

EUROSATORY

June 13-17, 2016

Paris - Villepinte - Halls 6 & 5a
CNIM / Bertin Stand - N° B-278 - Hall 5B

FUSIONSIGHT®:
**BERTIN launches the world-first digital Night Vision Device
providing smart fusion for threat and target accurate detection**



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Press Release:

*FusionSight®: Bertin launches the world-first digital Night Vision Device
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BERTIN is pleased to present its **brand new FusionSight® Night Vision Device** during Eurosatory 2016, held from June 13 to 17 in Paris, France. Developed in **partnership with PHOTONIS**, FusionSight® is the world- first compact monocular that combines a colour low light sensor with a thermal image sensor. When combined, these sensors enhance situational awareness and provide users with the option of using a thermal image, colour optical image or a fused thermal and full colour image, that can also be recorded.

To win in close combat missions under increasing global terrorist threats, the ability to use the night as your ally has become a priority. Infantry commanders and special forces require reliable and easy to use devices that are highly efficient in the field during night operations, when facing hidden or camouflaged enemies. FusionSight® assists by drastically enhancing the detection, recognition and identification capability, making it a key device for Police and Homeland Security to quickly investigate or for long-term surveillance. Even under limited visibility and low light conditions, FusionSight® provides substantial visual support for search and rescue missions, locating missing persons and casualties. The combined view of thermal and colour imaging is especially critical in urban environments or structures that provide little ambient light and have multiple barriers behind which a potential threat can conceal themselves.

FusionSight® : night & day field vision enhancer

FusionSight® is the industry's first hand held device that features smart colour fusion of images. The first image is recorded by a state-of-the-art colour imaging sensor (powered by PHOTONIS) that provides a colour image in extreme low light conditions (~10 mlx) without additional illumination. The second image is recorded by a high-resolution thermal imaging sensor that can detect in any night condition (down to 1 mlx). The embedded real-time image processor automatically selects key information from each sensor, allowing users to see at dark night even better than in broad daylight, and can record and be saved as a digital file. The smart digital fusion also overcomes the traditional limitations of each individual sensor: FusionSight® can detect through smoke, other obscurants and in deep night conditions with a thermal sensor, while providing an optical color image that can detect through windows with sufficient resolution to allow positive identification thanks to the colour imaging sensor.

FusionSight®'s assets include:

- All-in-one with 3 viewing modes: color low light, thermal and smart fusion
- Night & day threat & camouflage detection (ranging up to 3 km)
- Ergonomic design inspired by user's needs
- Image recording & HD video output for proof collection

Project partner PHOTONIS provided their Kameleon Colour Image Sensor for the FusionSight®. The sensor uses a Complementary Metal Oxide Semiconductor (CMOS) similar to mobile phones, which in itself, cannot distinguish colours. To identify colour, a patented innovation allows two raw images and a reconstruction algorithm to reproduce the final image in colour, in real time.

In 2015, PHOTONIS received the prestigious French Army "Prix General Chanson" award for their innovative digital night vision sensor. An added advantage of the Kameleon sensor is the ability to use it under daylight and at night, up to night level 3 (quarter moon with cloud cover). In lower light levels, the sensor will revert visible images to black and white. Kameleon is developed by the PHOTONIS' Digital Imaging division.

"Our collaboration with PHOTONIS began nearly three years ago, when both companies allied to jointly develop cutting-edge solutions to meet National Defence's needs more closely" states Bruno Vallayer, Managing Director of BERTIN Systems and Instrumentation. "Together we decided to take the lead in building on the latest fully-mastered optonics innovations to offer **100%-made-in-France solutions**. This approach would also allow to benefit from the **unique agility** that characterizes SMEs in order to provide powerful, competitive and scalable devices brought to market in the shortest time as possible".

Casper Dekker, Managing Director of PHOTONIS Digital Imaging said: "We are pleased to partner with BERTIN on such an innovative project. It is a perfect match for our award winning technology. The expertise of both companies has resulted in a high performing sight that provides dismounted users the ability to rapidly Detect,

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Recognize & Identify (DRI) targets in all conditions and environments. The uniqueness of DRI at low light conditions and recording capability for evidence purposes is a great fit for modern warfare requirements".

The FusionSight® project is part of a newly established Night Vision Technology Innovation alliance, currently forged between BERTIN TECHNOLOGIES, PHOTONIS and OPTSYS., and it supports the scope of the decision by the French Direction Générale de l'Armement (DGA – French M.O.D.) and Centre National d'Etudes Spatiales (CNES) to support the French Optronics industry and to define a joint R&D roadmap. The French Optronics industry has an estimated annual turnover of 2.5 billion euros (in 2012) representing 10% of the global market, and ranks second after the USA.

More information:

- [Watch FusionSight® trailer](#) 
- Discover more about FusionSight during our **Press conference** at Eurosatory show
June Tuesday the 14th, 12:20 pm, Room "Conf 10" - Hall 6 - Parc des Expositions - Villepinte, Paris
- Interested in Optronics technology?
Become a member of the **Night Vision Technology & Innovation LinkedIn group:**
<https://www.linkedin.com/groups/8540841>

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FUSIONSIGHT® PICTURES



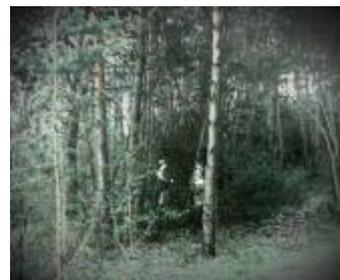
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Colour low light vision



Thermal vision



Smart fusion

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ABOUT BERTIN TECHNOLOGIES

BERTIN TECHNOLOGIES, a CNIM Group subsidiary, relies on its long history of innovative engineering to develop, produce and market innovative systems and equipment worldwide. With close to €90M in turnover in 2015 and now nearly 750 partners, of which 2/3rd are engineers and high-level managers, the group works in four major fields: Systems and Instrumentation, Consulting and Engineering including a substantial part devoted to risk management and ergonomics, Information Technology and Pharmaceuticals and Biotechs. Based in Paris region, the group is highly active worldwide.

www.bertin-technologies.com

Its leading instrumentation activity is represented through the brand **BERTIN INSTRUMENTS**.

BERTIN INSTRUMENTS solutions and teams are dedicated to innovative measurement and sampling for key worldwide markets, such as:

- Lab Equipment (sample preparation, air sampler)
- Nuclear Instrumentation (radon professional monitoring, environmental radiation monitoring systems, radiation portal monitors, health physics)
- Defence, Security and Safety (gas detection, optronics)

Its R&D people also provides on-demand technology systems and turnkey integrated solutions under harsh environment or industrial constraints.

www.bertin-instruments.com

A COMPANY MEMBER OF CNIM GROUP

CNIM designs and builds turnkey high-tech industrial facilities and provides expertise, service and operations support in the environment, energy, Defence and industrial sectors. CNIM leads projects and sells equipment worldwide. CNIM relies on stable family ownership, which underwrites its development. The Group has 3,000 employees with revenues in 2015 of €727.0 million, of which exports accounted for 61.3%. CNIM is quoted on Euronext Paris.

www.cnim.com

ABOUT PHOTONIS

PHOTONIS is a leading multinational high-technology group, with experience in manufacture, sales and innovation specializing in photo sensor imaging technologies since 1937.

PHOTONIS is a global manufacturer of electro-optic components used in the detection of ions, electrons and photons. PHOTONIS innovates and engineers quality components for integration into a variety of applications such as night vision optics, digital cameras, mass spectrometry, physics research, space exploration and many others.

www.photonis.com

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