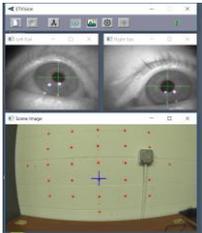


ETVision System

[Specification Download](#)

Wearable 180 Hz binocular Eye Tracking System



The ETVision system is the latest development from Argus Science, providing high update rate and binocular measurement, with the ultimate in ease of use and complete mobility indoors or out.

ETVision builds upon our experience with lightweight, un-obtrusive eye trackers and takes these capabilities to the next level. .

Conceived to allow the investigator to capture data in multiple ways...over a longer period of time, the ETVision may be worn either by participants with uncorrected vision...or by participants who require prescription glasses, or contacts. The intuitive interface allows for single point or multiple point calibration. Data is sent to a laptop PC via WiFi or LAN, or may be captured locally on a microSD card. Battery power allows recording time of well over 5 hours.

The system is designed to handle the increasingly diversified demands of eye tracking in a variety of applications including [Sports](#), [Kinesiology](#), [Driving](#), [Market Research](#), [Reading](#), [Safety & Training](#), Social Interaction, [Neuroscience](#), Mobile Device Usability, and much more....



The participant simply puts on the "glasses" frames, which include the two eye cameras, near IR light sources, scene camera and microphone. The frames can be worn over prescription glasses and are connected with a standard HDMI cable to the ETVision Controller. The Controller is a linux based lightweight unit that may be carried either with a removeable belt, or in the participants pocket or anywhere one might carry a cell phone.

The ETVision system can integrate with numerous commercially available position tracking systems to impliment the Argus Science [ET3Space](#) function. Argus Science [StimTrac](#) and [SceneMap](#) functions are also supported, along with Argus Science [ETAnalysis](#) software.

One Eye Tracker for Multiple Applications



ETVision, combined with new Argus Science [SceneMap \(Scene Mapping\)](#) or [StimTrac \(Stimulus Tracking\)](#) data analysis technology and the [ETAnalysis program](#), allows use of one eye tracker for multiple applications which, in the past, would have required different types of eye tracker systems.

For example, in the case of a participant seated in front of a display monitor, the data analysis advantages afforded by a desk top eyetracker can now be realized with ETVision by using the optional Argus Science [StimTrac \(Stimulus Tracking\)](#) feature.

For certain environments, the Argus Science [SceneMap \(Scene Camera Mapping\)](#) feature can be used to collect data that includes the participant's head location in space and point of gaze with respect to multiple objects in the environment without requiring a separate head tracking device.

Features

Precise, binocular eye measurement at 180Hz.
Automatic vergence correction for accuracy at any distance.
High Definition Scene Image.
Incredibly fast and simple setup: Auto feature detection combined with single point calibration allows for fast participant setup.
Score feedback gives investigator confidence for quality of gaze data.
ETAnalysis base package included with every ETVision System.
Left Eye, Right Eye and Scene images displayed in GUI with constant real-time feedback showing point-of-gaze and system feature recognition performance.
Two Way audio allows investigator to speak with participant...and participant to speak to investigator, during performance of task.
Unsurpassed customer support from the team at Argus Science.
Real-time network communication with external devices.

ETAnalysis



The Argus Science ETAnalysis application is a powerful software program designed to process and analyze data collected with Argus Science eye trackers. Our engineers have leveraged 40+ years of experience in the industry combined with researchers' feedback to create a remarkably versatile tool for eye tracking data analysis.

Argus Science ETAnalysis Software was developed to be compatible with a vast range of eye tracking application to ensure that it will suit your organizations specific research needs. Please [Contact Us](#) to receive a free trial version.

Use ETAnalysis to perform the following tasks, as well as others.

- Examine and plot raw data.
- Divide data files into sections corresponding to particular events or time periods.
- Reduce gaze data to fixations.
- Associate scene images and videos with sections of gaze data.
- Define areas of interest (including moving areas of interest) on stimulus images or videos.
- Find "dwells" (periods of continuous gaze on one area of interest).
- Compute various statistics that relate fixations or dwells to areas of interest.
- Display data and statistics graphically in many formats including time plots, X/Y plots superimposed on images or videos, heat maps, bar charts, etc.
- Combine results across trials or subjects by averaging statistical data from each, or by pooling the original data.
- Create a swarm display showing gaze from multiple trials or subjects overlaid on an image or video.
- Find blink frequency, and pupil diameter minimum, maximum, and average over specified periods.
- Export results in Excel or ASCII text format for further custom analyses.



Playback of video presentations with superimposed gaze data can be displayed in full screen mode, and recorded at the resolution of the original presentation.

