source, which traverse the entire infrastructure, gathering crucial information as they travel through the fiber optic cable. Upon returning to the FOTAS system, advanced computer software meticulously analyzes the laser beams, effectively filtering out any unwanted noise or irrelevant data. Ultimately, the intelligent FOTAS AI accurately classifies the alarms generated.

Live monitoring of actions causing vibrations is possible through the system, enabling real-time surveillance. Noisy areas can be pinpointed and deactivated based on user preferences. All alarms are promptly received and reported via the intuitive web interface, where they are stored and can be easily exported for comprehensive analysis.

FOTAS is a proven early warning security system, renowned for its effectiveness in detecting third-party interventions, illegal crossing attempts, and unauthorized excavations across vast distances, spanning from several kilometers to thousands of kilometers.

Applications Areas

- Industrial, Residential and Commercial Sites Security
- Military, Public and Private Facilities Security
- Railways and Highways Security
- Power Plants Security
- Border Security
- Security of Mining Enterprises

Applications Types

With **FOTAS** a large variety of activities can be detected remotely along a fiber line, such as the below applications:

- **Environmental and Border Security**

A detection fiber can detect unauthorized excavations, when laid on the ground; and it can detect climbing and cutting attempts when mounted along a wire-fence.

- **Telecom Line Security**

The advanced FOTAS artificial intelligence allows the detection of multiple events, and offers a wide range of application areas. Damages along communication lines can be monitored in-real time and any unauthorized excavations can be easily detected.



*Interrogator for Distributed Acoustic Sensor (DAS) +
Rugged OPTTA-PP62X AI server*



AICP-X64 Standard AI server pro FOTAS

Functional Features

- The fiber optic line can be monitored live using GIS based Human Machine Interface.
- No installation is required to use the operator interface.
- Types and regions of threats can be defined along the desired regions of fiber cables.
- Past threats can be accessed and analysed.
- Access can be granted to multiple users.
- With CCTV integration, threat zones can located and visually monitored.
- FOTAS can be integrated with other security solutions.
- Access to FOTAS with multiple devices via web interface
- Fast and reliable with 24/7 access
- Up to 10 km of real-time security with one device
- Up to 4 m sensitivity range
- Ease of use and installation
- Compatible with previously deployed fiber cables and can have dedicated fiber cables
- No electricity or electronic devices needed along the protected area

Technical Specifications

Detection Distance	Deppend on type, see table bellow
Position Accuracy 100 km	100 km Single Channel ≥ 10 m
Position Accuracy 10 km	10 km Single Channel ≥ 4 m
Number of Channels	Deppend on type, see table bellow
Dimensions and Weight	49 cm (19") x 50 cm x 8.9 cm (2U), 8 kg
Electrical Requirements	Input voltage: 115/220 VAC, 50/60 Hz Average Power Consumption: about 125 W Maximum Power Requirement: 250 W
Operating Conditions	Sensing Cable: -40 – +70 °C SL-50 Device: 0 – 60 °C (AC environment)
System Interface	Web 2.0 - Mobile Compatible

OPTOKON ACOUSTIC SENSING PRODUCTS

FOTAS-S-10 Single Channel / 10 km

Our go to product for a cost-effective solution in small scale security and monitoring projects. Fast, reliable and easy to install.

FOTAS-S-50 Single Channel / 50 km

The product for the long pipelines, big facilities and energy cables which need protection and monitoring spanning thousands of kilometers.

FOTAS-D-5 Dual Channel / 5 km

If you are in need of a small, cut resilient and cost-effective solution for your small scale project; we recommend you to check out this double channel solution for security and monitoring.

