

Helios[®] Theta

Cutting-edge photonics delivering unrivalled performance and imaging

Helios Theta, Fotech's true phase Distributed Acoustic Sensor (DAS), converts a single optical fibre into the equivalent of tens of thousands of highly sensitive vibrational sensors. Using cutting edge photonics, Helios Theta delivers unrivalled performance and imaging for upstream operations.

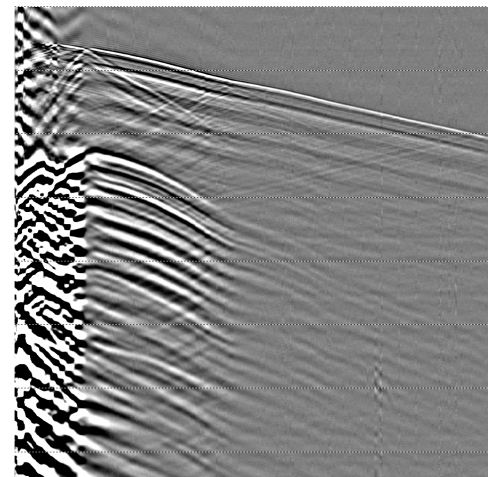
Helios Theta's industry leading linear response delivers greater fidelity, enhanced sensitivity and signal to noise ratio allowing you to:

- Achieve greater measurement performance and image resolution
- Acquire seismic data at greater well depths
- Detect lower levels of fluid production
- Measure smaller microseismic events
- Detect lower levels of sand production

Tri-Mode Operation

Helios Theta offers unrivalled versatility, delivering three modes of operation from a single DAS interrogator unit. Tri-Mode enables you to dynamically optimise the interrogator for your downhole operations:

The quantitative phase modes (Bandwidth and Fidelity) deliver high quality imaging for low energy environment applications, ideal for VSP and Microseismic measurements. And the Intensity mode provides unmatched performance and profiling for high energy environments, such as for hydraulic fracture operations.



Helios Theta interrogator and high resolution seismic data data acquired with the system

Key Benefits

- Industry leading linear true phase measurements
- Enhanced signal-to-noise ratio of 25dB*
- Switchable gauge length
- Greater signal fidelity (raw signal quality improved) and sensitivity for longer range downhole applications
- Finer spatial resolution (2m): proven on real-world operations
- Improved spatial granularity and dynamic range
- GPS clock-locking functionality
- Low 'through-life' maintenance and service costs
- Requires no power along the fibre sensor - immune to EM / RF interference

* Compared with Helios DAS HSi at ~40km range; Enhanced SNR of 14dB at 1km range.

Helios *Theta* Features

- Tri-Mode Operation - A single DAS interrogator with: Bandwidth and Fidelity optimised modes (quantitative phase modes), and Intensity mode
- Delivers live stream of quantitative phase and amplitude output to 3rd party or Fotech processors
- Real-time output of quantitative phase coherent data in HDF5, SEG Y or SEG-D formats
- GPS clock-locking for microsecond accuracy for measurements across each fibre segment from surface to depth
- Seismic source acquisition control
- Remote management by network connection

Upstream Applications

- Seismic profiling
- Microseismic
- Sand ingress monitoring
- Production & injection flow monitoring
- Offset well monitoring

World leading DAS technology from Fotech Solutions

Head Office

Titan House
Redfields Industrial Park
Redfields Lane
Church Crookham
Hampshire, GU52 0RD
Phone + 44 1252 560 570

Calgary Office

Suite 280,
700 6th Avenue SW
Calgary
T2P 0T8
Canada
Phone: +1 403 852 5696

Houston Office

1001 S. Dairy Ashford
Suite 100.
Houston
Texas 77077
USA
Phone +1 713 595 6604

www.fotech.com

Email: sales@fotechsolutions.com

Copyright © 2018 Fotech Solutions Ltd.

FS-HT-0118

