

EXHIBITION
29-30 January 2014

A white optical crosshair graphic is positioned above the main title. It consists of a central cross with four T-shaped ends, all enclosed within a dashed square border.

OPTRO 2014

**6th International Symposium
on Optronics in Defence and Security**

Paris, France 28 - 30 January 2014 www.optro2014.com

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ORGANIZED BY



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AAAF:

Association Aéronautique et Astronautique de France is the French society of reference with regards to scientific and technological expertise in the area of civil and military aviation and space.

Thanks to its High Scientific Council, its technical committees and to the organization of numerous national and international conferences/ symposia AAAF promotes the latest scientific and technological findings.

Our Missions:

Bring together people on scientific and technical issues with the aim to:

- **Create links between peers**
- **Produce excellence**
- **Convey our passion**

Clarify aerospace scientific and technical challenges, put forward our expertise, and make proposals to decision makers

Represent our members within the French, European or Overseas corresponding organizations

Promote aerospace and encourage young people to join the domain

Technical Committees: Engineering / Science: Aerodynamics – In flight testing - Materials - Propulsion (both Space & Aeronautics) - Structure - Environment - On Board Energy - Medicine - Avionics - Optronics - Aerospace Platforms: Commercial Aviation - Military Aircraft - Light Aircraft - Business Aircraft – Helicopters – Missiles - UAV (Unmanned Aerial Vehicle) - Space Transportation (Launchers & Exploration Vehicles) - Space Exploration (Missions & Payloads) Transversal: Strategy & International Affairs - Business Intelligence - History - Intellectual Property & Rights - Unidentified Aerospace Phenomena

Forthcoming Symposia for 2014:

2-5 February 2014

Toulouse, FR : "Emdedded Real Time Software and Systems ERTS2014"

12-14 March 2014

Brussels, BE : Greener Aviation

24-26 March 2014

Lille, FR : "49th Symposium of Applied Aerodynamics AERO2014"

19-22 May 2014

Köln, DE: Space Propulsion 2014

17-20 June 2014

Mainz, DE: "10th International Conference on Missile Defence MD2014"

