

Mudlink™ High Speed Telemetry Upgrade

Upgrade Legacy Kits For a Fraction of The New Cost



The Vertex Mudlink™ tool is a probe based, retrievable, mud pulse system capable of operating at 4 bits per second, and not limited to depth. Our upgrade kit converts your tools to the Mudlink protocol. This will upgrade your current data rate from less than 1 bit per second to Mudlinks 4 per second. Completely removes the limitations that exist for these older generation tools.

Advantages

- New technology supports up to 0.15 second pulse width.
- Reliability; patent pending PCB board mounting. Makes boards impervious to shock and vibration.
- Real time shock, vibration and RPM.
- Full memory capabilities, with graphical interface
- Patented Mudlink dual digitizer decoding. Advanced syncing, pulse detection and error checking.
- Includes gamma and resistivity logging software
- Dynamic telemetry – telemetry switches automatically between rotating and sliding; no need to program check points in telemetry sequence.
- Re-sync on rotary, no need to recycle pumps.
- Drilling dynamics – plot all EDR data with calculated and decoded data.
- Flowswitch or rotary downloading; 49 options.

Survey Evaluation Table

Data Rate (Bits/s)	0.50	0.63	1.00	2.00	3.33
Pulse Width (s)	1.000	0.800	0.500	0.250	0.150
Short Survey	160s	128s	80s	40s	24s
Long Survey	316s	252s	158s	79s	47s
8 Bit Toolface	18s	14s	9s	5s	3s
8 Bit Gamma	18s	14s	9s	5s	3s

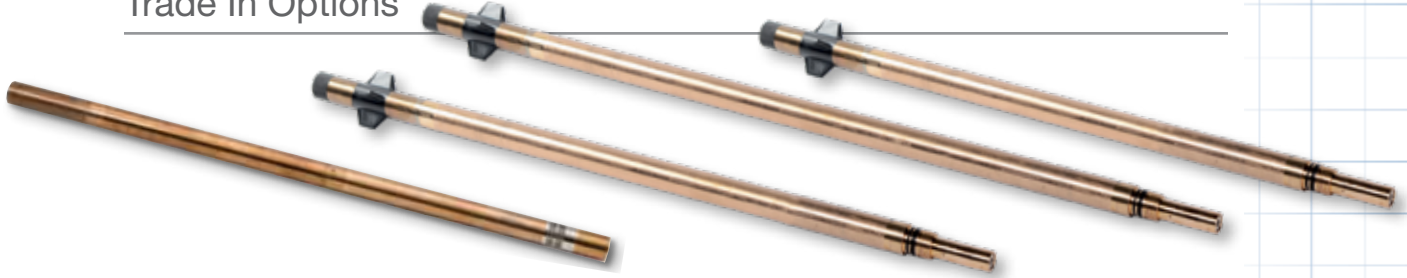
Short Survey: INC 11p, AZM 11p, DipA 12p, Grav 11p, MagF 12p, Temp 8p, BatV 8p

Long Survey: Ax 12p, Ay 12p, Az 12p, Mx 12p, My 12p, Mz 12p, INC 11p, AZM 11p, DipA 12p, MagF 12p, Grav 11p, Temp 8p, BatV 8p

The above graph shows the maximum drilling speed while maintaining a gamma spacing of 2 points per foot. The 1.000s Pulse Width shows the maximum speed of 50ft/hr of drilling providing only toolfaces and gamma during telemetry. The 0.150s Pulse Width provides the ability to drill over 330 ft/hr leaving plenty of space for additional telemetered such as Shock and Vibration, String RPM, Temperature and Battery data without having to manage drilling speed while achieving acceptable geological data.

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Trade In Options



1. Complete probe trade in for new Mudlink modules.
2. Upgrade pulser, sensor pack with Vertex ICU, gamma interface and keep your existing probe skins.
3. Keep existing DM and gamma modules and upgrade to Smart Pulser for faster data rates but not all the advanced features of upgrade.

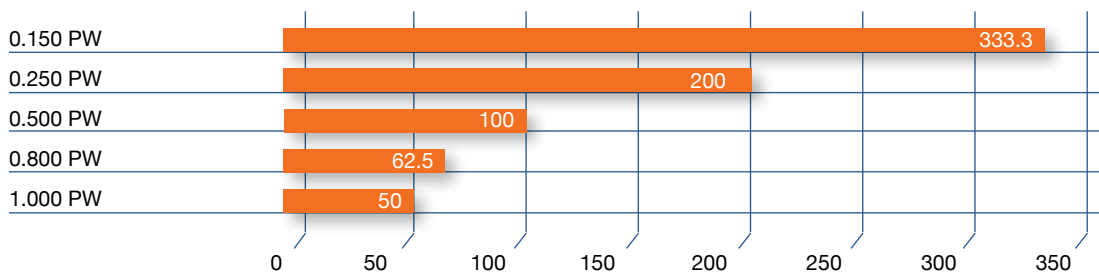
Ask about pricing and which option works best for your needs. Trade in required for discount.

Surface System Upgrade with Mudlink High Speed Decoding



Trade in required. Tool Programming Kit requires trade in of existing programming cable for modification. System requires 2 additional functioning pressure transducers with matching connectors. Existing transducer cables can be reworked, and system laptops must meet minimum requirements.

Maximum Drilling Speed for 2 Points/ft Gamma Density



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