



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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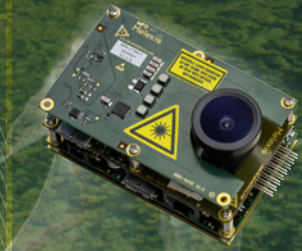
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EVK75123

REAL-TIME 3D IMAGING

**TIME-OF-FLIGHT
CHIPSET EVALUATION KIT**



Microbats generate ultrasound via the larynx and emit the sound through the nose or open mouth; from 14,000 to over 100,000 hertz, well beyond the range of the human ear. The emitted vocalizations form a broad beam of sound used to probe the environment, as well as communicate with other bats.

QVGA TIME-OF-FLIGHT CHIPSET EVALUATION KIT

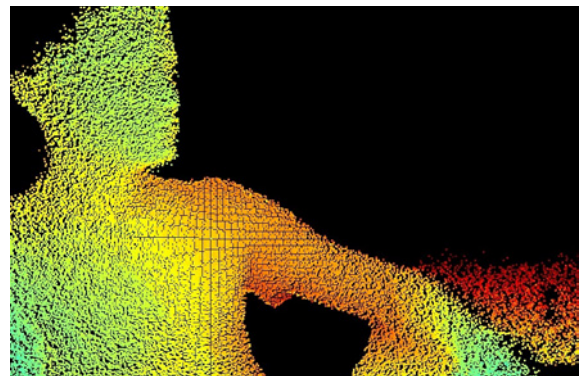
The EVK75123 is the evaluation kit for the MLX75023 and MLX75123 Time-of-Flight (TOF) chipset. This new chipset enables real-time 3D imaging at full QVGA resolution with unsurpassed sunlight robustness. The evaluation kit is a complete camera built around this chipset and can be directly connected to a PC for visualization and recording of depth map data, while allowing direct access to many configuration settings.

EVK75123 is a modular plug and play platform perfectly set up for customization by its customers. The kit consists of four stacked PCBs (from top to bottom: illumination board, TOF chipset board, interface board and a processor board). It is possible to detach the top two PCBs from the bottom two PCBs by bypassing the board to board connection with an external cable suitable for FPD-Link III communication. A graphical user interface for Windows is provided for live depth map visualization, basic recording, analysis and configuration. For custom SW development, a MATLAB SDK and C API is also provided. The built-in flexibility of our evaluation kit enables any designer to develop the necessary system know-how and experience for use in their application.

The evaluation kit is available in variants with 60 deg and 110 deg field-of-view (FOV).

KEY FEATURES

- ✓ MLX75023 and MLX75123 TOF Chipset
- ✓ QVGA resolution
- ✓ 120 klux sunlight rejection
- ✓ VCSEL illumination (60° or 110°)
- ✓ Modulation frequency up to 40MHz
- ✓ Distance and confidence data at max. 60 FPS
- ✓ Visualizer, C API and Matlab SDK
- ✓ Dimensions: 80 x 50 x 35mm
15mm TOF chipset board only



ILLUMINATION BOARD

- ✓ 4x VCSELs (60° or 110° field of view)
- ✓ Programmable peak optical power (0 - 25W)
- ✓ Onboard temperature sensor
- ✓ Eye safe (certificate available)

TOF CHIPSET BOARD

- ✓ MLX75023 QVGA, 320x240 pixels, TOF sensor array
- ✓ MLX75123 TOF companion chip
- ✓ Standard S mount (M12x0.5) lens holder
- ✓ Two temperature sensors
- ✓ Programmable input clock and VMIX voltage
- ✓ FPD-Link III serializer

INTERFACE BOARD

- ✓ Interface between TOF Chipset Board and CM-i.MX6 Board
- ✓ FPD-Link III deserializer
- ✓ Power input (9 - 16V) and RJ45 ethernet connector
- ✓ GPIO connector (I²C, SPI, VIN, 3V3 & three GPIOs)

CM-I.MX6 PROCESSOR BOARD

- ✓ Quad core i.MX6 processor running up to 1.2 GHz
- ✓ Calculates the distance and confidence data

EVK75123 PACKAGE CONTENTS

- ✓ 1x HW module
- ✓ 1x external AC/DC PSU
- ✓ 1x ethernet cable
- ✓ Visualizer for Windows
- ✓ MATLAB SDK & C API (+ example code)
- ✓ Registration number (for SW, documentation & support)

EVK75123 ORDER CODES

- ✓ EVK75123-60-850-1 : 60deg FOV, 850nm VCSELs
- ✓ EVK75123-110-850-1 : 110deg FOV, 850nm VCSELs
- ✓ EVK75123-110-940-1 : 110deg FOV, 940nm VCSELs

BLOCK DIAGRAM

