

# **LYNRED from SWIR to LWIR infrared detection.**

Patrick ROBERT

LYNRED, Actipole - CS 10021  
364, route de Valence, 38113 Veurey-Voroize, FRANCE

## **ABSTRACT**

Thanks to the fusion of SOFRADIR and ULIS companies, LYNRED product offer covers a large span of applications, in cooled and uncooled infrared domains. The presentation will focus on two detectors addressing two different infrared bandwidth:

- ✓ First a SWIR detector in InGaAs technology: the advantages of this technology will be recall (high interaction with organic materials, and various chemicals, thermography applications etc...) as well as recent innovation of the LYNRED SWIR detectors.
- ✓ Then a LWIR camera module will be presented: an uncooled bolometers detector stacked with a custom IR image processor (ISP). The ISP is a dedicated ASIC built to apply a pipeline of image processing algorithms to the raw sensor data which corrects for pixel defects and non-uniformities in the sensor, without requiring to an external mechanical shutter. With this approach, LYNRED demonstrates an easy-to-use, plug-and-play solution

## **AUTHOR BIOGRAPHY:**

Patrick ROBERT received an engineering degree in microelectronics from the CUEFA-ENSERG de Grenoble, France, in 1988. He was with Thomson-EFCIS in the analog design of telecommunication circuits for 5 years, after which he joined Dolphin Integration for ADC design, for 6 years. Since 1999, he has been involved with infrared readout circuits design (ROIC) at SOFRADIR and ULIS, Grenoble, France. He was in charge of the ROIC designer's team of ULIS until 2018. Since LYNRED fusion he is now senior expert in the Video Chain Electronic Design.