24-26 September 2014

Troyes, FR : 12ème Forum Intelligence Economique et Stratégique IES2014

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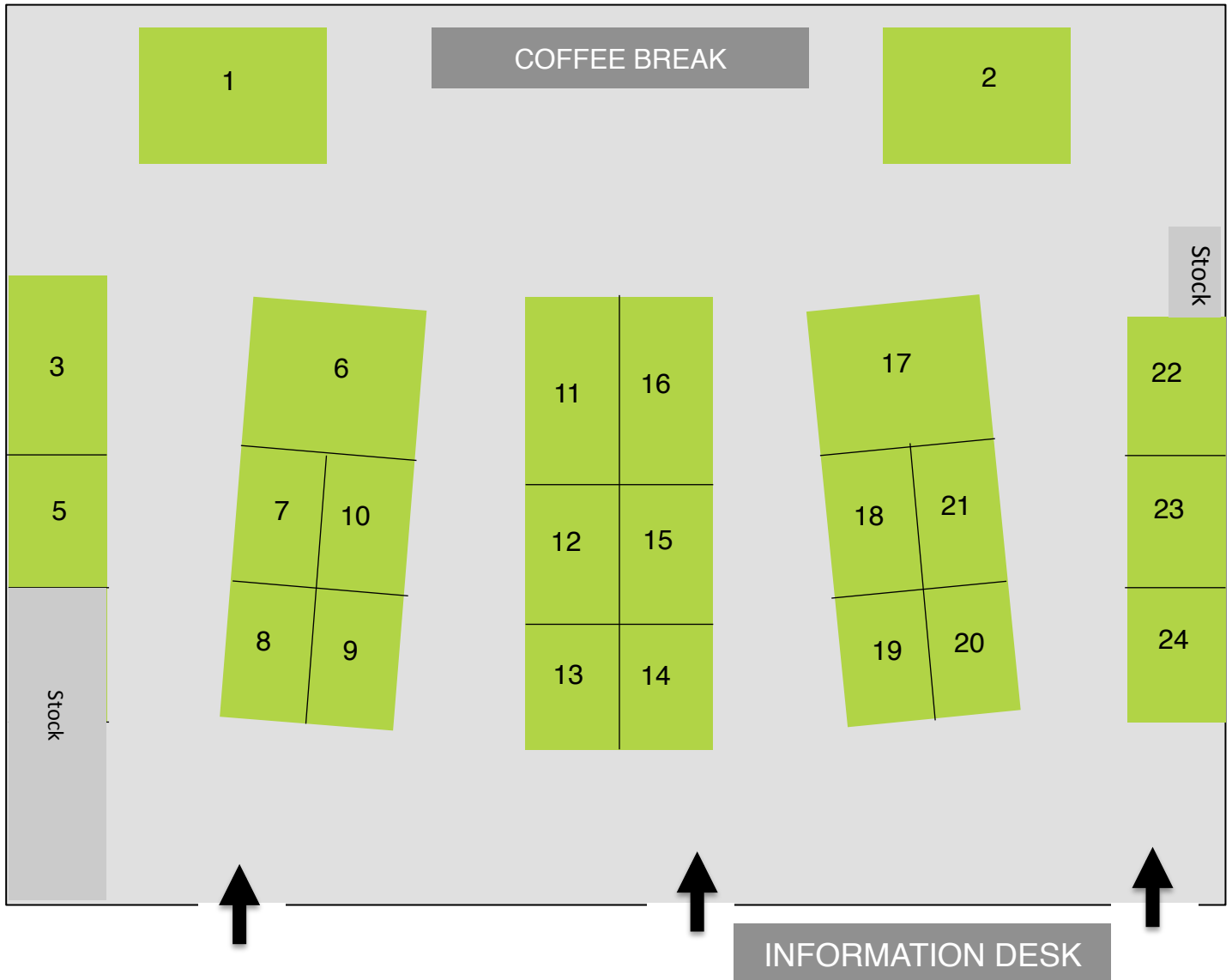


THALES

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FLOOR PLAN



3AF, FR – Booth 23
 ACAL BFI France, FR – Booth 24
 CI SYSTEMS, FR – Booth 19
 ECRIN, DE – Booth 10
 EPIC, FR – Booth 21
 GOOCH & HOUSEGO, GB - Booth 18
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 Laser Components, FR – Booth 13
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 SAFRAN SAGEM, FR – Booth 2
 Semi Conductor Devices (SCD), IS – Booth 6
 THALES, FR – Booth 1
 THORLABS SAS, FR – Booth 20
 TRIOPTICS, FR – Booth 8
 SOFRADIR, FR – Booth 17
 XENICS, FR – Booth 3
 WZW OPTIC AG, DE – Booth 14

OPTRO 2014



ACAL BFI FRANCE SAS
ZI La petite montagne sud
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91018 Evry Cedex, France

Acal BFi is the European leader in advanced technology solutions operating across Europe. We provide manufacturing, design, engineering, marketing services and custom solutions to the industrial and the only such provider with an infrastructure to deliver a broad complementary range of specialist products and bespoke solutions across Europe. We work with key suppliers worldwide like **LABSPHERE** and **DRS TECHNOLOGIES**.

Our exclusive partner, LABSPHERE, a leading company in optical test & Measurement offer a large choice of standard and custom uniform sources for calibration of different types of imagers, detectors, 1D or 2D, from UV, VIS, NIR & SWIR (<2500nm) (www.labsphere.com).

Our exclusive partner, DRS technologies Inc., a leading company in thermal imaging technologies offers VOx based sensors over the band 8-14µm. We, ACALBFI and DRS offer miniature modules (smallest worldwide with shutter), fixed cameras and P&T systems.

