

MOUNT SOPRIS INSTRUMENTS



MATRIX Portable Digital Logger

This proven, ultra-lightweight package features weather-resistant detachable instrument electronics and winch in a single 25 Kg (55 lbs) small footprint unit. A dual purpose tripod and accessories are shipped with every system. Add your own PC or an MSI pre-loaded PC/Printer combination and MSI downhole probes to complete the system. Each unit is delivered with an emergency hand crank, integral precision hardened steel depth measuring wheel, optical depth encoder, and LED depth and telemetry indicator display. This unit can be spooled with either 200 meters (656 ft) of 3.17 mm (0.125" diameter) or 305 meters (1000 ft) of 2.54 mm (0.10" geophysical logging cable.

Part Numbers:

Matrix Console: 5MXA-1000-120, or 5MXA-1000-230

Mini Winch Series: 4200-1000-120 or 4200-1000-230, 4305-1000-120 or 4305-1000-230

Key Benefits of MSI / ALT MATRIX Acquisition Systems

- User-configurable power supplies.
- Field-proven system architecture.
- Worldwide support network.
- Third party winch and probe support.



4MXA-1000 Winch

The most popular Mount Sopris winch system can be configured with several types of logging cable. The standard **4MXA-1000** systems includes 500 meters (1640 ft) of 3.17 mm (0.125") single-conductor geophysical wireline. This winch will also hold 800 meters (2625 ft) of 2.54 mm (0.10") wireline.

4MXB-1000 winches are designed to handle up to 305 meters (1000 ft) of standard 3.76 mm (0.1875') single-conductor, 4-conductor, or coaxial cable. The 4MXB-1000 winch will also hold 250 mm of 6.35 mm (0.25") coax or 7-conductor cable.

4MXC-1000 winches hold up to 1000 meters (3281 ft) of rugged 3.17 mm single-conductor cable.

Key Benefits

- High Resolution Optical Depth Encoders
- Dynamic Electronic Braking System
- Emergency Hand-Brake
- Automatic Level-Wind
- Industry-Standard, Lightweight, Small Footprint, High Capacity Winches.

4MXA-1000

Weight	26.3 Kg (58 lbs) without cable
Shipping Case Weight	8.6 Kg (19 lbs)
Footprint	35.5 x 30.5 cm (14 x 12")
Shipping Dimensions	48 x 48 x 46 cm (18.9 x 18.9 x 17.5")

4MXB-1000

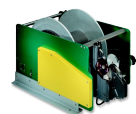
Weight	28.2 Kg (62 lbs) without cable
Shipping Case Weight	13.6 Kg (28.6 lbs)
Footprint	52.4 x 35.2 cm (20.6 x 13.8")
Shipping Dimensions	66 x 61 x 59 cm (26 x 24 x 22")

4MXC-1000

Weight	32 Kg (70 lbs) without cable
Shipping Case Weight	13.6 Kg (28.6 lbs)
Footprint	52.4 x 35.2 cm (20.6 x 13.8')
Shipping Dimensions	66 x 61 x 59 cm (26 x 24 x 22")

4WNA Series Winches / Truck-Mount Loggers

Versatile 4WNA series winches manufactured by Mount Sopris are designed for installation in logging vehicles or skid units. 4WNA winches hold a standard 1800 meters (5905 ft) 3.76 mm (0.1875") diameter logging cable and are equipped with a two-speed transmission, manual and electric brake, optional tension sensor with automatic cutoff, and LED depth/speed/ tension display on the 3WCA-1000 controller below.



The 3WCA-1000 Controller for the 4WNA winch can be packaged in a truck-mounted instrument rack or in heavy-duty, shock-proof, hard-plastic cases. Full featured, users can program depth presets, scaling factors, and tension threshold cutoffs quickly in the field. Users can toggle between depth and speed, & monitor cableline tension.

