

GeoEel- Solid Data Sheet

Geometrics Solid™ GeoEel's elegant design offers superior performance for high resolution 2D seismic surveys.

The smallest-diameter solid design available (only 44.5 mm), the GeoEel Solid™ is easy to deploy, easy to transport and can be shipped by air.

Separate 8-channel modules coupled with a unique slim active section design yield ultra-low towing noise levels (under 4 microbar) and are largely immune to electronic interference, leakage and ground loops that plague analogue streamers. Communicates via 100 mbs Ethernet to the Geometrics CNT-2 controller, running field-proven software that is used on over 70 installations worldwide.



GeoEel deployment. Courtesy of Geometrics Inc.

Advantages of solid streamers;

- No bulge wave transmission along the length of the streamer.
- Up to 6 hydrophones per group.
- Offers higher resolution compared to competitors streamers due to the tight hydrophone group spacing.

- Low noise compared to fluid filled streamers.
- Extremely rugged and easy to handle.
- Environmentally friendly and non-flammable. Manufactured from solid polyurethane the GeoEel Solid™ presents no risk of leaking oil and can be shipped via air-freight.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	variable x 44.5mm x 44.5mm	156kg/100m

Technical Specifications

A/D Converter Modules:

Channels:	8 per A/D module.
Sample intervals:	1/8, 1/4, 1/2, 1, 2 ms.
Bandwidth:	5 Hz to 3 KHz.
Programmable gain:	0 dB, 8 dB, 18 dB, 30 dB, 42 dB.
Anti-alias filter:	Set by sample interval, down 135 dB at stop-band.
Maximum input range:	1.59Vrms
Resolution:	24 bits including sign.
Dynamic range:	120dB Typical @ 1ms.
Record length:	Up to 32,768 samples.
Continuous recording mode:	Available, with GPS synchronization.
QC tests:	Leakage and capacitance of hydrophone elements, noise, offset, harmonic distortion and gain similarity.

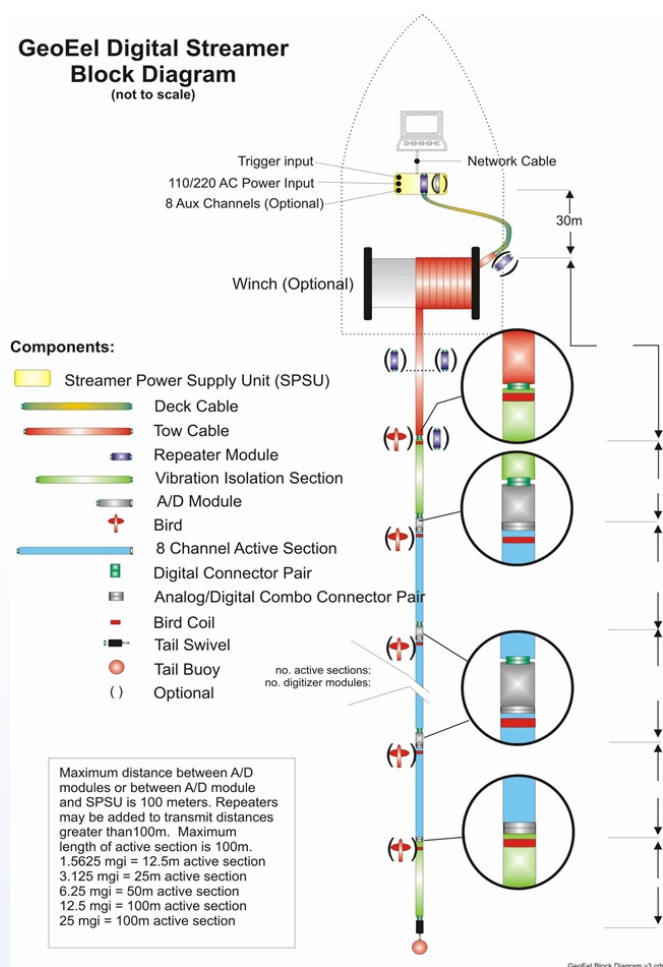
Hydrophone Sections:

Number of channels:	8 per section.
Group interval:	1.5625, 3.125, 6.25, or 12.5m.
Hydrophones per group:	4-6 (typical; up to 12 upon request).
Group sensitivity:	-194 + 1.5 dB re 1 V/mPa.
Low cut filter:	10 + 0.5 Hz (100 and 50m). 15 + 1 Hz (25m and 12.5m)
Hydrophone type:	Proprietary polymer.

Strain member:	Zylon
Working load:	635 kg.
Minimum bend radius:	1 m.

Gallery

**GeoEel Digital Streamer
Block Diagram**
(not to scale)

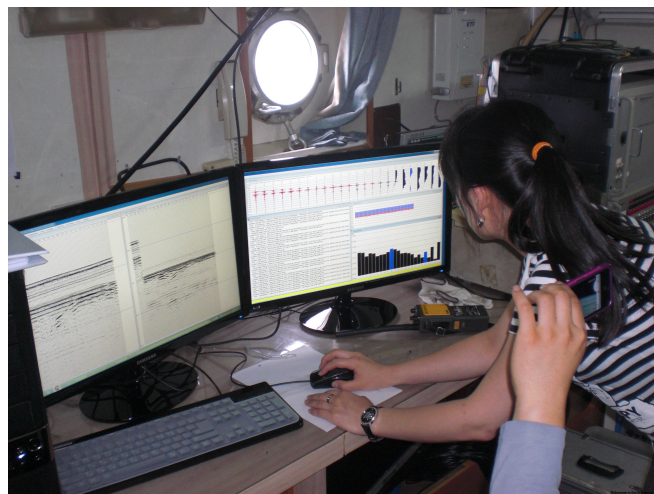


Adding fairing to GeoEel tow cable to reduce noise on the streamer due to cable strumming.

GeoEel block diagram showing all required components.



Locking A/D can termination to GeoEel Solid Section.



GeoEel data acquisition software.



GeoEel Termination with tail buoy

Videos

<https://youtu.be/8m1ltHKykrE>
<https://youtu.be/8m1ltHKykrE>