

Quantum EM™

Plug and Play Compatibility

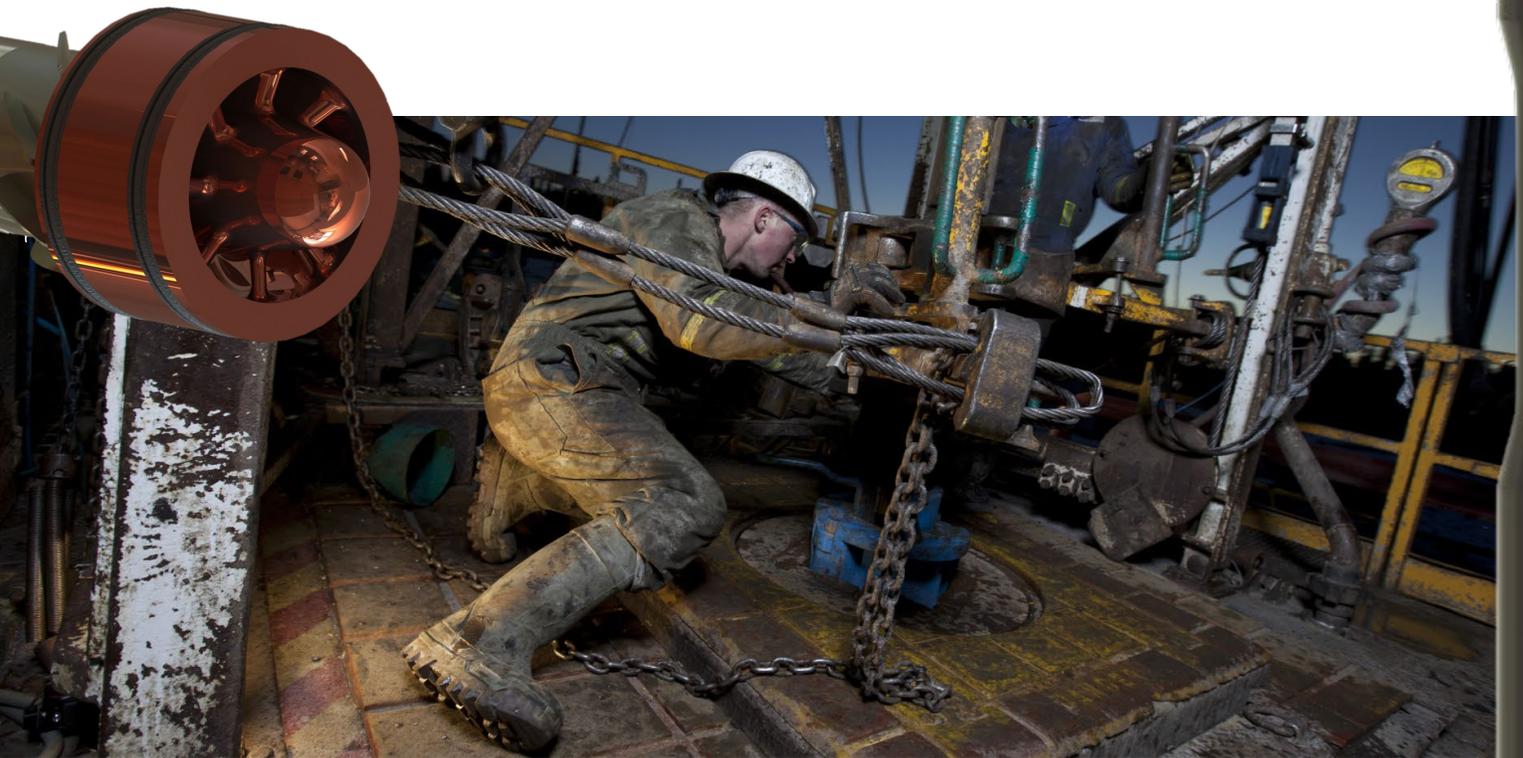
Built by the experts (Extreme XEM & Evolution Unified), this next generation EM plugs into existing legacy assets such as Tensor or QDT style and can be integrated to other proprietary platforms.

Maximum Power

The high voltage EM transmitter contains on-demand continuous power – not limited by batteries. The 48V power supply pushes through formations typically limited by previous EM tools at speeds up to 32 bits/second. The transmitter is power seeking, meaning it manages the current and voltage settings to maintain maximum power levels under dynamically changing formation and fluid conditions.

Surface Detection

Advanced noise cancelling and simultaneous intuitive and adaptive multi-channel decoding are incorporated into the surface receiver. The system will seek the best signal for detection while cancelling out rig and drilling pad related EM noise that typically interfere with EM MWD signals.



Quantum Specifications

| | Quantum Pulse™ | Quantum EM™ |
|-------------------------------|--|--|
| Temp Rating | 347°F | 347°F |
| Vibration (Shock) | 20 g RMS, 15 to 500 Hz (1,000 g, 0.5 mS, half-sine) | 30 g, 30 – 500 Hz, (1000g, 1/2 msec, 1/2 Sine Shock) |
| Max data rate (at 20k') | 2 bps | 32 bps |
| LCM tolerance | 50lb/bbl published | 60 lb/bbl+ |
| Max Flow Rate (6.5") | 750 GPM | 800 GPM |
| Shock/Vibe | Yes | Yes |
| Rotational Values | Yes | Yes |
| Power Consumption | ~3mA standby, ~100mA*sec/pulse @ 28V (~3.5 joules/pulse) | 48 V (up to 300W) |
| Dogleg Rating Rotating 7" | 18° / 100ft | 18° / 100ft |
| Gap Sub Torsional Strength | N/A | 35,000 lb-ft |