Data recorded with some eye trackers formerly manufactured by Applied Science Laboratories (ASL) are compatible with ETAnalysis.

Additional Modules(Option- additional cost)

1.SceneMap (Scene Mapping) Module

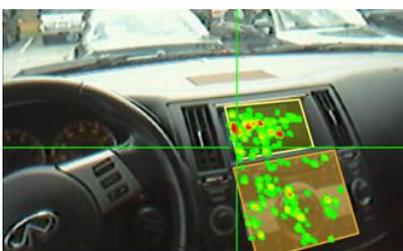


Argus Science is pleased to announce our revolutionary eye tracking data analysis technology: Argus Science ETAnalysis SceneMap Module! As part of our comprehensive Argus Science ETAnalysis Software suite, our advanced SceneMap Module makes analysis quick and easy with a near automated process! Please [Contact Us](#) for more information.

By leveraging over 40 years of experience and hundreds of thousands of conversations with Argus Science researchers, Argus Science developed the powerful SceneMap Module to enhance our Argus Science eye tracking analysis software suite: ETAnalysis.

We incorporated the SceneMap Module into this suite to further automate and expedite data analysis for applications where gaze falls on stationary object(s) or surface(s). SceneMap Module greatly assists researchers with analysis of eye tracking data collected in driving simulators, stores, rehabilitation facilities, and many other environments, without requiring use of a separate head tracking device.

This revolutionary SceneMap module saves you and your analysis team resources and time. You can create one master environment file without the need for an elaborate IR marker set up. By identifying the Areas of Interest (AOIs) in one master file, AOIs are applied to all participant files. This software eliminates arduous video frame by frame analysis when participants are viewing stationary objects. You will no longer be hindered by the time it takes to perform large studies with multiple participants.

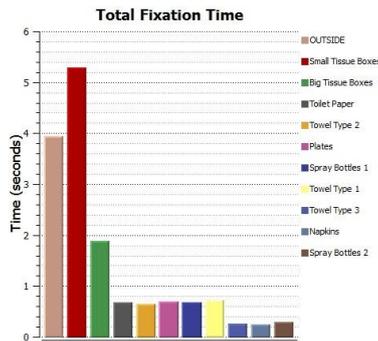


As with the entire suite of Argus Science ETAnalysis Software, SceneMap Module is designed to assist with all types of eye tracking applications. Whether data is captured while the participant is moving freely or not, looking at static or moving objects, this software streamlines data analysis.

SceneMap Module provides immediate selection of data with a simple key stroke. Data can be previewed as gaze points, fixations and/or heat maps.

SceneMap technology is intuitive and easy to use. Argus Science understands that analysis software needs to be flexible to meet your unique research needs.

Your eye tracking data is encapsulated into an easy project configuration to allow both you and your colleagues to view the data and collaborate. At any time, a single frame or short video clip can be captured for viewing presentations.



Argus Science ETAnalysis SceneMap Module will rapidly reduce raw data to a series of fixations. Fixations on presentation images can be conveniently presented in size, numbers, or in duration. These fixations will automatically be assigned to your designated Areas of Interest (AOIs).

Quickly output results for one participant or an aggregated group to examine and plot raw data, associate scene images with sections of gaze data, and define area of interest on images, both static and dynamic. Easily reduce gaze data to statistics and graphical representations (fixations, scan paths, heat maps, SWARM™, blinks, etc.).

Eye tracking has never been easier!

2. StimTrac (Stimulus Tracking) Module



Exciting new data analysis technology for eye tracking mobile devices and computers! Our Stimulus Tracking analysis software module is among the latest additions to our powerful Argus Science ETAnalysis suite. Analysis is quick and easy with a near automated process! Please [Contact Us](#) for further information.

Revolutionary Software Capability

With the enormous growth in the use of mobile devices, it is more important than ever for researchers to be able to easily and accurately eye track and analyze participant use of mobile devices.

In keeping with our history of innovation, Argus Science incorporates the unique StimTrac (Stimulus Tracking) module into the powerful Argus Science ETAnalysis software suite to further automate and expedite data analysis for applications where gaze falls on a stimulus device, such as smart phone, mobile device, or computer screen.

Easily Analyze Small Screens



Typically with head mounted eye tracking the output image of real-world mobile devices, such as tablets and smartphones, capture the environment around the device as well as the device. As a result, the small size of the device relative to its environment makes it difficult to identify specific areas of interest (AOIs) on the device's screen. The screen image cannot be reliably analyzed.

Argus Science ETAnalysis StimTrac Module solves this issue by outputting gaze information on the screen image (the presented stimulus), which is recorded in addition to the head mounted camera's scene image. This final screen image is larger and has a higher resolution than is obtained with a typical head mounted scene camera, displays only the scene relevant to your experiment, and is easier to analyze.

