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Mirrorcle Showcases MEMS Technology at CES 2018

Mirrorcle Technologies presented its proprietary MEMS mirror technology at the Microchip Technology booth #26070 at CES 2018. The company's delegation to Las Vegas joined its longtime partners in the South Hall 2 of the Las Vegas Convention Center, equipped with the latest micromirror-based scanning solutions and prototype demos. It is the first time that the two companies present their products side by side, demonstrating their joint development of control and drive electronics tailored to support Mirrorcle's gimbal-less MEMS mirrors. This year's Consumer Electronics Association (CES) trade show spans 2.5 million net square feet of exhibition space with more than 3900 exhibiting companies and an expected attendance of more than 184000 visitors.



Figure 1. Mirrorcle's CEO, Dr. Veljko Milanovic (left) and Microchip's Product Marketing Manager, High Voltage Interface and DMOS, Donald Humbert at the Microchip booth at CES 2018 in Las Vegas. 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 vector 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 is powered by the designated USB-SL MZ Controller, which controls the MEMS mirror scanning and laser modulation, as well as interacting with the kit's photosensor to allow for e.g. target tracking in 3D space. The controller is the culmination of a number of years of collaboration between Mirrorcle's and Microchip's teams and utilizes Microchip's PIC32MZ high voltage driver ICs and other components. The Mirrorcle team at CES joined in discussions 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 of the CES exhibition, a new and highly compact PLAYZER display module with a credit-card sized OCCIE controller (ver. 1.1) and a compact Scan Module was unveiled. In private discussions, the team also introduced the first Programmable Light Source prototype 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 geared for a number of industries and application areas, including automotive lighting, security and industrial lighting, search lights etc. Bright white light, shaped by the rapid movement of the MEMS mirror, is projected by a condenser lens to a target surface area such as e.g. a roads, walls or carpet. The projected light is real-time configurable by 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 high voltage driver IC.