

# BlackBox Eclipse II Downhole Measurement Tool

The BlackBox™ Eclipse II downhole measurement tool is a descendant of the BlackBox Eclipse drilling dynamics memory-mode logging tool, offering additional features, such as increased accuracy, higher resolution, and higher frequency continuous sampling. The BlackBox Eclipse II tool is deployed in a BlackBox carrier sub, allowing for flexible placement in the BHA or the drillstring. The tool captures an array of measurements, which includes multi-axis vibration, temperature, and rotation. Analysis of the high-frequency downhole data allows for improvements in drilling efficiency, and the BlackBox Eclipse II tool can help deliver custom solutions to drilling challenges by maximizing performance and reducing well delivery costs.



## Features and benefits

**Flexible deployment options**—carrier sub sizes range from 4.75 to 9.5-in. OD

- Allows for various data collection techniques

### Gyro RPM sensors

- Provides accurate data at all speeds and with all carrier sub sizes

### Three-axis vibration measurement

- Captures detailed downhole behavior

### Continuous high-frequency data

- Captures high-frequency data for analysis

### Field-replaceable electronics

- Minimizes tool downtime

### Delayed start feature

- Conserves battery life

## Sensor measurement and accuracy

Three-axis vibration (XYZ-axis).....-200 to +200G (±1G)  
 RPM.....-1,200 to 1,200 RPM (±5 RPM)  
 Temperature.....-40 to 302°F (-40 to 150°C) (±6°F / 3°C)

## General specifications

Material.....High-strength steel alloy  
 Rated pressure.....20,000 psi  
 Rated temperature.....302°F  
 Battery life.....120 hr, optional delayed start\*  
 Memory storage.....8 GB

## Data rate

Continuous data rate..... 1,500 Hz high G accels  
 100 Hz low G accels, RPM, temperature  
 Data representation.....Statistical max, min, mean, and RMS

\*Results may vary with configuration