BOOTH 24

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CI SYSTEMS
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CI is known as the most trusted name in the field of Infrared and optical test equipment. Our products are found in every major IR laboratory in the world. Our mission is to be the most cost effective and reliable supplier of electro-optics test equipment. Our goal is to supply the best service and applications support in the world.

CI Systems was founded in 1977 to commercialize advanced infrared (IR) remote sensing technology. Shortly after the company was founded CI became the leader in infrared spectroradiometry for remote sensing of the atmosphere, signature analysis and ground truth measurements.

In the 80's CI Systems grew to include two divisions. The Electro-Optics (E-O) division develops and commercializes MIL-Standard E-O precision test equipment for all stages in the product life cycle including airborne built-in test equipment. Our products range from standard off-the-shelf instruments to customized electro-optical test systems. The semiconductor division develops and commercializes optical monitoring equipment for wafers and photovoltaic solar cell manufacturing. Its products include noncontact temperature monitors and liquid monitoring systems.

CI Systems has facilities for R&D, production, customer support and sales in Simi Valley, California and Migdal HaEmek, Israel. In addition CI has a sales service and support facility in Paris, France. CI Systems employs 150 workers, including a large percentage of physicists, chemists and engineers. The company sells in most Western and Far Eastern countries through agreements with local sales representatives. For more than 30 years we have never let our customers down. CI is a company to be counted on.

BOOTH 19

CONTACT

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ECRIN SYSTEMS
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COMPUTER ON DEMAND

With 40 years of experience, ECRIN Systems has built its development around three major activities to become a key player into Embedded:

- Manufacturer of «Ready to Application» COTS and MOTS systems,
- Subcontracting and ODM services
- COTS building blocks and system integration

This triple competence, added to its high capability of innovation and strong expertise, allowed ECRIN Systems to become a key player in its market.

TO SERVE demanding markets

Adopted as a solid subcontractor by primes, key accounts and governmental institutions, ECRIN Systems pays particular attention to design and deliver in time innovative, reliable and competitive Rugged and Industrial Computers.

ECRIN Systems serves a wide spectrum of markets which have in common high technology level, rugged environmental constraints, operating in a highly competitive market: Aerospace, Defense & Security; Network & Communications; Transportation & Energy; Industrial Equipment

INNOVATION

Our R&T conducts preliminary studies and develop new concepts that will be incorporated into your sub-systems when their Technology Readiness Level (TRL) will be proven enough: Heterogeneous System Architecture, load balancing, image processing, tracking solutions, safety and dependability...

ONYX®,

COTS SWaP-C Multi Mission Computing System, providing strong security operation (BIT), pre-qualifications passed for Mil / Aero standards (MIL-STD-810, DO-160...; -40° C / +71° C; IP67...).

ONYX is ready to perform Vetrronics and Avionics applications, acting as a Mission or Display Computer, or as a Processor for Crew Station, Command and Control, or Situational Awareness applications.

Particularly attention has been made on Embedded Video Graphic features thanks to its GPGPU AMD E6760 that offers high-end Video Analog, HD-SDI inputs and outputs, H.264 AVC Codec and EAS-NI encryption. 576 GFLOPs computing engine into an small envelope by 80 Watts, 6 liters and 6 Kg.

BOOTH 10

CONTACT

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EPIC
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EPIC is the industry association that promotes the sustainable development of organisations working in the field of photonics in Europe. We foster a vibrant photonics ecosystem by maintaining a strong network and acting as a catalyst and facilitator for technological and commercial advancement. EPIC publishes market and technology reports, organizes technical workshops and B2B roundtables, coordinates EU funding proposals, advocacy and lobbying, education and training activities, standards and roadmaps, pavilions at exhibitions.