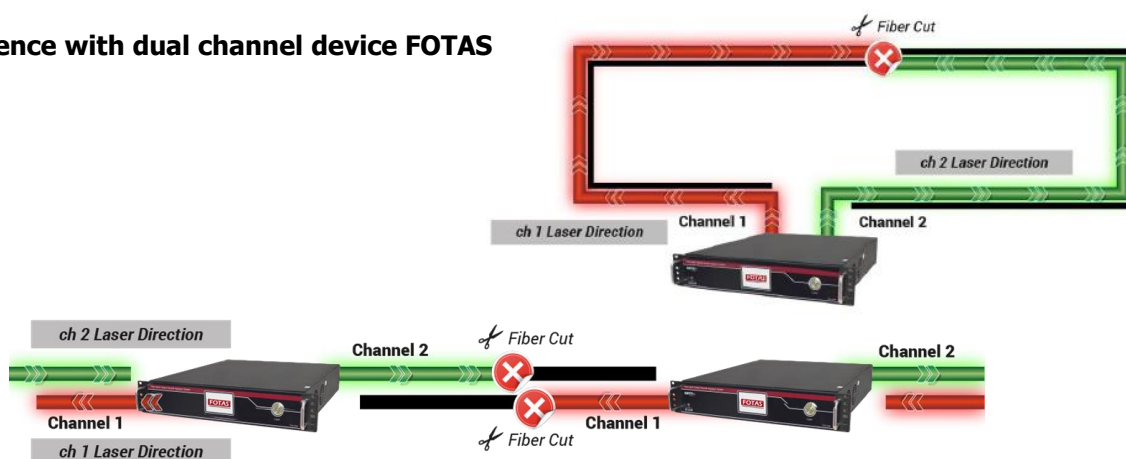
FOTAS-D30 Dual Channel / 30 km

A solution for middle scale projects to provide monitoring and security; including industrial and military facilities, cities and data-centers. The dual channel is what gives this product the cut resiliency.

FOTAS-D50 Dual Channel / 50 km

D-50 providing the solution you need for perimeter security and monitoring that spans thousands of kilometers which also has cut resiliency

Cut resistance with dual channel device FOTAS



Tactical F/O Distributed Acoustic Sensing System FOTAS



Tactical FOTAS



Wireless or wired access to the sensor device

Tactical FOTAS consists of the following core components:

