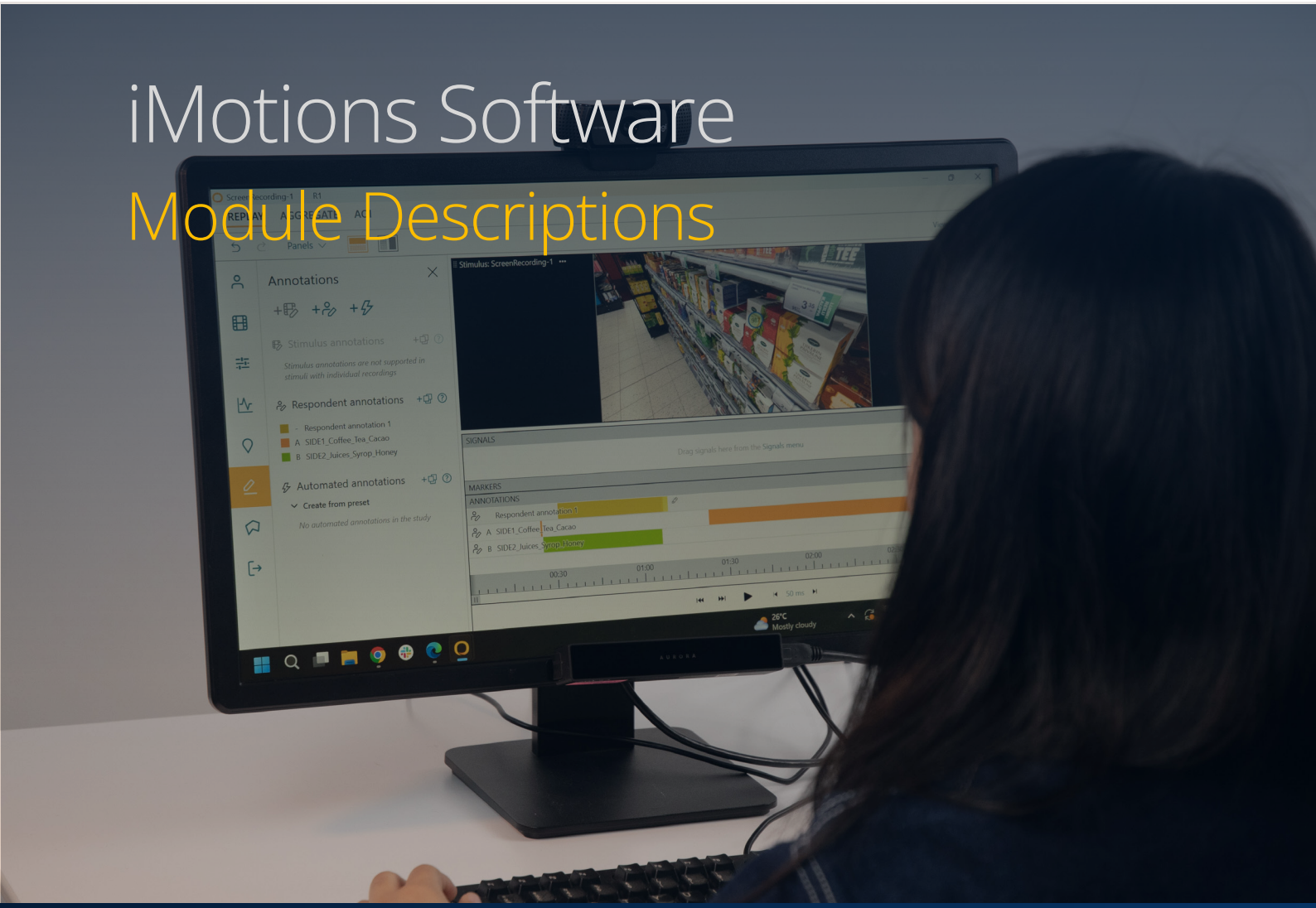
iMotions Software

Module Descriptions



Valid as of April 2026

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

iMotions Software Modules

Software licenses:

- Individual modules can be activated and deactivated to meet your specific needs.
- Each license enables installation of iMotions software on a single computer.
- Licenses can be used without limitations on respondents, data storage, users, etc.
- You own your data.