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GOOCH AND HOUSEGO
Dowlish Ford
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Gooch & Housego provides optical system design, engineering, manufacturing and supply chain management services to the aerospace, defense and space sectors based upon a range of enabling optical technologies. From sites in the UK and USA the company provides ruggedized COTS / custom built components and assemblies (some space qualified) for harsh environments based on the following technologies:

- Acousto-optics / Electro-Optics for laser control
- Fiber optics – Active / passive, including DFB / DBR lasers, detectors, photonics packaging, and fiber assemblies including interferometers
- Precision optics – Flat, spherical and aspherical optics in a range of materials from UV to mid-IR - Zerodur optics, super polished mirrors, complex optical assemblies

BOOTH 18

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HAMAMATSU
PHOTON IS OUR BUSINESS

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91300 Massy, France

Hamamatsu Photonics is a world-leading manufacturer of opto-electronic components and systems and employs over 4000 staff worldwide. The corporate headquarters are based in Hamamatsu City, Japan along with six manufacturing plants (and more to come) and central research laboratories. Since its inception in 1953, Hamamatsu Photonics has expanded to now enjoy a global presence with production facilities, business locations and associated companies throughout, Europe, North America and Asia.

Hamamatsu Photonics' corporate philosophy stresses the advancement of Photonics through extensive research and development. Hundreds of new opto-electronic products are introduced to the market each year and many Hamamatsu products are regarded as state-of-the-art. Hamamatsu sources, detectors and imaging products are designed to cover the entire optical spectrum, from nuclear radiation, x-ray, Ultraviolet (UV), Visible, Infrared and Terahertz. Hamamatsu devices provide solutions for a wide variety of applications including analytical, industrial, medical as well as consumer applications.

Main Press releases for 2013 :

. Nobel Prize: <http://www.hamamatsu.com/us/en/news/news/20131008000003.html>

. New Laser Irradiation Facility: <http://www.hamamatsu.com/us/en/news/news/20131001000000.html>

. New MOEMS Facility: <http://www.hamamatsu.com/us/en/news/news/20130417000000.html>

Please see daily our website for upcoming news!

BOOTH 22

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SPYNEL panoramic infrared cameras, coming in 3 different models, feature an astounding image resolution up to 30 megapixels for an automatic detection of all threats around, up to the horizon.

HGH Infrared Systems is a global provider of high-end infrared technologies for security, industrial and civil applications. With the mission to offer the best cutting-edge products and services to clients, HGH has consolidated its core businesses on:

Defense and Civil Security, with its unique, multi-awarded, infrared panoramic surveillance system, named Spynel.
Thermography for Industrial applications, with its complete line of IR scanners and sensors to monitor rotary kilns.
Optronic Test and Measurement Equipment, with products ranging from blackbodies and collimators to integrated test benches, for laboratories and IR sensors developers.

Seeking out customer satisfaction, through innovation and technical excellence, HGH has built a world-wide reputation for more than 30 years.

SPYNEL is a unique wide-area surveillance system, acquiring real-time full panoramic images with automatic intrusion detection and tracking capabilities. Completely passive, undetectable, compact and robust, it can be quickly deployed to perform early intrusion alert over extremely large areas in total darkness, fog, smoke. An unlimited number of tracks are simultaneously identified on highly resolved images, including hardly detectable threats, such as crawling men, UAVs, stealth aircrafts.

The SPYNEL family consists of three different models, depending on the sensor type (MWIR or LWIR FPA / cooled or uncooled detector) to fulfill all requirements for situation awareness and critical infrastructure protection.

BOOTH 09

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HTDS
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HTDS is a hi-tech optoelectronic specialist (emitters and detectors) that markets and monitors optoelectronic components and integrated solutions to the leaders in aeronautics, defense, health and automotive industries... (APD photodiodes, laser diodes pulsed and CW, power LEDs, xenon lamps, thermopiles ...). HTDS : The flexibility and expertise to serve innovation.

