CGX
THE LEADER IN
EEG TECHNOLOGY

Wireless, Mobile Dry and Wet
EEG Systems For Real-World
Neuroimaging

2025 Product Guide

CGX

Helping Researchers Get Fast, Accurate EEG Results

CGX enjoys the reputation for designing the most accurate, data-rich dry EEG systems for researchers and practitioners.

We've earned this reputation through engineering prowess and best-in-class technical assistance.

Our team of engineers focuses on dry EEG technology, bringing the benefits of no-prep, accurate results to neurophysiological researchers.

Highest Wireless Data Quality

We design noise reduction into our hardware, with active electrodes, active shielding, and extremely low-noise electronics.
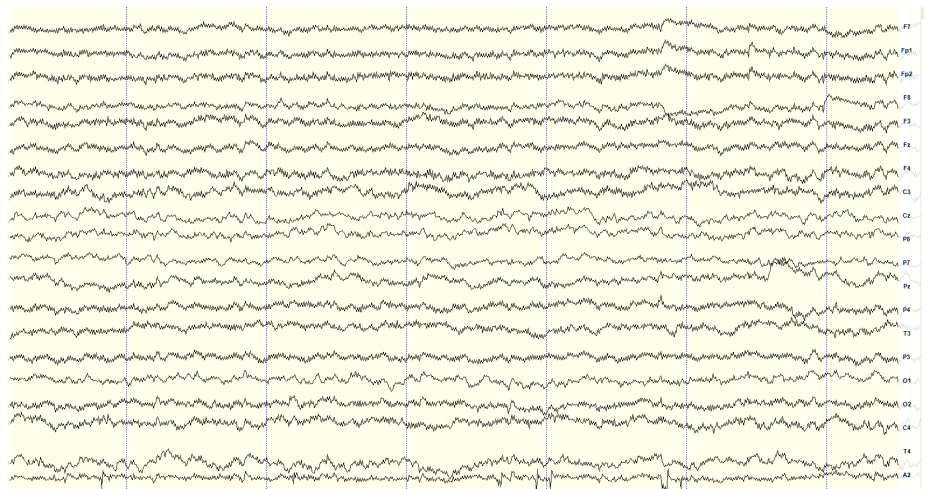
Unrestricted Data Access

We provide raw, unfiltered data in several formats:

.EEG / .EDF / .BDF / .TXT
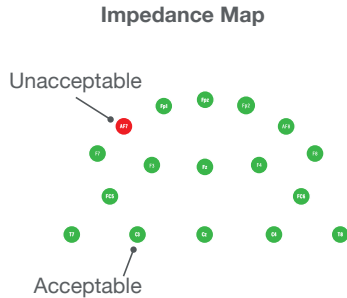

Typical CGX data recording after 5 minute set-up.

Typical competitor's dry EEG data.

Continuous Real-Time Impedance Check

On-board and in software. Near-instantaneous impedance checking assures highest data quality.

Wireless Triggering

Our patented wireless triggers broadcast time markers with millisecond precision, resolving issues of latency and jitter.

Portability And Ease-Of-Use

Most CGX headsets can be put on by a novice, or the user themselves. And once on, the user can move about freely.

Impedance Map

Unacceptable

Acceptable

Meet The CGX Management Team

Mike Chi, Ph.D.
Mike Chi founded the company in 2010. He holds a PhD in electrical engineering from UCSD.

Ira Friedman
Ira Friedman joined as president of CGX in 2019. He holds an MBA from Harvard Business School.

Spencer Linton
As VP, Spencer oversees engineering and production. He holds an EE degree from UCSD.

Alan Fang
VP Special Projects, Alan manages device development. He holds a Bioengineering Masters from UCSD.

Started In 2008 In San Diego As Cognionics

We're a UCSD spin-off, funded through grants from NASA, NIH, Navy, Air Force Research Laboratory, Army Research Laboratory, DARPA, TATRC, and other institutions.

Patch EEG™

Simplify EEG. Amplify Insights.

The Patch EEG is a wireless, wearable system that collects EEG data in natural environments and situations. Proprietary HydroFlex™ electrodes and advanced amplification techniques reject ambient electrical noise for clean data gathering in motion and in sleep.

Patch EEG

- Reliable at-home data collection.
- Plug-and-Play design, no experts required.
- Affordable and scalable.
- Single-use HydroFlex™ electrodes stay in place for up to 20 hours.
- Record to SD card or stream BLE.
- Stream, read, and manage Patch EEG files in CGX Flowpoint.
- Use with the Onton Sleep Profiler Plug-In for research-grade sleep staging.

Perfect For Sleep Studies.

- The Patch EEG is light and unobtrusive — for unencumbered, at-home sleep studies.
- One-button operation requires no training.
- Single-use HydroFlex™ electrodes for a clean worry-free session.
- Use the ground-breaking Onton Sleep Profiler Plug-In for deep insights into sleep staging.

Patch EEG™

Technical Overview

Wireless Amplifier

· A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
· Sampling rate: 500 samples per second.
· Bandwidth: 0-131 Hz with true DC coupling.
· 3-axis accelerometer measures head motion.
· Wireless Range: 10 meters.
· Noise: <0.6 µV RMS from 1-30 Hz, shorted inputs.
· Electrostatic Discharge protection

Custom HydroFlex™ Electrodes

· Single Use Hydrogel Electrodes ensure hygiene and consistency in signal quality.
· Skin-safe pressure sensitive adhesive and foam materials ensure comfort and safety during use.

Data Stream

· Bluetooth Low Energy.
· Full access to raw data via Flowpoint software.

· Continuous on-board and on-screen impedance check with real-time monitoring of all channels simultaneous with EEG.
· Micro SD: 32GB card can store over 2 weeks of consecutive EEG recordings.
· Export data to .EEG, .BDF, .EDF, or .TXT with the Patch EEG Plug-In.

Power

· Internal rechargeable battery: 14 hours streaming, 20 hours recording.

Cleaning

· Hand wipe device.
· HydroFlex electrode is single use.

