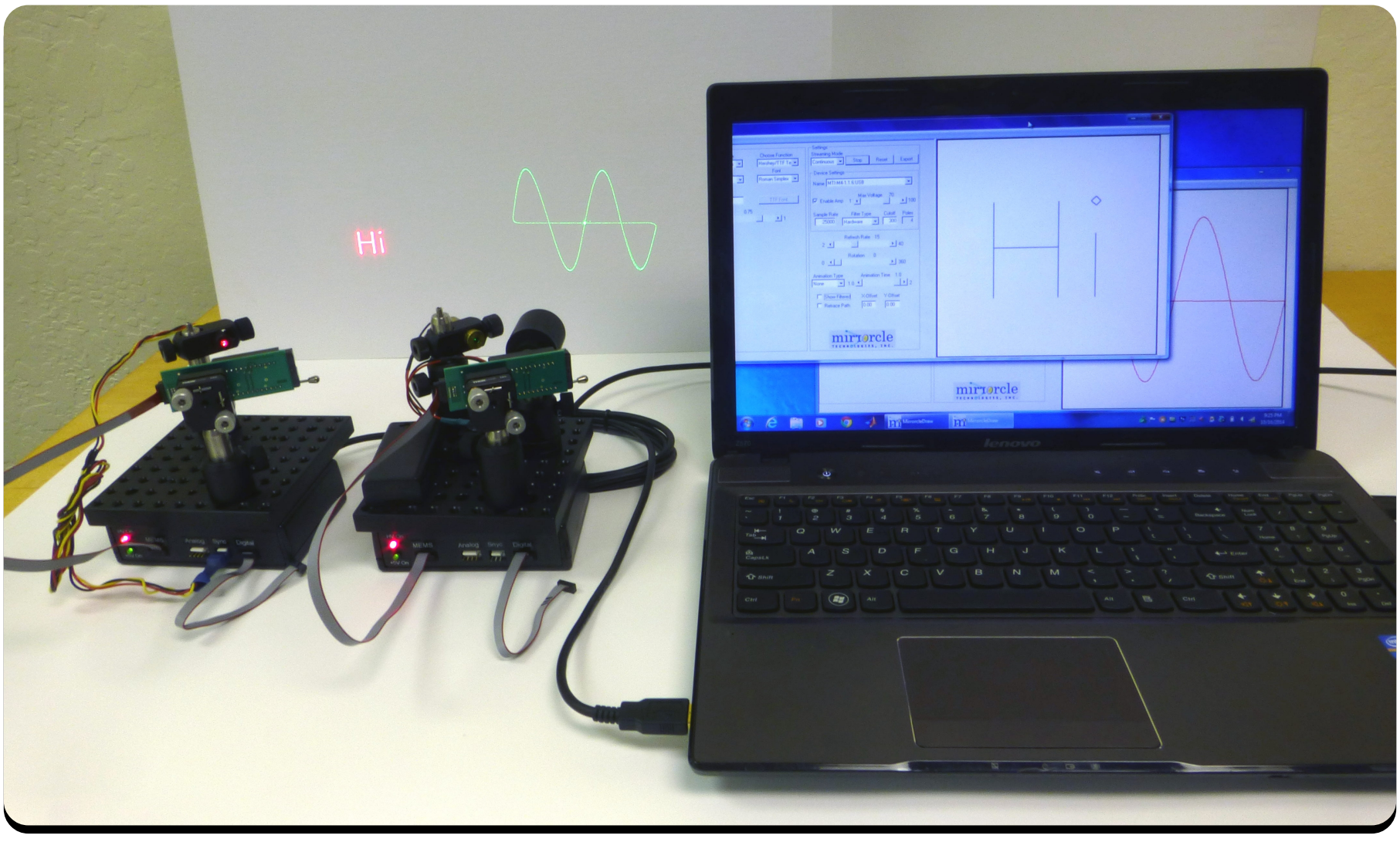
Software



Two development kits are connected to a single laptop and running simultaneously. On the right is a kit with a green 532nm laser, and on the left is a kit with a red 630nm laser.

The software suite enables users to perform MEMS mirror device driving from proof of concept in new application development to products. Additionally, it has been proven to be an excellent educational tool for MEMS students and professionals. It features software development capabilities with extensive C++, Matlab, Labview and Android Java API for prototype and product development.

Software solutions included in the suite provide tools to aid users in: developing content for controlling MEMS mirror position/scanning behavior over time, conditioning that content to get the best performance from the devices, streaming that content to appropriate MEMS Controller hardware, and controlling certain parameters in the hardware (e.g. amplitude and offset).

There are multiple Windows-based executables which give users control of all of the mirrors' various modes of operation – point-to-point (quasi-static) beam steering, line-by-line uniform velocity rastering, vector graphics at various refresh rates, bitmap image laser displaying or laser marking, one-axis-resonating, and Lissajous patterns.

The main executable "MirrorcleDraw" provides a graphical user interface with all of the above-mentioned modes and options. The program further allows users to study a device's step response, resonant frequency of each axis, response with the use of various types of filters, etc. There are several examples of laser display capabilities based on vector graphics drawings, laser display of text with various fonts, and animations. Features also include the capability to load waveforms (import from text files) to direct the MEMS mirror to user-controlled positions, as well as the capability to load ILDA-specification vector files.

Mirrorcle Software Suite 10.6 includes the following software:

- **MirrorcleDraw**
- **MirrorcleLinearRaster**
- **Software Development Kit for C++**
- **Software Development Kit for Matlab**
- **Software Development Kit for LabVIEW**

Mirrorcle Android Suite 10.6, provided as part of the Android Development Kit for mobile Android devices, includes**:**

- **MirrorcleDraw**
- **Software Development Kit for Android**

Mirrorcle Linux Suite 10.6, provided as part of the Linux Development Kit**,** includes**:**

- **MTIDevice-Demo**
- **MirrorcleLinearRaster**
- **Software Development Kit for Linux**

Please refer to the Mirrorcle Software Suite – Applications Guide for additional information. Additional comprehensive user guides are provided with the purchase of a development kit.