Melexis

INSPIRED ENGINEERING

EVK75027

3D OPTICAL SENSORS

TIME-OF-FLIGHT CHIPSET EVALUATION KIT
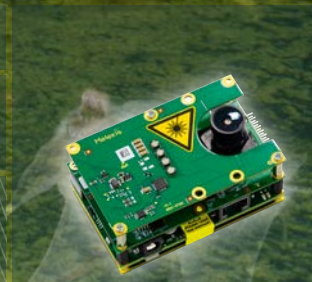
VGA TIME-OF-FLIGHT EVALUATION KIT

EVK75027 is the evaluation platform for Melexis' automotive qualified MLX75027 Time-of-Flight (TOF) image sensor. This sensor enables real-time 3D imaging at VGA resolution with unsurpassed accuracy & sunlight robustness. The evaluation kit is a complete camera that can be connected directly to a PC for real-time visualization, recording & analysis of distance data, whilst allowing easy access to many configuration settings.

This 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 sensor board, interface board and a processor board). 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 provided. The built-in flexibility of our evaluation kit enables any designer to develop the necessary system know-how and product experience for use in their application.

The evaluation kit is available with a 110° horizontal field-of-view and 940nm VCSEL illumination.

KEY FEATURES

- ⊘ MLX75027 VGA Time-of-Flight sensor
- ⊘ VCSEL illumination (110° FOV @940nm)
- ⊘ Modulation frequencies in range 4 to 100MHz
- ⊘ Exchangeable sensor optics (standard S mount)
- ⊘ Distance & confidence data at max. 35 FPS
- ⊘ Raw data mode(s)
- ⊘ Visualizer, C API & Matlab SDK
- ⊘ Dimensions: 80 x 50 x 35 mm (complete module)
  80 x 50 x 27 mm TOF chipset board
  (front end only incl. optional MIPI SerDes boards)

Melexis
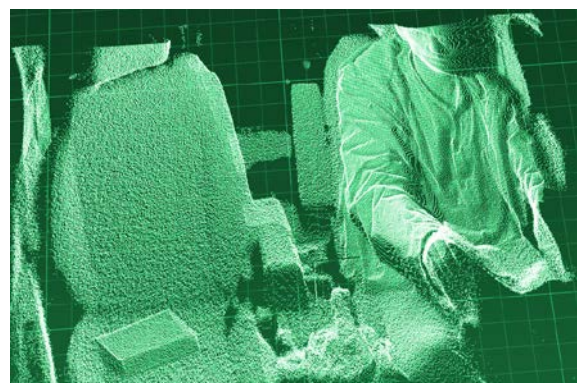
ILLUMINATION BOARD

- 4x VCSELs (110° circular FOV @940nm)
- Programmable peak optical power to simulate 1, 2 or 4 VCSEL operation
- Over temperature protection
- Eye safe (certificate available)

TOF SENSOR BOARD

- MLX75027 VGA (640x480 pixels) TOF sensor array
- Optimized optics incl. optical band-pass filter
- Standard S mount (M12x0.5) lens holder
- External & on-chip temperature sensors

INTERFACE BOARD

- Physical interface between MLX75027 & i.MX6 processor
- 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
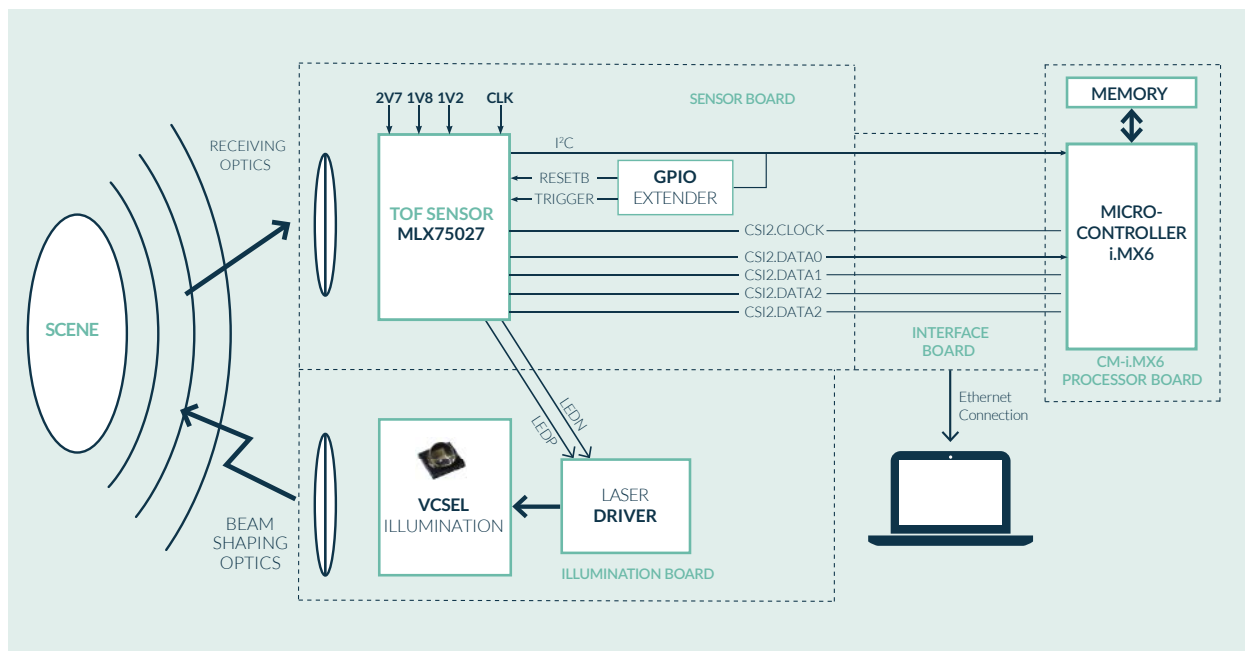- Calculates the distance & confidence data

EVK75027 PACKAGE CONTENTS

- 1x HW module
- 1x external AC/DC 12V PSU
- 1x ethernet cable
- Visualizer for Windows
- Matlab SDK & C API (+ example code)
- Unique registration key (for documentation, software, updates & support)

EVK75027 ORDER CODES

- EVK75027-110-940-1: 110deg HFOV with 940nm VCSELs

BLOCK DIAGRAM

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Distance Sensor Development Tool *category:*

Click to view products by Melexis *manufacturer:*

Other Similar products are found below :

SEN0004 MIKROE-2509 172 DFR0315 SEN0006 SEN0007 SEN0008 SEN0187 SEN0202 SEN0208 DM160234 SEN0143 SEN-13968 3316 SEN-08504 SEN-08502 DFR0445 3317 984 SEN0014 SEN0001 SEN0171 3942 979 981 982 985 TMF8701-DB TMF8801-DB TMF8801-EVM AD8283CP-EBZ AD8285CP-EBZ ADUX1020-EVAL-SDP SEN0245 EVALBGT24LTR22TOBO1 DM160238 MIKROE-3339 MIKROE-3439 MIKROE-1589 MIKROE-1991 MIKROE-2086 MIKROE-3103 SECO-RANGEFINDER-GEVK PIM058 PIM062 PIM373 101020083 101020353 101020532 101020617