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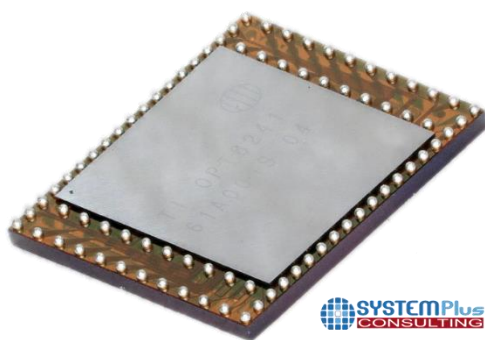
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# Texas Instruments' Time of Flight Image Sensor for Industrial Applications

*A look into Texas Instruments' system-on-chip, including Sony/Softkinetic's time-of-flight pixel technology, for industrial applications*



Today, Time-of-Flight (ToF) systems are among the most innovative technologies offering imaging companies an opportunity to lead the market. Every major player wants to integrate these devices to provide functions such as 3D imaging, proximity sensing, ambient light sensing and gesture recognition.

Sony/Softkinetic has been investigating this technology deeply, providing a unique pixel technology to several image sensor manufacturers in three application areas: consumer, automotive and industrial. For industrial applications, Sony/Softkinetic has licensed its technology to Texas Instruments, which is providing ToF imagers for human detection or robot-human interaction.

The OPT8241 3D ToF imager is packaged using Chip-On-Glass (COG) technology. The device comprises a system-on-chip (SoC) and glass filter in the same component in thin, 0.7 mm-thick, packaging.

This report analyzes the complete component, from the glass near-infrared band-pass filter to the collector based on ToF pixel licenses developed by Sony/Softkinetic and adapted by Texas Instruments. The report includes a complete cost analysis and price estimation of the device based on a detailed description of the package, and the ToF imager.

It also features a complete ToF pixel technology comparison with the Infineon/pmd, STMicroelectronics and Melexis automotive ToF imagers, which are all also based on Sony/Softkinetic technology, with details on the companies' design choices.

**Title:** Texas Instruments Industrial ToF Imager

**Pages:** 79

**Date:** July 2017

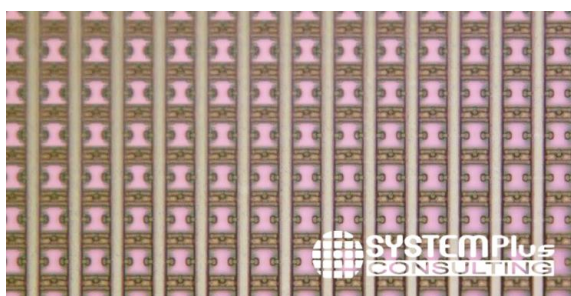
**Format:** PDF & Excel file

**Price:** Full report: EUR 3,490

## COMPLETE TEARDOWN

### WITH:

- Detailed photos
- Precise measurements
- Materials analysis
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### AUTHORS:



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Stéphane has a deep knowledge of materials characterizations and electronics systems. He holds an Engineering Degree in Electronics and Numerical Technology, and a PhD in Materials for Microelectronics.



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Nicolas is in charge of physical analysis. He has a deep knowledge in chemical and physical analyses. He previously worked in microelectronics R&D for CEA/LETI in Grenoble and for STMicroelectronics in Crolles.

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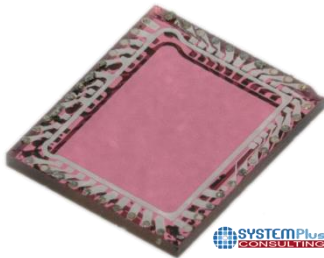
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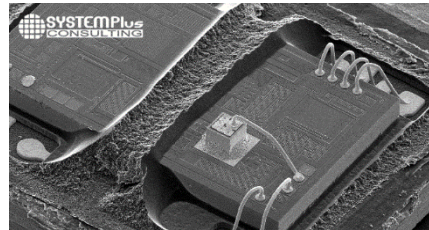
A cutting-edge ToF imager technology from Sony/Softkinetic, adapted by Melexis for automotive in-cabin applications.



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### STMicroelectronics Time of Flight Proximity Sensor in the Apple iPhone 7 Plus

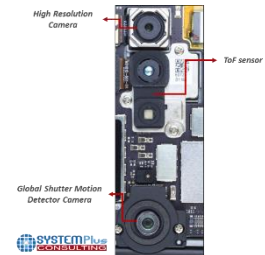
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