EyeLink® Portable Duo Technical Specifications

EyeLink Portable Duo		
Eye Tracking Mode:	**Head Stabilized Tracking**	**Remote, Head Free-to-Move Tracking**
Sampling Rate	**Monocular or Binocular** **250, 500, 1000, 2000 Hz**	**Monocular or Binocular** **250, 500, 1000 Hz**
Eye Tracking Principle	**Pupil with Corneal Reflection (CR)**	
Average Accuracy [1]	**Down to 0.15° (0.25° to 0.5° typical)**	
Saccade Event Resolution	**0.05° microsaccades**	
Spatial Resolution [2]	**0.01°**	
Noise with Participants [1]	**Filter (Off / Normal / High)** **1000 Hz: 0.03°/ 0.02°/ 0.01°** **2000 Hz: 0.05°/ 0.03°/ 0.02°**	**Filter (Off / Normal / High)** **500 Hz: 0.03°/ 0.02°/ 0.01°** **1000 Hz: 0.05°/ 0.03°/ 0.01°**
End-to-End Sample Delay [3]	**M = 1.34 msec, SD = 0.18 msec @ 2000 Hz** **M = 1.88 msec, SD = 0.36 msec @ 1000 Hz**	**M = 2.10 msec, SD = 0.37 msec @ 1000 Hz** **M = 3.21 msec, SD = 0.61 msec @ 500 Hz**
Blink Recovery Time	**0.5 ms @ 2000 Hz** **1.0 ms @ 1000 Hz**	**1.0 ms @ 1000 Hz** **2.0 ms @ 500 Hz**
Pupil Detection Models	**Centroid or Ellipse Fitting**	**Ellipse Fitting**
Pupil Size Resolution [1]	**0.1% of diameter**	
Gaze Tracking Range	**Customizable – Default is 32° horizontally, 25 ° vertically**	
Allowable Head Movement	**±25 mm horizontal or vertical**	**20 cm horizontal X 20 cm vertical at 52 cm**
Optimal Camera-Eye Distance	**42 - 62 cm**	
Glasses Compatibility	**Excellent**	
On-line Event Parsing	**Fixations / Saccade / Blink / Fixation Update**	
EDF File and Link Data Type	**Gaze, Raw, and HREF eye position data / Pupil size / Online events / Buttons / Messages / Digital inputs**	
Real-time Operator Feedback	**Eye position gaze cursor superimposed on static image or position traces with camera images and tracking status**	
Certifications	**IEC 60601-1 ed. 3., AAMI ES60601-1, CSA C22.2#60601-1 ed. 3.1, IEC 62366 ed. 1, ISO 15004-1, ed. 1, ISO 15004-2, IEC 62471 ed. 1, ISO 14971. ed. 2, IEC 60601-1-6 ed. 3.0, IEC 60601-1-2, ed. 4**	

Specifications are subject to change without notice. Availability of some features depends on options purchased.
1. Measured with real subject fixations.
2. Unfiltered data measured with an artificial eye.
3. Time from physical event until first registered sample (unfiltered) is available via Ethernet