4WNA-1000

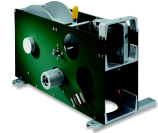
Weight	111 Kg (244 lbs) without cable
Est. Shipping Weight	170 Kg (374 lbs)
Footprint	
Shipping Dimensions	116 x 82 x 66 cm (46 x 32 x 26")

3WCA-1000

Actual Weight	6.36 Kg (14 lbs)
Shipping Weight	Depends on system configuration
Shipping Dimensions	44 x 33 x 14 cm (17.3 x 13 x 5.5")

4MGB-1000 Ultra-light Winch

Our smallest ultralight motorized winch featured on MGX II Portable Digital Loggers offers the smallest full-featured, PC - based logging system available in the world today. This winch is designed to hold 200 m of 3.17mm (0.125") cable or 305 m of 2.54 mm (0.10") cable.



4MGB-1000

Weight	11.8 Kg (26 lbs)
Shipping Case Weight	10 Kg (22 lbs)
Shipping Dimensions	67.3 x 41.9 x 45.7 cm (26.5 x 16.5 x 18')

MSI specialize in small diameter tools (1.5"/38mm) with temperature (65°C) and pressure (2000 PSI) ratings suitable for boreholes drilled to a maximum of 2000 meters (6,600 feet). Our downhole tools are generally lightweight, easy for one person to handle in the field, and we take care when designing tools placing measurement points so that users can maximize hole coverage.

MSI Model No.	Measurements
2PGA-1000	Gamma / SP / SPR
2PEA-1000	8/16/32/64" Normal Resistivity
2PFA,2SFA,B,2WQA-1000	Temperature / Fluid Resistivity
2PCA-1000	3-Arm Caliper
2PIA-1000	Electromagnetic Induction
2DVA-1000	Borehole deviation
2SAA-1000/F	Multi-frequency, Monopole-Dipole Full Waveform Sonic
2GHA-1000	Triple Gamma
2NUA-1000	Neutron-Thermal (or epithermal)-Neutron
2FSA-1000	1-Liter Fluid Sampler
2SGA-1000	Ultra-thin Gamma
2IDA-1000	Water Quality (pH,DO,Redox,T,FEC,Salinity) and others
2GDA-1000	New! 4-detector density / Guard Resistivity
FLP-2492	Spinner Flow Meter
HPF-2293	Heat-Pulse Flow Meter
2SNA-1000	NEW! 256,512, or 1024 Channel Spectral Gamma

2BSA-1000	Bartington Magnetic Susceptibility
ABI40 - NEW	Full Waveform Acoustic Televiewer
OBI-40	ALT Optical Televiewer
FAC-40	ALT Acoustic Televiewer
DIL45	ALT Dual Induction
2BHV-1000	Laval R-2000 Borehole Video

MSLog - Log Acquisition Software

The MGX II Logger acquisition system is based on a modem electronic design in which software control techniques have been used to the best advantage. The hardware incorporates the latest electronic components with embedded systems controlled via the specially developed MSLog Windows interface program. This software uses the Windows family of operating systems. These multi-tasking platforms can accommodate all tasks necessary for maximum data security and ease of operation. The system design philosophy is unique in two respects. First, it has been built to handle several generations of single-conductor Mount Sopris tools, secondly, it is totally software controlled.

- **Basic System Features:**

- Windows 95, 98, NT, 2000, XP operating systems.
- Rugged, fault-tolerant electronics.
- East-to-use, on-screen graphical user interface. Users with minimal technology knowledge can operate system.
- Wireline and winch flexibility - runs on most coax, single, & multi-conductor wirelines with compatible probes.
- Shaft-encoder flexibility - compatible with most 12V or 5V AB quadrature and pulse shaft encoders & configurable for any combination of wheel/shaft pulses per revolution.

LogCruncher

LogCruncher is a user friendly program allowing users to easily perform advanced processing of geophysical well logs. Processing includes standard borehole corrections, advanced sonic log analysis (velocity correlation algorithms, mechanical properties, etc.), nuclear data processing (density, spectral gamma, etc.), volumetric fractions of rocks, and coal quality.