Xenics
Infrared Solutions

PRESS RELEASE

Xenics introduces DIONE S 640

Leuven, Belgium, May 4th, 2021 – Dione S 640 has been announced today as the new SWaP high performance uncooled long-wave infrared (LWIR) camera from Xenics.

Xenics is Europe's leading developer and manufacturer of advanced infrared sensors, cameras and customized imaging solutions from the short-wave infrared (SWIR) to the LWIR realm.

Dione S 640 is a VGA (640x480 pixels) 12µm pitch LWIR camera optimized to meet today's increased demand for smaller size, lower weight, higher resolution and lower power (SWaP) with no compromise on electro-optical performance. The Dione family is growing with this new product dedicated for highly demanding applications in the safety and security markets as well as industrial applications.

Xenics has plans for other new products within the Dione family scheduled in 2021.

Xenics, provider of infrared solutions

The mantra of Xenics is to provide infrared solutions that offer real added value to customers. Once more this is demonstrated by the new product in the Dione family. With customers seeking ultra-SWaP products with high electro-optical performance, the Dione S 640 is a shuttered version of its well-known Dione 640. This makes it a real SWaP product with ultra-low residual fixed pattern noise and the capability to adjust to a fast-changing environment in the blink of an eye. This new product further validates Xenics' commitment in offering the best solutions to its customers.

SWaP and low spatial noise are compatible!

With the Dione 640 CAM, Xenics already offers the ultimate SWaP LWIR camera on the market thanks to its high performing shutterless algorithm. Some applications however require adjustment of the image correction for a very fast-changing setting or environment. For such requirements, Xenics implemented the shuttered solution, which, through an in-situ calibration, instantaneously corrects the image to perfection. The question is then: SWaP or shuttered? Thanks to the optimized design by the Xenics engineering team, it's now possible to get the best of both worlds.

Paul Ryckaert, CEO of Xenics, says: "Customer requirements sometimes impose apparently contradictory solutions, which is a fantastic challenge! It forces us to be more creative and innovative, values that we nurture in the DNA of Xenics. Mastering and combining all the requirements in one final product and giving the customer what he dreams of, that is the real satisfaction."

Dione S 640 is proposed with 2 possible optical interfaces: M24 (Dione S 640 CAM M24) and M34 (Dione S 640 CAM M34). It offers a genuinely optimized product in term of size (37.4x37.4x28.4mm^3 for Dione S with M24 optical interface and 42x42x30.3 mm^3 with M34 optical interface), weight (50g for Dione S with M24 optical interface and 55g with M34 optical interface), and power (0.85W) including a durable mechanical shutter. Therefore, optimized correction can be done automatically or on-demand and allows an unmatched fixed pattern noise level.

Moreover, as Dione S 640 is based on Dione 640, it benefits from innovation shared by the whole Dione family: a 12µm pitch cutting-edge microbolometer sensor and a truly optimized architecture. “This specific architecture makes the Dione family unique in terms of latency,” explained Paul Ryckaert. “Like Dione 640, Dione S 640 latency for synchronization is just 100 µs, and this makes all the difference for driving aids, fire-control or in any application based on control-loop”.

Additionally, it benefits from the Dione family consistency: 16bit DV electrical interface, same protocol and same processing architecture and, of course, Xenics’ GenICam compliant SDK.

Dione S 640 is the solution when there is a need for the ultimate SWaP configuration with no compromise on electro-optical performance and speed of correction:

- for high-end hand-held thermal imagers (HHTI) and thermal weapon sights (TWS) where size and weight are critical but also image quality is essential
- for drone accurate observation where customers will benefit from a very stable picture
- for driver vision enhancement where low latency enables customers to benefit from a real-time perception and simplify image fusion.
- for remote-controlled weapon station with long time operation combined with excellent image stability.
- for thermal industrial inspection where operation times are long and request high image stability.
- for medical applications where speed of correction and electro-optical performances are a must.

Dione S 640 demonstrates that SWaP and high optical performance are compatible. This will open a new era in safety and security as well as industrial thermal analysis.

About Xenics

Xenics is a pioneer of infrared technology with a proven track record of twenty years. Xenics designs and markets infrared imagers, cores and cameras of best-in-class image quality to support machine vision, scientific & advanced research, transportation, process monitoring, safety & security and medical applications.

Xenics offers a complete portfolio of line-scan and area-scan products for the vSWIR, SWIR, MWIR and LWIR ranges. Mastering all critical steps of the manufacturing process with advanced production facilities and in-house know-how on detectors, systems and software development Xenics delivers state-of-the-art solutions and optimized custom designs. As a European vendor with a worldwide sales and service network, Xenics supports its customers with simplified export procedures. More at: **xenics.com**

Press Release

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