



ATLAS

DIGITAL RECORDER FOR SEISMIC OR STRUCTURAL MONITORING

KEY FEATURES

ADC RESOLUTION 24 bit

DYNAMIC RANGE > 136dB@100 sps

SAMPLING RATE 25, 50, 100, 200, 250, 500, 1000 sps

SYNCHRONOUS SAMPLING

LAN, WIFI

INTEGRATED 4G MODEM (OPTIONAL)

BUILT-IN GNSS RECEIVER

INTEGRATED UPS

INPUTS COMPATIBLE WITH ACCELEROMETERS
VELOCIMETERS GEOPHONES MICROBAROMETERS

MINISEED DATA FORMAT

COMPATIBLE WITH EARTHWORM, SEISCOMP,
GEOPSY, SEISGRAM2K

Atlas is a robust and reliable digital recorder.

The instrument is equipped with high-resolution delta-sigma 24bit ADCs, all the channels are synchronized and the sample rate is adjustable up to 1000 sps per channel.

The internal memory (up to 1TB) has two independent recording zones: the ring-buffer which is dedicated to continuous sampling, and the triggering which is used for event sampling. The data format is MiniSEED. The built-in GNSS receiver synchronizes the system clock with the absolute time so that a network of several units can be created where all the channels are synchronized. Using the trigger criteria that is available in the firmware, it is possible to distinguish environmental vibrations from seismic events.



<p>Seismological networks Structural monitoring and surveys Post-seismic damage analysis</p>	APPLICATIONS
<p>INPUT CHANNELS 3, 6 or 9 differential SAMPLING Simultaneous INPUT IMPEDANCE 90KΩ or opt 2MΩ INPUT VOLTAGE 40, 20, 10, 5, 2.5Vpp SENSOR COMPATIBILITY Accelerometers (FBA, MEMS), Geophones, Seismometers and Microbarometers</p>	INPUTS
<p>ADC Sigma-delta 24 bit synchronous sampling DYNAMIC RANGE > 136dB @ 100 sps SAMPLE RATES 25, 50, 100, 250, 500, 1000* sps * (3 ch active) ADVANCED FEATURES Dual Sampling ANTI-ALIASING FILTER FIR linear or minimum phase ADDITIONAL DIGITAL FILTERS Low-pass and High-pass filter</p>	A/D CONVERSION
<p>TRIGGERS STA/LTA and threshold independent for each channel AND/OR configuration on all channels Trigger broadcasting towards recorders in the network</p>	TRIGGERS
<p>FORMAT MiniSEED INTERNAL MEMORY 32GB standard, optionally up to 1TB RING BUFFER DATA RECORDING (16 or 32 days, depending on mem. size) plus strong motion events ADV. FEAT. Periodic generation of ambient noise and post-seismic analysis</p>	STORAGE
<p>TIMING SOURCE GNSS or NTP - Absolute Time UTC through high sensitive integrated GNSS receiver ACCURACY in GNSS signal loss condition: ± 1 ppm (32 s/year) Accuracy with GNSS signal < 1 μS</p>	SYNCHRONIZATION
<p>LEDs Heartbeat, 4G, WiFi, GNSS, Ethernet, Power BUTTONS Power on/off and WiFi enable/disable on the same button</p>	UI

<p>FILE TRANSFER Via Ethernet 10/100, WiFi (optional) or integrated 4G modem (optional) WIFI MODE SOFT AP function METADATA RESP file available on IRIS DATA DOWNLOAD Through SCP protocol based program or via web interface VPN Compatible with OpenVPN and IPSec</p>	COMMUNICATION
<p>FORMAT Seedlink protocol management for real-time interface with most common seismic programs such as SeisComP and Earthworm STREAM Seismic and State-of-Health ALARMS Management towards remote monitoring server</p>	DATA STREAMING
<p>INTERFACE Web Server CONTROL Connection and management on remote servers UPDATES Remote software update (local network or via internet) ADVANCED FEATURES Multiple units can be connected to the network (Ethernet, WiFi or 4G) acting as a single multi-channel instrument</p>	CONFIGURATION
<p>POWER SUPPLY 9 ÷ 28 Vdc - AC/DC adapter included POWER CONSUMPTION < 2 W (< 800 mW available on request) SENSOR POWER Provided from sensor connector UPS Back-up LiPO battery, autonomy > 33 hours ALARMS Remote alarms management in case of blackout ACCESSORIES External battery pack and solar panel options</p>	POWER SUPPLY
<p>STORAGE TEMPERATURE RANGE - 40 ÷ +85°C HUMIDITY 0 to 100% OPERATING TEMPERATURE RANGE Without battery - 40 ÷ +85°C * <small>*LiPo batteries can be charged in the range 0 ÷ +45°C while discharge is allowed in the range of -20 ÷ +70°C. If the temperature is out of range, the LiPo battery will be inhibited by the electronics</small></p>	OP. CONDITIONS
<p>CASE Anodized aluminum case (AISI 316 stainless steel optional) PROTECTION GRADE IP67, IP68 optional DIMENSIONS 17 x 13 x 8 cm WEIGHT ≈2 Kg</p>	PHYSICAL