HTDS fournit et assure le suivi de composants optroniques et de solutions intégrées aux leaders des industries de la santé, automobile, aéronautique (Lampes xénon, diodes laser, LEDs pour éclairage et signalisation; LEDs pour applications médicales et scientifiques, photodiodes, thermopiles...). HTDS : La flexibilité et l'expertise au service de l'innovation.

BOOTH 16

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OPTRO 2014



LASER COMPONENTS
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The LASER COMPONENTS Group specializes in the production of high-tech components for the optoelectronic and laser industries.

We manufacture high-power **pulsed laser diodes (PLDs)** at 905 nm and 1550 nm. Sophisticated options such as fiber coupling or fast axis collimators (FAC) integrated into the TO housing are available on a standard basis. We are introducing a few new PLD type (3J08 series) with peak power levels up to 650 W.

We also offer Si and InGaAs **avalanche photodiodes (APDs)** of different designs as well as low-noise receivers that incorporate signal-processing electronics together with the APD into a TO can. Recently we introduced Si, InGaAs and extended InGaAs **PIN photodiodes** as well.

We also manufacture The COUNT series of **photon counting modules**. Optimized for either the blue, red, or NIR range these photon counters exhibit unrivaled detection efficiencies of >70% and record-breaking dark count rates of <10 cps. All models are available as free beam module or fiber coupled.

Newest product is our new generation of diamond-like pulsable **infra-red emitters**.

LASER COMPONENTS also makes hard dielectric coatings for laser optics, offering the complete spectral range from 193 nm to 5 μ m. High quality laser diode modules, particularly for machine vision applications, and fiber assemblies complete our product range.

Whether you just need a standard product or a custom solution – LASER COMPONENTS is your partner!

BOOTH 13

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A World Class Supplier of CMOS Sensors™

NEW IMAGING TECHNOLOGIES (NIT)
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New Imaging Technologies (NIT) is a spin-off from the French Institute of Telecommunications where our MAGIC™ core technology was invented through a continuous effort of 15 years of R&D investment.

Its core team is a delicate mixture of experienced CMOS designers all recognized as experts in their field associated to a multi-disciplinary team of imaging and electronic engineers.

New Imaging Technologies (NIT) offers world class CMOS imaging sensors based upon a unique and patented pixel technology which provides intrinsic high dynamic range response of more than 140dB, no noticeable fixed pattern noise and operability without image artifacts to more than 90°C.

NIT offers a complete range of standard, customized and full custom CMOS imaging sensors for a variety of applications where performance, cost, quality and reliability are of premium choice such as machine vision, automotive transportation, biometrics, medical, security and surveillance...

NIT's supply chain is fully qualified, we have strong partnership with major EU and Asian silicon & packaging fabs which allow us to offer both volume production and sampling at affordable costs along with the best available quality.

BOOTH 12

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OPTOPRIM
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OPTOPRIM is working with MIL / AERO companies and will take the opportunity of the OPTRO 2014 Conference to discuss new projects which may use high-accuracy Motion Opto-Mechanical motorized stages, InGaAs SWIR and EMCCD cameras, High Performance Photodetectors, specific Infrared Optics , Electronic Autocollimators and MID-IR Fiber Optics .

We will exhibit the following High Technology equipment :

- NIR to MID-IR OBJECTIVES manufactured by the company UMICORE Electro-Optic Materials (BELGIUM))
- MID-IR FIBER OPTICS manufactured by the company IR FLEX (USA)
- AMG150-LP GIMBAL . The AMG LP (Low Profile) position and rate gimbal mounts provide ultra-precise angular position, rate, and acceleration for development and production testing of a wide range of systems. The AMG LP series of optical mounts and gimbals is ideal for directing optics, lasers, antennas, and sensors at high speed to precise pointing angles. (This stage is manufactured by the company AEROTECH in USA)
- ASRT IP66 sealed rotary stages provide precise angular positioning in hostile environments where dirt or liquids are present. (This stage is manufactured by the company AEROTECH in USA)
- InGaAs NIR and SWIR High Performance cameras (These cameras is manufactured by the company RAPTOR PHOTONICS in UK)
- EMCCD High performance cameras for scientific and low light imaging applications. (These cameras is manufactured by the company RAPTOR PHOTONICS in UK)
- High Sensitivity Silicon and InGaAs photodetectors (single or multi-elements) and Si photomultipliers. (These detectors are manufactured by OSI Optoelectronics (USA) and SensL (UK)).

