

FIBER OPTIC DOWNHOLE TOOL



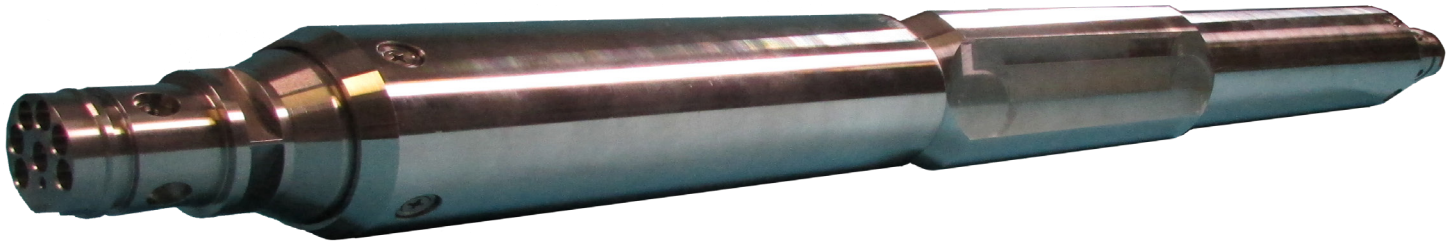
FEATURES

- Passive, all-optical downhole sensor network – no electronics downhole
- Years long operational lifetime @ 150 °C
- 3-each high dynamic range optical accelerometers in each shuttle
- Low noise, linear point sensing enables accurate recording of low-amplitude micro seismic events.
- Slim hole shuttle 2.50 inch OD – less than 63 mm
- Operates in any orientation
- Solid-machined shuttle body minimizes mechanical resonance
- High-resolution and high-frequency recording
- Direct connection sub arrays, armored wireline
- Magnetic and bow-spring clamps available
- Supports wireline tools below the array (Gamma, CCL, Well Tractor)
- Distance between shuttles from meters to kilometers
- Maximum temperature rating 150 °C
- Capable of > 100 shuttle levels per well deployment
- Compact, modular topside interrogator

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SYSTEM SPECIFICATIONS

Sensor Station Configuration	3-Component All-Optical Accelerometer
System Size/Capacity	Compact interrogator footprint: a single 19" rack services thousands of channels
System Design Life	7 Years
Telemetry System	Cabled, all-optical, frequency and wavelength-division multiplexed Michelson interferometer based accelerometer
Instrumentation Integration	Modular and flexible. (Optional integration with on-prospect processing, containerized, stand-alone IEC certified module with self-contained UPS, HVAC, workspace)
Sample Interval	Field programmable: 0.25 ms to 8 ms
Sensor Operational Bandwidth	2 to 200 Hz
System Noise Floor	50 ng/√Hz spectral level typical
Instantaneous Dynamic Range (2 ms sample interval)	200 dB single-tone @ 2 Hz; 186 dB @ 15 Hz; 170 dB @ 100 Hz
Operating Temperature	-40 to 150 °C
Maximum Operating Pressure	20,000 psi
Cable Configuration	Highly flexible: Can support sensor station spacings of a few meters to 10s of km
3-Component Shuttle Diameter	63 mm (2.50 in)



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