Perimeter security

Distributed acoustic sensing

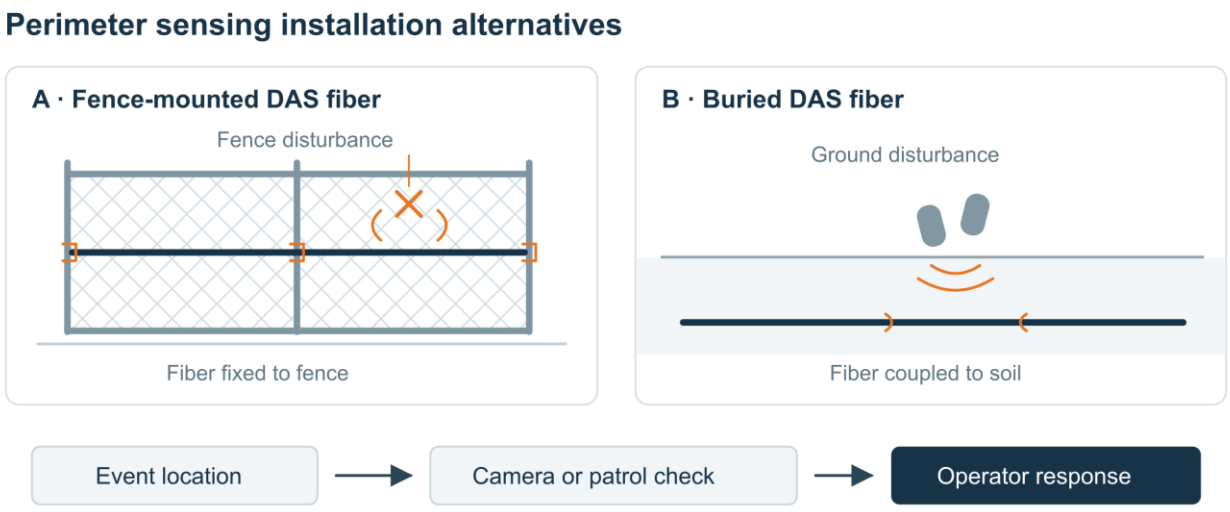
Planck distributed acoustic sensing (DAS) measures disturbances along an optical fiber. A fence-mounted or buried sensing route can help locate activity for review by the security team.

Fence-mounted sensing

Fiber secured to a fence responds to motion transmitted through the structure. Climbing, cutting and impacts can create observable disturbances. Fence construction, attachment and the condition of panels and gates affect the signal.

Buried sensing

A buried fiber responds to ground vibration from nearby movement. Cable depth, soil, surface construction and coupling affect what can be observed.



Fence-mounted and buried fiber are alternative sensing arrangements. Illustrative layout; not to scale.

System design

From location to verification

Map fiber distance to fence sections, gates and access roads. A monitoring workflow can associate a disturbance with the relevant camera view or patrol location. The operator verifies the event and follows the site's response procedure. DAS does not identify a person or establish intent.

Site commissioning

Survey the perimeter and assess existing fiber or a dedicated sensing cable. Record normal conditions before setting event criteria. Include wind, rain, vegetation, traffic and routine maintenance in trials, alongside the agreed test events. Review settings when the site or fence changes.

Planck DAS equipment

Planck DAS systems use single-mode fiber with FC/APC connectors. REST API, WebSocket and Ethernet provide interfaces for project-specific alarm and security-system integration.

DAS system	Max. range	Spatial resolution
20 km single-mode	20 km	1–10 m
40 km single-mode	40 km	5–10 m

Select range and spatial resolution together with measurement settings. Confirm the configuration and performance in the model datasheet.

Agree coverage, location checks and nuisance-alarm criteria for the installed system. Fiber sensing supports a wider security design that includes verification, physical barriers and a response plan.

Discuss your project

Send the perimeter layout, fence details and response requirements to discuss a sensing trial.

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