General

Weight: 36g without electrode.
Fits most users aged 9 and above
Dimensions: 44 x 116 x 24 mm

Available Flowpoint Plug-Ins

Patch EEG Plug-In

· Synchronize the Patch EEG internal clock
· Set SD Card file naming convention
· Read and export Patch EEG files

Onton Sleep Profiler

· Generate single- and multi-night sleep reports using validated spectral sleep scoring methodology developed by Julie Onton, PhD from UCSD.
· Interactive spectrogram
· Dominant Frequency analysis
· Hypnogram
· Accelerometer
· Plus, a full compliment of sleep metrics

Included In System

Patch EEG amplifier
Bluetooth Low Energy Dongle
32GB SD Card
SD Card Reader (USB)
Battery Charging Cable (USB-C)
Carrying Case
1 Year Warranty

HydroFlex Sensors are available separately.
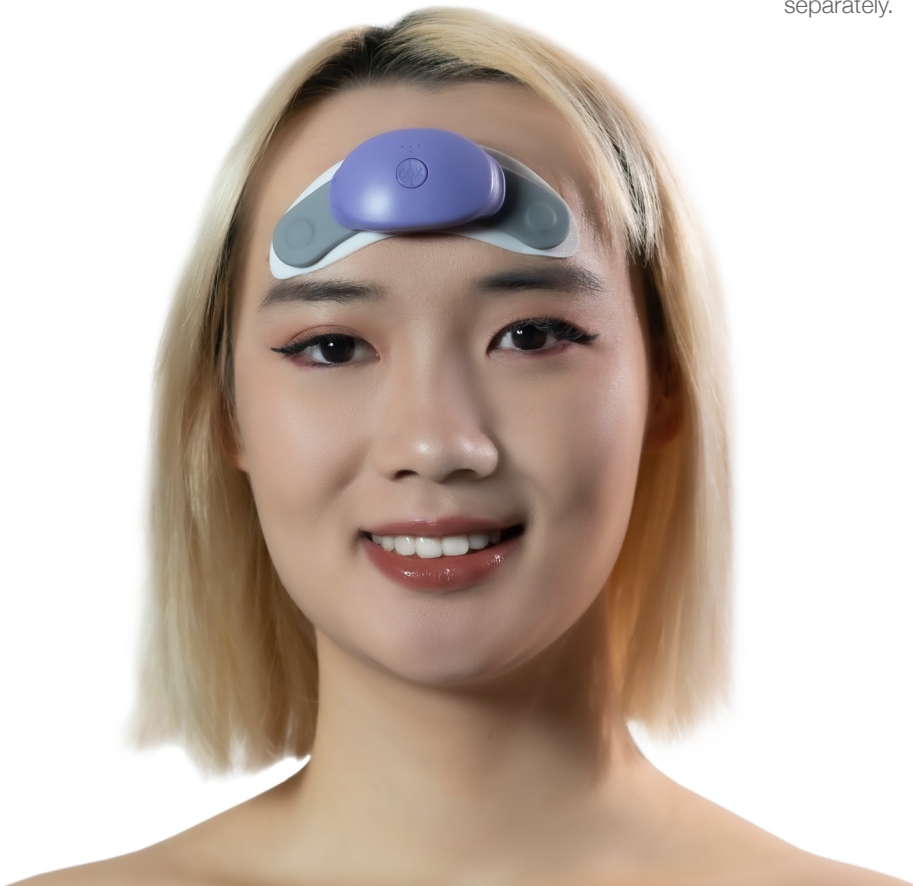
CGX QUICK SERIES HEADSETS

Quick Series Key Features

We redesigned the Quick Series headsets.

The most advanced dry headsets have undergone a complete redesign—with an advanced mechanical design, ground-breaking materials, and an eye to comfort and ease-of-use. Plus, they're integrated with BrainVision Recorder to streamline your academic experiments, and compatible with most leading qEEG and neurofeedback solutions.

On-board real-time impedance checking for confident set-up.

Lightweight, comfortable design is rated for 60-minute sessions.

Advanced mechanical design accommodates heads from 52 to 62cm. See Head Size Accommodation on following pages for additional fitting information.

Use with our Wireless StimTrigger for ERP sessions. Trigger indicator light built into handle.

Two variable ExG channels can be used for additional EEG locations, EOG, EMG, or ECG.

8 hours of battery life from rechargeable AA batteries.

![CGX logo]

Quick-20r v2

Fully redesigned wireless headset with active impedance check.

The CGX Quick Series is well regarded for generating research-level data from our active dry electrodes. The all-new Quick-20r v2 features a fully redesigned electrical, mechanical, and structural system for faster set-up, extended wear time, enhanced reliability, and immunity from artifacts.

Quick-20r v2

- EEG amplifier and wireless electronics integrated into headset.
- Active impedance check built into each sensor position for quick set-up and monitoring.
- Flexible composite arms create excellent contact between the sensors and head.

- Fits adolescents through adults.
- Includes 2 variable ExG leads for user-defined EEG, ECG, EMG, and EOG.
- 8 hours of uninterrupted data gathering with two AA batteries.
- Standard 10-20 montage.
- Fully integrated with BrainVision Recorder and other leading EEG software solutions.

Fully Mobile, Fully Wireless. 3 Minute Setup

- Place headset on subject.
- Check impedance on each pod.
- Adjust sensors — if required — for comfort and contact.
- Begin wireless data acquisition.

Quick Series Dry Headsets

Technical Overview

Wireless Amplifier

- A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
- Sampling rate: 500 samples per second.
- Bandwidth: 0-131 Hz with true DC coupling.
- 3-axis accelerometer measures head motion.
- Wireless Range: 10 meters.
- Noise: <1.0 µV RMS from 1-50 Hz, shorted inputs.

Sensors

- Active electrodes and active shielding for highest signal quality.
- Choose Drypad or Flex sensors at any position.
- Sensor life (all sensors): 200 uses.

Data Stream

- Bluetooth Low Energy.
- Full access to raw data via real-time streaming API.

- Continuous on-board and on-screen impedance check with real-time monitoring of all channels simultaneous with EEG.
- Export data to .EEG, .BDF, .EDF, or .CSV.
- Compatible with BrainVision Recorder, NeuroPype, LabStreaming Layer, EEGLAB, BCILAB, MATLAB, BCI2000, OpenViBE, NeuroGuide and more.
- Available API allows you to build your own applications.

Power

- Two AA batteries: 8 hours.

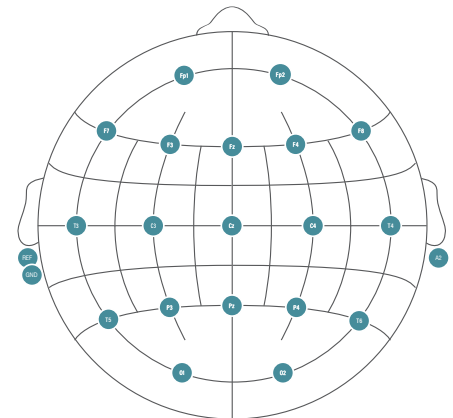### Cleaning

- Hand wipe between sessions.

