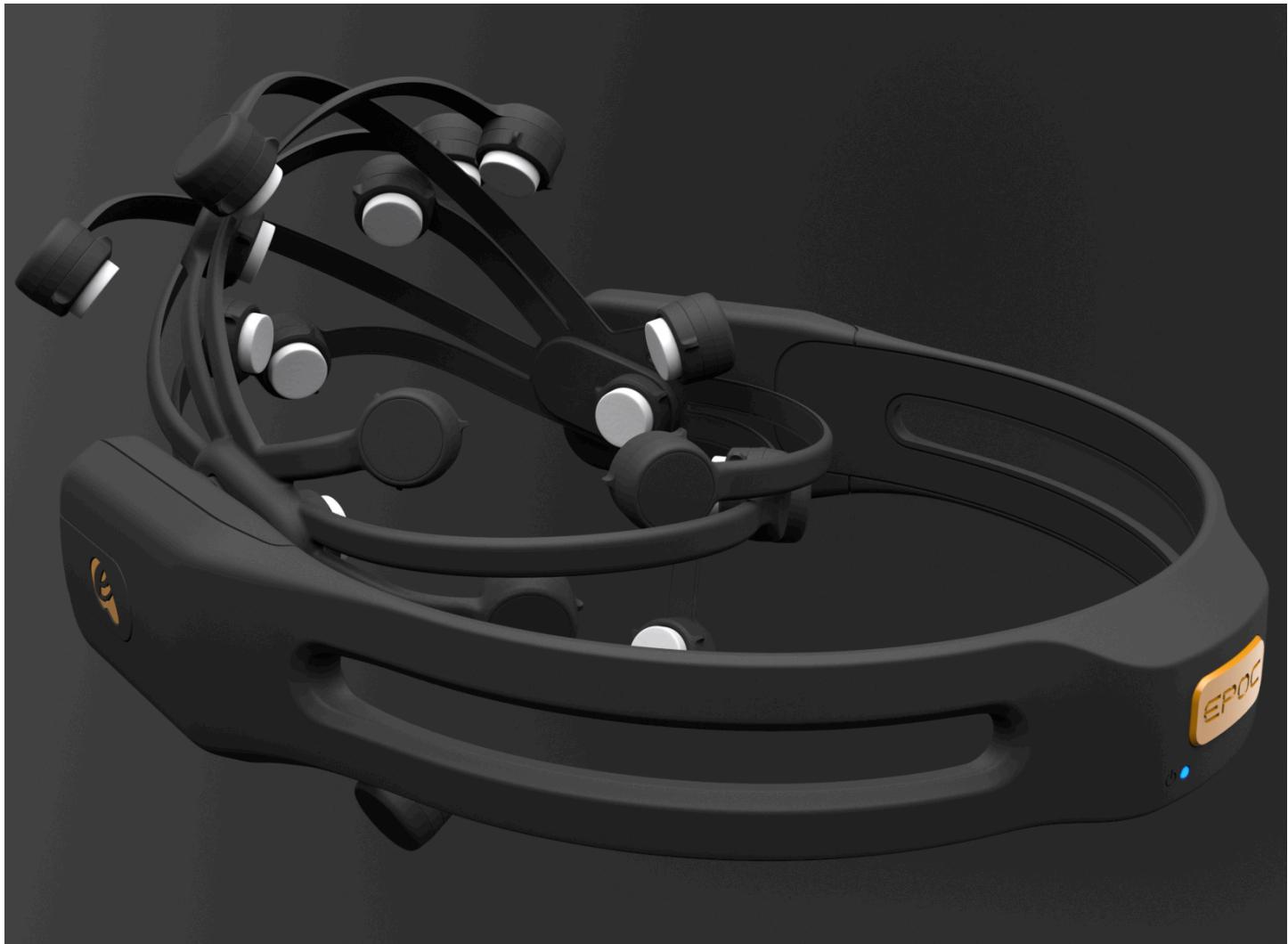


EMOTIV

# EPOC



EPOC SPECIFICATIONS



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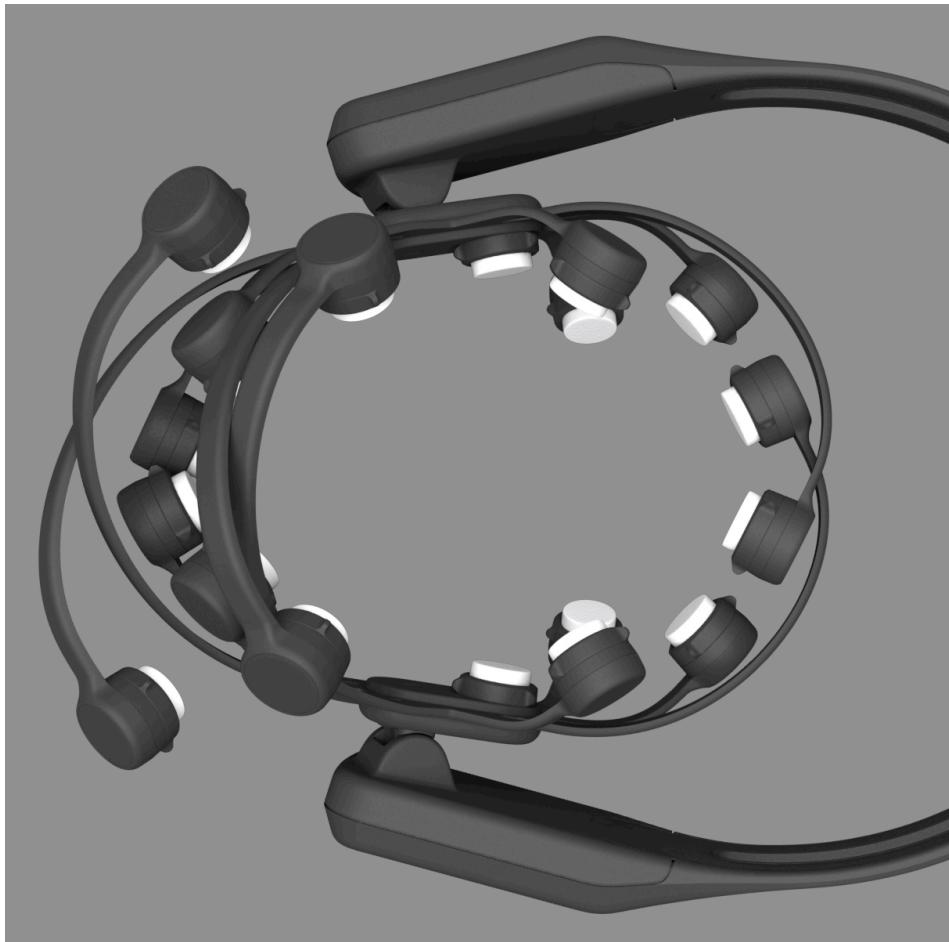


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EPOC Neuroheadset



# Emotiv Detection Suites



*A high-fidelity, 14-channel wireless neuroheadset, designed for human computer interaction.*

## Emotiv Detection Suites

The Emotiv EPOC is a high resolution, multi-channel, wireless neuroheadset which has been developed to provide a revolutionary new personal interface for human computer interaction.

### Affectiv™ Suite

The Affectiv suite monitors the user's emotional states in real-time. It enables an extra dimension in interaction by allowing the computer to respond to a user's emotions. Characters can transform in response to the user's feeling. Music, scene lighting and effects can be tailored to heighten the user's experience in real-time. The user's state of mind can be monitored so that difficulty can be tailored and adjusted to suit each situation.

The Affectiv suite can be combined with other inputs such as eye tracking devices to provide real-time feedback from the entire user experience for neuromarketing applications. Adaptive interfaces can monitor user engagement, boredom, excitement, frustration and meditation level in real time.

### Cognitiv™ Suite

The Cognitiv suite reads and interprets a user's conscious thoughts and intent. Users can manipulate virtual or real objects using only the power of their thought! For the first time, the fantasy of magic and supernatural power can be experienced.

