

## SMI Eye Tracking Glasses 2 Wireless

Mobile eye tracking made easy, robust, efficient and versatile



- Natural Gaze™ design with maximal peripheral and binocular view
- Full wireless control for observation and annotation in real-time
- Highly robust technology proven with > 100,000 users
- Specific application modules and SDK
- Packages starting at 9,900 Euro / 11,900 USD

## SMI Eye Tracking Glasses 2 Wireless

SMI Eye Tracking Glasses 2 Wireless (SMI ETG 2w) are designed to capture a person's natural gaze behaviour in real-time. The technology has been proven under extreme conditions and with more than 100,000 users and provides outstanding robustness, mobility and ease of use for a broad range of real-life tasks. An SDK and specific application modules allow use of SMI's leading wearable eye tracking technology in the broadest range of applications.

### Capture a person's natural gaze behavior

The Natural Gaze™ design of the head gear for SMI ETG 2w is designed for natural recording of gaze behavior. It provides maximal peripheral perception and binocular vision – important for realistic depth perception and natural visual orientation. For best and robust fit, the glasses come with flexible temple arms.

### Observe and annotate in real-time

With the wireless live capabilities, professionals and scientists have full wireless control of a study. From a remote computer or tablet connected via Wi-Fi, operators can collect participant properties, perform calibration, observe live gaze traces and add live annotations to a user's behaviour. For enhanced productivity, annotations can be used in SMI BeGaze powerful analysis software to efficiently focus data analysis on relevant sequences of the recorded data.

### Make highly robust and reliable 60Hz eye tracking recordings

SMI's high quality eye tracking technology provides 60Hz binocular tracking technology combined with a high definition scene camera. Automatic parallax compensation ensures accurate data over all distances with no need for manual adjustments.

SMI Eye Tracking Glasses have been proven by world class customers (e.g. Stanford University, Max Planck Institute, Shanghai National University, Google, Microsoft, Sony) with more than 100,000 participants worldwide in study settings that range from scientific research e.g. in human factors, sports and psychology, medical task training to professional use in shopper and packaging studies, car clinics, professional and sports training.

### Be efficient and productive in design, setup, recording and analysis

The SMI ETG 2w covers the whole process from study design, participant setup and data recording to efficient analysis.

The software interface collects participant properties and questionnaires. Live feedback of calibration and live observation of the recording make it easy to control study progress even with demanding subject groups. With its easy and calibrationless setup, the SMI ETG 2w is ready to start recordings of a participant within seconds. The small smartphone recording unit allows for 3+ hours recording and full mobility even in highly dynamic tasks.

The SMI BeGaze analysis software allows for very efficient aggregation of eye tracking data over multiple participants with the unique SMI Semantic Gaze Mapping (SGM) technology. SGM works on all relevant use cases ranging from free outdoor studies to well controlled lab experiments. SMI BeGaze allows qualitative visualization as well as quantitative analysis of eye tracking data and scene videos. Data and visuals such as heat maps or Key Eye Tracking Metrics can be easily exported for further analysis and reporting.

### Observe special user groups with snap-on corrective lenses and sun glasses

While previous ETG versions already worked with many vision correction spectacles, SMI implemented an additional solution with snap-on corrective lenses to cover the maximum user population. The SMI ETG 2w also comes with snap-on sun glasses which ensure robust tracking in outdoor situations.

### Explore your own applications with unique application modules

The SMI ETG 2w offers flexible application modules, such as

- snap-on 3D stereo shutter glasses
- optical head and motion tracking modules
- data integration modules for mobile EEG
- cognitive workload assessment
- data and trigger synchronization allowing synchronization with other data streams (hardware triggers via parallel ports)

SMI's mobile eye tracking platform has an SDK which supports real-time data streaming and integration into customers' applications for analytics or interaction.

[Learn more: www.eyetracking-glasses.com](http://www.eyetracking-glasses.com)

### SMI ETG 2w Smart Recorder



### 3hrs+ Data Collection

The SMI ETG 2w come with a customized Samsung Galaxy S4 smart recorder. The pocket-size device allows 3+ hours in-field recording without battery swap or recharge at a weight of only 246g.

The advanced interface collects participant properties and questionnaires. The live feedback of a calibration and a live view of the recording make it easy to control the quality of recordings even with demanding subject groups.

The ETG 2w smart recorder can be fully controlled via Wi-Fi from a Windows device like a laptop or tablet. Live annotations can be made wirelessly during the recording on the controlling device.

## Flexible SMI ETG 2w Packages

SMI offers packages for SMI ETG 2w tailored to specific uses. The packages range from live observation to quantitative data aggregation with SMI Semantic Gaze Mapping.

SMI Eye Tracking Glasses 2 packages start at 9,900 Euro / 11,900 USD.

Please inquire for special Virtual Reality and Motion Tracking packages for SMI ETG 2w.



