Melexis

INNOVATION WITH HEART



EVK75027

GEN3 VGA

TIME-OF-FLIGHT 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 and analysis of image data, whilst allowing easy access to many configuration settings. The onboard compute platform enables customer to load their own SW application!

TOF|3D by Melexis
1 MILLION
SENSOR ICs SHIPPED

The evaluation kit is available with a 110° horizontal field-of-view, 940 nm automotive qualified VCSEL illumination and driver IC with integrated eye-safety functionality designed in collaboration with Lumentum, Stanley Electric and Sony Semiconductor Solutions..

KEY FEATURES

- MLX75027 VGA Time-of-Flight sensor
- VCSEL illumination (110° HFOV at 940 nm)
- Modular (interchangeable) platform architecture
- HW & SW reference design
- ROS compatible including web GUI
- Distance and confidence data at >100 FPS
- Advanced feature support on demand
  - Range de-aliasing
  - Multi-path error correction
  - High dynamic range (HDR)
  - Non-synchronized cross interference rejection
- Small form factor 50 x 40 x 45 mm



FOR MORE INFORMATION: WWW.MELEXIS.COM/EVK75027

Melexis

ILLUMINATION BOARD

- 2 dual junction VCSELs (110° x 85° FOV @940nm)
- Over temperature protection
- Integrated driver with eye-safety protection
- Eye safe certificate available

TOF SENSOR BOARD

- MLX75027 VGA (640x480 pixels) TOF sensor array
- Optimized optics incl. 38nm optical band-pass filter
- Standard S mount (M12x0.5) lens holder
- EEPROM for calibration parameters

INTERFACE BOARD

- Physical interface between MLX75027 & Zynq Ultrascale+
- Power distribution with 12V input and RJ45 ethernet connector
- Pin header (GPIO, VIN, I²C)
- Gigabit ethernet interface

PROCESSOR BOARD

- Xilinx Zynq Ultrascale
- COTS Trenz TE0820-04-3BE21xL board
- Proprietary Melexis firmware

PACKAGE CONTENTS

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

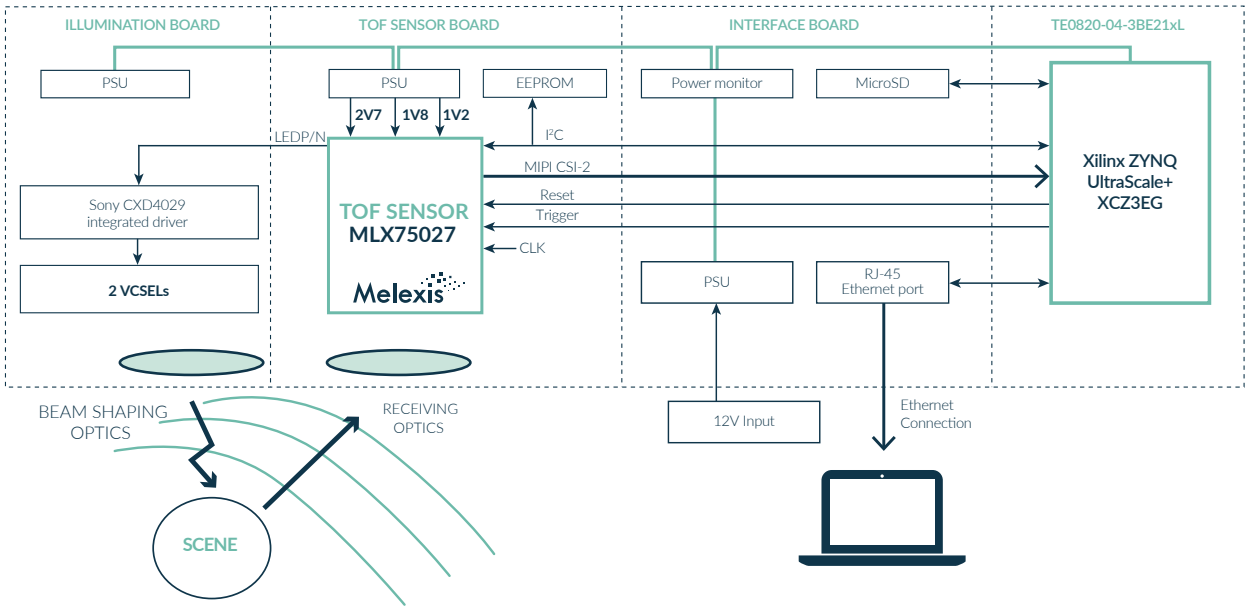
ORDERING CODE

- EVK75027-110-940-2-SLM

AVAILABILITY

Check **www.melexis.com/en/contact/distributors** for a local distributor in your region.

BLOCK DIAGRAM



The above information is "as is" and believed to be correct and accurate. Melexis disclaims any and all liability in connection with or arising out of the furnishing, application or use of the information or products; any and all liability, including without limitation, special, consequential or incidental damages; and any and all warranties, express, statutory, implied, or by description, including warranties of fitness for particular purpose, non-infringement and merchantability. Melexis reserves the right to change it at any time and without notice. Users should obtain the latest version of the information to verify it is current. Users must further determine the suitability of a product for its application, including the level of reliability required and determine whether it is fit for a particular purpose. Export control regulations may apply and export might require a prior authorization from competent authorities. Melexis' products are intended for use in normal commercial applications. Unless otherwise agreed upon in writing, the products are not designed, authorized or warranted to be suitable in applications requiring extended temperature range and/or unusual environmental requirements. High reliability applications, such as medical life-support or life-sustaining equipment are specifically not recommended by Melexis. Melexis' products are sold under the Melexis' Terms of Sale, which can be found at https://www.melexis.com/en/legal/terms-and-conditions.