General

- Weight: 596g in use
- Fits heads sized 52-62 cm
- Dimensions: 20 x 18 x 19 cm

Included In System

Quick-20r Headset plus 2 ExG Channels
Bluetooth Low Energy Dongle
20 Drypad Sensors
40 Flex Sensors
10 Drypad Ear Sensors
30 Skintact Sensors
A1 Earclip
A2 Earclip
3 Active Lead Wires
3 Passive Lead Wires
5 Alcohol Wipes
4 Rechargeable AA Batteries
Battery Charger
Carrying Case
3 Year Warranty

Headmap

Standard 10-20 Montage

Head Size Accommodation

Percentage Of Subjects Per Age Range

Age	Male	Female
9-12	75%	50%
13-16	95%	90%
17-20	95%	95%
21+	97%	99%

The Journal of Pediatrics 2010. United States head circumference growth reference charts: birth to 21 years. J. Rollins, J. S. Collins, K. Holden

![CGX]

FDA-Cleared Quick-20m

The Quick-20m is a wireless, battery operated 10-20 montage EEG headset utilizing dry sensor technology. The headset provides an integrated approach to the wireless acquisition of EEG signals. The Quick-20m includes advanced amplification and shielding to reject ambient electrical noise. The headset obtains high-quality EEG with minimal scalp preparation. Patented mechanisms and a range of replaceable dry sensors align to various head shapes and sizes, maintaining sensor positions in a standard 10-20 layout. The Quick-20m is FDA-cleared for general-purpose EEG.

Quick-20m

· EEG amplifier and wireless electronics integrated into headset.
· Active impedance check built into each sensor position for quick set-up and monitoring.
· Flexible composite arms create excellent contact between the sensors and head.

· Fits adolescents through adults.
· 6 hours of uninterrupted data gathering with two AAA batteries.
· Standard 10-20 montage.
· Use with validated Third-Party EEG Analysis Software. Contact CGX for details.

Fully Mobile, Fully Wireless.

· Place headset on subject.
· Check impedance for each pod.
· Adjust sensors — if required — for comfort and contact.
· Begin wireless data acquisition.

Quick Series Dry Headsets

Technical Overview

Wireless Amplifier

- A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
- Sampling rate: 500 samples per second.
- Bandwidth: 0-131 Hz with true DC coupling.
- 3-axis accelerometer measures head motion.
- Wireless Range: 10 meters.
- Noise: <0.6 µV RMS from 1-30 Hz, shorted inputs.

Sensors

- Active electrodes and active shielding for highest signal quality.
- Choose Drypad or Flex sensors at any position.
- Sensor life (all sensors): 200 uses.

Data Stream

- Bluetooth Low Energy.
- Use with validated Third-Party EEG Analysis Software. Contact CGX for details.

Power

- Two AAA batteries: 6 hours.

Cleaning

- Hand wipe between sessions.

General

- Weight: 596g in use
- Fits heads sized 52-62 cm
- Dimensions: 20 x 18 x 19 cm

Indications For Use

The Quick-20m is intended to be used to acquire the electroencephalogram (EEG) and transmit it wirelessly to a computer. Federal (US) law restricts this device to sale by or on the order of a physician. The Quick-20m requires operation by a healthcare professional familiar with EEG. Instructions for use can be found in the product labeling supplied with each device.
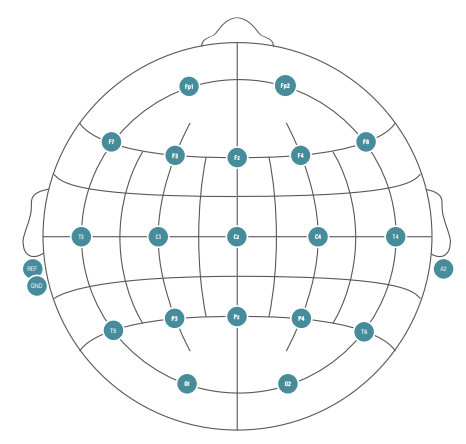
Included In System

Quick-20m Headset plus 1 extra channel
Bluetooth Low Energy Dongle
20 Drypad Sensors
40 Flex Sensors
10 Drypad Ear Sensors
30 Skintact Sensors
A1 Earclip
A2 Earclip
3 Active Lead Wires
2 Passive Lead Wires
5 Alcohol Wipes
4 Rechargeable AAA Batteries
Battery Charger
Carrying Case
3 Year Warranty

Headmap

Standard 10-20 Montage

Head Size Accommodation

Percentage Of Subjects Per Age Range

Age	Male	Female
9-12	75%	50%
13-16	95%	90%
17-20	95%	95%
21+	97%	99%

The Journal of Pediatrics 2010. United States head circumference growth reference charts: birth to 21 years. J. Rollins, J. S. Collins, K. Holden

Quick-32r

Fully redesigned for demanding EEG experiments.

Designed for researchers requiring the highest signal quality, the Quick-32r is a triumph in dry EEG technology. 30 fixed channels—10-20 montage plus 10 additional on-head channels—with 2 ExG channels to gather additional biometric data.

Featuring our new mechanical design for unmatched comfort and ease-of-use. With impedance check built into each sensor pod, downtime between subjects including cleaning, setup, and impedance verification is reduced to less than 8 minutes.

- EEG amplifier and wireless electronics integrated into headset.
- Active impedance check built into each sensor position for quick set-up and monitoring.
- Flexible composite arms create excellent contact between the sensors and head.
- Fits adolescents through adults.
- Includes 2 variable ExG leads for user-defined EEG, ECG, EMG, and EOG.
- 8 hours of uninterrupted data gathering with two AA batteries.
- Use with our Wireless StimTrigger for sophisticated ERP experiments with millisecond-precise wireless synchronization.
- Fully integrated with BrainVision Recorder.

Quick Series headsets are light-weight and comfortable — rated for hour-long sessions.

Quick Series Dry Headsets

Technical Overview

Wireless Amplifier

- A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
- Sampling rate: 500 samples per second.
- Bandwidth: 0-131 Hz with true DC coupling.
- 3-axis accelerometer measures head motion.
- Wireless Range: 10 meters.
- Noise: <1.0 µV RMS from 1-50 Hz, shorted inputs.

Sensors

- Active electrodes and active shielding for highest signal quality.
- Choose Drypad or Flex sensors at any position.
- Sensor life (all sensors): 200 uses.

Data Stream

- Bluetooth Low Energy.
- Full access to raw data via real-time streaming API.

- Continuous on-board and on-screen impedance check with real-time monitoring of all channels simultaneous with EEG.
- Export data to .EEG, .BDF, .EDF, or .CSV.
- Compatible with BrainVision Recorder, NeuroPype, LabStreaming Layer, EEGLAB, BCILAB, MATLAB, BCI2000, OpenViBE, NeuroGuide and more.
- Available API allows you to build your own applications.

Power

- Two AA batteries: 8 hours.

Cleaning

- Hand wipe between sessions.

