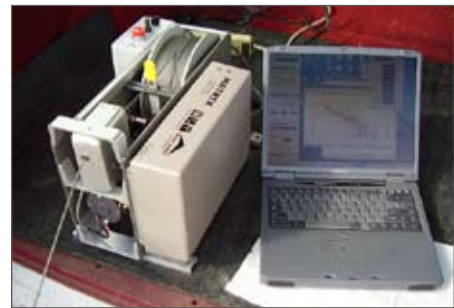


MATRIX

borehole logging system



Combining their long experience in the slimhole logging industry Mount Sopris and ALT have teamed up to develop M A T R I X, providing a single solution to the multiplication of telemetry standards seen in the logging tool industry over the last decade. Since its introduction in 2006 the system has become the system of choice for a diverse range of end users acquiring borehole data in the mineral exploration, groundwater, geotechnical, and environmental industries.

- Uses the latest Digital Signal Processor (DSP) technology directly linked to the wireline through a pair of ultra fast high-resolution A/D and D/A converters.
- Supports all ALT & Mount Sopris tools, most analog tools and a wide range of 3rd party tools.
- Telemetry automatically adjusts for operation on most common wireline lengths and configurations.
- Settings totally software controlled (incl. depth encoder and wireline tension).
- Real time data display and printing using MATRIX software. Windows printer support, ALT and LAS data output.
- Support of sophisticated software tools such as digital scope, spectrum analysis and histograms for signal tuning and access to configuration database.
- Lightweight portable, but extremely robust and adaptable.

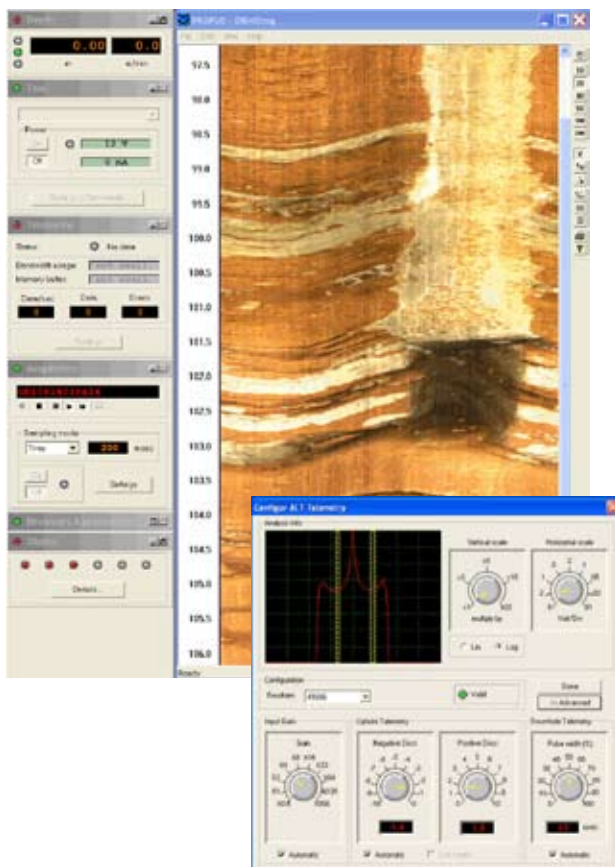


Technical specifications

MATRIX

Dimension (W x L x H)	20 x 33 x 10 cm 8 x 13 x 4 in
Weight	5 kg
Input Voltage	90 – 240 VAC, 50 – 60 Hz inverter compatible
Tool Power	Up to 200 V / 300 mA
Cable Connectors	18 Pin Mil-C-26482 (single connector for depth, tension and wirelines)
PC Connection	High speed USB
Operating System	Windows 2000, NT4, XP, VISTA
Logging Cable	Standard single, four, seven conductor and coax
Logging Speed	e.g. ABI 40 @ 3mm, 144 pts/trn : 2.5 m/min
Tools / Telemetry	ALT, MSI, Geovista, Robertson V106, Century, analog tools (up to 4 pulse channels)
Upgradeability	User upgradable firmware
Software	Matrix Software

Software



The heart of the graphical user interface is the Dashboard which consists of multiple threads running concurrently and handling specific system tasks simultaneously. The dashboard is the operator's control panel to select and control all system functions and to monitor the data acquisition process and tool status.

The Dashboard provides access to the following windows :

- Depth control
- Tool configuration and power control, and advanced tool settings
- Telemetry control and tuning
- Data sampling and replay control
- System status display
- Wireline weight indicator display
- Data browser and processor windows control

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, acoustical 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.

Further developments of the software will allow a real time connection to the WellCAD v4.2 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.

The specifications are not contractual and are subject to modification without notice.



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