

01/09/2018

Mirrorcle Showcases MEMS Technology at CES 2018

Mirrorcle Technologies presented its proprietary MEMS mirror technology at CES 2018. Attracting nearly 200,000 exhibitors and visitors, CES 2018 spanned more than 2.75 million square feet of exhibition space across Las Vegas. Mirrorcle's delegation to Las Vegas joined the Microchip team at the Las Vegas Convention Center to showcase their latest micromirror-based scanning solutions and prototype demos. It was the first time that the two companies presented their products side by side, demonstrating their joint development of control and drive electronics tailored to support Mirrorcle's gimbal-less MEMS mirrors.



Figure 1. Mirrorcle's CEO, Dr. Veljko Milanović, (left) and Donald Humbert, Product Marketing Manager at Microchip Technology (right), at the CES 2018 Microchip booth demonstrate PLAYZER prototype with compact USB Controller OCCIE 1.1 and new compact scan module.

Laser Imaging and Tracking Development Kit Boasts Many Features and Applications

Mirrorcle Technologies displayed its Laser Imaging and Tracking Development Kit (DEMO-01) at the Microchip booth, demonstrating its core technology of fast and extremely repeatable beam-steering MEMS mirrors. The integrated scan modules are manufactured by a Taiwan manufacturing partner and are powered by the USB-SL MZ Controller, which controls the MEMS mirror scanning and laser modulation. It also interacts with the kit's photosensor to enable target tracking in 3D space. This controller is the culmination of a multi-year collaboration between teams from Mirrorcle and Microchip. It integrates a high-performance PIC32MZ microcontroller, several high-voltage driver ICs and other components from Microchip. At CES, the Mirrorcle team met with a number of interested visitors and offered its in-depth expertise in utilizing dual-axis, gimbal-less MEMS mirrors in various applications.

New Miniaturized MEMS Controller and Programmable Light Source Prototype

In the afternoon of the first day at CES, Mirrorcle unveiled its new and highly compact PLAYZER display module with a credit-card sized OCCIE controller (ver. 1.1) and a compact Scan Module. In private discussions, the team also introduced the first prototype of its Programmable Light Source (PLS-01), which will be publicly launched at the Mirrorcle booth (#4214) at Photonics West 2018. The PLS is a low-power, programmable light emitter demonstrator based on the latest laser-phosphor projection technologies. It is designed for a number of industries and application areas, including automotive lighting, security and industrial lighting, search lights, and more. Bright white light, shaped by the rapid movement of the MEMS mirror, is projected by a condenser lens onto a target surface area such as a road, wall or carpet. The projected light can be configured in real time using Mirrorcle's standard software suite. It is the result of the unique capability of Mirrorcle MEMS mirrors to run fast scan patterns in both axes and operate safely with high optical laser powers (several Watts) and at elevated temperatures.



Figure 2. PLAYZER prototype with new USB Controller OCCIE 1.1 and new compact scan module (left). Programmable Light Source PLS-01 projecting white-light "CES" text (middle). Open PLS-01 module with MEMS-based scanner and integrated laser, phosphorous and optics. Also shown is the Mirrorcle USB-SL MZ controller powered by Microchip's PIC32MZ microcontroller (right).