

# SPECIFICATIONS | GeoEel VHR LH-16 Digital Streamer

## A/D CONVERTER MODULES

### Preliminary, subject to change

Channels: 16 per A/D module.

Sample intervals: 1/16, 1/8, 1/4, 1/2, 1, 2 ms.

Programmable gain: x1, x4, x10, x40, x100.

Anti-alias filter: Stop band attenuation of 105 dB above Nyquist.

Maximum input range: 1.45 V<sub>rms</sub>

Resolution: 24 bits including sign.

Input impedance: 127 kOhms, paralleled by 2.2 nF.

Dynamic range: >120 dB typical @ 16 KHz.

Common mode rejection: >110 dB.

Total Harmonic Distortion: < 0.001 typical at 100 Hz, full scale input, 0 dB gain.

Record length: Up to 30,000 samples.

Dead time: 10 ms with max average data rate of 2.1 M samples/s (dead time is 15% of recording time with 160 channels @ 16 kHz).

Continuous recording mode: Available, with GPS synchronization.

Noise floor: TBD.

QC tests: Leakage and capacitance of hydrophone elements, noise, DC offset, harmonic distortion and gain similarity.

Power consumption: 225 mW/channel. Calibration

oscillator: 1-250 Hz, 0.3  $\mu$ V to 600 mV<sub>rms</sub> Dimensions:

DIA: 44 mm; L: 330 mm.

Weight: 900 g.

Packaging material: Titanium.

Connectors: 38-pin custom Glenair.

## HYDROPHONE SECTIONS

Number of channels: 16 per section.

Group interval: 1.0m – 2.0m.

Hydrophones per group: 3.

Group sensitivity: -194 + 1.5 dB re 1 V/mPa.

Low cut filter: 10 + 0.5 Hz (100 and 50 m); 15 + 1 Hz (25 m and 12.5 m).

Hydrophone type: AQ2000

Bird coil: ION Model-578 compatible.

Operation depth: 30 m.

Diameter: 44.5 mm.

Weight: ~156 kg / 100 m.

Strain member: Zylon.

Working load: 560 kg.

Minimum bend radius: 1 m.

## TOW CABLE

Weight: 0.5 kg/m. Strain

member: Kevlar.

Working load: 900 kg.

Diameter: 18.5 mm.

## STRETCH AND VIBRATION ISOLATION SECTIONS

Length: 10, 25 or 50 meters.

Diameter: 41 mm (stretch) or 44.5 mm (isolation).

Ballast fluid: Inert Silicon GEL

Stretch ratio: 15% (stretch only).

Bird coil: ION Model-578 compatible (1 per active).

Working load: 560 kg.

Strain member: Zylon (isolation), Vectran (stretch).

## STREAMER POWER SUPPLY UNIT

Power Requirements: 115/230 VAC, 3/1.5 Amp max, 50/60 Hz.

Voltage to Streamer: 36-60 VDC.

I/O Communications: I/O Communications: 100Base TX Fast Ethernet, IEEE 802.3 compliant.

Trigger Requirements: Isolated input, positive or negative TTL.

Testing: Cable leakage and resistance.

Optional Auxiliary Inputs: 8 analog channels with 24-bit resolution.

Ethernet Connection: RJ-45.

Trigger Connection: BNC.

## CONTROLLER

PC-based, running Geometrics CNT-2 software. Multiple shot and gather windows, bar graph noise displays, windows for shot timing, gun energy, brute stack, tape status, spectral analysis. Auto-switching between storage devices, dual tape writing. Supports multiple printers. Full log kept of all parameter changes. Integrates navigation, gun, and bird data into SEG-D or SEG-Y header.

Specifications subject to change without notice. GeoEel LH-16\_v1 (0219)



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