Two Eye Trackers in One



With limited funding, it can be difficult to purchase more than one eye tracking solution for all of your research projects requiring multiple types of stimulus. Argus Science ETAnalysis StimTrac Module enables you to use only one eye tracking solution, a head mounted eye tracker, both for projects where one would typically use a remote/desktop eye tracking solution (when displaying stimulus on one flat surface) and for projects where one would use a head mounted solution (when participants need to be mobile, view stimulus on multiple surfaces and/or handle mobile devices). With one powerful software package and a single eye tracker, your research opportunities are now expanded.

Synchronize with other devices: EEG, GSR

Output data from other devices is easily synchronized to your Argus Science ETAnalysis StimTrac Module output data. You can easily parse your data as well as introduce post session event markers.

Simple Analysis Process



With Argus Science ETAnalysis StimTrac Module, the eye tracking glasses or head mounted system records the participants' normal mobile device usage, with one exception: four small markers are positioned near the mobile device.

You record both the stimulus presented on the device's screen and your head mounted eye tracking data (from the scene and eye cameras). The final output from Argus Science ETAnalysis StimTrac Module is gaze information superimposed on just the high quality screen video image.



Scene Camera Image From Argus ET Mobile Glasses

Import your stimulus into Argus Science ETAnalysis StimTrac Module, specify your Areas of Interest (AOI) once and have them applied to all of your participants.

Drill down your data with the Argus Science ETAnalysis StimTrac Module intuitive project based format and reduce your participant data to a series of fixations. Fixations on background images can be presented in size, number, or in duration. These fixations will be automatically assigned to your designated AOI.



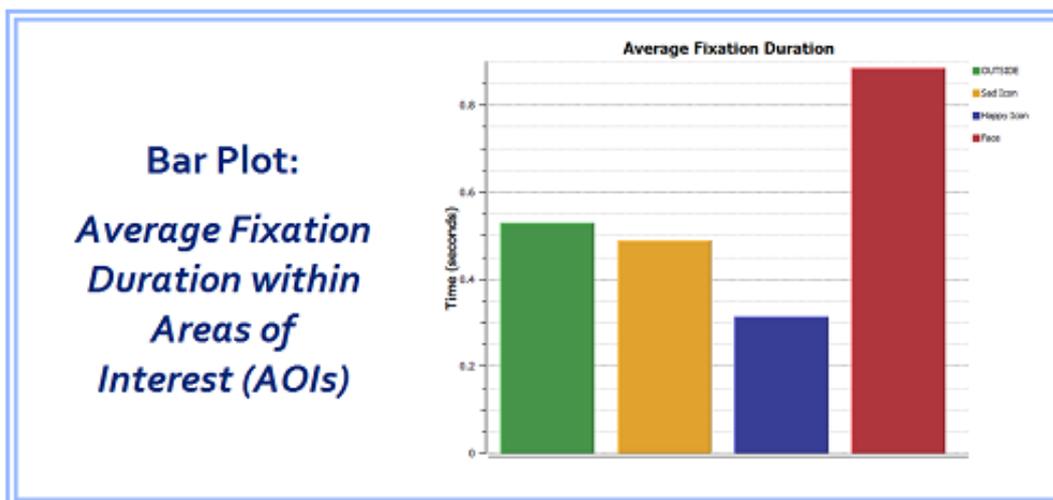
Final High Quality Screen Image (Heat Map on AOIs)

As with the entire suite of Argus Science ETAnalysis software, Argus Science ETAnalysis StimTrac Module quickly outputs statistics for a single participant or a large group. It has many useful tools to examine and plot raw data, associate scene images with related segments of gaze data, and define AOI on both static and dynamic images. These built-in tools make it simple to arrange the statistics in user-definable charts and create compelling graphical representations such as scan paths, heat maps, SWARM, etc.

Argus Science ETAnalysis StimTrac Module eliminates the disadvantage of using a head mounted eye tracker when a remote eye tracker is recommended by outputting gaze data on a separately recorded stimulus. The software automates the time consuming process of viewing individual video frames to manually position each AOI.

Fast and Convenient Tools

Statistical fixation data is quickly available via informative graphic displays. Bar plots include: total amount of time in each AOI, percent of time in each AOI, number of fixations in each AOI, average fixation duration, total fixation time, time to first fixation, and average pupil diameter in each AOI.



Features

- Easy Analysis of Mobile Device Activity.
- Present Experiment on iPhone and iPad.
- Total Synchronization with EEG and GSR.
- Save Funding Dollars – Two Eye Trackers in One.