



GraeL LT EEG

® graeL LT

Industry-leading value amplifier with research-grade technology.

A DC-coupled, digital amplifier system with a high input range and 22-bit resolution providing amplification and digitization of electroencephalographic physiologic signals. The amplifier provides 39 channels (32 isolated high-frequency referential channels, 6 bipolar channels) and event button input. The unit has a POE 100BASE-TX network connection for both power and communication.

HD EEG

Technical specifications



INPUTS	32, DC-coupled, fully isolated, referential (monopolar); 6 user-defined, DC-coupled, fully isolated, bipolar inputs
INPUT IMPEDANCE	>100 M Ω 1-32; >20 M Ω 33-40
BIAS CURRENT	typically 1nA
INPUT NOISE	< 2 μ Vpp typical (referential ch)
INPUT RANGE	600mVpp
CMRR	> 100dB
CROSSTALK	<- 60dB to adjacent channels FSR
HIGH PASS FILTER	DC Coupled
LOW PASS FILTER	(3dB): 71 Hz at 256 s/s 143 Hz at 512 s/s 284 Hz at 1024 s/s 580 Hz at 2048 s/s

NOTCH FILTER Software based display filtering of 50Hz, 60Hz, or off

ISOLATION SPECIFICATIONS

Complies with IEC 60601-1 CF patient Inputs

ANALOGUE TO DIGITAL CONVERTER

22 bit resolution

SAMPLE AND DATA RATES CHANNELS 1 TO 40

Data sampled at 16384 samples per second and decimated to data rates shown below. Actual data rate sent is determined by controlling PC software application.

Output data rate 2048, 1024, 512 or 256 samples per second

COMMUNICATION INTERFACE

Network Type 802.3/802.3u twisted pair Ethernet with auto MDIX; RJ45 connector.

EVENT BUTTON CHANNEL x 1

DIMENSIONS

Grael EEG System Component	Size L x W x H	Weight
Amplifier	240mm x 144mm x 50mm 9.45in x 5.66in x 1.97in	700 grams 24.7 ounces

ENVIRONMENTAL REQUIREMENTS

Temperature	Ambient operating temperature range: 0°C - 40°C (32°F - 104°F) Storage temperature range: -10°C - 50°C (-4°F - 122°F)
Humidity	20% - 90%-relative humidity (non-condensing)
Altitude	Less than 3,000m

ELECTRICAL SPECIFICATIONS

Power Supply	All power provided by the network connection using Power Over Ethernet (either mid-span injector or POE Switch, per IEEE 802.3af standard)
Operating voltage	48 volts
Power consumption	<10 watts

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