Platforms

iMotions Core Platform

Prerequisite to integrate any module. Create studies, display stimuli, complete surveys, record from a camera, import and export all data, connect through API, LSL, and more.

iMotions Remote Data Collection Platform

Extension of the iMotions Core Platform, enables remote data collection. Deploy studies, manage participant workflows, ensure data integrity with automated quality checks, and securely transfer data via encrypted channels.

Modules

Module: Eye Tracking - Screen-Based

Integrate screen-based eye trackers from most major vendors, carry out analyses such as AOI creation, heatmaps, data segmentation, and gaze mapping to understand visual responses to screen-based stimuli.

Module: Eye Tracking - Glasses

Integrate a range of eye tracking glasses, carry out advanced analysis and automated gaze-mapping to understand visual attention in natural environments.

Module: Eye Tracking - VR

Capture, visualize, analyze, and export eye tracking data from VR eye tracking headsets.

Module: Eye Tracking - Webcam based

Based on state-of-the-art technology iMotions WebET 3.0, for accurate and robust webcam eye tracking.

Module: Affectiva

Collection and analysis of facial expressions using Affectiva module and webcam. Get information such as valence, engagement, landmarks, basic expressions, interocular distance, and head orientation.

Module: EDA/GSR

Collection of EDA/GSR data related to physiological arousal. Automatic peak detection, and other data available.

Module: Voice Analysis

Analyze aspects of voice such as pitch, tone, rhythm, emotion analysis and emotional valence.

iMotions Software Modules

Module: Respiration

Capture, analyze, and export respiration data. Apply R notebooks for data filtering and respiration peak detection.

Module: EEG

Connection to a wide variety of EEG headsets. Collect, visualize, and report signals from the brain.

Module: ECG

Collect, visualize, and export raw electrocardiogram (ECG).

Module: EMG

Collect, visualize, and export raw electromyography (EMG or fEMG) signals.

Module: Automated AOIs

Create automated areas of interest for Eye Tracking studies

Module: GPS

Receive and visualize satellite-based location, speed, and course data from GPS, GLONASS, and Galileo networks within iMotions desktop.

Module: fNIRS

Synchronized recording of functional near-infrared spectroscopy data via LSL, combinable with other modalities for multimodal research.

Module: Motion Capture

Post-process respondent camera videos to extract body and hand landmark data, movement metrics, and skeleton overlays using R notebooks.

Module: Multiface Facial Expression Analysis

Measure facial expressions of multiple faces simultaneously via webcam using Affectiva cloud processing, as an add-on to the Affectiva Module.

Analysis license software

Analysis Only License - No Data Collection

The iMotions Analysis-Only License provides access to analysis capabilities and study creation without post-processing for specific modules.

- Enables all analysis capabilities except post-processing for the Affectiva Facial Expression Analysis Module and audEERING Voice Analysis Module
- Allows users to create and preview studies that can be transferred to iMotions Core
- Can be used remotely from iMotions Core

Note: Only sold as an add-on to iMotions Core.

iMotions Student License Bundle

The iMotions Student License Bundle provides sets of five specialty licenses for lab managers and university labs to distribute to students.

- *Enables students to set up and analyze studies in iMotions without purchasing additional Core licenses; license keys are transferable across students and not tied to a physical lab space, helping free up lab time for data collection*
- *Configured for study setup and analysis only; does not support data collection*
- *Does not allow post-processing capabilities for the Affectiva Facial Expression Analysis Module or the audEERING Voice Analysis Module, and does not include technical or CSM support*

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

iMotions Software Platforms Features

The features for each software module are detailed below.

iMotions Core Platform

Prerequisite to integrate any module

Study Design:

- Build advanced study designs by point and click
- Support within- and between-subject designs, randomizations, block designs, etc.
- Have the same interface for a variety of study designs like screen based studies, simulator studies, VR, behavioural studies, interviews and focus groups, ecologically valid studies with glasses, testing on a mobile phone and many more.

Stimuli Presentation:

- Multimedia capabilities including images, videos, live websites, surveys, mobile phone apps, software interfaces, gaming, VR, etc. Up to 3 camera feeds are supported.

