

Brochure

VIAMI

Fiber Test Head

Distributed Acoustic Sensing

FTH-DAS

The FTH-DAS is a compact, 2U, 19" rack mounted fiber test head, with single and dual channel chassis options, for fiber-enabled, continuous, real-time asset monitoring.

VIAMI Distributed Acoustic Sensing (DAS) utilizes fiber optic cables to provide continuous and dynamic real-time information of vibrational disturbances occurring in the environment of your assets. Each FTH-DAS can monitor up to 50 km (single channel) and 100 km (dual channel) of optical fiber, providing characterized and prioritized information of events that could affect the efficiency of your operations.

DAS gives you high confidence of ensuring optimal asset performance from day one, and reduces downtime and disruptions. Furthermore, retrospective review and trend analysis enables future optimization by identifying event characteristics before they materialize into a threat. DAS can be used independently or supplemented by VIAMI auxiliary modules to provide enhanced capabilities from event alarm management and advanced processing to networked solutions.



Front View



Rear View

FTH-DAS
Dual Channel Acoustic Sensing

Key Features

- Compact 2U chassis with low power consumption
- Data centralization and analysis with customizable Alarm Management System (AMS) UI
- Superior spatial resolution and accurate event localization
- Simultaneous monitoring across different assets, environments and applications

Applications

- Superior pipeline leak detection and third party interference detection
- Long-distance uninterrupted perimeter monitoring
- Utilities power transmission condition monitoring and asset management
- Telecommunication and Datacenter infrastructure monitoring and physical threat prevention

Event Detection Capabilities

Event Type	Electrical Power	Pipelines	Security/Protection
Third Party Interference (TPI)*	■	■	■
Cable Tampering	■		■
Cable Faults/Failure	■		■
Joint Fault/Failure	■		
Cable Bend/Stretching	■		■
Arching/Flashover	■		
Leak Detection		■	
Ground Deformation		■	

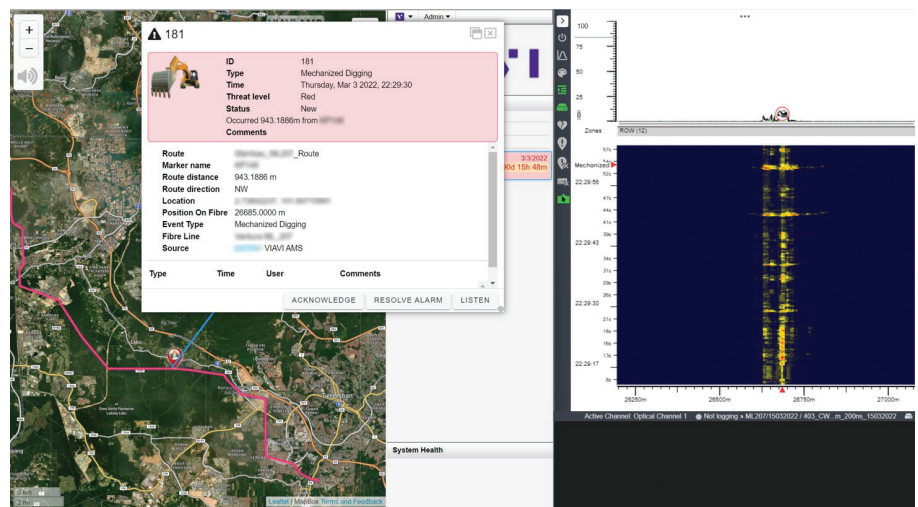
* Detection of Third Party Interference (TPI) events includes:

Walking, Manual Digging, Mechanized Digging, Fence Climbing, Fence Cutting, Vehicle movement, Excavation, Vessel Detection, Man-hole Interaction.

FTH-DAS User Interface (UI) provides accurate and actionable alarms and displays them on a map to help protect client's assets. Using advanced AI technology it differentiates between background noises and real threats to ensure clients have the information they need to respond safely and effectively.

When acoustic events occur along a fiber optic cable, they are detected by FTH-DAS, which processes all the acoustic data received and applies its detection algorithms to identify and classify events (e.g., digging, climbing, and pipeline leaks).

Each event is instantly delivered to the user/operator. It evaluates all the events it receives, assesses the location, persistence, cadence, and movement of the event. With its advanced artificial intelligence it determines if an event is a 'threat' to the integrity of an asset and when to raise the alarm.'



FTH-DAS User Interface showing detection and localization of mechanical digging near the perimeter of critical infrastructure

Visit viavisolutions.com/en-us/solutions/nitro-fiber-sensing to learn more about Nitro Fiber Sensing Solutions for Power Utility, Pipeline and Security/Protection applications.



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