BOOTH 05

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PHOTONIS

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Latest Digital Imaging Technology from PHOTONIS at OPTRO 2014

PHOTONIS is a high-tech European organization and is today world leader in providing Night Vision Sensor Innovations that are trend setting for many defence and security applications. PHOTONIS is world-renowned by MOD's, government agencies and end-users for its superior knowledge of Night Vision and unrivalled performance of its Image Intensifier Tubes and Digital Imaging Solutions.

Digital Imaging from the Night Vision expert

When applied to visible light, *Digital Imaging Technologies* tremendously increase the range of applications, such as portable and remote applications, day/night surveillance (surveillance cameras in urban environment), UAV's, perimeter protection, border control, infrastructure surveillance, and manned and unmanned vehicle protection. PHOTONIS Digital Imaging Technology is based on the LYNX Solid state low noise CMOS, which is today's digital benchmark for low light level imaging, or on the LYNX EBCMOS. Moreover, compared to all other current technical solutions such as the EMCCD sensor, it has a lower power consumption and is more cost efficient.

NOCTURN, first compact uncooled extreme low light camera

The NOCTURN camera is a brand new digital extreme low-light CMOS camera. The PHOTONIS NOCTURN camera is especially designed for high performance under both daylight and low-light level conditions (down to light level 3). PHOTONIS NOCTURN perfectly fits applications where high-resolution detection and ultra-high sensitivity are required under 24/7 conditions. Its small size, weight and power (SWaP) make this camera module ideal for integration into aerial, mobile and hand-held surveillance systems.

Providing to customers a XS as well as a XL version, these configurations perform both equally, but differ in housing. The XS version is the standard core and very suitable for integration in various imaging applications, such as CCTV security and surveillance, long range target identification, 860 & 1064 nm laser line detection, UAV and other reconnaissance applications for instance. The XL version of the NOCTURN Camera has a CS mount which supports a wide range of standard lens options, including long-range and wide angle, to optimize surveillance field of view. It also comes equipped with multiple industry-standard interfaces (CameraLink, NTSC, PAL, USB), and a choice of connectivity options including wireless and USB for a versatile plug-and-play solution.

Besides the XS and XL version, characterized with a monochrome output, PHOTONIS also patented a colour variant (Color) and one with a High Resolution monochrome OLED Micro display (MD) as well as one with a GigE Interface (GV) for transmission over IP, that soon is to be released.

BOOTH 11

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PLEIADES TECHNOLOGIES
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Pleiades Technology is engineering and consulting company specialized in the development of high technology systems and software.

Pleiades Technologies has the necessary skills in multiple fields to achieve the development of complex innovative systems.

The achievement of your project is assisted by three interlocked departments (optical engineering, embedded systems and software).

You can find more information on our web site : www.pleiades-technologies.com

BOOTH 07

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ROFIN-BAASEL FRANCE

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ROFIN BAASEL France is a fully owned subsidiary of the ROFIN Group, a worldwide leader on the filed of laser systems, laser sources, laser based instruments and optical components.

The ROFIN Group is composed of **DILAS**, The diode laser company, **Nuferm**, specialist in fiber solutions, **Optoskand** and **Corelase** among others.

At the symposium OPTRO 2014, ROFIN BAASEL France will present Optronics products pertaining to large variety of Defence & Security applications such as Active Imaging, Solide State laser Pumping etc.

