BIOPAC Systems, Inc.®

PRODUCT SHEET
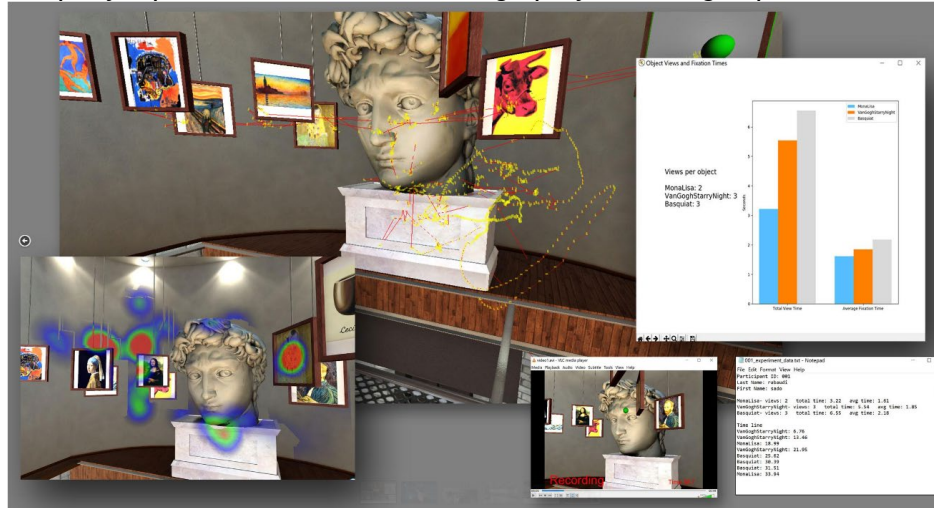
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VR EYE TRACKING SYSTEMS

VR-EYETRACK-SYS-1-USER, VR-EYETRACK-SYS-2-USERS

VIRTUAL REALITY EYE TRACKING ANALYTICS LAB

A Simple yet powerful solution for setting up eye tracking experiments in VR

*Solution provides VR eye tracking analytics for
gaze path, heatmaps, gaze intersects, and fixations.*

BIOPAC's Complete Virtual Reality Eye Tracking Systems allow researchers to immerse one or two users in easy-to-create VR scenarios and collect synchronized eye tracking and physiological data for a comprehensive response assessment. By providing meaningful insights on attention and decision making, users can improve the quality of their research. VR Eye Tracking Systems are preconfigured and tested before they ship so that they are ready to run out of the box.

VR Eye Tracking Systems allow users to do the following:

- Record and replay VR sessions with advanced eye tracking analytics such as gaze path visualizations, heatmaps, gaze intersects, and fixations

- Modify parameters such as fixation time, views per object, average view time and more!

- Add synchronized physiological measures: ECG, RSP, EDA, EEG, fNIRS, etc. Choose the type and number of signals to suit your paradigm (components and Network Data Transfer (NDT) License sold separately).

- Use with no coding or integrate into complex projects

- Visual interaction supports new research opportunities: users can grab objects in the environment by simply looking at them instead of pointing or pressing a button

- Calibrate user with 5-to-9 point calibration

- Add 3D scenes and 360 video or images (mono or stereoscopic)

- Substitute a remote eye tracker for 2D images

- Easily swap out and modify the target objects, environment, and parameters of your study

- Works with all the major PC based VR eye tracking devices: Meta Quest Pro, Vive Pro Eye, StarVR One, HP Omnicept, Pupil Labs and Tobii original Vive eye tracked HMDs

- Connect your VR scene to multiple devices including biofeedback, data gloves, and more

- Save to a file or export as a .csv

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Each VR Eye Tracking Systems includes the following:

VR-EYETRACK-SYS-1-USER

- 1 Meta Quest Pro VR/AR/MR headset—or similar—with integrated eye tracking
- Light blocker and link cable
- 1 VR-optimized computers
- 1 Vizard Development + SightLab VR Pro license
- 1 Year Silver Support

VR-EYETRACK-SYS-2-USERS

- 2 Meta Quest Pro VR/AR/MR headsets with integrated eye tracking
- Light blocker and link cable
- 2 VR-optimized computers
- Networking equipment
- 2 Vizard Development Licenses + SightLab VR Pro Multi-User Edition
- 1 Year Silver Support

Add a Network Data Transfer (NDT) License to integrate with Acq*Knowledge* and send markers to Acq*Knowledge* and/or use physio data for real-time biofeedback. See ACK100W-NDT/ACK100M-NDT.

Compatible with the following systems:

- B-Alert X10 Systems
- BioNomadix Wireless Systems
- fNIRS Imaging
- MP160/MP150 Research Systems
- MP36R Research Systems

Modifiable Eye Tracking Features:

- Utilize a GUI or code-based interface for setting up an eye tracking experiment
- Add environments and target objects of your choosing
- Add 360 video or images (mono or stereoscopic)
- Adjust fixation time
- Enter participant data
- Record and replay VR sessions with advanced analytics overlays
  - o 3D Gaze Path visualization
  - o Fixation Spheres
  - o Gaze Ray and intersect points
  - o Fixations
- Collect eye tracking data and write to a .txt or .csv file with the following parameters
  - o Timestamp
  - o Pupil intersect x,y,z position
  - o Pupil Diameter
  - o Eye Openness
  - o Fixations
  - o Custom Flags
- Write stats to file including

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- Views per object
- Total view time per object
- Average view time per object
- Object timeline

- Calibrate user with 5-to-9-point calibration
- Toggle a gaze intersection point
- Display fixations in real time along with a timestamp
- Record video of experiment for later review
- Add custom flags to synchronize with events in the simulation
- Add custom events to a fixation for gaze-based interactions
- Modify hardware setup to allow for various tracking devices and inputs
- Choose from various avatars (male or female)

HEATMAP

- Record gaze point data, generate a heatmap, and display a saved heatmap.