General

- Weight: 646g in use
- Fits heads sized 52-62 cm
- Dimensions: 20 x 18 x 19 cm

Included In System

Quick-32r Headset plus 2 ExG Channels
Bluetooth Low Energy Dongle
30 Drypad Sensors
60 Flex Sensors
10 Drypad Ear Sensors
30 Skintact Sensors
A1 Earclip
A2 Earclip
3 Active Lead Wires
3 Passive Lead Wires
5 Alcohol Wipes
4 Rechargeable AA Batteries
Battery Charger
Carrying Case
3 Year Warranty

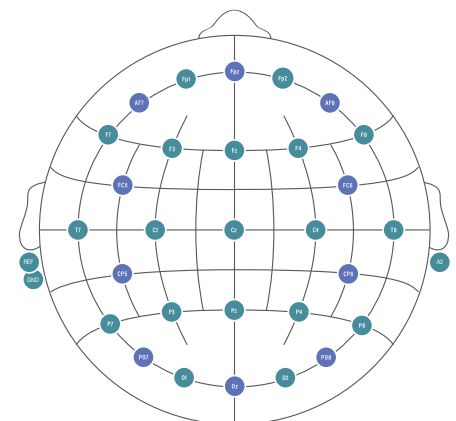## Head Size Accommodation

Percentage Of Subjects Per Age Range

Age	Male	Female
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13-16	95%	90%
17-20	95%	95%
21+	97%	99%

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Headmap

Standard 10-20 Montage + 10 Additional Channels

CGX DEVICES | CAMP

CAMP Compact Amplifier

For Use With 10-20 Montage Wet Caps

This amplifier has 20 channels and is small enough to fit in your hand. Amplifier includes standard DB-25 connector for use with off-the-shelf wet caps.

CAMP Compact Amplifier

For wet systems

· Compact Amplifier streams via Bluetooth low energy.
· Up to 8 hours of battery life.
· DB-25 port for standard wet caps.
· Built for continual usage.
· Perfect for neurofeedback.

Technical Overview

Wireless Amplifier

· A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
· Sampling rate 500 samples per second.
· Bandwidth 0-131 with true DC coupling.
· 3-axis accelerometer measures head motion.
· Wireless Range: 10 meters.
· Noise: <1.0 μV RMS from 1-50 Hz, shorted inputs.

Data Stream

· Bluetooth Low Energy.
· Full access to raw data via real-time streaming API.
· Continuous impedance check with real-time monitoring of all channels simultaneous with EEG.

· Export data to .EEG, .BDF, .EDF, or .CSV.
· Compatible with NeuroGuide, NeuroPype, LabStreaming Layer, EEGLAB, BCILAB, MATLAB, BCI2000, OpenViBE, Neurofield and more.

Power

· Lithium-ion: 8 hour.

Wet Cap Requirements

· The CAMP system does not include an EEG cap. We recommend the E1 Series with ear inputs from Electro-Cap
· International (Electro-Cap.com).

General

· Weight: 82g
· Dimensions: 9 x 8 x 3 cm

Included In System

CAMP

CAMP Compact Amplifier
Bluetooth Dongle
Carrying Case
3 Year Warranty

Pin-Out Diagram

n/a	n/a	A1	Fz	FCz	P7	T3	F7	O1	P3	C3	F3	Fp1
⑬	⑫	⑪	⑩	⑨	⑧	⑦	⑥	⑤	④	③	②	①
㉕	㉔	㉓	㉒	㉑	⑳	⑲	⑱	⑰	⑯	⑮	⑭	
n/a	A2	Pz	Cz	P8	T4	F8	O2	P4	C4	F4	Fp2	

Cap must follow this DB-25 Pin-out

Dev Kit

Versatile Development Kit

The Dev Kit includes everything you need to undertake EEG experiments and custom hardware development: an 8-channel amplifier, lead wires, CGX dry electrodes with active amplification, and a comfortable headband.

- Soft, washable fabric band with reinforced polymers for a snug, artifact-resistant fit.
- Standalone amplifier attaches to headband, streams via Bluetooth low energy.
- Eight hours of battery life.
- Freely position individual active electrodes to meet your experimentation needs.
- Use with CGX and Skintact sensors.

Headband holds up to 8 active, shielded dry electrode pods.

Dev Kit

Wireless Amplifier

· A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
· Sampling rate 500 samples per second.
· Bandwidth 0-131 with true DC coupling.
· 3-axis accelerometer measures head motion.
· Wireless Range: 10 meters.
· Noise: <1.0 μV RMS from 1-50 Hz, shorted inputs.

Data Stream

· Bluetooth Low Energy.
· Full access to raw data via real-time streaming API.

· Continuous impedance check with real-time monitoring of all channels simultaneous with EEG.
· Export data to .EEG, .BDF, .EDF, or .CSV.
· Compatible with NeuroPype, LabStreaming Layer, EEGLAB, BCILAB, MATLAB, BCI2000, OpenViBE, and more.

Power

· Lithium-ion: 8 hour wireless.

General

· Weight: 80g
· Dimensions: 9 x 8 x 3 cm

Dev Kit

Dev Kit Amplifier
Bluetooth Low Energy Dongle
Passive Ground Lead Wire
9 Active Lead Wires
10 Drypad Sensors
10 Flex Sensors
30 Skintact Sensors
Headband
Carrying Case
3 Year Warranty

Use included Drypad, Flex, or Skintact sensors. Place under headband for a snug fit.

Place Skintact sensors directly on skin.

AIM Physiological Monitor

Add advanced physiological monitoring to your EEG recordings.

Everything you need to measure physiological response. The AIM Physiological Monitor is a compact, sophisticated unit that adds heart rate, temperature, respiration, GSR, PPG/HRV/SpO2 and more to any EEG system.
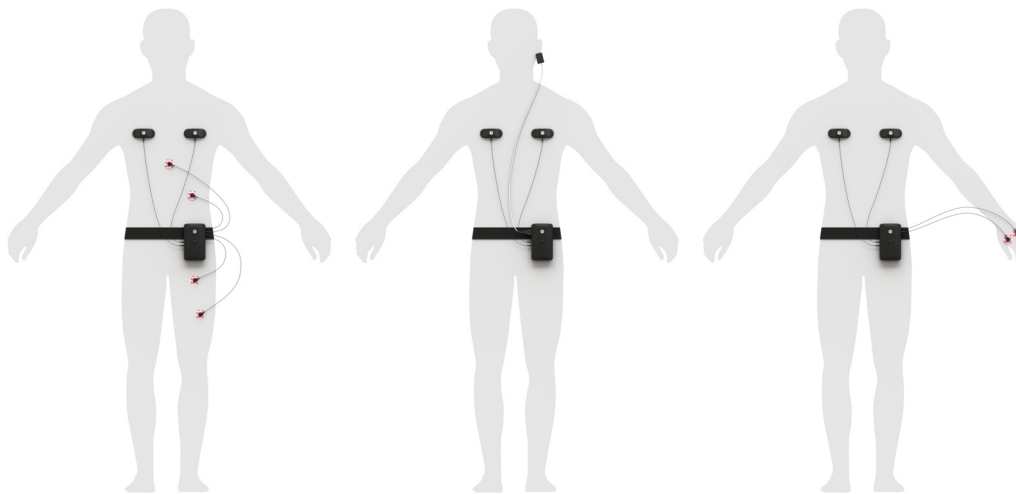
AIM Physiological Monitor

Physiological accessory

- Stream wirelessly via Bluetooth.
- Designed for optimized performance with CGX proprietary physiological sensors.
- Compact design clips onto belt, or sits on surface.
- 5 hours of battery life.

