



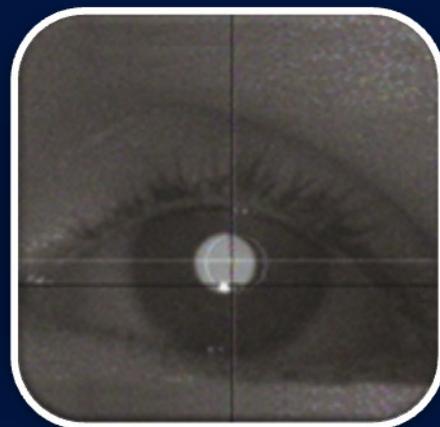
## H6 Optics

### Head Mounted Eye Tracking System

The H6 module connects to the EYE-TRAC® PC for a light-weight head mounted eye tracker. It is designed to quickly and accurately track gaze position of all participants, including young children. Head mounted optics are recommended in situations where it is important for participants to have freedom of movement and/or where gaze must be measured over an unrestricted field of view.

**The many advantages of the H6 head mounted solution are :**

- A comfortable but secure adjustable headband.
- A flexible choice of methods for capturing the scene image including a head mounted scene camera, scan converter (from computer image) or a remote (room fixed) scene camera if EYEHEAD™ Integration option is used.
- Constant visual feedback throughout entire tracking sessions.
- Automated features with manual overrides for challenging participants.
- A method for directing the eye image to the camera with a small monocular beam splitter mounted to a flexible boom arm, providing the adjustability needed to capture a wide variety of participants over multiple viewing areas and conditions.
- A Software Development Kit (SDK), which provides access to the eye tracker controller port, serial out port and to data files recorded by the ASL interface program.
- A standard 15 foot cable connecting the optics to the EYE-TRAC® PC, with custom configuration available up to 50 feet.



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## H6 Optics

### Head Mounted Eye Tracking System

The eye tracker provides constant feedback indicators superimposed on both the eye and scene images, allowing the operator to monitor the status and quality of the measurement.

The gaze point can be displayed as a cursor or a cross hairs on the scene image. A videotape or digital recording of the scene image can be created as a permanent record.

Recorded data include time, horizontal and vertical eye position in relation to the head, and pupil diameter. External events-marks can be recorded along with eye tracking data.

Data recorded with the EYE-TRAC PC operating software automatically includes participant calibration data as well as all eye tracker set-up, parameter, and configuration information. Descriptive user information can also be entered.

#### EYEHEAD™ Integration

When combining H6 optics with an optional head tracking device and ASL's EYEHEAD™ software package, participant's gaze with respect to stationary surfaces in the environment is provided. Recorded EYEHEAD™ data files report the identification number of the surface being viewed, point-of-gaze coordinates on the surface, distance from the eye to the surface being viewed, and pupil measurement. A maximum of 20 surfaces can be defined. If desired, other data can be included as well, such as position of the eye in space, and the direction of gaze with respect to room coordinates. Data is also available to external devices from the real time digital output port.

The six degrees of freedom head tracking information needed for EYEHEAD™ integration can be captured by many commercially available tracking devices.

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#### Optional Equipment

ASL's EYE-TRAC®PC offers a range of eye tracking configuration options providing the greatest flexibility for your research requirements today and tomorrow.

- The H6 Optics can be configured with a multi-speed high speed camera; and can also be mounted to a chinrest head restraint.
- New optics can be added at any time.
- System components and software can be shared among collaborators for greater allocation of time, funding, and resources.

H6 optics can be configured with a laptop or desktop PC.

Technical Specifications	
Sampling Rate	60Hz
Measurement Method	Pupil-Corneal Reflection
Accuracy	.5° Visual Angle
Resolution	0.1° of visual angle
Visual Range	50° Horizontal 40° Vertical
Real Time Data Outputs	X & Y Gaze Coordinates Horizontal and Vertical Pupil Measurements Two Analog Outputs One Video Output
Distance from participant to EYE-TRAC PC.	Standard 15 foot ( 4.57 m) cable from EYE-TRAC®PC to head mounted optics. Custom lengths are available.