

High density EEG

■ Net Amps 400 series amplifiers

Basic specification:

- The Net Amps 400 series amplifiers are specifically designed for EEG acquisition using EGI's Geodesic Sensor Nets
- Fiber optic signal input and output for optimal digital bandwidth and an extra level of safety isolation
- Built-in clock sync port for MR and MEG applications, and for synchronous acquisition by multiple amplifiers

Technical specification:

- Bipolar channel count: up to 256
- Coupling: DC
- Chip for A/D conversion: ADS1298
- A/D resolution: 24 bits
- On-board microprocessor: Intel ATOM 1.6 GHz 32-bit
- FPGA: DSP FIR filter signal processor
- Embedded operating system: Linux
- I/O connection: fiber optic Ethernet
- Digital (TTL) inputs: 16 bits (8 supported in software)
- Input impedance: ≥ 1 G ohm
- Sampling rate supported: 8 kHz
- Sensitivity (AC mode)/precision: $0.023 \mu\text{V/bit}$
- Bandwidth: DC to 2,000 Hz
- Input noise: $< 0.8 \mu\text{VRMS}$



- Input range: ± 200 mV
- Synchronize multiple amplifiers
- Common mode rejection rate: ≥ 90 dB
- Isolation mode rejection rate: ≥ 120 dB
- MR compatible
- Power consumption: 15 Watts

■ HydroCel Geodesic Sensor Net (GSN)

Technical specification:

Routine

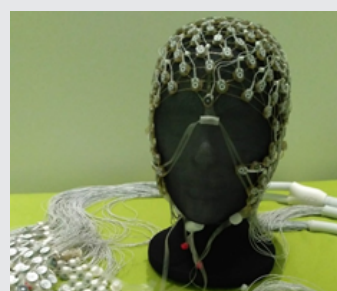
- Up to 2 hours of measuring
- Sensors with sponges
- Use of saline solution
- 256 channels
- Available 13 caps in range of sizes 51-61 cm
- Possibility of GTEN (see below)
- Compatible with MR system up to 7T

MicroCel GSN

- Very low profile for use in EEG-TMS measuring
- Use of gel or paste
- 256 channels
- Caps in range of sizes 54-58 cm

Long term monitoring (LTM)

- For EEG exams over 2 hours in duration
- Sensors in soft pedestals without sponges
- Use of standard EEG paste
- 256 channels
- Caps in range of sizes 51-61 cm



■ Geodesic Transcranial Electrical Neuromodulation – GTEN 200

Technical specification:

- 256 channel sensor nets allowing any electrodes to serve as anodes, cathodes or recording electrodes
- Up to 2 mA current intensity for custom HD tDCS, tACS, tPCS, and tRNS protocols
- Individualized head modeling and a library of age-matched atlases

■ GeoScan Sensor Digitalization Device

Basic specification:

- Image-based technologies create a 3D coordinate file of up to 256 EEG sensors locations in real time
- Not susceptible to movement artifact or electromagnetic interference
- Accurate to within 0.5 mm with a 95% confidence interval and a repeatability of 0.1 mm
- Compatible with HydroCel Geodesic Sensor Nets
- 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 – step for precise neuromodulation targeting with the GTEN 100 Research neuromodulation system



Producer's web: <https://www.egi.com>

■ Contacts

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