Those products range from the widest line of high power diode lasers, fiber lasers (both continuous wave and pulsed), femtosecond lasers, optical parametric amplifiers, laser based instruments, laser accessories, optical non linear crystals to a complete offering of laser safety equipment.

BOOTH 15

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OPTRO 2014



SAGEM
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Sagem, a Safran high-tech company, holds world or European leadership positions in optronics, avionics, electronics and critical software for both civil and military markets. Sagem is the No. 1 company in Europe and No. 3 worldwide for inertial navigation systems (INS) used in air, land and naval applications. It is also the world leader in helicopter flight controls and the European leader in optronics and tactical UAV systems. Operating across the globe through the Safran international network, Sagem and its subsidiaries employ 7,500 people in Europe, Asia-Pacific, North America and South America.

BOOTH 02

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SemiConductor Devices

SEMI CONDUCTOR DEVICES (SCD)
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Semi Conductor Devices (SCD) develops and manufactures a full spectrum of cooled and uncooled infrared detectors and laser diodes. The company's advanced concepts and cutting-edge technologies have positioned it as one of the world's leading sources of IR detectors. The close relationship between SCD and well-established systems houses such as Rafael, Israel Aircraft Industries and El-Op ensure that SCD's detectors are specified and produced in accordance with the latest military requirements. The continuous feedback from the Israeli Defense Forces lays the ground for new R&D activities to meet future battlefield demands. SCD offers a complete range of off-the-shelf and custom-designed detectors and laser diodes in various configurations which are typically applied in IR seekers, thermal imagers, smart munitions, night navigation systems, laser rangefinders and laser designators.

Among SCD's detectors: InSb two dimensional arrays 320x256, 640x512, 1280x1024 and 1920x1536; MCT 240x1, TDI 288x4 and 480x6, VOx Microbolometers 320x256, 640x512 and 1024x768.

Among SCD's diode lasers: CW, QCW and FCLD diode lasers.

BOOTH 06

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OPTRO 2014

THALES

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Thales places a premium on innovation. Each year, the company devotes close to 20% of its defence revenues to research and technology in order to anticipate future trends and meet the new requirements of defence and security forces around the world. Thales operates a policy of research and technology partnerships with the local industrial and scientific ecosystem in each country where it has major operations. Thales has created a network of corporate research laboratories called Thales Research & Technology. As well as prestigious research institutes and universities, this knowledge network also includes Thales' technology providers and customers.

Optronics, a key technology in Thales' portfolio

The market for optronics technologies is expanding rapidly, driven in particular by asymmetrical conflicts, border surveillance and citizens security requirements which call for high-precision observation and identification systems to maximise situation awareness and operational effectiveness.

First actor in Europe and fourth in the world in the defence optronics market, Thales offers a complete range of solutions in land, naval, airborne and space applications, mastering the entire value chain from detectors, coolers or lasers to complex integrated equipment and systems.

Thales is honoured to be a sponsor of Optro 2014 and to contribute to innovation in the optronics technologies.

BOOTH 01

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THORLABS

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Thorlabs, an active member of the Photonics community for over 20 years, manufactures equipment for the photonics industry, including optomechanics, optics, light sources, optical fibers, optical detectors, motion control equipment and instrumentation. In addition to core photonics equipment, we also provide imaging system-level products.

With offices based in the US, UK, Germany, France, Sweden, Japan, China and Brazil, Thorlabs is focused on providing fast response to customer inquiries and same-day shipment for stock items.

As an integral member of the photonics community we serve, Thorlabs also welcomes the opportunity to continue to foster the forward movement of photonics via collaborations that will lead to peer-reviewed research projects.

Our products portfolio contains:

Optical and Opto-Mechanical Components
Test and Measurement Systems
Optical Tables and Vibration Control

Nanopositioning Systems
Laser diodes (QCL, ICL)
Optical fiber (Mid-IR fiber)

BOOTH 20

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TRIOPTICS
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Since 1992, TRIOPTICS GmbH has been a leading manufacturer of optical test equipment for industrial and scientific use. The company has focused on research and development of precise and automatic optical test and measurement instruments.

