



Screenshot of FP2100-X series software interface



Trench installation of a FiberPatrol X in-ground sensor.

Description

The FiberPatrol® FP2100-X perimeter intrusion detection system uses in-ground fiber-optic sensors to detect humans and vehicles crossing over the sensor area. Unlike the readily visible fence-mounted sensors, a buried FP2100-X sensor is covert. Moreover, because FiberPatrol sensors are non-metallic and produce no electro-magnetic emissions or heat, they are not merely invisible, but virtually undetectable.

The FP2100-X systems feature high sensitivity monitoring, capable of easily detecting and pinpointing the location of an intruder's footsteps. Sensing cables are buried in protective conduits using standard utility contractor techniques to minimize the installation cost. Buried sensors can be deployed in a single straight line or configured to cover areas of any shape and size on flat or rolling terrain. The in-ground sensors are compatible with a wide range of soil types and climate conditions.

The FP2100-X systems can be calibrated to report GPS coordinates of an attempted breach, which can be used for activating corresponding PTZ camera presets or for personnel dispatch. The location-sensing ability of an FP2100-X system enables it to resolve multiple simultaneous disturbances, making it immune to defeat by overwhelming.

When a sensor cable is cut, either by accident or in an attempt to defeat the security system, an FP2100-X system immediately reports the incident, including its exact location. Moreover, the system retains the ability to detect and pinpoint intrusion attempts up to the cut point. A self-healing sensor ring can be implemented by installing an FP2100-X sensor in a closed loop configuration. The same fiber-optic cable can be used for video and data transmission.

The FP2100-X systems are commonly deployed to provide intrusion detection around the site perimeter or to isolate individual high-value assets within the facility. The FP2100-X in-ground sensors can be discreetly incorporated into landscaped areas, where security fencing may not be desirable on aesthetic basis. Alternatively, the FP2100-X can be used as a second layer of intrusion detection, in conjunction with fence- or wall-mounted sensors.

Features

Long Range Fiber-Optic Sensor

- No electrical power required in the field
- EMI / RFI and lightning immunity
- Built-in fiber-optic video and data links
- Multiple I/O options for system integration
- Economy-of-scale pricing

Covert Detection

- Invisible and undetectable buried sensor
- Essential part of multi-layer security
- Highly sensitive to foot traffic
- Simple installation methods

Location Sensing

- Accurate location of intrusion attempts
- Detection of multiple simultaneous events
- GPS mapping of site perimeter
- Mixed application capability
- Reconfigurable virtual detection zones
- Intrinsic rejection of non-localized events

Cut Immunity

- Remains operational after a cable cut
- Supports self-healing ring architecture
- Supports redundant sensor configurations
- Option to postpone cable repairs

Made in the U.S.A.

Range and Resolution

Max Sensor Length:	10 miles for larger projects, please inquire
Sensor Configuration:	Closed loop or dead end
Alarm Location Accuracy:	Better than 75' maximum Better than 25' typical
Min Virtual Zone Length:	100' recommended
Max Virtual Zone Count:	50 per mile recommended

Sensor Cable

Cable Type:	Tight buffer
Rating:	Outdoor aerial / duct
Fiber Count:	12, expandable
Optical Loss:	0.5 dB/mi @ 1550 nm
Outer Diameter:	0.26"
Weight:	132 lbs/mi
Max Pull Strength:	600 lbs

Installation

Sensor Depth:	6" to 12"
Sensor Installation:	HDPE Conduit
Conduit Diameter:	OD 1.66" / ID 1.39"
Sensor Layout:	Straight line

Electrical Power

Consumption / Field:	None
Consumption / Head End:	325 Watts maximum
Requirements / Head End:	100..240 Volts, 50 / 60 Hz

Sensor Controller / Optical

Laser Classification:	Class IIIb
Laser Wavelength:	1550 nm
Connector Type:	FC/APC

Alarm Processor / Software

CPU*:	1.86 GHz Intel Nehelem
RAM*:	3 GB DDR3
HDD*:	250 GB RAID Redundancy
Networking*:	Dual Gigabit Adapters
Operating System*:	Windows XP SP3
External Alarm Interface:	XML over TCP/IP
Optional Interfaces:	RS232, relay contacts

* Similar or better configuration may be substituted

Head End Mechanical

Combined Dimensions:	19" x 19" x 16"
Combined Rack Space:	19", 9 RU
Rack Clearance:	2" (front), 6" (back)
Combined Weight:	105 lbs

Environmental

Op. Temp / Head End:	+50°F..+95°F (+10°C..+35°C)
Op. Temp / Field:	-40°F..+158°F (-40°C..+70°C)
Humidity / Head End:	20%..80%, non condensing
Humidity / Field:	No restriction

In-Ground Sensor Application Example