<b>SMI ETG 2w Packages <sup>1</sup></b> <b>(starting at 9,900 Euro/11,900 USD)</b>	<b>SMI ETG 2 Observation</b>	<b>SMI ETG 2 Wireless Observation</b>	<b>SMI ETG 2 Wireless Analysis</b>	<b>SMI ETG 2 Wireless Analysis Pro</b>
<b>Recording/Observation</b>				
Gaze video recording	✓	✓	✓	✓
Wired live view	✓	✓	✓	✓
SMI ETG 2w smart recorder	x <sup>2</sup>	✓	✓	✓
Full wireless control	x	✓	✓	✓
SMI Software Development Kit (SMI SDK)	x	✓	✓	✓
<b>Analysis</b>				
<b>Qualitative</b> Qualitative analysis made easy with single user gaze videos, behavioral live annotations, Retrospective Think Aloud, customized gaze videos, fixation data and raw data	x	x	✓	✓
<b>Quantitative</b> Aggregate multiple participant gaze and behavioral data onto target areas with SMI Semantic Gaze Mapping <sup>3</sup> and combine both in SMI advanced visualizations and statistics	x	x	x	✓
<b>Compatibility of Modules</b>				
<b>SMI 3D Stereoscopic Vision module <sup>13</sup></b> Snap-on shutter glasses for realistic 3D user experience	x	x	✓	✓
<b>SMI Optical Head Tracking module <sup>13</sup></b> Real-time head/motion tracking support via VRPN	x	x	✓	✓
<b>SMI Mobile Emotiv EEG module <sup>3</sup></b> Synchronize data of the Emotiv EEG Neuroheadset	x	x	✓	✓
<b>SMI Cognitive Workload module <sup>3</sup></b> Combine data with the patented Index of Cognitive Activity (ICA)	x	x	✓	✓
<b>Multi-user SMI Semantic Gaze Mapping module</b> Multi-user SGM license not bound to network connection	x	x	x	✓
<b>SMI Corrective Lenses module</b> Snap-on corrective lenses for people wearing vision correction spectacles	✓	✓	✓	✓
<b>SMI Trigger module</b> PCI Express card with parallel port supporting hardware trigger	x	x	✓	✓

<sup>1</sup> special Virtual Reality and Motion Tracking packages available

<sup>2</sup> recording on user laptop meeting SMI specifications

<sup>3</sup> for details see special flyer

## Technical Data<sup>1</sup>

### SMI ETG 2w

Human interface design	Non-invasive video based glasses-type eye tracker; Insertable sun glasses included
Glasses weight	47g
Calibration	Calibrationless gaze tracking; 1-/3-point calibration; Offline calibration correction
Validation	Live validation of gaze tracking quality
Parallax compensation	Automatic parallax compensation
Sampling rate	60Hz binocular
Gaze tracking accuracy	0.5° over all distances (typ.)
Gaze tracking range	80° horizontal, 60° vertical
Scene camera	Resolution: 1280x960p @24 fps; 1024x720p @30 fps; HDR (high dynamic range) mode with high sensitivity for low light
Scene camera field of view	Field of view: 60° horizontal, 46° vertical
Eyewear compatibility	Works with contact lenses and most vision correction spectacles; Snap-on corrective lenses from +/- 4 diopter available
Audio	Integrated microphone <sup>1</sup>
Wireless control	Online scene video with gaze cursor, tracking status, eye images; Wireless live control and live annotations via Wi-Fi connected Windows device Wi-Fi standard 802.11 a/b/g/n/ac
Interfacing with laptop <sup>2</sup>	VRPN interface Real-time data streaming with SDK Hardware trigger via PCI Express card with parallel port Wi-Fi standard 802.11 n GigabitLAN 802.3 a/b
Norm compliance	CE Declaration of Conformity; EN55022:05/2008 (class A); EN55024:10/2003; EN62471:2008; IP Class: 20

### SMI ETG 2w Smart Recorder

Dimensions	135x 69 x 23 mm (length x width x height)
Weight	246g
Options	Wireless control via Wi-Fi connected Windows device
Recording time	3hrs+ without battery exchange <sup>3</sup>
Storage capacity	10hrs recording

<sup>1</sup> some specifications refer to options

<sup>2</sup> with SMI ETG subnotebook or laptop meeting SMI specifications

<sup>3</sup> wireless may reduce battery run time

### Contact Information

SensoMotoric Instruments GmbH  
Warthestr. 21  
14513 Teltow  
Germany  
Phone: +49 (0) 3328 – 39 55 – 10  
Fax: +49 (0) 3328 – 39 55 – 99  
E-mail: sales@smi.de

SensoMotoric Instruments Inc.  
28 Atlantic Ave  
236 Lewis Wharf  
Boston, MA 02110 USA  
Phone: +1 - 617 - 557 - 00 10  
Fax: +1 - 617 - 507 - 83 19  
E-mail: sales@smivision.com