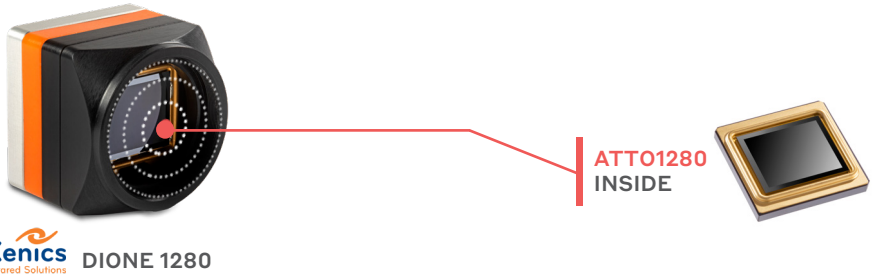
CUSTOMER STORY

LYNRED

XENICS «THANKS TO THE ATTO1280, WE'VE BUILT ON OUR RANGE OF SWAP MODULES FOR HIGH-PERFORMANCE INFRARED APPLICATIONS»



Frédéric Aubrun

Chief Commercial Officer at Xenics company, explains how Xenics integrated the ATTO1280 microbolometer into the Dione 1280 module.

Xenics is a European expert that delivers infrared detection and imaging solutions. Headquartered in Louvain (Belgium), Xenics operates in the short-wave (SWIR), mid-wave (MWIR) and long-wave (LWIR) bands. The company primarily designs, produces and markets its solutions to support machine vision, process monitoring, security & surveillance, scientific and industrial automation applications. The Belgian company was founded over 20 years ago and employs 65 people around the world.

Xenics pioneers and produces infrared sensors and modules, but, over 10 years ago, the company chose not to develop its own LWIR sensors and instead **forged a partnership with LYNRED to use its uncooled LWIR products** (microbolometers).

Historically speaking, Xenics developed two lines of uncooled LWIR cameras (Raven and Gobi) harnessing LYNRED's Pico Gen1 and then Pico Gen2 microbolometers, which proved to be a **tremendous success in the manufacturing markets** (process monitoring). It was a fairly natural process that these products started gaining traction in the security & surveillance and defense markets. Two years ago, Xenics began making more focused inroads into these two sectors that already featured a number of large companies and where demand continues to grow for small-sized or «SWaP» modules (Size, Weight and Power).

> *"Thanks to the interaction with the Lynred team and their solid sensor background, we were able to speed up the development process tremendously and quickly bring to market a high end product - with reliability and reproducibility being guaranteed back to back by Lynred and Xenics."*

Leveraging LYNRED's family of Atto 12 µm detectors, Xenics focused on developing unique SWaP modules initially based on the Atto640, which is incorporated into the Dione 640 module (the first product of a family to be released in 2020). This module was a resounding success with a surge in the number of customers looking for modules with embedded image processing capabilities. The Dione 640 hit the market at exactly the right time. Not only does this incredibly small-sized module integrate countless features for algorithms and image enhancement, but it also delivers shutterless operation, all of which with a market conform price tag.

«Our partnership with LYNRED has been instrumental in giving our company access to prototype products before they are publicly announced. Back in September 2020, we worked on the Atto1280 detector.

Integrating the Atto1280 was a fairly natural step forward from the Atto640 and allowed us to scale up our performance with the SXGA format by masterminding another SWaP module with improved power consumption.»

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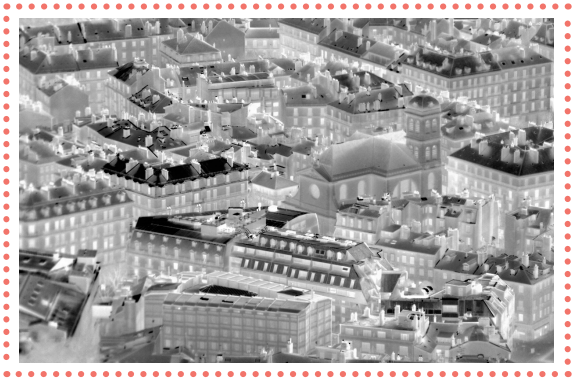

«We drew on our experience with the Atto640 to develop the Dione 1280 module and get the product to market before some of our competitors.

The Atto1280 further completed our line of SWaP uncooled LWIR products and helped create an end-to-end range, meaning that our customers can seamlessly swap from one product to another without having to change their mechanical and electrical interface. This design philosophy will be further expanded with other resolutions and interface choices.»

Infrared applications with high performance requirements.

«The need for superior resolution, performance and range for surveillance and defense equipment gave every justification to our decision to migrate to a higher resolution than VGA. In today's market, the Dione 1280 modules are mainly used for defense applications with elevated performance needs (e.g. vehicle-mounted mobile equipment requiring good range performance). The fact that there is no mechanical shutter allows for a more space-saving design, optimizes costs and power consumption, and eliminates shutter noise, which are sometimes preferred criteria for these applications.

After the initiaal wave of testing and evaluations, **customer feedback has been highly positive** with several commitments from customers going forward with their programs. The number of competing solutions with this particular format and equivalent quality is rather low today. Further, having a reliable and proven EU supply chain is clearly a differentiating factor to guarantee security of supply to our customers.»

LYNRED's teams helped us develop some of the algorithms.

«The in-house, in-depth infrared experience of Xenics was further completed with solid support from LYNRED with optimizing the shutterless algorithm and pushing the boundaries on the enhancement of image quality (detecting bad pixels and correcting non-uniformity). Collaboration between both teams has been excellent. The LYNRED teams clearly understood our needs and were quick to respond. It's a real pleasure being one of the beta-tester customers for testing the water, anticipating and ramping up our time-to-market against our competitors.»

LYNRED Headquarters
Avenue de la Vauve - CS 20018
91127 Palaiseau, France
Tél. +33 (0)1 60 92 18 30
info@lynred.com

LYNRED Main branch
Actipole - CS 10021 - 364, route de Valence
38113 Veurey-Voroize, France
Tél. +33 (0)4 76 28 77 00
info@lynred.com

Xenics Headquarters
44 Ambachtenlaan
Leuven, 3001 - Belgium 38113
Tél. +32 163 899 00
www.xenics.com

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