

Smart Eye Pro

The world's most advanced eye tracking system



Smart Eye is a truly innovative company that produces the world's most advanced eye tracking system - Smart Eye Pro. Built for high-impact experimentation in any environment, including the most challenging and demanding setups, Smart Eye Pro provides unparalleled data accuracy and detail. With a small and non-intrusive form factor, as well as the best combined head box, field of view and gaze accuracy on the market, insights are all but guaranteed.

- Understand visual attention like never before
- O Up to 360-degree head and eye tracking
- O Works in any lighting conditions, in trulydemanding scenarios
- Flexible placement of cameras, up to 3 meters from the participant
- Control all aspects of the research process, from study design to analysis in iMotions

Smart Eye Pro & iMotions

A match made for insights

The iMotions Software Suite enhances the capabilities of the Smart Eye Pro eye tracking system by adding a sophisticated layer of data management and analysis. It enables precise capture, organization, and tagging of gaze data, which supports complex research designs and ensures high data quality and reliability.

The integration of iMotions enriches the visualization capabilities, allowing researchers to overlay gaze data on video in real-time, thus enhancing the understanding of visual attention and interactions. It also expands system flexibility by enabling the import of external video sources for post-hoc analysis, broadening research possibilities.

Advanced analytics and visualization tools

Optimize the interpretation of 'gaze in scene' data, gain insights into gaze patterns, hotspots, and areas of interest. Additionally, iMotions equips the system with extensive data analysis tools for complex statistical analyses and detailed annotations, improving the granularity and relevance of research findings. Heatmap generation and enhanced functionality for defining and analyzing Areas of Interest (AOIs) are also facilitated, enabling nuanced studies of visual cognition and behavior.







Synchronize data from multiple sources with real time visualization of data from Smart Eye Pro and other data sources









Gaze paths

Heatmaps

AOI metrics

Eye tracking like never before

Market-leading performance

Welcome to Smart Eye Pro

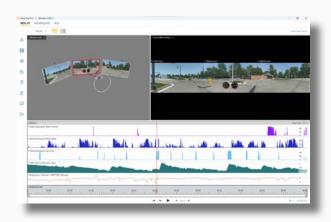
As the world's most advanced remote eye tracking system, Smart Eye Pro features the best combined head box, field of view and gaze accuracy on the market. It is also the best horizontal/vertical remote tracker on the market today.

A true multi-camera system, Smart Eye Pro is scalable from 2 up to 8 cameras allowing 360-degree head and eye tracking. Free and wide placement of cameras both horizontally and vertically makes it ideal for a large number of environments, setups and situations.

This versatility, combined with stellar performance in all conditions, is why Smart Eye Pro is the preferred research partner for car and flight simulators, vehicle studies, multi-screen or control room environments, long-range tracking, mobiles, tablets and single screens around the world.







Real-world data

Smart Eye Pro's World Model provides incomparable insight into human behavior with a complete overview of head and eye movements. As a multi-camera system, the tracking is ideal for environments in which users move around and attend to multiple screens or viewpoints. The system can be - and is - implemented into vehicle control panels, cockpits, control rooms, and corresponding simulators. Features of >0.3m can be tracked up to 2.5m between cameras and participant.

iMotions provides a native integration with Smart Eye Pro, and allows for the possibility of synchronizing with 50+ different sensors from 20+ independent vendors, across 10+ modalities. It's also possible to add even more sensors through the Lab Streaming Layer. Data can be forwarded and imported in real time from simulators or other external sensors / software data and looped back into the platform via the API. Together, iMotions and Smart Eye Pro provide human behavior research possibilities like never before.

Technical specifications

Smart Eye Pro dx features and specifications

Free Placements of Cameras	Smart Eye Pro is a flexible system where cameras are located based on customer setup		
Optimal Camera — Eye Distance	30 - 300 cm, adjustable with lenses and positioning of cameras		
Field of View	90° - 360° (depending on number of cameras)		
Tracking Accuracy	Head: Position +/-5mm Rotation 1.5 degrees (under ideal conditions) Gaze: 0.5 degrees (under ideal conditions) / 5 degrees (calibration free)		
Output	TCP / UDP / CAN (optional) / text file		
Output Data (true 3D values)	Head orientation (6DOF), Eye position, Eye gaze, Pupil diameter, Saccades, Fixations, Blinks, Eyelid opening etc. Quality values Data for left and right eye		
Tracking Recovery Time	Typically. 1 frame (16/8ms)		
Eyewear Compatibility	Glasses, contact lenses and non-IR-blocking sunglasses		
Gaze Calibration	Flexible number of calibration points for precision, or calibration-free gaze		
Light Independent	Smart Eye Pro uses active IR illumination @ 850mm		
Sync Available with Other Systems	Smart Eye Pro cameras can be synced with other Smart Eye Pro systems or other types of optical systems. Both optical and electrical signals can be used for synchronization. iMotions allows for simple synchronization with other biosensors and software.		
Sampling rate	60 and 120 Hz		
Number of cameras	1 - 8 cameras		
Headbox	Up to 120x85cm		
Camera interface	USB3		
Camera size	17x31x31mm		
Camera weight	20g		
Resolution	2.3 MP		
Mounting kit	3 DOF		
Lenses (focal length)	6, 8, 12, 16, 25mm		
Maximum available cable length	8m (up to 50m with fiber cable extension)		

iMotions Lab

Multimodal research in any environment

iMotions reduces the complexity of carrying out multimodal research, enabling a wide array of sensors to be seamlessly connected. By combining these different physiological measurements, it's possible to get a better understanding of human behavior in any environment.



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70+	2250+	70+	97.6%
of the world's top ranked universities	studies every month on average	countries worldwide	support satisfaction rate

The iMotions software is a modular system, with a central hub upon which a variety of biosensors and their corresponding modules can be integrated. This multimodal approach is designed to streamline human behavior studies, from study design and stimuli presentation to data collection and analysis, all in one unified software suite to advance human behavior research.

Want to know more?

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