

GeodeFlex

Exploration Seismograph



FEATURES & BENEFITS

- **Use Any Screen You Want** – Control the system from any modern device (PC, tablet, or phone) using the GeodeFlex Web App and Wi-Fi connection.
- **Fewer Cables** – Internal batteries and Wi-Fi connection to controller means fewer cables to carry and higher reliability.
- **Internal batteries with USB Charging** – USB-C PD charging of internal batteries using chargers or external batteries you already have. No more 12V battery batteries and chargers to bring to the field.
- **Geometrics Quality Data** – 24-bit simultaneous sampling up to 32 kHz. Bandwidth (13.8 kHz - 3dB) and high dynamic range.
- **Legacy Compatible** – Features 24 analog channels; fully compatible with standard legacy Geode spread cables and trigger cables.
- **Integrated Timing** – Built-in GPS provides microsecond time sync, eliminating the need for external synchronization boxes.
- **Stand Alone Autonomous Recording** – Integrated Linux controller enables GPS time synchronized recording without external devices for passive and monitoring surveys.
- **Rugged housing** – Engineered to withstand the most extreme field conditions. Shock resistant, IP-55+ weatherproof rating for dust and water ingress.
- **Software Included** – SeisImager/2D Lite included with streamlined data export.
- **Geometrics proven reliability** – Includes the 3-year warranty that made the Geode the industry standard.

Building on the strengths of the Geode, the world's most popular engineering seismograph, the GeodeFlex delivers a modernized 24-channel acquisition platform engineered for the way field crews work today.

Control the system from any device through the browser-based GeodeFlex Web App (Core bundle), or use the GeodeFlex Web App on a connected laptop (Economy bundle). The Core bundle runs untethered on two field-swappable batteries for up to two days, with USB-C PD charging. Capture cleaner data with a modern 24-bit, sigma-delta acquisition path delivering up to 32 kHz sampling per channel and up to 13.8 kHz bandwidth.

For passive or monitoring surveys, the Core bundle's integrated Linux controller records continuous GPS-synchronized data autonomously. For active-source work, hardwired triggering keeps the system simple and reliable on day one. Both bundles are compatible with 61S analog spread cables and 3-pin Mil-spec trigger cables.

• Core bundle:

- Integrated Linux controller (Wi-Fi, standalone recording, multi-device control)
- Two field-swappable lithium batteries (8 Ah, up to 2 days), USB-C PD charger
- Web App control - runs on PC, tablet, or phone (Chrome, Safari, Edge, Firefox)

• Economy bundle:

- Ethernet-only to laptop, no batteries
- Web App control - installed on a connected laptop

SPECIFICATIONS | GeodeFlex Exploration Seismograph

ADC & Acquisition Performance:

Channels	24ch per unit. 48ch side by side.
A/D Resolution	24 bits (sigma-delta, simultaneous sampling).
Max Sample Rate (ODR/ch)	Up to 32 kHz sampling per channel.
Input Bandwidth (~3dB)	Up to 13.8 kHz.
Dynamic Range	120 dB @ 2 ms PG=12 dB; 121 dB @ 2 ms PG=24 dB.
Total Harmonic Distortion	< 0.001% at 25 Hz, 2 ms.
Input Noise	0.22 μ VRMS @ 2 ms PG=34 dB.
Preamplifier Gain	0 dB, 12 dB, 26 dB, 34 dB
Max Input Signal	1.4 VRMS @ 12 dB / 100 mVRMS @ 34 dB
CMR	>96 dB @ 60 Hz.

Frequency Response:

Sample: Interval / Rate	Frequency Response (-3 dB)
0.03125 ms / 32 kHz	1.5 Hz – 13,800 Hz
0.0625 ms / 16 kHz	1.5 Hz – 6,400 Hz
0.125 ms / 8 kHz	1.5 Hz – 3,200 Hz
0.25 ms / 4 kHz	1.5 Hz – 1,650 Hz
0.5 ms / 2 kHz	1.5 Hz – 825 Hz
1 ms / 1 kHz	1.5 Hz – 412 Hz

Timing & Synchronization:

GPS	Integrated.
Network Timing	IEEE 1588 Precision Time Protocol (PTP).
Trigger	Hardwired (cabled).

Power:

Internal Batteries	Powered by one or two internal 8AH lithium batteries and/or an external USB-C PD connection. Batteries are field swappable.
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Runtime	11 hours runtime with integrated controller, 16 hours runtime with external laptop controller (Economy).
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External Power Charging	USB-C PD (Core bundle). USB-C PD 60W charger.
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Connectors:

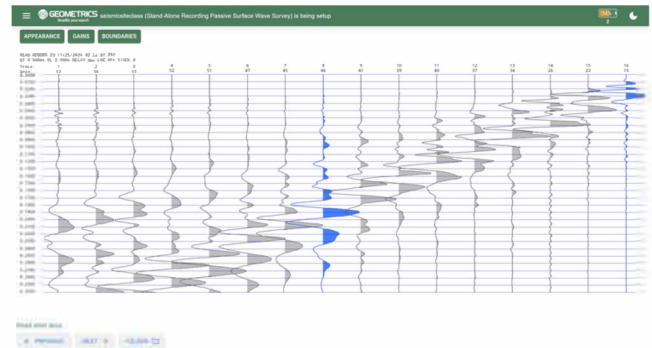
Analog spread cable	61-pin Amphenol.
PC / Network	6-pin Amphenol.
Hardware Trigger	3-pin Amphenol.
Charge / External Power	USB-C.
Digital (Low/High Side)	6-pin Amphenol (reserved for future).

Environmental & Physical:

Enclosure	IP-55+ (waterproof, dustproof)
Operating Temperature	-20 °C to +50 °C ; (-4 °F to +122°F)
Weight	4.54 kg ; (10 lbs).
Dimensions	35.6 x 27.9 x 12.7 cm ; (14" x 11" x 5")

System Software:

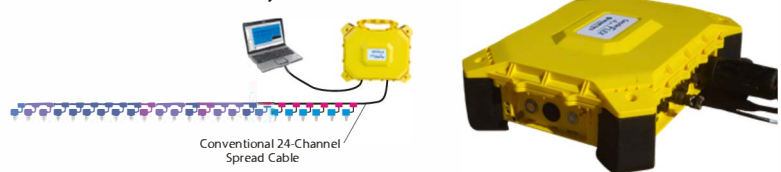
Browser Based Control	Connect via Ethernet or Wi-Fi.
GeodeFlex WebApp (Core)	Runs on Chrome, Safari, Edge, Firefox. Runs on Windows, macOS, Linux, iOS, and Android.
Web App (Economy)	Installed on connected laptop, Ethernet-only.
Standalone Recording Mode (Core)	Autonomous, GPS-synchronized recording to internal storage for passive and monitoring surveys.



GeodeFlex Web App

Data export: via Data Download page or SMB easy export to analysis software. **SeisImager/2D Lite:** included in both Economy and Core bundles.

GeodeFlex 24-Channel System



Looking Ahead - 2027 Roadmap:

The GeodeFlex platform is designed to grow.

- GPS synchronized Wireless Trigger.
- Digitally Integrated Cables - Expansion up to 192 channels and beyond (with inline power injectors), from a single GeodeFlex controller.
- Simple Integration of Existing Geodes Into GeodeFlex Network.

Existing Geode users can still purchase legacy units directly from us. Trade-in credits for the GeodeFlex 24 are available; contact Terraplus for details.

Specifications subject to change without notice. GeodeFlex_v1 / (0526)



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