Data Collection:

- Respondent management
- Real-time data viewing (raw data & metrics)
- Behavioral observation data from camera, mouse-clicks, and key strokes
- Capture respondent activity with facial and environmental cameras

Markup & Annotations:

- Create live or post-processing markers with annotations
- Segment data automatically based on markers created by researchers, through iMotions signal processing algorithms or events sent externally.

Data Analysis:

- Variety of automated features and easy-to-use tools
- Moment-to-moment visualization of raw and aggregated data
- Summary scores across multiple modalities

Data Import / Export:

- Export raw data, videos, summary metrics and data visualizations on video and static stimuli, etc. Import external data sources for visualization / synchronization

Face / Environment / Scene Camera:

- Includes ability to record respondent's face and / or environment from up to three different camera feeds
- Record and view the scene to define moments of interest

API

- Input / output API: UDP or TCP/IP connection can be used to stream data live into and from 3rd party software/hardware. Integrate almost any device, and send data live into iMotions for full synchronization
- Post Import Data: Upload externally recorded data for analysis within iMotions software (e.g. sensor recordings or video obtained by camera)
- TTL trigger for sending integration signals via other programs for synchronization accuracy
- LSL (Lab streaming layer) integration options for receiving timeline signals real-time from any LSL supported device. Integrate even more devices into iMotions.

Survey

- Program and launch surveys in conjunction with, or separately from biosensor recordings
- Multiple choice, scale, and open-end question types, customizable with rich text, images, and color, etc.
- Set advanced logic features to get stratified survey responses.

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

iMotions Remote Data Collection Platform

Prerequisite to integrate Webcam Eye Tracking and Webcam Respiration modules. w

iMotions RDC is an extension of the Core Platform.
All Core capabilities—including data synchronization, annotation tools, survey integration, and export formats—are fully supported for remote sessions.

Study Design:

- Study Design:
- Full study design capabilities via iMotions Core (desktop-based builder)
- Supports randomizations, block designs, within-/between-subject formats
- Integrated participant management

Stimuli Presentation:

- Present images, videos, surveys, websites, and custom content
- Delivered via a browser-based participant experience—no installation required
- Compatible with modern browsers (Chrome, Firefox, Edge) on laptop/desktop
- Supports up to 3 video feeds, including webcam-based monitoring

Data Collection:

- Remote recording via participant's webcam and microphone
- Supports webcam-based eye tracking, facial expression analysis, voice analysis, and respiration analysis
- Secure and synchronized upload to iMotions Core for analysis

Survey

- Fully supported within remote sessions
- Program and launch surveys in conjunction with, or separately from biosensor recordings
- Multiple choice, scale, and open-end question types, customizable with rich text, images, and color, etc.

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

iMotions Software Modules Features

Module: Eye Tracking - Screen-Based

Prerequisites: iMotions Core & Eye Tracking Hardware

- Integration with 20+ eye tracking models from a range of vendors such as SMI, EyeTech, GazePoint, Smart Eye etc.
- Advanced analytic tools for screen-based multimedia stimuli (images, videos, websites, games, software interfaces and 3D environments)
- Integrated quality assurance tools
- Real-time gaze replays and automated metrics such as dwell time, respondent ratio, revisits, fixation count, mouse clicks, key strokes, etc.
- Website aggregation supported with Chrome, Firefox and Edge
- Static and dynamic areas of interest (AOIs) and heat maps
- Automated and real-time metrics such as time to first fixation, dwell time, ration, revisits, fixation count, mouse clicks, etc.
- Export all raw data and metrics
- Scene video recording, segmentation, and editing
- Mobile device testing via mobile stand
- Automated gaze mapping on websites, both on screen and mobile phones for fast and automatic analysis

Module: Eye Tracking - Glasses

Prerequisites: iMotions Core & Eye Tracking Glasses Hardware

- Connection to eye tracking glasses such as Pupil Labs Glasses (Core, Invisible and Neon)
- Post-Import glasses data directly from Argus Science ETVision, and Viewpoint VPS
- Live streaming for qualitative insights and advanced analytic tools for insights in real-world environments
- Integrated quality assurance tools
- Individual & aggregate gaze replays for gaze mapped stimuli
- Static & dynamic areas of interest (AOIs) and heat maps, with manual and semi-automated options
- Automated metrics such as Time to First Fixation, Dwell Time, Respondent Ratio, Revisits, Fixation Count,
- Gaze mapping allows for automating aggregate views of in-person shelf testing.
- Raw data including X,Y coordinates on scenes and pupillometry (if data is available from the sensor)