Typical Testing Set-Ups

Included Sensors

PPG/HRV/SpO2

GSR and ExG

Temperature

Respiration

ECG + EMG + Respiration Test
Measure physiological response in a light ambulatory setting, capturing muscle EMG from the leg.

Cardiac Output Test
Measure common cardiac functions for monitoring heart health including blood oxygen saturation, heart rate variability, and respiratory sinus arrhythmia.

Emotional Arousal/Stress Test
Measure emotional arousal in response to presented stimulus. Capture changes in respiration, heart rate, and galvanic skin response.

Aim Physiological Monitor

Wireless Amplifier

- A/D Resolution: 24-bit simultaneous sampling analog-to-digital converters.
- Sampling rate 500 samples per second.
- Bandwidth 0-131 Hz with true DC coupling.
- Wireless Range: 10 meters.
- Noise: <1.0 µV RMS from 1-50 Hz, shorted inputs.

Sensors

- 4-Channel ExG.
- Bioimpedance-based respiration sensor.
- PPG/HRV/SpO2.
- 12-bit solid state temperature.
- GSR (EDA).

Data Stream

- Export saved data in EEG or CSV (text).
- Full LSL streaming support.
- Stream data using the simple API in C, C++, C#, Java, MATLAB or Python.
- Available API allows you to build your own applications.

General

- Rechargeable Lithium-Ion Battery: 5 hour runtime.
- Weight: 190g
- Dimensions: 14 x 8 x 3 cm

AIM Physiological Monitor

AIM Wireless Amplifier
Bluetooth Dongle
11 Passive Lead Wires
PPG/HRV/SpO2 Sensor
Temperature Sensor
Respiration Sensor Set
30 Skintact ECG Electrodes
Carrying Case
3 Year Warranty

PPG/HRV/SpO2 sensor clips to ear.

Small temperature sensor can be placed where most comfortable.

Unique belt-free respiration pads stick directly to skin, permit natural movement.

Four ExG channels can be used for ECG, EOG, EMG

AIM device clips to belt

Wireless StimTrigger

Co-designed by CGX and Cedrus for sophisticated research projects requiring highest wireless synchronization precision.

Mark events precisely with this all-in-one wireless trigger solution. Synchronize with eye trackers and other recorders without the need for software or algorithmic timing compensation.

Wireless StimTrigger

- Accepts light sensors, audio sensors, RB-x40, microphone, and USB.
- m-pod signal mapping assigns any event marker to any output line.
- Wireless broadcasting sends information to a limitless number of in-range receiving systems for multi-subject group research.
- Compatible with virtually all popular triggering and stimulus presentation packages including E-Prime, Presentation, and more.

Works with all CGX systems.

Wireless StimTrigger

Inputs

- Four light sensors (4th light sensor can be used for microphone).
- Microphone for onset of vocal response.
- Audio in/out pass-through for auditory stimuli.
- Cedrus RB-x40 response pad.
- USB Input for event codes.
- External TTL input.

Wireless Output

- Resolution: 16-bit simultaneous Event Marker data.
- Timing and Latency: <2-6ms depending on protocol and software with minimal jitter.
- Wireless Protocol: Proprietary 2.4 GHz.
- Wireless Range: 20 meters.
- Compatible with all CGX systems.

Built-in Outputs

- Direct TTL output.
- Audio in/out pass-through.
- Time-stamped output via USB.
- Configurable output.
- Compatible with over a dozen popular recording devices via Cedrus m-pods with support for up to 3 simultaneous m-pods.

