



# **Sensor Digitization**

Fast, accurate sensor digitization for source estimation and neuromodulation

## **NEW! Two product choices**



### Geodesic Photogrammetry System

Simultaneously record the location of all sensors on the head with the click of a button. Solve for sensor locations at any time from the saved photographs. For clinical and research use. Innovative, image-based technologies create a 3D coordinate file of up to 256 EEG sensors locations

Not susceptible to movement artifacts or electromagnetic interference

Minimal participant time requirement

GeoScan device

Solve for sensor locations as you scan the head in only 5 minutes. For research use only.

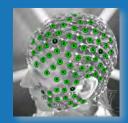
Semi-automated techniques minimize human errors

Designed for use with EGI's Geodesic EEG Systems

Seamlessly integrated with EGI's GeoSource 3.0 Research source imaging software and GTEN 100 Research neuromodulation system

The 3D coordinate file of EEG sensor locations is registered with head models to define the path of electrical current from the cortex to the scalp. This is a critical step for ensuring the most accurate source estimation using **GeoSource 3.0 Research** or other source imaging software and for precise neuromodulation targeting with the **GTEN 100 Research** neuromodulation system.





# **Geodesic Photogrammetry System (GPS) 3.0**

### Instantaneous imaging

Using a precision geodesic dome of cameras, the GPS takes 11 photos simultaneously to instantly record the position of up to 256 electrodes on the participant's head.

## **Minimal participant time**

Simply position the participant under the dome, take the picture, and the participant is free to go — the data is immediately saved and analysis can be completed later.

#### Semi-automated 3D sensor map creation

The GPS software uses a semi-automated algorithm to create a 3D coordinate file of sensor locations in about 30 minutes.

### **High accuracy**

Accurate to within 1 mm with no movement artifacts and no electromagnetic interference.

#### **Permanent record**

Saved high-resolution photographs are useful for verifying registration of sensors with head models, and for guiding sensor application in subsequent experiments.

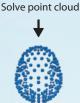
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Compatible with HydroCel and MicroCel Geodesic Sensor Nets.







Export 3D coordinate file



Product size: 221 cm high x 102 cm wide x 150 cm deep



Solved 3D coordinate file of sensor locations can be embedded in Net Station MFF files to be used with Net Station and GeoSource, or may be exported to formats compatible with BESA, EMSE, Curry, and EEG Lab.

For clinical and research use.

# **GeoScan Sensor Digitization Device**

#### Real time 3D sensor map creation

Stereo camera tracking technology measures, identifies, and creates a 3D coordinate file of sensor locations in real time.

#### Minimal time for both participant and operator

Simply hold the GeoScan device in one hand and move it around the head to scan the sensors. The entire scan, including fiducial points, takes about 5–10 minutes for 256 electrodes.

#### **High accuracy**

Accurate to within 0.5 mm with a 95% confidence interval and a repeatability of 0.1 mm, with no movement artifacts and no electromagnetic interference.

#### **Compact size**

Ideal for laboratories with limited space.

Compatible with HydroCel Geodesic Sensor Nets.



Solved 3D coordinate file of sensor locations can be embedded in Net Station MFF files to be used with Net Station and GeoSource, or may be exported to formats compatible with BESA, EMSE, Curry, and EEG Lab.

#### For research use only.

# **Products**

#### Geodesic Photogrammetry System (GPS) 3.0

- a precision geodesic dome of 11 cameras mounted on a gantry with effortless counterweight movement
- GPS acquisition and solver software
- data acquisition computer and monitor
- calibration object
- 1 year system warranty and Basic support supplement for GPS

#### Upgrade from GPS 2.0 to GPS 3.0

GPS acquisition and solver software

#### Upgrade from GPS 1.0 to GPS 3.0

- a precision geodesic dome of 11 cameras
- Retrofit plate
- GPS acquisition and solver software
- data acquisition computer and monitor
- 1 year system warranty and Basic support supplement for GPS

#### GeoScan Sensor Digitization Device Package

- GeoScan sensor digitization device
- GeoScan wireless optical probe
- 27 inch iMac with OS X 10.10
- GeoScan software
- 1 Year System Warranty and Basic Supplement for GeoScan



3D coordinate file of sensor locations are used in GeoSource and GTEN Research neuromodulation software (sold separately)

#### **Integrated Products**

- **Geodesic EEG System 400** a complete EEG System for clinical and research applications, available in portable or desktop configurations with 32, 64, 128, or 256 EEG channels. Net Station 5 EEG Software Suite included.
- GeoSource 3.0 Research software for head modeling and source estimation
- GTEN 100 Research Neuromodulation System for tDCS, tACS, and tPCS with simultaneous EEG

#### To schedule a demo, or for more information, contact info@egi.com or visit us at www.egi.com

#### Electrical Geodesics, Inc.

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