Module: Eye Tracking - VR

Prerequisites: iMotions Core & VR headset with built-in eye tracking

- Connection to Vive Pro Eye, or Varjo Aero, VR- or XR- series headsets for built-in eye tracking
- Live streaming VR environments with eye tracking data
- Integrated quality assurance tools
- Live visualizations of eye tracking inside iMotions
- Individual replays
- Gaze-mapping onto static images
- Static image and dynamic AOI's and heat maps
- Live stream X, Y co-ordinates into iMotions
-
-
-
-
-

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

Module: Webcam Eye Tracking

Prerequisites: iMotions Core & Webcam

- Connection via webcam
- Display dynamic or static gaze paths as fixation points or heatmaps
- Create visualization reports
- Calculate fixation points with Hidden Markov Models
- Access 35 metrics related to eye movements, including amplitude, dispersion, velocity, and more
- Add fully customizable AOIs to images and videos
- View 12 further metrics related to fixations (TTFF, dwell, revisit and more)w
- Access fundamental stimuli data and mouse action data
- Export and download all data for further exploration and analysis

Module: Affectiva

Prerequisites: iMotions Core & Webcam

- Connection to Affectiva Module via wewbcam
- Measure facial expressions towards screen-based or physical stimuli
- Import externally recorded videos for post processing of facial expressions
- Integrated quality assurance tools
- Valence: Positive, negative, or neutral response, adaptive valence
- 7 Basic emotions: Joy, Anger, Surprise, Fear, Sadness, Disgust, Contempt, plus new metrics Confusion and Sentimentality
- Blink detection and blink rate calculation
- Integrated R-notebooks for automated event marker creation, thresholding and aggregation for advanced behavioural coding
- Engagement: Overall expressiveness - is respondent neutral or engaged, adaptive engagement
- 21 Facial Expressions: Attention, Brow Furrow, Brow Raise, Inner Brow Raise, Eye Closure, Nose Wrinkle, Upper Lip Raise, Lip Suck, Lip Pucker, Lip Press, Mouth Open, Lip Corner Depressor, Chin Raise, Smirk, Smile, Blinks, Speaking
- Interocular Distance: Distance between two outer eye corners for estimation of distance from screen
- Head Orientation: Head rotation as yaw (up/down), pitch (left/right), and roll

Module: EDA/GSR

Prerequisites: iMotions Core & EDA/GSR Hardware

- Connection to Shimmer3 EDA/GSR+ sensor, BIOPAC / Bionomadix EDA/GSR sensor, or PLUX Biosignals EDA/GSR sensor
- Potential compatibility with any Lab Streaming Layer (LSL) supported EDA/GSR sensor
- Integrated R-Notebooks for automatic peak detection, signal quality assessment, binned aggregation, and epoching as well as automated event markers of GSR activity for advanced behavioral coding
- Connect multiple EDA/GSR devices on one iMotions software license
- Integrated quality assurance tools
- Collect, visualize, and export raw signals
- Battery level and signal strength visualizations
- Automatic Peak Detection with integrated R-notebooks
- Connect up to 6 Shimmer devices on one iMotions software license

Module: fNIRS

Prerequisites: iMotions Core & fNIRS Hardware

- Connect to supported fNIRS devices via Lab Streaming Layer (LSL) for synchronized recording with other data streams
- Combine fNIRS data with other modalities in iMotions such as EEG, eye tracking, and physiological sensors
- Export data in .csv format for use within iMotions workflows and .snirf format for compatibility with established fNIRS analysis tool boxes for multimodal research