### Expressiv™ Suite

The Expressiv suite uses the signals measured by the neuroheadset to interpret player facial expressions in real-time. It provides a natural enhancement to interaction by allowing characters to come to life. When a user smiles, their avatar can mimic the expression even before they are aware of their own feelings. Artificial intelligence can now respond to users naturally, in ways only humans have been able to until now.

### Develop for the Emotiv EPOC™

To develop your own applications for the EPOC, license an SDK to obtain our proprietary software toolkit that exposes our APIs and detection libraries.



# Emotiv EPOC Neuroheadset

EMOTIV EPOC HEADSET	
Number of channels	14 (plus CMS/DRL references, P3/P4 locations)
Channel names (International 10-20 locations)	AF3, F7, F3, FC5, T7, P7, O1, O2, P8, T8, FC6, F4, F8, AF4
Sampling method	Sequential sampling. Single ADC
Sampling rate	128 SPS (2048 Hz internal)
Resolution	14 bits 1 LSB = 0.51µV (16 bit ADC, 2 bits instrumental noise floor discarded)
Bandwidth	0.2 - 45Hz, digital notch filters at 50Hz and 60Hz
Filtering	Built in digital 5th order Sinc filter
Dynamic range (input referred)	8400µV (pp)
Coupling mode	AC coupled
Connectivity	Proprietary wireless, 2.4GHz band
Power	LiPoly
Battery life (typical)	12 hours
Impedance Measurement	Real-time contact quality using patented system

**EMC and Telecom:** Class B

ETSI EN 300 440-2 V1.4.1

EN 301 489-1

EN 301 489-3

AS/NZS CISPR22 :2009

AS/NZS 4268 :2008

FCC CFR 47 Part 15C (identifiers XUE-EPOC01, XUE-USBD01)

**Safety:**

EN 60950-1:2006

IEC 60950-1:2005 (2nd Edition)

AS/NZS 60950.1:2003 including

amendments 1, 2 &amp; 3

CB Certificate JPTUV-029914 (TUV  
Rheinland)