Evaluation Kit for Tobii IS5 Integration Platform

Get started with the most advanced eye tracking platform available

The IS5 is Tobii's seventh generation of eye tracking technology featuring a more compact size and power footprint. It seamlessly integrates into devices to enable entirely new applications with a fresh, new eye tracking experience for both professionals and end consumers. The IS5-BE is the integration platform of the IS5 for devices with screens up to 19" in size.

The Tobii IS5 Evaluation Kit is a USB peripheral that integrates the IS5-BE eye tracking platform in a small form factor that can be used on a computer screen or laptop. This kit allows the user to evaluate the performance of the IS5, try out Windows experiences and games, and get started with developing their own applications for eye tracking. Early software development is possible using the IS5 Evaluation Kit, so that software development and integration can be done in parallel and thus save time-to-market lead time.

The Evaluation Kit comes in two variants, 850nm and 940nm, depending on the illumination wavelength chosen in the IS5 platform. The 850nm variant is within the visible range so it is seen as a slight glow, whereas the 940nm is outside of the visible spectra so it is not detected by the human eye. The choice of variant is dependent on the application, the performance requirements, and whether invisible illumination is a requirement or not.

The IS5 Evaluation Kit is mounted with a magnetic attachment to the screen for easy installation and removal. Two metal plates with adhesive are included in the package.

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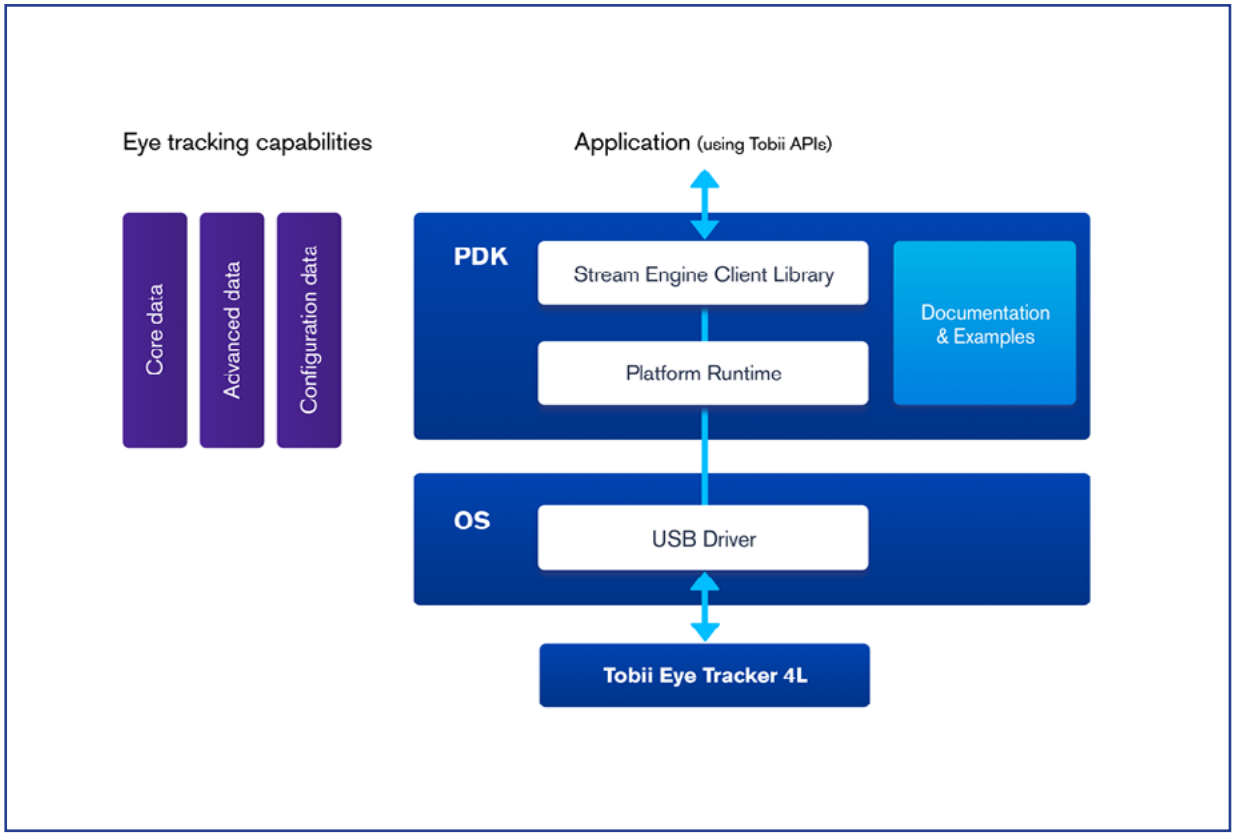
Getting Started

It is easy to get started with the IS5 Evaluation Kit. All of the necessary drivers and software to get started are included in a downloadable package here: http://developer.tobii.com/is5. Additionally, on this site, you will also find the Tobii Experience app, which can be used to try out eye tracking on a Windows PC. It includes several Windows convenience features developed by Tobii.

To begin writing your own applications for interaction use, you use the Tobii Stream Engine – a client library which provides a stable eye tracking API. The necessary information on how to get started is available in the Developer Zone. The Stream Engine can be found at: https://developer.tobii.com/consumer-eye-trackers/stream-engine/getting-started/

The IS5 Evaluation Kit includes a Platform Development Kit (PDK), which enables customization of the calibration, configuration, and setup of the eye tracker. The PDK includes a platform runtime in the form of a service executable that, together with the Stream Engine client library, can be used by any customer-provided application. The platform runtime and the Tobii Stream Engine client library allow you to build a customized version of the platform software.



Tobii IS5 Evaluation Kit Specifications

	IS5 Evaluation Kit 850	IS5 Evaluation Kit 940
Size	142 x 15 x 11 mm	
Gaze data rate	▪ Fine gaze at 33Hz (x/y position on screen at 33Hz for interactions) ▪ Fast gaze at 60Hz (x/y position on screen at 60Hz) ▪ Non-interlaced tracking is based on three images per gaze sample for optimum tracking over a large population.	
Accuracy for 95% percentile of population	1.71 degrees	1.76 degrees
Precision for 95% percentile of population	0.79 degrees	1.07 degrees
Detected gaze for 95% percentile of population	90.3% valid gaze samples	81.06% valid gaze samples
Power consumption	Maximum average: 2.8 W (to ensure stable operation, it should be connected to a BC1.2 capable port or a powered hub)	
Processing unit	Tobii EyeChip™ with fully embedded processing	
Interface	Connector: USB 2.0 type A	
Working distance	45 – 90 cm	45 – 80 cm
Track box size (width x height)	20 x 20 cm @ 45 cm distance 35 x 35 cm @ 65 cm distance 35 x 35 cm @ 80 cm distance	
Head movement	Up to 20 cm/s, head roll at angles up to 25 degrees	
Screen size	Up to 17.4” (19” with reduced performance)	
Compatible operating systems	Windows 10 RS3 or later On request: Linux, MacOS	

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Tobii IS5 Evaluation Kit Data Streams

Core data streams	**Combined (left and right eye) gaze point, filtered for interaction**
	User presence
	Gaze origin
	User position guide
Advanced data*	Left and right eye separate unfiltered gaze point
	Left and right eye separate unfiltered gaze origin
	Left and right eye separate unfiltered pupil diameter
Configuration data*	Screen calibration and display setup

*these data streams require a separate license key

[1]For larger screens, the limiting parameter is the quality of the gaze accuracy at the upper corners of the screen when the user sits close to the screen.

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