



BURIED INTRUSION DETECTION SYSTEM FOR BORDER SECURITY

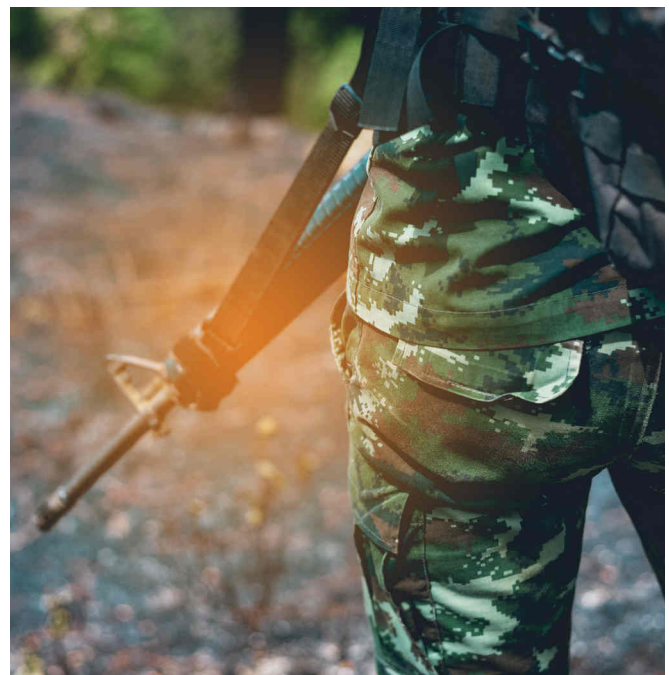


Border & Open Boundary Protection

AgilFence Buried Intrusion Detection System (BIDS) for Border Security & Open Boundary Protection is a buried fibre optics sensing solution that secures perimeters by detecting a range of threats above and below ground, e.g. illegal cross-border immigrants, tunneling, intrusion into an area with no physical barrier.

How It Works

Highly-sensitive discrete fibre sensors are spaced a distance apart, linked by a fibre-optic cable, and installed below ground to create an “invisible perimeter” along the desired protection areas. This intricate sensing system is able to detect small movements like footsteps of an intruder crossing into a protected area. Backend equipment, each covering a few kilometres, are housed in intermediate locations one every few kilometres to effectively cover extended border lengths.











Operational Concept








Overview of BIDS Advantages

Key Features

	Covert deployment of buried highly-sensitive fibre sensors		Zero field maintenance, easy operation
	Signal transmitted via low-loss fibre optic cable can be remotely monitored		Terrain-following
	No electronics or power in the field, no lightning risk		Unlimited scalability
	Intrinsically safe, immune to EMI/RFI		Good accuracy of +/- 2 m

Advanced Features

(Compared With Conventional Distributed Acoustic Sensing)

	Positioning of discrete fibre sensors is flexible, adjustable and customisable depending on terrain		Signal processing software rides on COTS PC server, thus cheaper, fully reliable and supportable
	Extremely sensitive sensors for weak ground disturbance factors like footsteps		Can be scaled down for shorter distance using fewer-channel Sensing Unit
	Offers alarm resolution, giving multiple alarms triggered by different fibre sensors		

Performance Specifications & System Architecture of BIDS

Detection Range	Footstep +/- 2 m away from cable
Detection Resolution	15 m
Coverage (per two sets of equipment and 2 x 16-core SM OFC in each cluster)	3,200 m
Power Consumption (per set)	<ul style="list-style-type: none"> • Each Sensing Unit: 25 W • Each Signal Processing Unit: 460 W • Each set of keyboard & monitor: 60 W

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