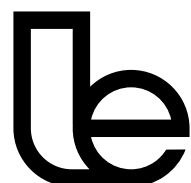


Reliable measurements.



M24 Modular Digital Seismograph System: The M24 3-channel 24 bit Low Power Digitizer

Quality exists
when the price is long forgotten.

 **lennartz**
electronic

The first link...

...in a chain of powerful components, designed for the new millennium. Starting from a clean slate without the burden of backward compatibility, the team of developers at Lennartz has built a truly modular digital seismograph system: **M24**.

Recent progress in global communications technology and infrastructure has led to exciting new possibilities. Satellites, cellular phone network, Internet: new options for worldwide data transmission that a modern seismograph system needs to support. A proprietary system architecture just won't cut it – that's why **M24** is heavily PC oriented. **An open system incorporating today's industry standards and offering a hassle-free upgrade path to tomorrow's possibilities:** that was the first and foremost design guideline.

The Digitizer...

...converts any analog seismometer into a fully digital instrument. Housed in a rugged, waterproof enclosure, it has been designed to be placed next to the sensor. A comparatively simple and inexpensive cable carries power and time sync information to the Digitizer, and a serial data stream back to the recording system.

To minimize the risk of operator errors in the field, the **M24 Digitizer** provides DIP switches to hard-code vital parameters (of course, it is still possible to configure the Digitizer through the serial port).

Versatility...

...is a given for this instrument. Simple one-way telemetry applications with central timestamping

Photo from an actual evaluation of these cases done by a technical magazine
Don't try this at home :-)




can be realized as easily as sophisticated bidirectional setups with direct Internet connection. The picture above shows one **M24 Digitizer** coupled to an **M24 Field Recorder** (the larger box) which is basically a fieldworthy, low-power PC with a large built-in hard disk and an Ethernet port.

The **M24 Field Recorder** runs an open-source Unix system (FreeBSD or Linux) and is based on PC-104 industry standard hardware, thus offering power users unprecedented freedom in data processing and configuration options. Two **M24 Digitizers** can be connected to form a six-channel unit.

Technical data

Principle	24-bit $\Delta\Sigma$ (Crystal), one converter per channel
Number of input channels	three
Input signal clip level	± 10 V (± 20 V differential)
Power supply	12 V DC, < 2 W
Synchronization input	1 pulse per second (pps)
Output interface	Serial, RS-232 or RS-422 switch-selectable
Data word	24 bits (standard), 32 bits (configurable)
Baud rates	1.5 Mbits/sec maximum, all usual lower rates
Sampling rates	500, 200, 100, 80, 50, 40, 20, 10, 1 Hz
Additional rates	250, 125, 62.5 Hz
Processor architecture	32 / 64-bit RISC (ARM)
Dimensions / weight:	
Metric	23.5 cm * 11.4 cm * 19.7 cm (5.4 liters), 1.4 kg
U.S.	9 ¹ / ₂ " * 4 ¹ / ₂ " * 7 ³ / ₄ ", 3.1 lbs
Protection class	IP 68 / NEMA 4X, 6P

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electronic**

Lennartz electronic GmbH • Bismarckstrasse 136
D-72072 Tübingen • Federal Republic of Germany
Phone: +49-(0)7071-93550 • Fax: -935530
WWW: www.lennartz-electronic.de
Email: info@lennartz-electronic.de