

PRESS RELEASE

For immediate publication

02/05/2025

Mirrorcle Technologies, Inc. announces the release of the PlayzerX platform at CES 2025

Mirrorcle is proud to announce the release of the PlayzerX platform at CES 2025. Mirrorcle has provided industry-leading, compact and cost-effective programmable laser-beam steering solutions for 20 years. Historically, our MEMS Mirror-based system solutions such as the compact projector “Playzer” and 3D lidar “SyMPL”, were offered as comprehensive solutions that include Mirrorcle’s proprietary software API and applications. But a rapidly evolving industry sometimes led customers to request support for a variety of less-common or application-specific platforms. In some cases, customers expressed a need to develop their own APIs to use Mirrorcle’s beam steering solutions. The new PlayzerX platform was developed to not only meet these demands, but to further lower barriers to entry to Mirrorcle’s unique laser beam steering technology. PlayzerX offers open-source programmability while being operating system and hardware platform independent. The PlayzerX hardware has already been available at a lower cost, directly from Mirrorcle and through online distributors like Digikey. Previously, users could interface to the hardware’s analog inputs to steer the laser beam and control laser brightness. Now, and in addition, USB-based (serial communication) control of steering and brightness projection data is enabled with a fully published and documented protocol, supported by a public C++ repository with an open-source API and code examples.

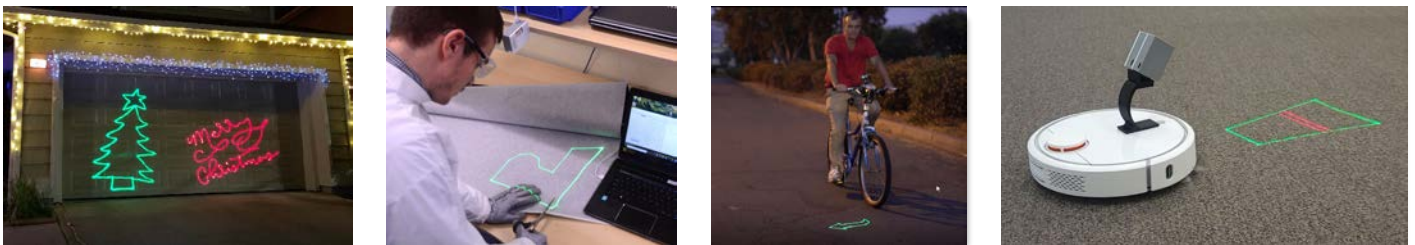


Figure 1. Mirrorcle Technologies’ Playzer use case examples in decorative projection, assembly assistance, bicycle safety and navigation and human-robot communications.

What is the PlayzerX?

PlayzerX is a pocket-sized, USB powered, programmable vector graphics laser projector which consists of a MEMS Mirror-based Scan Module and an embedded Controller. Playzer may be controlled by Software Applications and Mirrorcle’s proprietary software API (Playzer S-Series) or via Analog Input or USB Serial Commands (Playzer X-Series). It is a compact solution for displaying bright vector graphics in a multitude of environments, both outdoor and indoor. The Playzer products are built on Mirrorcle’s Vector Graphics Laser Projection (VGLP) Architecture, which combines a full technology stack of software, electronics, and optical laser beam-steering solutions to enable fully programmable and re-configurable laser projection and display of bright, high-contrast graphic content on a variety of surfaces.

The architecture optimizes the performance of lasers and fast gimbal-less dual-axis MEMS mirrors to achieve highest “wall-plug power to visibility” efficiency. A critical feature of the architecture is to utilize lasers of modest optical power at very high duty cycles and to deliver all available illumination to the desired vector graphics and image, and not to spread it over a wide area as in typical pico-projectors or DLP displays.

PlayzerX enables user to develop programmable high-brightness, high-contrast laser projection content for applications like digital signage and décor, human-robot interaction, dynamic courtesy lighting for automotive applications, 3D scanning and metrology, drone-based projection systems and many more.

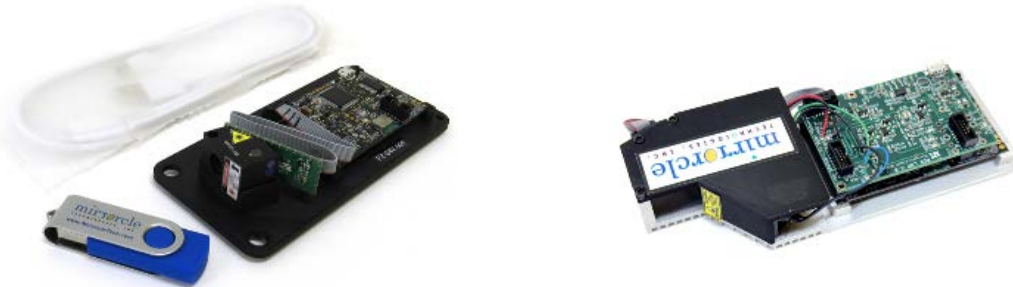


Figure 2. Examples of OEM Playzer modules for prototyping orders, Monochrome Playzer on the left and RGB Playzer on the right.

Availability of Playzer X-Series by end of Q1 2025

The PlayzerX product was launched in Jan. of 2025, with the hardware already available for sale online on Digikey, and through Mirrorcle Technologies directly. The open-source software platform is available on Github along with the supporting documentation:

<https://mirrorcletech.github.io/playzerx/>

At CES 2025, it was demonstrated at the booth of partner “Great Star Industrial” at LVCC North Hall #9455.



Figure 3. Renderings of Mirrorcle VGLP solutions in a variety of use cases.

###

Media contact:
Christian
christian [at] mirrorcletech [dot] com
Tel. +1 510 524 8820

About Mirrorcle Technologies, Inc.

Mirrorcle Technologies, Inc., founded in 2005, is a private California corporation that commercially provides products and laser systems based on its proprietary optical microelectromechanical system (MEMS) technology. Since its founding, and supported by its continuous investment in R&D, the company has been offering the world's fastest point-to-point (quasi-static) two-axis beam-steering MEMS Mirrors, as well as resonant-type micromirror devices with video rates. Mirrorcle is globally the only provider of tip-tilt MEMS actuators in combination with mirrors from submillimeter to several mm in diameter, offering customers a wide selection of specifications to optimize their paths to successful commercialization. Mirrorcle products can be found today in 3D metrology systems, biomedical imaging systems, solid-state Lidars, AR/VR prototypes, laser projectors, and classrooms. Mirrorcle's system solutions include the world's most compact vector graphics laser projectors and 3D Lidars. Mirrorcle maintains multiple cleanroom laboratories at its Richmond, California headquarters, and year-round, 24-7 access to a wafer-based CMOS and MEMS fabrication facility. Beyond its own facilities, the company has established high-volume manufacturing with leading MEMS wafer foundries and qualified opto-mechanical assembly houses.