Products

- ImageMaster® is the most comprehensive line of MTF equipment for complete characterization of lenses and optical systems. It covers the complete spectral range from UV to VIS to IR.
- The OptiCentric® family comprises tools for precise and fully automatic alignment, cementing, bonding, and assembly of lenses and optical systems. It includes the measurement of multi-lens objectives in mounted condition, air gap distance and lens center thickness, as well as the individual centering error of spherical and aspherical lenses and the tilt of aspherical lenses.
- OptiSpheric® is the industry's standard for integrated optical testing. It provides fast and reliable test results of almost all the relevant optical parameters, i.e. EFL, MTF, BFL and radius of curvature and FFL. Extension modules include multi-wavelength and intraocular lens (IOL) testing.
- The WaveSens® and WaveMaster® instruments provide wavefront analysis of spherical and aspherical lenses by using Shack-Hartmann sensors.
- The TriAngle® electronic autocollimator series provides angle, wedge and straightness measurements for precision alignment tasks with excellent accuracy and speed.
- PrismMaster® is the most accurate automatic goniometer featuring ultra-accurate angle measurements of prisms, polygons and other plano optics with accuracies higher than 0.2 arcsec.
- The ProCam® product range covers the entire spectrum of testing and active alignment of camera modules, which includes the optical system and the image sensor from development to final inspection. TRIOPTICS offers solutions for integrated end-of-line tests in production as well as stand-alone instruments.
- µPhase® Interferometer measures the quality of spherical, aspherical and flat optics. It is compact and modular and measures optics and surfaces with reflectivities from 0.3 % to 100 %.

BOOTH 08

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SOFRADIR
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Sofradir is the leading developer and manufacturer of highly advanced infrared (IR) detectors for military, space and industrial applications. Its vast IR product portfolio covers the entire spectrum from the visible and near infrared to very far infrared. Sofradir pioneers developments in cooled IR detectors based on a sophisticated high performance technology, Mercury Cadmium Telluride (MCT) to which Indium Antimonide (InSb), Indium Gallium Arsenide (InGaAs) and Quantum Well Infrared Photodetector (QWIP) technologies are now added. Many of the world's missile seekers, targeting pods, armored vehicle cameras, handheld goggles and other airborne, naval and ground vehicle applications use Sofradir's military-grade, battlefield proven IR equipment. Sofradir holds the unique position as the only maker of IR detectors in Europe to be space-qualified.

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XENICS
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Xenics is a pioneer of path-breaking infrared technology with a proven track record of more than ten years. Xenics designs and markets infrared imagers, cores and cameras of best-in-class image quality to support innovative R&D, industrial automation, machine vision, process control and high-end security applications. The company offers a complete portfolio of line-scan and 2-D area-scan products for the VisNIR, SWIR, MWIR and LWIR ranges. A vertically integrated manufacturer with advanced production facilities and in-house know-how on detector, systems and software development, Xenics delivers state-of-the-art imaging solutions as well as specifically targeted and optimized custom designs. Due to its Western European location and a worldwide sales and service network, Xenics is able to support its customers with simplified export procedures.

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WZW OPTIC AG
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Since 1965 WZWOPTICAG have been producing optics for customers all over the world with Swiss precision. High-end optical fabrication and opto-mechanical assemblies all under one roof. Our assembly capabilities include rapid prototyping with flexibility to series production. In 2008, WZW introduced "super polishing capabilities, RMS <1 Angstrom, guaranteed with metrology. Further investments made in 2010 brought the capability for the manufacturing of micro-optical components and assemblies.

Precision optics production
Sub Angstrom polishing
Micro-optical elements
Opto-mechanical assemblies

Key words:

Super polishing
Opto-mechanical assemblies
Sub Angstrom
Micro optics
Precision Optics production
Endoscopic optics

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