

SL06 24/32 seismograph is a high resolution recorder based on Linux o.s. working with standard flash drives. It provides several Internet services like **SeedLink**, FTP client & server to stream data toward the most popular central station recording software like SeismoWin, EarthWorm, SeisLog, Seiscomp, etc..; Available since 2006 it is a real workhorse of dynamic monitoring; it has been continuously improved from v1, v2 and now with two new versions as v3 (which includes improved digitizer) and frame mount version for easier deployment for indoor installations.

NOW 24 or 32 bit versions available !

Applications

- * Earthquake Early Warning Systems / Networks
- * Observatory grade earthquake seismology
- * Reservoir microseismic monitoring
- * Planetary seismology and geophysics
- * Operational Modal Analysis (OMA)
- * Structure Health Monitoring (SHM)
- * Large scale tomography with earthquake or microseismic

Main features

- * High sensitivity
- * Ultra low noise design
- * Ultra low latency transmission down to 10 packets per second
- * GPS synchronised, PPS or NTP when GPS not available
- * Broadband + accelerometer input with combo version
- * Command to broad band sensor for centering and mass lock
- * Low power consumption for use in remote installation with limited energy source
- * Wide power supply voltage range
- * Internal battery for safe shutdown on power failure
- * High computing power allowing edge-computing capabilities
- * International SeedLink streaming protocol
- * Networking: TCP, SSH, FTP, http, ModBus, MQTT, Telnet, Telegram, SMS
- * VPN ready for work behind firewalls and NAT filters
- * Temperature and Humidity sensor interface and/or meteo station integration
- * High capacity local data storage
- * Real time measurements according to the UNI9916 norm
- * Automatic frequency peak-picking with frequency shifting alarm report
- * Easy Web browser configuration and management
- * Geophones special input feature
- * IP68 protection grade version (harsh environment) and IP44 for indoor use
- * Response file in IRIS NRL repository
- * Embedded MEMS accelerometer for extra strong motion channels (optional)
- * Substreaming capability
- * Shared memory stream for end-user custom algorithm implementation
- * Development Toolkit available allowing end-user to write its own code
- * Made in EU (Italy)



Standard IP68 housing



IP44 frame mount version



rugged case version

Common Specifications

Power supply:	9-36Vdc,
Power consumption:	< 1.9 W in standard working mode [§]
Number of channel:	3,4,6,8,9,12 channels 24 bit
Input range:	PGA with ranges 40, 20, 10, 8 Vpp - (10, 5, 2.5, 2 Vpp for geophones) or fixed as 2Vpp or 4Vpp (jumper selectable) or custom
Dynamic range:	144dB system, 141dB Peak over RMS noise at 20Vpp 100SPS 32 bit system with > 144dB dynamic range at 50 SPS or less
Sampling rates:	1,2,5,10,20,50,100,200,250,300,400,480,500,600,800,1000,1500 Hz*
Anti Aliasing Filter:	Analog and Digital (FIR) both customizable upon request
Real Time Clock:	GPS disciplined clock +/- 10ppm -20/+50°C
RTC Accuracy:	down to 1µs to the respect of UTC with SPLL locked and PPS available
GPS Antenna:	external with coaxial cable of 10 meters and BNC connector
Messaging:	Telegram alerting for groups, message bot or SMS
Data Links:	Ethernet 10/100, RS232, RS485 (optional)
Mass Memory:	microSD and USB
Data Format:	GSEcm6, GSEint, SAC, SAF, SEED
Recording:	continous and/or on-event trigger
Triggering:	multimode STA/LTA, amplitude, IP voting and scheduled; fully independent, high/low/band pass filter; pre/post event: 1 to 10000 seconds
Operating temperat.:	-20/+70°C
Status of health:	Memory, Power, Vref, Mass Position (for BB) with automatic recentering, peers status (if some units are connected together in voting systems)
Control panel:	LCD 16x2 + 3 buttons for system check and setup
Protection grade:	IP68 or IP44
Norms conformity:	CE, SL06C6-IP68 is also KIGAM (Korean meteo-seismic authority) approved

Broad band, Combo Version and IP68 versions

Housing:	machined out of a solid block of aluminum, wall mount possible
Connectors:	MIL-C-26842 series, with 10, 18, 19, 26 pins depending on configuration
Dimensions:	205x170x107 mm (weight: about 3 kg)

Indoor version specification IP44

Housing:	aluminum
Connector:	for indoor version DBx connectors for I/O and screw terminals for sensors
Dimensions:	177x261x66 mm (weight: about 1kg)

Outdoor rugged case version specification IP68

Housing:	rugged case
Connectors:	MIL-C-26842 series for external sensors and communication
Dimensions:	260x250x115 mm (weight: about 1.5kg without battery, 3.5kg with battery)
Number of channels:	limited o 3 or 6
Battery duration:	up to 30 hours depending on instrument configuration and battery size
Communication:	can embed 4g/5g modem

* The maximum sampling rate may be reduced depending on configuration channels from 3 to 12

§ This is a typical power consumption, it may vary depending on number of channels, memory size, active functions

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Notice! This paper is an information leaflet only; it is published without programmed updates. All specifications, features and prices are subjected to changes without any prior notice. In the event of any discrepancies between this document and a commercial offer or bidding document, these latter will take precedence.

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