

# ETVision Wearable Eye Tracker



Gaze-Pupillometry-Saccade-Fixation

ETAnalysis

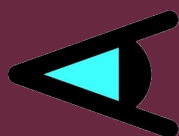
ETPhone

ETRemote

ET3Space-StimTrac

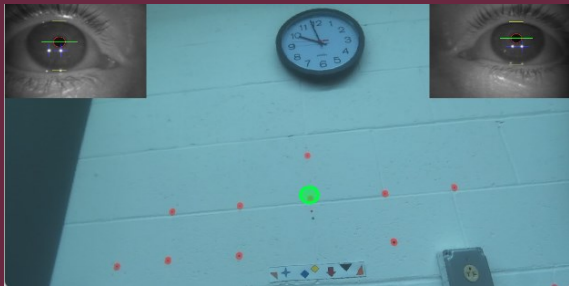
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[www.argusscience.com](http://www.argusscience.com)

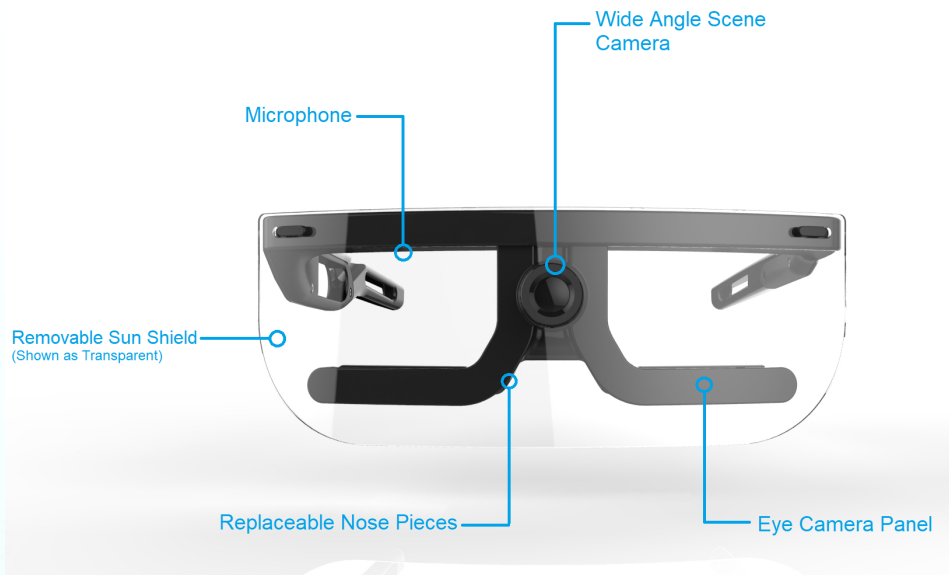


## ETVision

- 180Hz Data Collection
- Binocular Gaze Calculation
- Wide Angle HD Forward facing Scene Camera
- Built In Microphone
- Removeable Sun Shield
- 5+ Hour battery life
- Multiple Nose Pieces for comfort
- Record on SD, stream live via WiFi or LAN
- ETAnalysis Included



## PROVIDING YOUR RESEARCH WITH THE FLEXIBILITY YOU NEED



The **ETVision** wearable eye tracker allows ultimate flexibility for real-world research. The simple design and work flow of the ETVision delivers the tool to get your research done quickly and accurately.

With the ETVision in live stream mode, we can use our exclusive Live Area Of Interest (LAOI) capability to define objects and track them to get immediate reports on visual engagement. If your research requires participants to range far beyond Wi-Fi range, ETVision can record locally to an SD card for later analysis.

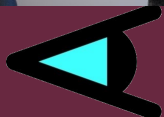
ETVision Records the eye images as a 180Hz video, allowing exact replay of participant gaze experience.

If your research occasionally requires stimulus presented on a screen, the Argus Science **StimTrac** package allows the researcher to transform data from the scene camera coordinate space to the presented stimulus coordinate space (Images, Videos or non-determinant stimulus, such as video games or web browsing)

Using Motion Capture combined with eye tracking in your research? Add the **ET3Space** option to combine head position and orientation in space with gaze vector relative to head for immediate results of gaze vector, or gaze intersection with surfaces in your environment.

Argus Science provides SDK support as well as the ability to live stream to our **ETPhone** app which may be found on Apple App Store as well as on Google Play.

Of course, our ETAnalysis is included with your ETVision.

