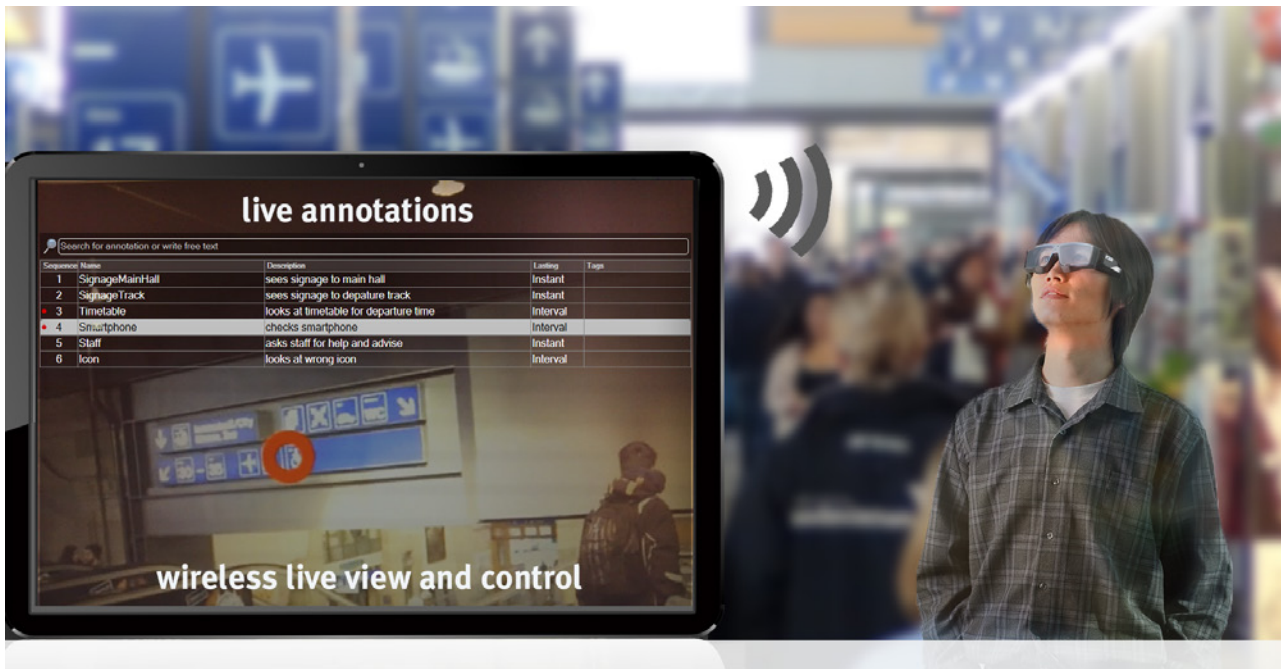# SMI Eye Tracking Glasses 2 Wireless

## Wearable 60Hz eye tracking with full wireless control



- **NEW** Full wireless control and live annotations

- Proven with 100,000+ participants

- Outstanding productivity: 4+hrs operation, calibrationless

- Many specific application modules and SDK

- Packages starting at 9,900 Euro / 11,900 USD

**www.eyetracking-glasses.com**

# SMI Eye Tracking Glasses 2 Wireless

SMI Eye Tracking Glasses 2 are a widely appreciated tool which reveals implicit factors of cognition and decision-making by capturing the eye movements of the wearer.

The next generation, SMI Eye Tracking Glasses 2 Wireless (SMI ETG 2w), comes with full wireless control, enhanced productivity, an SDK and specific application modules which extend the use of wearable eye tracking.

## Full wireless control and live annotations

With the new wireless live capabilities, professionals have full wireless control of a study. From a remote computer connected by Wi-Fi, operators can collect participant properties, perform a calibration, observe a live gaze video and add live annotations on a user's behaviour.  For enhanced productivity, annotations are logged in SMI BeGaze software which helps to focus on relevant sequences within the recording during analysis.

## Proven with 100,000+ participants

Since its launch, SMI ETG and its robust binocular eye tracking have been thoroughly tested with more than 100,000 participants. Best in class scientific institutes and global innovators use it to evaluate shelf layouts and package designs, assess athletes' performance, evaluate user strategies and to monitor social interaction and rehabilitation.

## Instant setup and binocular 60Hz eye tracking

With its calibrationless setup, users can fit the SMI ETG 2w on the participant and start the recording within seconds. SMI's high quality eye tracking data relies on 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.

## 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 come with snap-on sun glasses which ensure robust tracking in outdoor situations.

## Efficient analysis with SMI Semantic Gaze Mapping

The SMI ETG 2w cover the whole process from study design and data recording to efficient analysis. SMI BeGaze analysis software allows for aggregation of eye tracking data over multiple participants with the unique SMI Semantic Gaze Mapping technology (SGM).

SMI's patent pending fixation mapping technology has significantly increased the efficiency of mobile eye tracking research. SMI also offers a new multi-user license for SGM. From SMI BeGaze, eye tracking data and visualizations such as heat maps and Key Eye Tracking Metrics (KPIs) can easily be exported for further analysis and reporting.
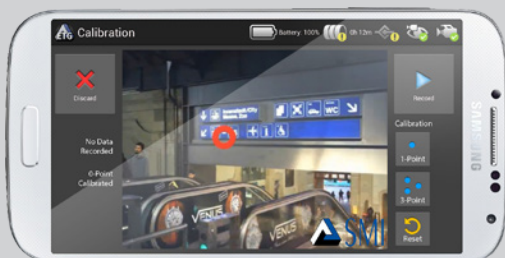


*KPIs on target shelf*

## Many specific application modules and SDK

The SMI ETG 2w are a versatile tool which offers flexible application modules, e.g. snap-on 3D stereoscopic glasses and optical head and motion tracking support as well as plug&play mobile EEG and cognitive workload integrations in SMI BeGaze software. For scientific timing and synchronization with other data streams, the SMI Trigger module supports hardware trigger sent via parallel port.

SMI's mobile eye tracking platform comes with an SDK which supports real-time data streaming and has been used for integrations with other mobile technologies, e.g. EEG.

**Learn more: www.eyetracking-glasses.com**

## SMI ETG 2w Smart Recorder



## 4hrs+ Data Collection

The SMI ETG 2w come with a customized Samsung Galaxy S4 smart recorder. The pocket-size device allows four 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 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.

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

[1] special Virtual Reality and Motion Tracking packages available
[2] recording on user laptop meeting SMI specifications
[3] for details see special flyer

# Technical Data[1]

## SMI ETG 2w

| | |
|---|---|
| Human interface design | Non-invasive video based glasses-type eye tracker; Insertable sun glasses included |
| Glasses weight | 68g |
| 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; 960x720p @30 fps; Video format: H.264; 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 |
| 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[2] | 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 | 4hrs+ without battery exchange[3] |
| Storage capacity | 10hrs recording |

[1] some specifications refer to options
[2] with SMI ETG subnotebook or laptop meeting SMI specifications
[3] wireless may reduce battery run time

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