Melexis
INSPIRED ENGINEERING

EVK75027

GEN3 VGA

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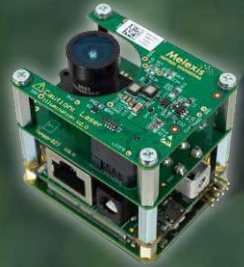
VGA TIME-OF-FLIGHT EVALUATION KIT

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!

The evaluation kit is available with a 110° horizontal field-of-view and 940 nm automotive qualified VCSEL illumination, designed in collaboration with Lumentum and Lextar.

TOF|3D by Melexis
1 MILLION SENSOR ICs SHIPPED

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

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ILLUMINATION BOARD

- 2 VCSELs (110° x 85° FOV @940nm)
- Over temperature 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)
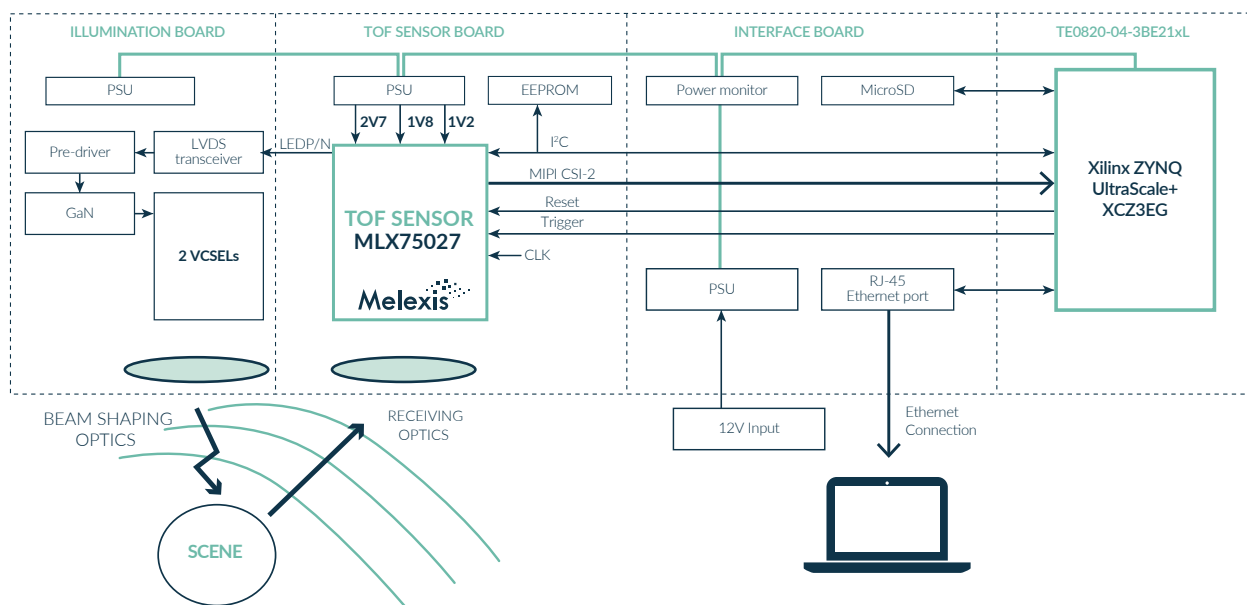- Unique registration key (for documentation, software, updates & support)

ORDERING CODE

- EVK75027-110-940-2

AVAILABILITY

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

BLOCK DIAGRAM