CMG-DM24S24EAM

Digitizer and Communications Module

The Güralp CMG-DM24S24EAM is a combined digitizer and network communications unit which provides a convenient and expandable way of connecting analogue and digital instruments to your network.

Inside the robust, waterproof casing are housed standard DM24 digitizers and an EAM enhanced acquisition module.

The DM24S24EAM is a high-quality digitizer with full 24-bit resolution and twenty four primary data channels, designed for data quality and durability, whilst the EAM is a stable and robust Linux-powered unit with on-board storage and networking facilities.

Key Features:

Twenty four low-noise 24-bit channels

Exceptionally low noise: 137dB of dynamic range @ 40sps

Twelve environmental channels with 16-bit resolution

STA/LTA, level and external trigger

Four concurrent output sample rates (continuous or triggered) up to 1,000 samples per second

UTC timestamped data using a low-power GPS receiver

Multi-user Linux operating system with full network support

Remote configuration with on-board Web server (HTTP and HTTPS)

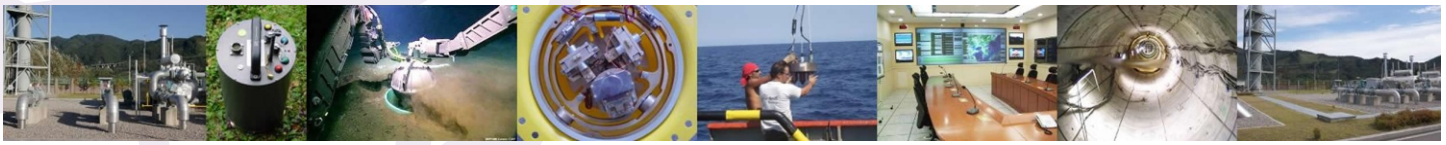
Removable 80Gb mass storage device

Full remote control of digitizer parameters

Full remote control of Güralp broadband sensors, including remote lock, unlock and centre, via web server

Supports multiple data formats, including SEED and CD1.1

Built-in calibration signal generator: step, sine or broadband



Specifications

CMG-DM24S24EAM

Primary digitisation channels	*Twenty-four @ 24 bits ±10 V differential*
Optional environmental channels	*Twelve @ 4sps, 16-bit resolution, ±10 V single-ended*
Input impedance	*130 kΩ / 10 nF*
ADC converter type	*4th-order, single-bit, low-pass Σ-Δ*
Output format	*32-bit*
Dynamic range	*137dB @ 40 samples per second*
Absolute accuracy	*0.5% (0.1 %)*
Common-mode rejection	*120 dB @ 10 Hz*
DSP sampling rate	*512 kHz*
Output rates available	*1 to 1000 samples per second*
Highest output capability	*3 × 1000 or 7 x 500 samples per second*
Decimation filters	*2, 4, 5, 2×4, 2×5*
Anti-alias filters	*3-pole*
Low pass filters	*FIR (other options available)*
Out-of-band rejection	*140 dB*
In-band ripple	*–140 dB*
Trigger modes	*STA/LTA, level, external, software*
Timing source precision	*8×10^{-7}*
Calibration signal generator	*Amplitude/frequency adjustable, sine, step or broadband noise*
Optional smart sensor interface	*SSI I2C/1-wire interface*
Operating temperature	*–40 to +60 °C*
Power supply	*12 – 28 V DC*
Power consumption at 12 V DC	*12W (GPS adds 0.3 W)*
Operating system	*Linux*
Communication technologies supported	*RS232, RS422, modems, Ethernet (10BaseT / 100BaseT)*
Internet technologies supported	*TCP/IP, PPP, SSH, HTTP, HTTPS (others on request)*
	Firewall and routing capabilities
Data recording formats	*GCF and miniSEED*
Seismic network protocols	*Scream! (Antelope/Earthworm), CD1.0/1.1, SEEDlink and others*
Mass storage device	*80Gb Removable drive*