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MATRIX Logger Data Sheet

Mount Sopris MATRIX Loggers

The Mount Sopris MATRIX loggers are lightweight, portable digital geophysical logging systems engineered for reliability and performance. Capable of handling all standard measurements on both single-conductor and 4-conductor wirelines, the MATRIX loggers are compatible with most winches currently available on the market. Thanks to their robust design and exceptional versatility, they have become one of the leading choices for geophysical logging professionals worldwide.
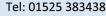
Versatility and Compatibility

The Mount Sopris / ALT MATRIX Console is an advanced, adaptable uphole electronics package designed to operate seamlessly with both analog and digital borehole tools. For added convenience, the MATRIX console can be paired with the MSI MX Series winch, which offers cable capacities ranging from 500 to 1,000 meters of standard single-conductor wirelines. Its compatibility doesn't end there—the console also integrates effortlessly with winches from other manufacturers, ensuring maximum flexibility for diverse field operations. For further details on available winches, please visit our Borehole Winches page.

Comprehensive Tool Compatibility

To explore the wide range of borehole probes that work harmoniously with the MATRIX logger, check out our Borehole Tools pages. pages. These tools, combined with the MATRIX system, empower users to achieve precise, efficient, and reliable data collection in any geophysical logging project.

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Matrix Logger Installed onto an MX Winch.

Key Features of the Mount Sopris MATRIX Logger:

- **Software-Configurable Power Supplies:** Easily adapt to various operational needs with versatile power settings.
- **Real-Time Colour Logs:** View high-resolution, real-time logging data directly on your PC monitor using intuitive MATRIX software.
- **Third-Party Probe Support:** Enjoy compatibility with a wide range of third-party borehole probes, enhancing operational flexibility.
- **Rugged Design**: Dust, water, and shock-resistant case ensures durability in challenging environments.
- **IP66 Compliance**: Built to withstand harsh conditions with certified water and dust ingress protection.
- **Universal Depth-Measuring System:** A universally-configured system ensures accurate and reliable depth measurements.
- **Dual Tool Compatibility:** Operates seamlessly with both digital and analog tools, supporting FSK and PCM telemetry schemes.
- **Stand-Alone Display:** Includes an independent depth, speed, and tension display for enhanced usability.
- **Optional Rack-Mount Package:** Offers a convenient rack-mount option for streamlined equipment organization.
- **Automatic Telemetry Adjustment:** Adapts telemetry settings automatically to accommodate various wireline lengths and configurations.
- **Integrated Winch Control:** Control winch operations directly through MATRIX software for smooth and efficient fieldwork.
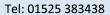
The MATRIX console is controlled using the LoggerSuite software operating on Windows 8, 7, Vista or XP operating systems, both 32-bit or 64-bit. LoggeSuite software offers an intuitive user interface with colour graphical real time log display to optimise visualisation of vital information required for data Browser windows are used for real time data monitoring and offer a wide choice display and printing options for conventional curves, full wave form sonic traces, acoustic and optical borehole images.

A WYSIWYG header editor is available to provide sophisticated log headers with graphics. Special processors for acoustic velocity picking, spectral gamma display and stacking, and application of complex algorithms for real-time compensated density are included with the MATRIX software package. LoggerSuite offers a real time connection to the WellCAD v5.2 data processing platform enabling the user to apply templates, compare currently logged data with reference / repeat data or run processes. QA / QC tasks, data preprocessing and field interpretation can be executed on incoming data.

Dashboard Features

The MATRIX Dashboard offers intuitive access to a suite of powerful tools and controls, including:

- Depth Control: Seamlessly monitor and manage depth measurements in real-time.
- Tool Configuration & Power Control: Easily configure tools, adjust power settings, and access advanced tool options for precise operation.
- Telemetry Control & Tuning: Fine-tune telemetry settings to ensure optimal communication and performance.
- Data Sampling & Replay Control: Manage data collection and replay logs for detailed analysis and review.
- System Status Display: Monitor overall system performance at a glance with a comprehensive status overview.
- Wireline Weight Indicator Display: Stay informed of wireline tension and weight to ensure safe and effective operation.

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- Data Browser & Processor Windows: Access and process your data efficiently with intuitive browser and processing tools.
- Signal Processing Filters: Apply advanced filters for refined data quality and enhanced signal interpretation..

Technical Specifications

Data Transfer:	High Speed USB
Logging Cable:	Standard single, four, seven conductor and coax
Logging Speed:	e.g ABI 40 @ 3mm, 144 pts/tm: 2.5m/min
Tools/ Telemetry:	ALT, MSI, Geovista, Robertson V106, Century, analogue tools (up to 4 pulse channels)
Upgrades:	User upgradable firmware
Input Voltage:	90-240 VAC 50-60Hz inverter compatible
Tool Power:	Up to 200V/300mA
Cable Connectors:	18pin Mil-C-26482 (single connector for depth, tension and wirelines)