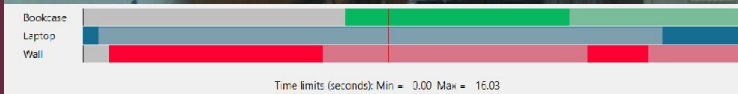


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## ETAnalysis

- Fixation Calculation
- Saccadic Calculation
- Pupillometry (Size, Blink and Blink Frequency)
- Fixation Sequence and Dwell Calculations
- Group Statistics
- Fixation Visualizations
- Heatmap Visualizations
- Gaze Trail Visualizations
- Time Plots of collected data
- Moving Areas Of Interest (Automatic)
- Parse Events by Markers or Time
- Create AOI Bar Plots—Individual or Group
- Record any visualization as an image or video
- Export any part or all data to xml or text file



### A Comprehensive Analysis Package for Researchers

Once data has been collected with the ETVision Wearable Eye Tracker, we may load the data records and recorded videos into ETAnalysis for complete Analysis.

An important factor in wearable eye trackers is that gaze is first reported relative to the forward facing scene camera. Since a participants head is always moving, objects in the environment always appear to be moving within the scene image. ETAnalysis simplifies this critical relationship with our automated Moving Areas Of Interest (MAOI). An object is defined to the program on a single video frame, and the program then automatically tracks the object through the entire video. We then may easily report gaze relative to these objects and the gaze location within the object.

Once this MAOI collection is made, we may then combine fixations to compute statistics regarding time to first fixation on an object, pupil size while attention is upon that object, total time viewing object and many other metrics. This information may be presented either as a text file, bar plots or visualizations upon the video including heatmaps, fixation plots and gaze trails.

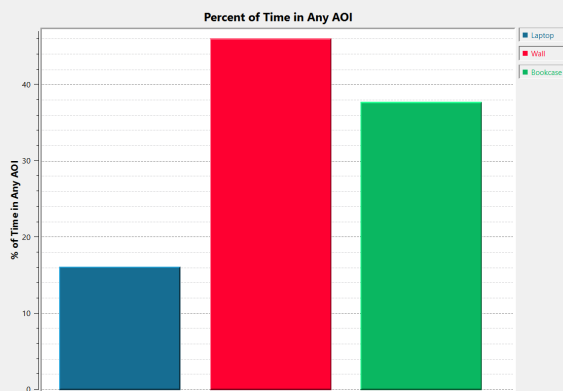
Using the same collection of MAOI's for data from multiple participants, ETAnalysis can provide statistics related to gaze behavior across a population exposed to similar visual environments and stimuli.

#### For More Details:

visit [www.argusscience.com](http://www.argusscience.com), email us at [info@argusscience.com](mailto:info@argusscience.com)

Visit our You Tube Channel: Argus Science Eye Tracking

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# Specifications

ETVision SYSTEM	
Eye Tracking Technique	Dark Pupil – Corneal Reflection
Binocular	Yes
Gaze Measurement Frequency	180 Hz
Pupil Size Measurement	Yes, Millimeter or Pixels: User Select
Parallax Compensation	Automatic
Accuracy	0.5 degrees
Calibration	Automatic, Multiple Point Modes
Outdoor Capability	Yes
Synchronization w/ External source	Available

ETVision Optics	
Color	Black
Removable Shield	Polarized, OD
Exchangeable Scene Camera Lens	Yes, Standard 96° : 16x9
Prescription Glasses Compatible	Yes
Nose Piece Adjustment	Replaceable, 3 included
Scene Resolution	720p (1280x720) @ 30Hz
Microphone	Yes
Weight	56g

ETVision Controller	
Processor	ARM Cortex A9
Operation System	Linux
Storage Media	Micro SD Card
Nominal SD Card Recording time	128GB Typ. >2 Hours
Main Battery	Rechargeable Li-Poly Battery
Main Battery Life	>5Hrs
Power Adapter	9VDC
Headphone Jack	3.5mm
(Length x Width x Depth)	150mm x 80mm x 36mm
Weight (with Battery)	345g
Connection PTU to Laptop (Live Streaming)	Wi-Fi (802.11ac) LAN (Gigabit Ethernet)

Standard Items Included
ETVision & ETAnalysis License
Access to ETPhone (iOS or Android)
Three (3) Nose Pieces for different head/nose sizes
ETRemote
SDK Samples including Python, LSL, Matlab and others
Removeable Sun Shield
Calibration Target
Carry Case
9V Power Supply (Controller)

Optional Items Available
ET3Space
StimTrac
EEG TTL Sync

3rd Party Compatibility
Biopac Systems
iMotions
Vicon
Qualisys
Advanced Realtime Tracking
Ant Neuro

