



THE[®]
MACHINE
VISION
COMPANY



Opto Engineering® is one of the only companies in the world that can design, manufacture, sell, and offer assistance for advanced products and technologies in the field of machine vision.

We are known for our many optical innovations, solving once-impossible machine vision applications, and establishing as **one of the world leaders in telecentric technology, 360° view special lenses** and **Italian camera manufacturer**. Today, after more than 20 years, our product range encompasses all the components needed to build a machine vision system: **OPTICS, CAMERAS, LIGHTING, and SOFTWARE.**

OPTO ENGINEERING® *The partner for vision system developers.*



PRESS RELEASE | OCT. 8-10, 2024 • Messe Stuttgart • Booth 8D48 - Hall 8

CAMERAS

ITALA[®]

COMING SOON **ITALA G.SWIR**

Industrial GigE vision VIS-SWIR PoE cameras

ITALA G.SWIR is a series of GigE vision PoE industrial cameras capable of detecting both visible and short wave infrared (SWIR) light from 400 to 1.700 nm using Sony's SenSWIR™ InGaAs technology. These cameras enable a wide range of applications in high resolution spanning from semiconductors precision positioning (SWIR light penetrates silicon wafers) to food inspection (water absorbs light at a wavelength equal to 1450 nm). **ITALA G.SWIR** cameras are designed and manufactured in Italy by Opto Engineering®, combining a robust and reliable design with advanced functionalities.



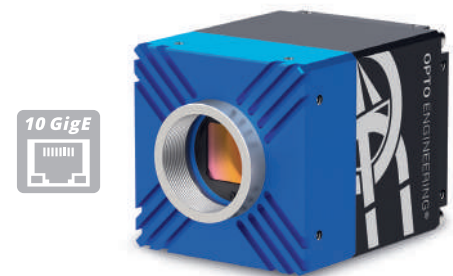
GigE[®]
VISION **GEN*i*>CAM**

COMING SOON **ITALA 10G**

Industrial 10GigE vision PoE cameras

ITALA 10G is a series of 10GigE vision PoE area scan cameras featuring the brand new 10Gbps (10GBASE-T) link speed, delivering next generation speeds without compromising image resolution.

ITALA 10G series features a compact form factor and integrates high quality Sony Pregius and Pregius S CMOS sensors ranging from II generation with 3.45 µm pixels to IV generation with 2.74 µm pixels (fast version). These premium cameras feature powerful and advanced functionalities, ideal for demanding applications including multi camera systems and high speed - high precision applications.



10 **GigE[®]**
VISION **GEN*i*>CAM**

COMING SOON **ITALA G.IP**

Dustproof & water resistant GigE vision PoE cameras

ITALA G.IP is a series of GigE vision PoE area scan cameras featuring an IP67-rated housing. By adding sealed lens tubes from IPT series and IP67 cables, **ITALA G.IP** cameras ensure protection against solid particles like dust, dirt, sand and water.

The Ingress Protection (IP) rating grades the resistance of an enclosure against the intrusion of dust or liquids. **ITALA G.IP** is a great camera solution in harsh, dirty and wet industrial environments.



GigE[®]
VISION **GEN*i*>CAM**

CAMERAS

ITALA®

NEW ITALA G with Polarsens™ sensors

Industrial GigE vision PoE cameras with 5 MP and 12 MP Sony Polarsens™ sensors

The ITALA G cameras integrate 5 MP and 12 MP Sony Polarsens™ sensors that capture polarization data in addition to brightness and color information.

KEY ADVANTAGES:

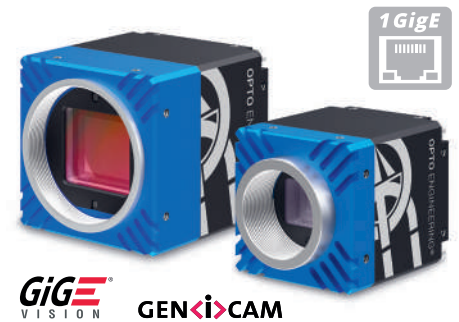
- Four directional polarizations in one single acquisition
- Dedicated ITALA APIs to calculate angle, degree of polarization and Stokes parameters
- Simple set-up without accessory filters



ITALA G

Industrial GigE Vision PoE cameras made in Italy

ITALA G is a series of GigE Vision industrial cameras designed and manufactured in Italy by Opto Engineering®. With resolutions ranging from 0.4 MP to 31.5 MP, the ITALA G series features robust and reliable cameras with excellent quality-to-price ratio and suitable for any imaging application.



