Smart Eye Pro



The World's Most Advanced Remote Eye Tracking System

Smart Eye Pro, a true multi-camera system, 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 many 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.

General Specifications and Features

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	Typ. 1 frame (16/8ms)

Eyewear Compatibility	Glasses, contact lenses and non-IR-blocking sunglasses
Gaze Calibration	Flexible number of calibration points for precision gaze or calibration free gaze
Light Independent	Smart Eye Pro uses active IR illumination @ 850nm
Synch Available with Other Systems	Smart Eye Pro cameras can be synched with other Smart Eye Pro systems or other types optical systems. Both optical and electrical signals can be used for synchronization
Integration Support	API for controlling the eye tracker remotely. SDK with documentation and examples to support integration of eye tracking capability into other products and applications.
Add-on Modules:	Fiber-cable extension to cameras up to 50m / Video recording while tracking / Facial feature points / Speaking detection / Output data to CAN

Smart Eye Pro Technical Specifications



Smart Eye Pro features are available at a compact size, small footprint and light weight in the state of the art camera, the Smart Eye Pro Dx.

In addition, the high resolution of the camera sensor enables a larger head box.

All this ensures superior data availability and a short setup and configuration time.

Sampling rate	60 and 120 Hz
Number of cameras	Up to 8 cam
Headbox	Up to 120x85cm
Camera interface	USB3
Camera size	17x31x31mm
Camera weight	20g
Resolution	2,3 MP
Mounting kit (parts)	Small form factor (3 DOF)
Size of applicable flashes	27x13x27mm
Lenses (focal length)	6, 8, 12, 16, 25mm
Maximum available cable length	8m (50m)