Power
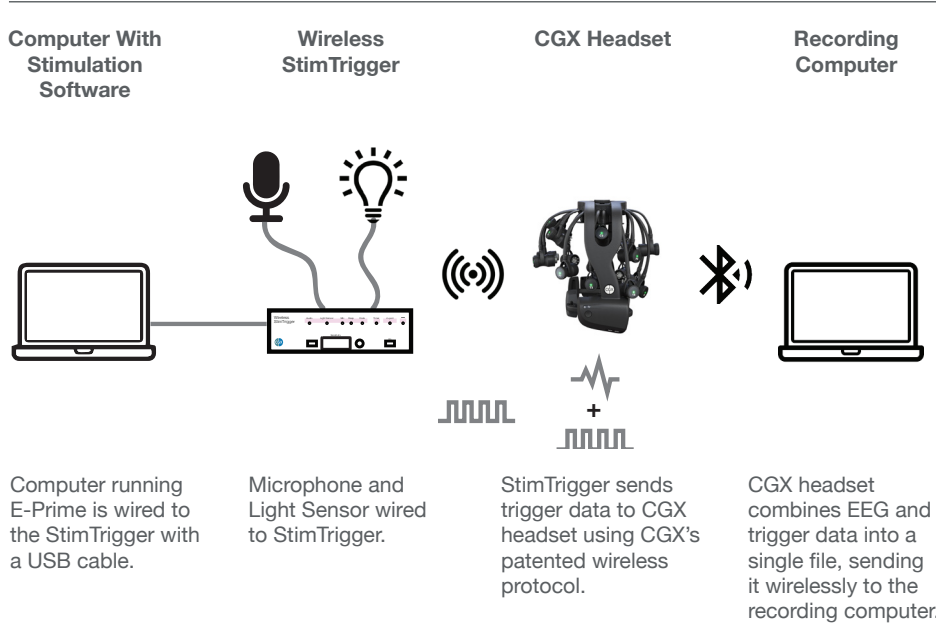
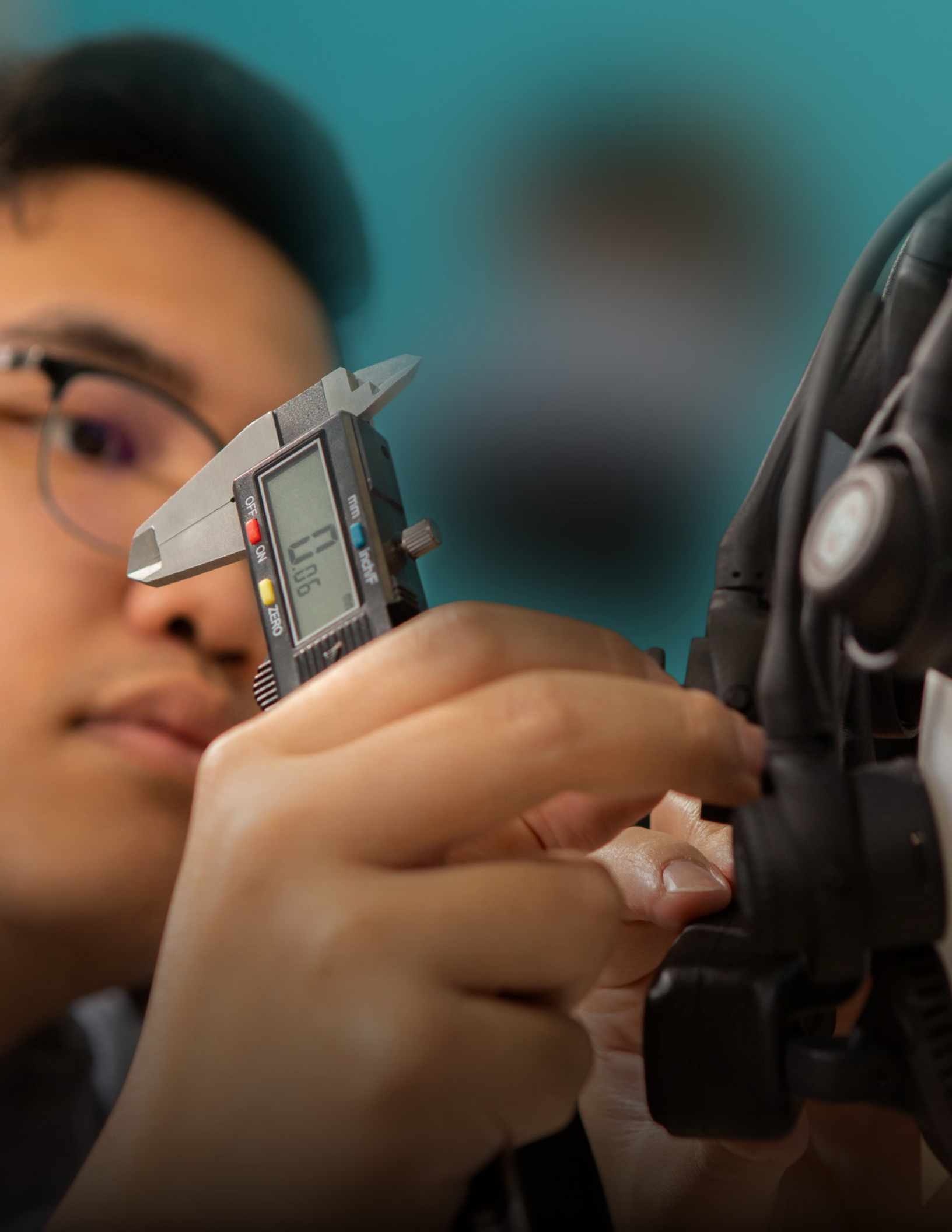- Input: 100-240V AC, 50-60hz, 1.0-0.5A Output: 9V DC, 2.0A

General

- Weight: 525g
- Dimensions: 18 x 14 x 6 cm

Wireless StimTrigger

Wireless StimTrigger
Two Light Sensors with Replacement Adhesives
One 3.5mm Audio Cables
USB Cable
Power Adapter
Carrying Case
Manual
1 Year Warranty

Example Connection Diagram

Computer With Stimulation Software	Wireless StimTrigger	CGX Headset	Recording Computer

Computer running E-Prime is wired to the StimTrigger with a USB cable.

Microphone and Light Sensor wired to StimTrigger.

StimTrigger sends trigger data to CGX headset using CGX's patented wireless protocol.

CGX headset combines EEG and trigger data into a single file, sending it wirelessly to the recording computer.

TECHNOLOGY OVERVIEW

Overcoming Dry System Challenges

Challenge 1: High Impedance

Dry systems make contact through hair without using gel or adhesive to secure the electrode. Removing gel increases impedances.

Challenge 2: Noise

Noise is caused by movement, electrical interference, and electrochemical interference.

The Solution

A successful dry EEG system is the sum of its parts: specific sensor design coupled with a flexible, yet comfortable mechanical solution, driven by a purpose-driven electrical system.

All three of these components — the sensors, headset mechanics, and amplifier — are designed as a system for best performance, as explained below.

Superior Sensor Design

We design our patented sensors in-house. Headsets use two interchangeable designs: Drypad sensors for direct skin contact, and Flex sensors to part hair, making contact with the head.

Sensors are coated in our bio-compatible conductive material, and are rated for 200 uses each.

Drypad Sensor

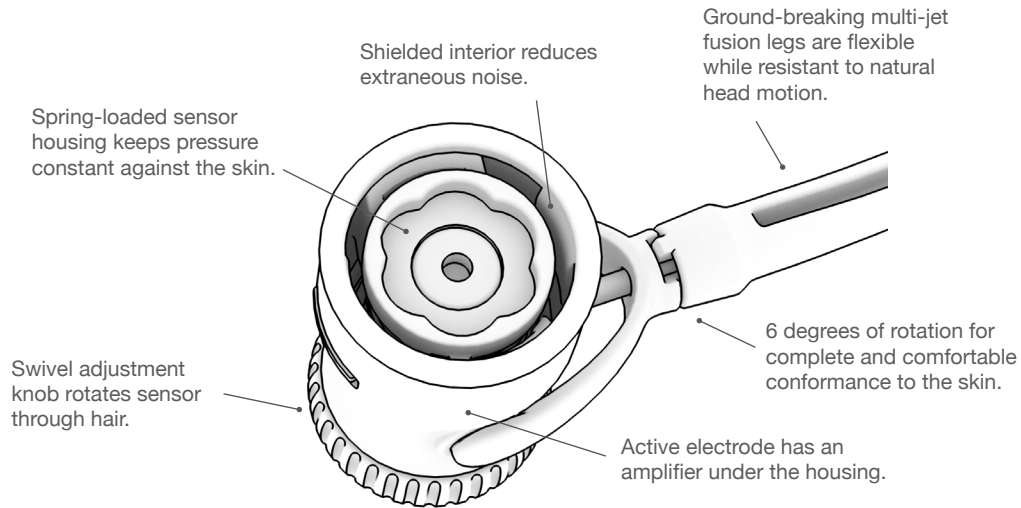For direct skin contact. Durable design rated for 200 uses.

Flex Sensor
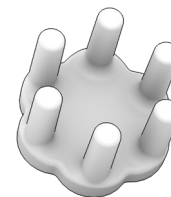
Comfortable legs slide easily between hair to make good contact on the scalp.

TECHNOLOGY OVERVIEW

Exacting Mechanical And Electrical Design

Having the sensor make good contact with the scalp is critical for low impedance measurements. That's why we design the sensors, pods, and legs concurrently.

Quick System Leg And Pod Design

Shielded interior reduces extraneous noise.