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

Module: EMG

Prerequisites: iMotions Core & EMG Headset Hardware

- Connection to Shimmer3 EMG sensor BIOPAC / Bionomadix EMG sensors or PLUX Biosignals EMG sensors
- Potential compatibility with any Lab Streaming Layer (LSL) supported EMG sensor
- Integrated R-Notebooks for signal processing, smoothing and normalizing EMG data, and the detection/ characterization of muscle contractions
- Automated event marker generation of muscle activation for advanced behavioral coding
- Collect, visualize, and export raw electromyography (EMG) signals associated with muscular contractions used for facial EMG and / or dynamic human movement research

Module: EEG

Prerequisites: iMotions Core & EEG Headset Hardware

- Connection to a variety of leading electroencephalogram (EEG) headsets including Advanced Brain Monitoring, Neuroelectrics Enobio, ActiCHamp and OpenBCI; and potential compatibility with any Lab Streaming Layer (LSL) supported EEG headset
- Collect, visualize and export high-fidelity raw EEG signals
- Access raw signals and automated analysis tools
- Battery level, signal strength, and impedance visualizations
- Integrated quality assurance tools
- Integrated R-Notebooks for the automatic calculation of Frontal Asymmetry, Power spectral density and EEG intersubject correlation
- Connection to a variety of leading electroencephalogram (EEG) headsets
- Access raw signals and automated analysis tools
- Integrated quality assurance tools
- Automatic calculation of frontal asymmetry with integrated R-notebooks
- Built-In Impedance Checker and Benchmark Task Battery for calculation of proprietary BrainState metrics (ABM Headsets Only)

Module: Voice Analysis

Prerequisites: iMotions Core

- Connection to audEERING's devAIce algorithm
- Automated event marker generation of voice detection for advanced behavioral coding
- Integrated R-Notebooks for the summarization of emotional voice data
- Voice activity detection
- Emotion models - both categorical (e.g. happy, sad) and dimensional (e.g. activation, valence)
- Prosody analysis (fundamental frequency, loudness, speaking rate, intonation)
- Speaker attribute model (age and predicted gender)
- Markers can be automatically created when voice is detected
- Collect, visualize, analyze, and export both processed and raw data

Module: ECG

Prerequisites: iMotions Core & ECG Hardware

- Connection to Shimmer3 ECG sensor, BIOPAC / Bionomadix ECG sensors, or PLUX BioSignals ECG sensor
- Battery level and signal strength visualizations
- Potential compatibility with any Lab Streaming Layer (LSL) supported ECG sensor or Low-Energy Bluetooth ECG sensor like the Polar Belt
- Integrated R-Notebooks for calculating heart rate BPM and heart rate variability via multiple methods
- Collect, visualize, and export raw electrocardiogram (ECG) signals associated with cardiovascular activity

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

Module: Webcam Respiration

Prerequisites: iMotions Core

- Connection via webcam
- Collect, visualize, analyze, and export both processed and raw data
- Apply notch filtering
- Integrated R-Notebooks for automatic breath detection, filtering, and calculation of respiration rate,cycle count, rate and duration

Module: Respiration

Prerequisites: iMotions Core & Respiration Hardware

- Connection to BIOPAC and PLUX Biosignals respiration sensors
- Potential compatibility with any Lab Streaming Layer (LSL) supported respiration sensor
- Collect, visualize, analyze, and export both processed and raw data
- Apply notch filtering
- Integrated R-Notebooks for automatic breath detection, filtering, and calculation of cycle count, rate and duration

Module: Automated AOIs

Prerequisites: iMotions Core & any Eye-tracking module

- Automated AOIs utilize computer vision to define AOIs on dynamic stimuli for automated tracking.
- Input frames are required for tracking, with options for multiple frames when objects change during the recording. The masking feature enables precise object selection, with corrective tools for refinement
- Processing can be optimized by defining time ranges and skipping unnecessary frames
- Once completed, AOIs can be reviewed and adjusted using keyframes. For greater accuracy, re-processing with new input frames or time ranges is also possible
- AOIs can be manually adjusted based on object visibility
- Keyframe-based editing ensures tracking transitions across frames, and AOIs can be customized for different stimuli, including mobile and VR recordings

