

Marmot

Ultra-Low Power Field Data Acquisition For Antelope Network Operators



Marmot is a truly rugged and ultra-low power data acquisition system designed for field deployments under extreme operating conditions.

As a member of Kinematics' Aspen product line, the **Marmot** represents a paradigm shift in seismic instrumentation. Designed to interface with one or more Quanterra, Kinematics and other third party digitizers, **Marmot** allows network operators the benefit of greatly enhanced data acquisition, data concentration, and field processing, and distribution to downstream data processing centers coupled with flexible communications options, including TCP/IP protocol.

Marmot comes pre-loaded with BRTT's embedded version of high performance **Antelope** environmental monitoring software for **Antelope** network operators. Specifically, the **Marmot Antelope** has been optimized for providing very deep telemetry buffers that can take advantage of the full **Marmot** CF memory resources for buffering data during long telemetry outages - up to 16 Gigabytes of non-volatile raw buffer resources. This means that the **MARMOT** Field Processor with **Antelope** can seamlessly buffer over a year of data from a typical 100 sample-per-second, three component field system.

Features

- ◆ Typical power consumption between 0.4W (idle) and 0.9W (with two Ethernet ports connected)
- ◆ MontaVista HardHat Linux v2.4.20
- ◆ Robust Journaling File System
- ◆ Embedded Antelope Software (available for Antelope System users only)
- ◆ Up to 16GBytes Solid State Storage
- ◆ Dynamic Power Management
- ◆ Advanced Power Control with intelligent safe and secure system shutdown and auto start
- ◆ Extensive State-of-Health Monitoring, including input and system voltages, internal temperature, internal humidity, communication link diagnostics
- ◆ System Status LEDs
- ◆ Transient and EMI/RFI protection on all connections
- ◆ Rugged aluminum extrusion with MIL-SPEC type connectors designed for 1m drop and 1m temporary immersion (IP67)
- ◆ Environmentally sound lead-free design; RoHS, WEEG and CE compliant

Specifications

Processor:	400 MHz Intel PXA255 XScale [®]
Memory:	256 -MBytes SDRAM
Storage:	1 x Internal Compact Flash Slot (up to 64 Gb) 1 x SD Card 4 GB 1 x SD Card Field Removable (optional)
Interfaces:	2 x 10BaseT Ethernet Ports 2 x RS232 Serial Ports 1 x USB 1.1Port (1 OTG/1 Host) (optional)
Power:	8-18 VDC 0.6W (typical)

Environmental:	-20 +60°C Operation (optional -30 +70°C) 0-100% RH (non-condensing)
Additional Options:	Available advanced power and communication enclosure with optional AC power, Solar Power Controller, and internal battery. Optional communications include internal GSM/GPRS Modem or CDMA Modem Available hardened Ethernet Switch with Power over Ethernet IDE Drive with USB 1.1 Interface for off line data removal, "Data Vacuuming".

All specifications subject to change without notice