Ground-breaking multi-jet fusion legs are flexible while resistant to natural head motion.

Spring-loaded sensor housing keeps pressure constant against the skin.

6 degrees of rotation for complete and comfortable conformance to the skin.

Swivel adjustment knob rotates sensor through hair.

Active electrode has an amplifier under the housing.

A Truly Mobile Experience

The benefits of CGX dry technology are clear when experimentation requires untethered data gathering.

Our "systems approach" to design gives you an EEG headset tolerant of real-world environments.

On-Board Impedance Checking

Quick Series headsets have on-board impedance checking for confident set-up and subject monitoring.

LED light on pod turns green when measured impedance is below 2,500 kΩ, turns red when impedance is above 2,500 kΩ.
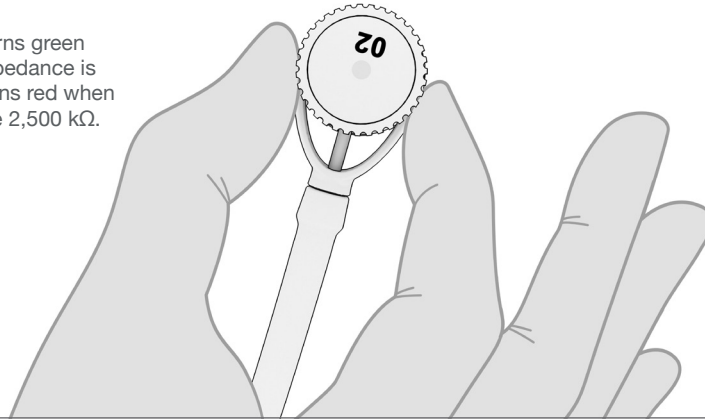
Operator And Subject Experience

CGX Dry EEG Headsets provide a superior experience for both operator and subject.

	Traditional Wet Caps	CGX Dry Headsets
Prep And Clean	**Several Hours** 10 min. prep, 10-40 min. sensor set-up, 20 min. cleaning, several hours drying time per cap.	**10 Minutes** No prep, 1-8 min. sensor set-up, 2-5 min. cleaning.
Comfort	**Low** Painful sensor placement, gel is messy and uncomfortable.	**High** Comfortable with 60 min. wear time.
Subject Experience	**Fair**	**Good**
Best For	· When subject's comfort is a low consideration · Low throughput investigational projects · Laboratory-only environments · Highly skilled technicians · Few or no time constraints · Ultra-high density arrays	· When the subject's comfort is important · High throughput applications · Self-donning unsupervised applications · Laboratory and real-world environments · Real-world time constraints
3-Year System Cost	**Moderate**	**Approx. 15% Higher Than A Wet System**
Raw EEG Signal Quality Resting Conditions	**High Quality** Alpha, Beta, Gamma, Theta **Moderate Quality** Delta *Requires scalp abrasion*	**High Quality** Alpha, Beta, Gamma, Theta **Moderate Quality** Delta *Dry systems have elevated noise at frequencies below 1 Hz. Mitigated by hydrating sensor tips*
EFP Signal Quality	**High**	**Comparable To Wet**

Comparing Dry Systems To Wet

We built a testing unit comparing real-time, concurrent wet and dry performance.

Test Unit

A custom-built, dual-mode headset concurrently recording EEG from a CGX Dry system and a high-quality traditional gel-based sensor. We measured a single CGX Dry sensor vs. the average of two wet electrodes (minimizing spatial displacement effects).

Two wet electrodes placed on either side of a CGX Dry electrode
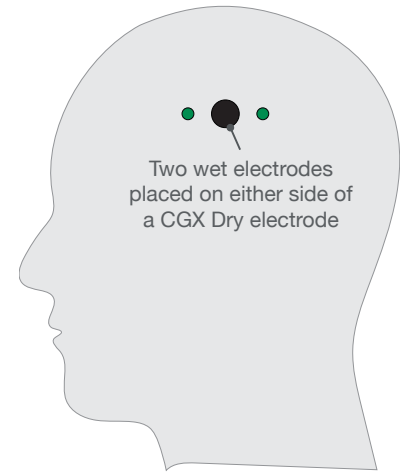
Protocol

· Test multiple subjects capturing real-world performance while minimizing experimental variability effects.
· Record simultaneous signals from dry and wet electrodes.
· Examine 10 second raw EEG and evoked potential (50 odd trials, 150 normal trials).
· Repeat swapping dry electrode under test with wet for control data.

