

...we move LIGHT ...

LiDAR/Imaging MEMS Development Kits

LiDAR/Imaging MEMS development kits are for developers of systems such as **OCT/Confocal** imaging systems, **LiDARs**, **3D Scanning**, and include MEMS Mirrors and supporting hardware and software to assist developers in integration into complete prototypes and/or products.

LiDAR/Imaging MEMS Dev Kit 1 (P/N: DK-026): Large diameter (4.6mm and 5.0mm), large angle MEMS mirrors, typically used in coaxial designs with both illumination/transmit and sense/receive paths going through the MEMS mirror.

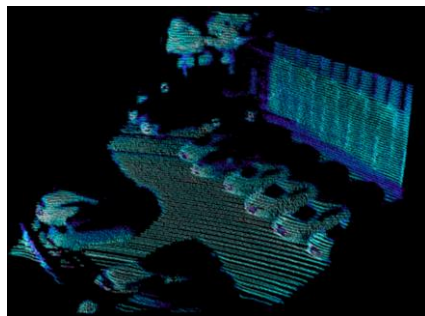
LiDAR/Imaging MEMS Dev Kit 2 (P/N: DK-027): Medium diameter (2.0mm and 2.4mm), large angle MEMS mirrors, fastest and most robust, typically used in biaxial/bistatic designs only on illumination/transmit paths, or in shorter distance coaxial designs.

Targeted Applications:

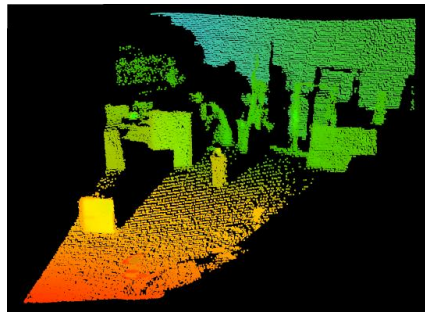
LiDAR, Biomedical imaging / OCT, 3D Sensing and Imaging

Development Kit Includes:

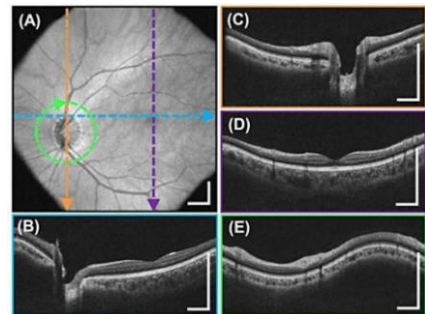
- MEMS mirrors (Qty. and type depend on Kit)
- Choice of B or C anti-reflection coated window and wedges optionally available for the windows with an -11° tilt for the MEMS mirrors
- USB Powered MEMS Controller: MZDK 2.x
- Optical Breadboarding
- Mirrorcle Software Suite
- MEMS Mount "Horseshoe"
- 5mW Class IIIa 635nm laser module



Scanning for high performance Coaxial LiDARs



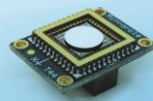
Scanning for high performance Biaxial LiDARs



Scanning for imaging and microscopy systems



FEATURED PRODUCTS



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DEMO-07: SyMPL 3D LiDAR Demonstrator Kit

The SyMPL 3D LiDAR is a compact, lightweight, low power consumption plug-and-play LiDAR based on Mirrorcle's Synchronized MEMS Pair LiDAR ("SyMPL") hardware architecture and supported with software applications. The kit is designed to demonstrate the capabilities of the architecture and to experience the aspect of programmable scanning for LiDAR applications.

For full programmability – users may purchase Mirrorcle Software Suite SDKs and software support hours or work with Mirrorcle's engineering team on product customization.

Targeted Uses:

Robot Vision, mid range LiDAR, AMR, AGV, Drones, Indoor Navigation and Mapping

Software Applications:

DEMO-07 includes two Windows applications. **MirrorcleLiDAR** utilizes Mirrorcle Software Suite API to communicate with the Controller, sets scanning parameters, and receives sensor data over USB. This data is then presented at a TCP/IP socket for client applications to receive and process. Application **MirrorcleCloud** is a Mirrorcle-developed example client for the point cloud data.



VGLP programmable messaging and 3D perception sensing solutions for AMR, AGV, service robots



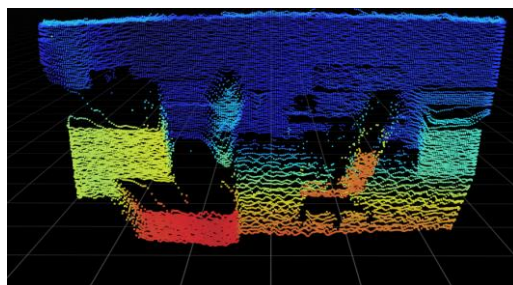
Guidance and Mapping for drones / UAVs

Features and Specifications of Demonstrator Unit:

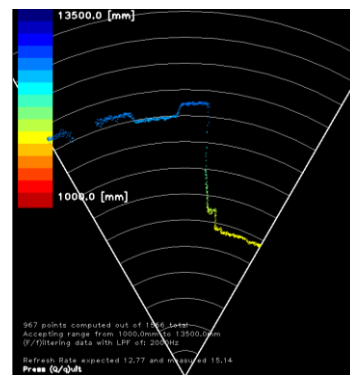
- Programmable Region of Interest
- Horizontal (azimuth) Scan up to -15° to $+15^{\circ}$
- Vertical (elevation) Scan up to -8° to $+8^{\circ}$
- Aspect ratio (horizontal to vertical) is fully programmable
- Weight $<0.25\text{kg}$, $85\text{mm} \times 84\text{mm} \times 73\text{mm}$ enclosure
- Power consumption approx. 1.25 W
- Power and serial communication by a USB cable (PC)
- At least 12m for 10% targets, 30m for typical targets
- Based on scanned 905nm laser, $\sim 2\text{-}3\text{mW}$ average power



Compact, Lightweight, Low power LiDAR



Streaming of 3D point cloud data at high rates



Polar plot representation of 3D data

FEATURED PRODUCTS