

Image Signal Processor for bolometers IR detectors

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ABSTRACT

Size, weight, power and cost reduction in thermal image sensors has become key to address high-volume applications. LYNRED, with its strong experience in manufacturing thermal image sensors, has developed a prototype of an IR image processor (ISP) to achieve the highest level of thermal imager integration (e.g. System in Package).

This ISP (Image Signal Processor) is a dedicated ASIC built to apply a pipeline of image processing algorithms to the raw data from the Focal Plane Array (FPA). This processing corrects pixel defects and non-uniformities of the FPA, without requiring an external mechanical shutter.

With this proof of concept, LYNRED demonstrates an easy-to-use, low power and compact plug-and-play thermal image solution.

Keywords: Uncooled microbolometer, LWIR, IR digital processing, shutterless, low power