

## **Proven track record of SmartIR640P uncooled thermal core, perfect fit for night & day vision of handheld equipment**

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After Photonis and Device-ALab joined forces, Photonis is **proud to announce the successful delivery of the 1000<sup>th</sup> unit of the SmartIR640P, the great reference core ready-to-integrate & use for night & day vision of handheld equipment.** This camera core is part of the growing LWIR camera families which use proprietary shutterless technology and contributes to complete the product portfolio of Photonis Digital Vision.

### **Reduced technical risks and time-to-market**

De facto, with SmartIR640P, the equipment maker can rely on a MIL-STD-810G and TWS duly qualified camera core, and focus on completing its integration with optics, batteries, and user features with short time to market. A quicker and smoother integration, relying on proven performance as image quality, required consumption, fast time to first image, lightweight, mechanical resistance... to finally have the ergonomic product of his choice, easily customizable to serve various end-user applications.

Indeed, SmartIR640P can end-up in various implementations: mostly thermal weapon sight and thermal clip-on, night & day monocular, but also helmet mounted devices and portable devices (e.g. multiple wavelength and/or telemetry)

### **Europe-made product, 1000 units already delivered**

SmartIR640P is designed and manufactured in France, which by far simplifies the export procedure all across EU countries. The product is already in use in several programs, DGA/FPSA for French Armed Forces being the most emblematic one.

SmartIR640P is indeed a key component in the lightweight TIGRIS-IR clip-on of the contractor: OIP Sensor Systems (BE). DRI performance for a 2.3m x 2.3m NATO target are: 5.8 km (Detection), 2 km (Recognition) and 1 km (Identification). The autonomy exceeds 8 hours with Lithium batteries.

### **All starts with an engine SmartIR640E**

This so-called platform is derived from the SmartIR640E engine core, and as such benefits of existing Device-ALab's proprietary technologies: shutterless, local Automated Gain Contrast, Progressive Digital Zoom and Overlays to name a few.

The shutterless enables to operate the device on a wide operating temperature range [-40°C to +70°C], keeping non-uniformity at low & acceptable level. However, in extreme cases, it remains anyway possible for the user to generate another one-point-NUC on site if ever required.

The local AGC offers capability to observe low contrast details in a scene with significantly different dynamics, while the progressive digital zoom offers total control to fit the image to the display or to the chosen area of interest in the scene.

Overlays stack provide latitude for the designer to upload reticles, symbols and text overlays linked to his own user application. In future there will be more to come!

### **Versatility and scalability of Platforms**

SmartIR640P features a so-called "display control board", which turns the engine core into a platform, to handle three functions: battery power management, video formats compatible to existing OLED displays and the user interface (via a microcontroller firmware the designer can re-write and customize).

Should the designer of the optronic equipment want to skip one of the functions above listed, it is possible to disable them.

Totally at Device-ALab clients' discretion, SmartIR640P can be supplied in base configuration or with display stack. Alternatively, can also be supplied with an additional video analog PAL/NTSC, to cover all sort of operational

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needs.

Beyond the sole SmartIR640P (which features 640 17µm LWIR sensors) are to come alternative models: LWIR (320 12µm, 640 12µm) as well as SWIR (640 15µm), which will be easily swappable with minimal redesign of the final equipment. Stay tune!

#### **About Device-ALab:**

Device-ALab was incorporated in 2010 as a spin-off of E2V semiconductors based in Saint-Egrève (38). The team knowledge roots in decades at Thomson-TCS, Atmel & E2V in development of electronic subsystems for Imaging (industrial cameras, X-ray sensors) and Data Conversion (DAC-ADC development kits). Since 2017, the company has successfully undergone a strategic transformation from an engineering company to a core-camera product company with remarkable growth. Device-ALab is fully part of Photonis Group since March 2021. For more information: [www.device-alab.com](http://www.device-alab.com)

#### **About Photonis:**

Photonis is a high-tech company, with more than 80 years of experience in the innovation, development, manufacture and sale of technologies in the field of photo detection and imaging. Today, it offers its customers detectors and detection solutions: its power tubes, digital cameras, neutron & gamma detectors, scientific detectors and intensifier tubes allow Photonis to respond to complex issues in environments extremely demanding by offering tailor-made solutions to its customers. Thanks to its sustained and permanent investment, Photonis is internationally recognized as a major innovator in optoelectronics, with production and R&D carried out on 5 sites, in Europe and the USA. For more information : [www.photonis.com](http://www.photonis.com)

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