

Applications

- Directional and horizontal drilling
- Custom drilling
- SAGD drilling

Benefits

- Improves reliability and accuracy by removing the legacy joint and reducing the connector count
- Enhances flexibility since it can be integrated into existing MWD-LWD systems, while providing advanced features
- Minimizes downtime since the boards are potted directly into the chassis, reducing movement from shock and vibration
- Greatly reduces the length of an EM+OM combination

Features

- High-operating temperature: 175°C (347°F), 185°C (365°F)
- High-speed communications via CAN or qBUS (auto detected)
- Patented instantaneous dynamic sequencing
- Drilling Dynamics: RPM, shock, vibration, temperature, continuous inclination, azimuth, stick-slip, when used with approved OMs
- Mode change with flow and/or rotation status
- Built-in diagnostics
- Customization available
- Memory dumps in minutes, instead of hours, with high-speed dump box

Short BTEM

Processor and Power Supply

The Short Bench Tree Electronics Module (BTEM) harnesses the processing unit, downhole power supply, and features from the 3D-Instrument (3D-I) but allows the customer to utilize their legacy orientation modules.

The durable chassis measures at 10.54 inches in overall length and can be customized with a short-lap joint or legacy long-lap joints. The Short BTEM, which includes Bench Tree's downhole processor and downhole power supply, provides intelligent processing, efficient power, and durability.

Enhanced Performance

The Short BTEM incorporates Bench Tree's proven high-temperature electronics. The chassis design improves stability, reliability, and accuracy over other configurations since the connector system is reduced and boards are potted directly into the chassis; thus, eliminating connector and vibration issues that plague legacy drop-in processors and power supplies.

Easily Upgrade MWD-LWD Systems

Since the Short BTEM can be integrated into most standard legacy MWD-LWD systems, it provides added flexibility during drilling operations, and offers an innovative and competitive solution. The backward compatibility of the module allows service companies to upgrade their MWD fleets over time and gives them instant access to the advanced drilling dynamic features necessary in today's drilling environment.

To maximize your drilling efficiency and wellbore accuracy, contact the Bench Tree sales team for assistance.



Specifications*

Parameter / Feature	Values / Ranges
Size	1.38 x 10.54 in.
Operating voltage	7 to 36VDC
Communications	Q-bus, CAN, or customer spec.
Connections	MDM, 15S & 21P, 10 thru wires
Gamma	Pulse or bus
Flow	From flow module signal or bus
Accuracy, std configuration ¹	
Temperature	<±1°C (<±1.8°F)
Rotation (0 to 300)	±12 RPM
Memory	32 Mb
Memory download time	<10 minutes
Drilling Dynamics	Memory and real time

Environmental Specifications for Performance

Parameter / Feature	Values / Ranges	
	Low	Max for standard models
Operating temp, std ²	25°C	175°C 185°C
Survival temperature	-40°C	
Temperature ramp	3°C / minute max	
Vibration (qualification)	20g Grms, 30 to 1000Hz	
Shock (qualification)	1000g 0.5mSec-½Sine	

* All sensor specs are OM-specific, except memory, rotation, and drilling dynamics. Bench Tree solutions are continuously reviewed and refined. Product specifications may change without notice.

1: Tighter performance on request

2: Contact Bench Tree for other ranges