- Sensor Device
- Tactical Cable
- Portable Reel Unit
- Wristband Device

Wireless or wired access to the sensor device

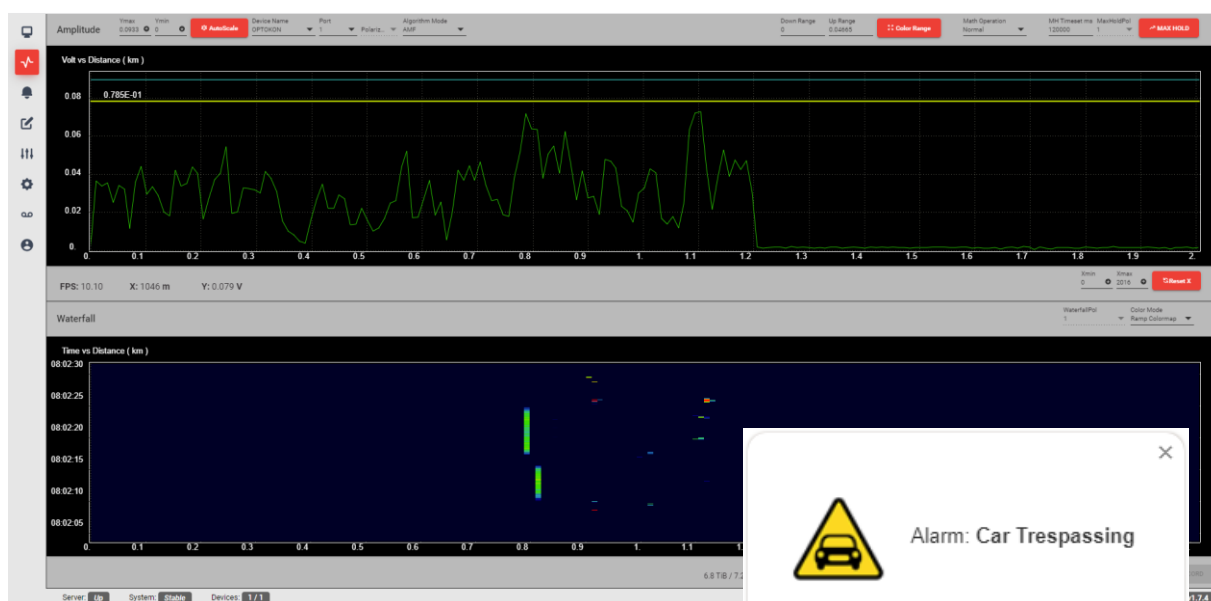
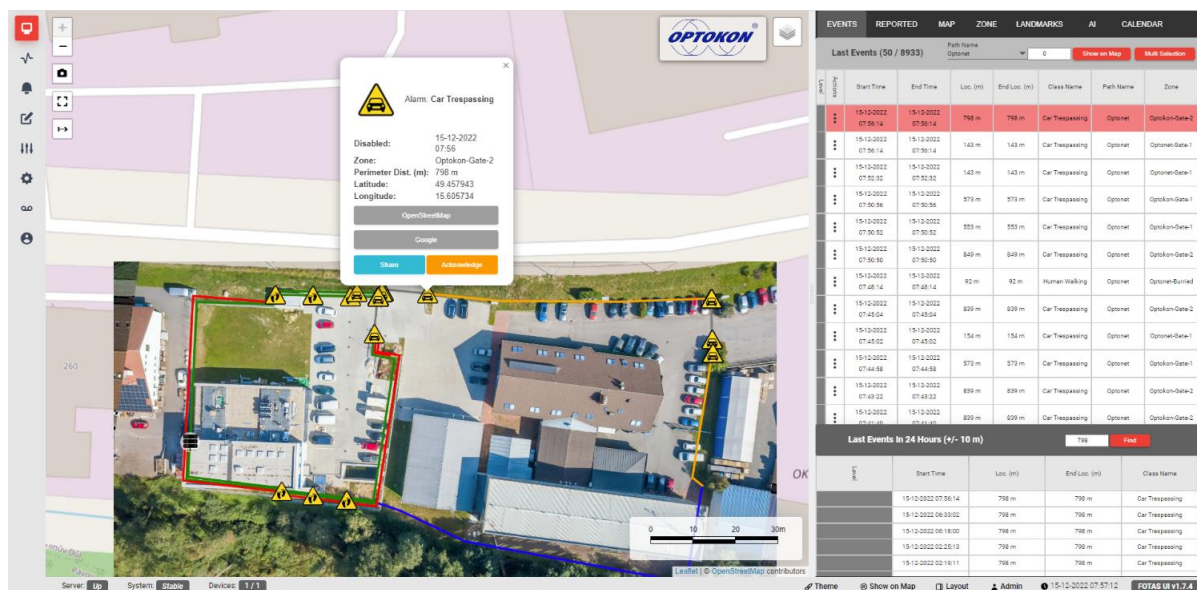
- Receiving immediate vibration notification during an alert
- Viewing battery information for sensor devices and wristbands
- Establishing the line profile's default parameters
- Viewing intrusions time data
- Examining earlier intrusions
- Practical in both dim and bright environments

Specifications:

Detection Range	Up to 4 Km
GPS Accuracy	<20 m
Number of Channels	1 dark fiber per device
Power Requirement	Approximately 13 hours of usage with a replaceable 12V 20Ah lithium-ion battery
User Interface	Low-power Bluetooth wristband device
Working Conditions	Fiber Optic Tactical Cable: [-46.71] °C
Sensor Device [0, 60] °C	
Weight	Sensor Device (Including Battery) 7 kg

Various types of OPTOKON mobile cable drums





Unique fiber optic cable for Acoustic Sensing Systems produced by OPTOKON Kable. The cable is suitable for installation on the fence and into underground grooves with a silica sand bed.