Module: Motion Capture

Prerequisites: iMotions Core

- Post-process respondent camera videos to identify body and hand landmarks, with skeleton overlay displayed in the camera video
- Receive position data for body landmarks such as wrists, shoulders, hips, and ankles in 2D and 3D
- Analyze movement onset and offset using an R notebook
- Analyze movement speed, acceleration, and body angles using an R notebook
- Export all raw data and calculated metrics

Module: GPS

Prerequisites: iMotions Core

- Receive location, speed, and course time series data from satellite positioning networks including GPS, GLONASS, and Galileo
- Support devices using the NMEA protocol that communicate via USB with the computer running iMotions desktop software
- Visualize recorded navigation data within iMotions using online map services such as OpenStreetMap

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

Module: Multiface Facial Expression Analysis

Prerequisites: iMotions Core & Facial Expression Analysis module

- Connect via webcam through the Affectiva Module to measure facial expressions toward screen-based or physical stimuli, and import externally recorded videos for post-processing.
- Use cloud-based processing for rapid analysis. Measure valence (positive, negative, neutral), 7 basic emotions (Joy, Anger, Surprise, Fear, Sadness, Disgust, Contempt), and engagement (overall expressiveness).
- Access 21 facial expressions, 33 facial landmarks, interocular distance estimation, and head orientation (yaw, pitch, roll). Use integrated quality assurance tools.
- *Note: Only sold as an add-on to iMotions Affectiva Module.*

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

Purchase Best-In-Class Hardware

iMotions software offers plug & play integration with industry-leading sensors. As a certified hardware reseller wit in-house technology experts, our consultative approach ensures you get the best sensors to meet your research goals. iMotions offers hardware at the same price as vendors.

Screen-Based Eye Tracking

EyeTech VT3 - 60 Hz

EyeTech VT3 mini – 60 Hz

EyeTech VT3 XL - 60 Hz

GazePoint GP3 SD 60 Hz

GazePoint GP3 HD 150 Hz

Smart Eye Aurora

Smart Eye Pro

AI-X

Eye Tracking Glasses

Pupil Labs Core

Pupil Labs Invisible

Argus Science ETVision

Neon VPS

EEG Headsets

ABM B-Alert EEG X10

ABM B-Alert EEG X24

Emotiv EEG EPOC + (specific usage license required)

Brain Products actiCHamp EEG

Neuroelectrics ENOBIO

OpenBCI Mark IV

LSL EEG

EDA/GSR Hardware

Shimmer3 EDA/GSR

Empatica E4

BIOPAC MP160

BIOPAC EDA/GSR 100C

BIOPAC Bionomadix 2CH EDA/GSR Amplifier

PLUX

ECG / EMG / Respiration Hardware

Shimmer3 ECG/EMG

BIOPAC MP160

BIOPAC ECG 100C

BIOPAC EMG 100C

BIOPAC RSP 100C

BIOPAC Bionomadix 2CH ECG Amplifier

BIOPAC Bionomadix 2CH EMG Amplifier

BIOPAC Bionomadix 2CH RSP Amplifier

PLUX

For the most up-to-date list of supported hardware, scan the QR code.

iMotions Academy & Resources

- **iMotions Academy:** Personalized online or in-person training programs that help clients become experts with iMotions software and human behavior research. Tailored to different experience levels from beginner to expert.
- **iMotions Help Center:** Find answers to FAQs in more than 150+ online articles and tutorials.
- **iMotions Blog:** More than 300+ posts on our iMotions blog provide unique information and perspective on human behavior research.
- **iMotions Pocket Guides:** 7 iMotions Pocket Guides provide detailed information for biosensor modalities like EEG, Facial Expressions, EDA/GSR, Eye Tracking, and more.

Confidential © 2026 Redistribution is not permitted without written permission from iMotions

IMOTIONS

Copenhagen, Denmark
Kristen Bernikows Gade 6
4th floor
København K, 1105
TEL +45 71 998 098

Boston, USA
141 Tremont Street
Floor 8
Boston, MA 02111
TEL +1 617-520-4958

China
NO.1 Fortune Avenue,
Room 2902
Yubei District, Chongqing
TEL +886 931684806

Synchronize, Visualize and Analyze your research in Eye Tracking, Facial Expression Analysis, Galvanic Skin Response, Surveys, EEG and much more in one software platform.

www.imotions.com