

# CuBIC® & PuK

## Continuous High-Frequency Sensors for Drilling Dynamics

CuBIC and PuK are embedded drilling dynamics data recorders that are designed to be placed at the points of interest in the bottom hole assembly. The sensors measure high-frequency accelerations (shock and vibration), angular velocity (RPM), and temperature. The recorded data is used for post-run advanced drilling dynamics analysis and geomechanics.

With embedded sensors placed at the bit and above the mud motor power section, they deliver a completely different perspective to drilling dynamics when compared to traditional MWD shock and vibration measurements. The high-frequency data aids in optimal drilling equipment selection and drilling parameter decisions. The ultimate end goal is to improve the drilling pace while preserving drill bit life and reducing downhole equipment degradation/failures.

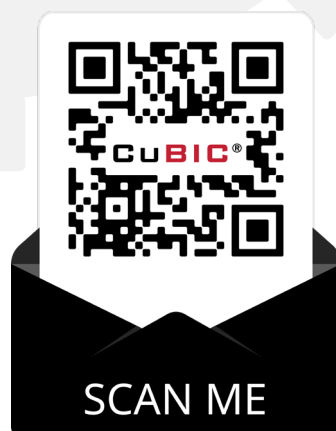
Sanvean Technologies specializes in the analysis of high-frequency drilling dynamics data. Utilizing CuBIC and PuK data recorders with our in-house GameChanger software, we can deliver analysis reports and drilling recommendations to improve your drilling performance.

### APPLICATIONS

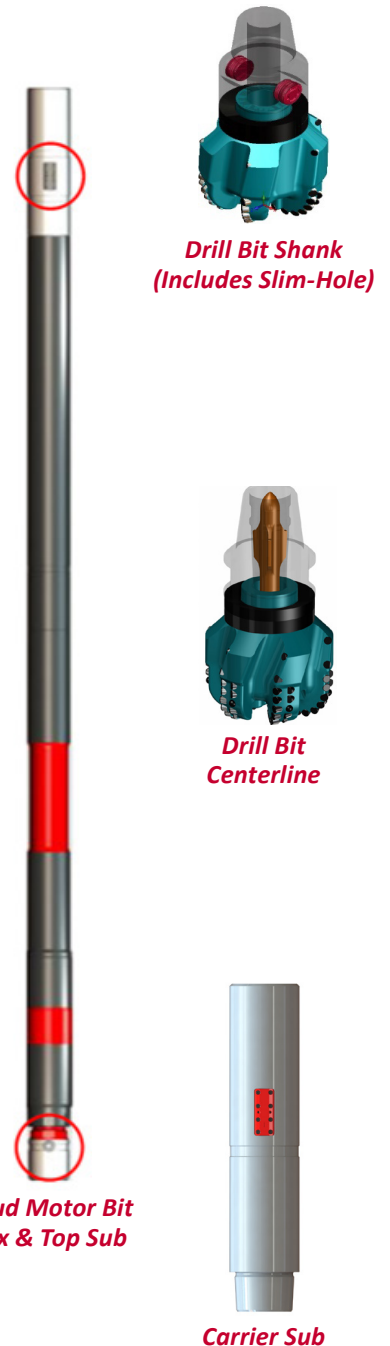
- Understand the dynamics that accelerate drill bit wear and power section degradation
- Develop detailed drilling parameter roadmaps to deliver consistent performance
- Measure, evaluate and validate downhole drilling tools and automated rig operations
- Utilize the continuous high-frequency data for geomechanics

### BENEFITS

- Can be embedded into drill bits and existing drilling equipment
- Drill bit shank and centerline mount options
- Compatible with slim-hole drill bits and drilling tools
- Field proven to deliver high-reliability and survivability



### Sensor Placement Options



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Sensors for Drilling Dynamics

## CUBIC® SPECIFICATIONS

Description	PuK HF	CuBIC HF
Placement	Drill Bit Shank, BHA and Drill String	Drill Bit Centerline, BHA and Drill String
Logging Trigger	RPM or RPM Delay	RPM or RPM Delay
3-Axis Shock	-200G to +200G (+/- 100mG)	-200G to +200G (+/- 100mG)
Shock Sample Rate	800Hz to 1600Hz	800Hz to 1600Hz
Shock Record	Continuous	Continuous
Gyro RPM	+/- 330 RPM*	+/- 330 RPM*
Gyro Sample Rate	100Hz to 1000Hz	100Hz to 1000Hz
Gyro Record	Continuous	Continuous
Temperature	150°C (302°F)	150°C (302°F)
Pressure Rating	15,000 PSI	15,000 PSI
Record Life	150 hours	150 hours

\*Note: +/- 1000 RPM Gyro Available



**1.87" Diameter x 1.12" Depth**



**0.75" Diameter x 5.80" Length**

The CuBIC® and PuK sensors are now available to rent or purchase. Visit our website at [www.sanveantech.com](http://www.sanveantech.com) or contact Sanvean Technologies directly at 713-569-2187.