Oddball Experiment

● Wet Electrode
● CGX Dry Electrode

Normal Tone: 150 Trials; Odd Tone: 50 Trials

Normal Tone

Wet vs. Dry

r = 0.93

Odd Tone

r = 0.95
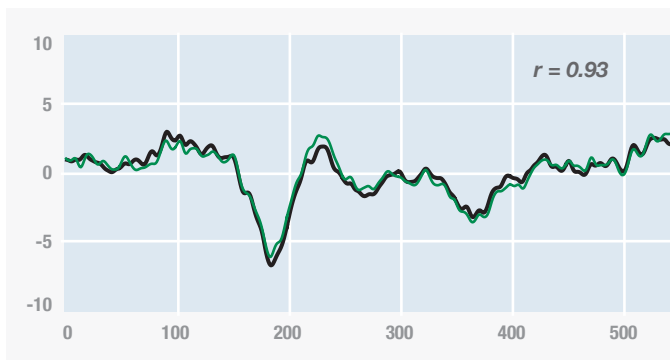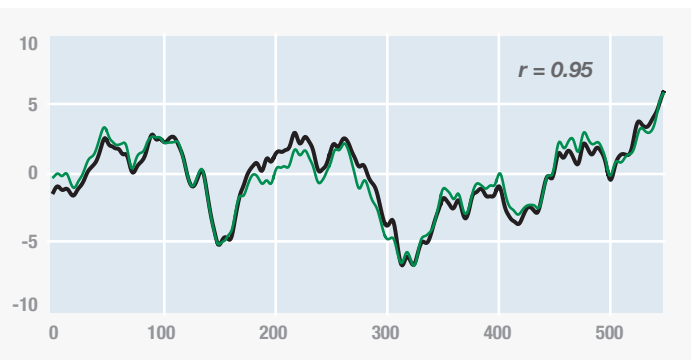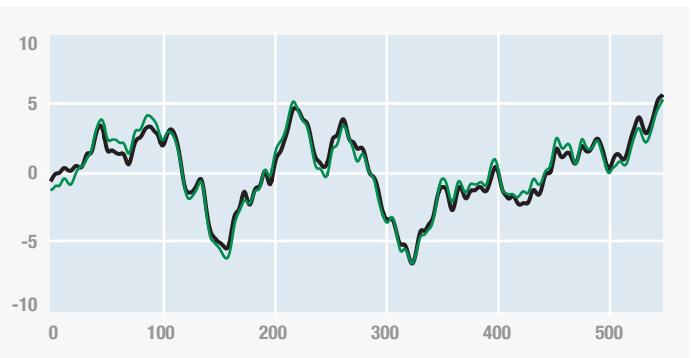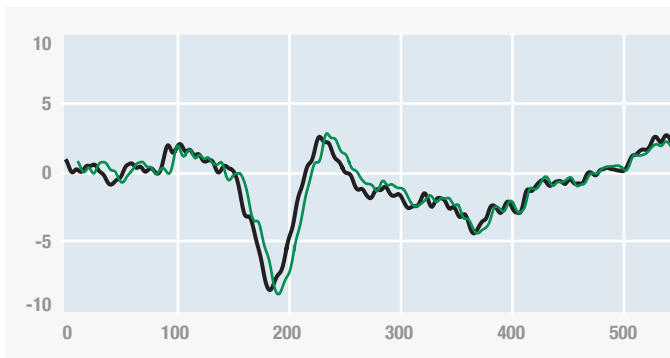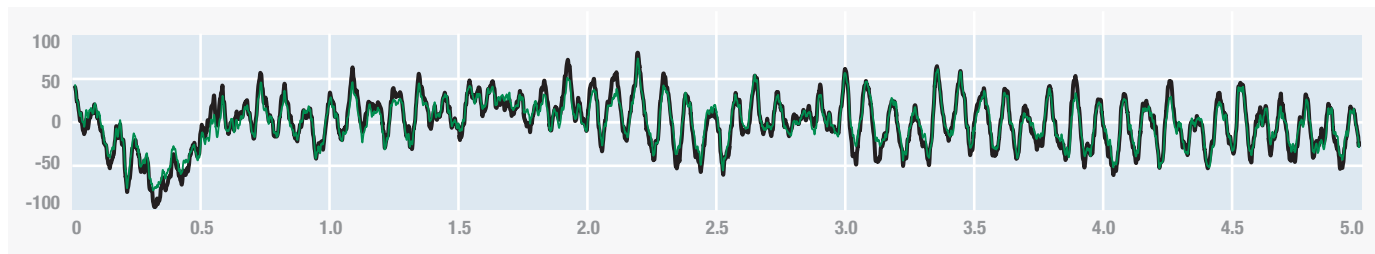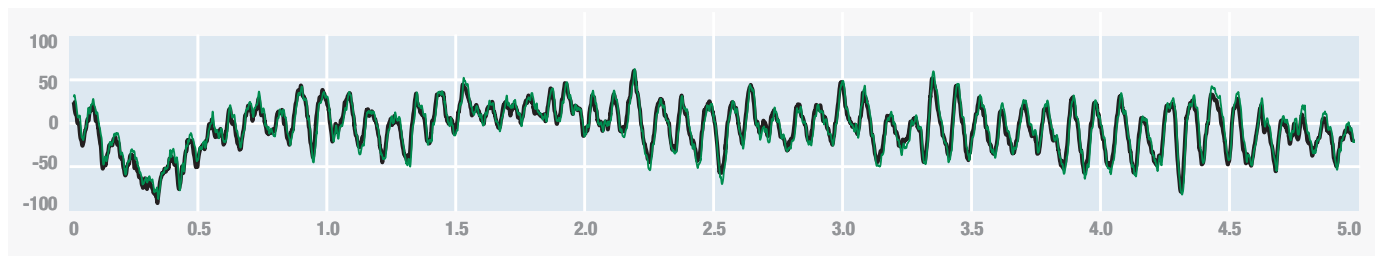
Wet vs. Wet

Wet vs. Dry and Wet vs. Wet

Device: CGX Quick-20. Resolution: 24-bits, 1,000 sps. Bandwidth: Raw 0.4-100 Hz

Wet vs. Dry

Wet vs. Wet

Correlation Results

Wet/Dry and Wet/Wet results show excellent correlation.

	Raw EEG		AEP Normal		AEP Oddball	
	r-Dry	r-Wet	r-Dry	r-Wet	r-Dry	r-Wet
S1	.90	.95	.99	.99	.98	.99
S2	.95	.98	.93	.96	.95	.98
S3	.96	.97	.97	.99	.96	.98
S4	.97	.99	.97	.98	.94	.99
S5	.93	.98	.93	.98	.95	.97
S6	.97	.99	.97	.98	.94	.97
Mean	.95	.98	.96	.98	.95	.98

EEG/ERP Bandwidth

Device: Quick-20. Resolution: 24-bits, 1000 sps. Power spectrum over 5 min

Power (µV/Hz½) vs Frequency (Hz)
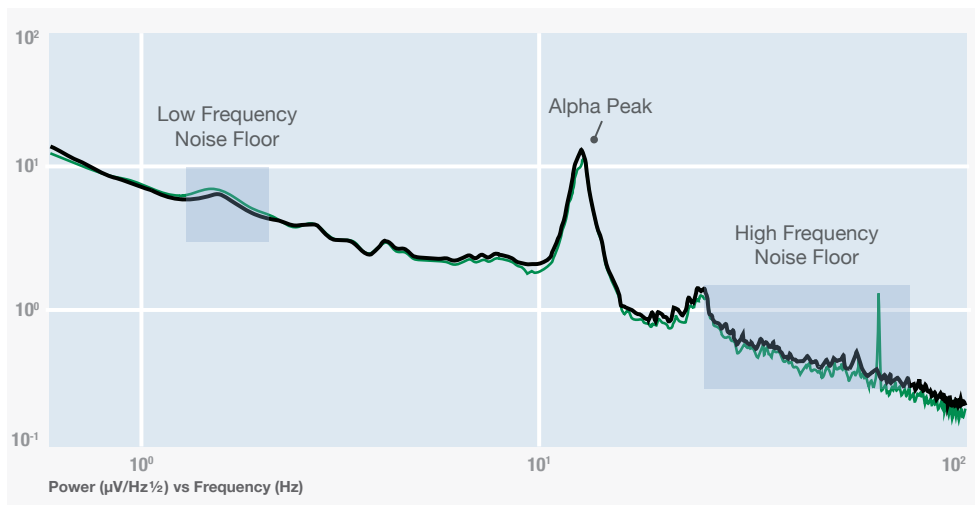
Headsets And Devices

3 year warranty on manufacturing for headsets and devices. 1 year warranty on Patch EEG, Wireless StimTrigger. Warranty is void if the device has been opened or tampered with.

Accessories

1 year warranty on manufacturing defects. 90 day warranty on lead wires and lead wire bundles.

Returns

All units returned to CGX for repair and assessment must have an RA number, issued by CGX. CGX will pay outbound shipping costs.

Ship all returns with an RA number to:

CGX
Attn: Service
8445 Camino Santa Fe, #213
San Diego, CA 92121