ITALA G.EL

Industrial GigE Vision PoE cameras with liquid lens control

ITALA G.EL is a series of GigE Vision industrial cameras with integrated liquid lens control designed and built in Italy by Opto Engineering®. With resolutions ranging from 1.6 MP to 25 MP, the ITALA G.EL cameras allow to simplify the integration of Optotune® liquid lenses thanks to a built-in driver to avoid an external dedicated hardware.



OPTICS

NEW HC series

Hypercentric lenses for 360° inspection of the inner sides and bottom of cavities

HC series features hypercentric lenses for sensors up to 1.1" designed for the simultaneous inspection of the inner sides and bottom surfaces of hollow cylindrical samples, such as bottles, cans, vials, containers, pipes and bores.

HC lenses image the inside of cavities from the outside thanks to the special optical path of the rays passing through bottlenecks and narrow openings. This unique optical design allows to fully inspect the inside surfaces of cavities without the need to rotate the sample or use complex multi-camera systems.



NEW MODEL PCCDL

Pericentric catadioptric lens for 1/2" - 1.1" sensors and large FOVs

PCCD series features catadioptric lenses exclusively developed and manufactured by Opto Engineering® to enable the 360° top and side view of objects with a single camera.

The new model PCCDL is ideal for large FOVs and has a more versatile design.

KEY ADVANTAGES:

- 10 to 110 mm object diameter
- Extra wide lateral viewing angle (35°)
- One model for various sensor sizes
- Top and side inspection at high resolution



NEW PCHIL series

Large aperture hole inspection lenses for 360° inside view

PCHIL series features hole inspection lenses for the inner inspection of cavities and containers. Unlike common optics which can only image flat fields of view, these lenses are specifically designed to image both the inner bottom and vertical walls of cavities, cylinders, bottles or threaded objects from the outside.

Thanks to the large angle of view and the innovative optical design with variable iris and large aperture, these lenses are compatible with a wide range of inspections and different object diameters. PCHIL series also includes models with integrated Optotune® liquid lens technology to provide the flexibility of an immediate and precise remote focusing.



TCZEL series

Telecentric zoom lens with dual liquid lens technology

The **TCZEL** telecentric zoom lenses feature a revolutionary design that integrates two liquid lenses.

This allows you to precisely adjust both the magnification and the working distance of the optics without any moving parts, thus reducing the risk of wear. In addition, the liquid lens technology allows you to change optical parameters faster than any traditional zoom and to control everything via PC.



EL5MP series

5 MP fixed focal length lenses for sensors up to 2/3" with liquid lens technology

The **EL5MP series** features 5 MP fixed focal length optics for sensors up to 2/3" with integrated liquid lens technology. The high-resolution optical design combined with the liquid lens allows autofocus within milliseconds and acquisition of high-quality images.

These optics are ideal for high-speed inspections and at different working distances typical, for example, of the food and beverage sector as well as the pharmaceutical and cosmetic industries. Moreover, EL5MP optics are ideal for guiding robotic arms used for applications such as pick-and-place and bin picking.



NEW MC3M series

Nearly zero distortion macro lenses for sensors up to 1.1"

The **MC3M series** is a family of macro lenses designed to acquire images of small objects with high resolution and virtually no distortion.

Optimized for 1.1" sensors, these compact and cost-effective optics are ideal for very accurate measurement and inspection applications.



LIGHTING

NEW LT2PRXP series

40W continuous and strobe LED pattern projectors

The **LT2PRXP series** features high-power LED pattern projectors designed for inline or offline applications including quality control, 3D reconstruction, dimensional measurement, planarity control, robot guidance and alignment applications.

LT2PRXP pattern projectors are available in two different versions to meet diversified application needs. The standard version integrates a built-in driver for continuous and strobe mode operations ensuring great application flexibility.

The compact version is a projector designed for strobe mode only operations and ideal for applications with space constraints.



NEW LT2PRUP series

100W continuous and strobe LED pattern projectors

The **LT2PRUP series** features ultra-high power LED pattern projectors designed for fast image acquisition in high-speed applications, including planarity control of opaque products, robot guidance for fast pick and place and 3D profiling.

LT2PRUP projectors integrate a built-in driver that makes them ideal both for continuous and strobe mode operations and ensures great application flexibility.



NEW LT3BC series

High-power LED backlights with integrated driver

The **LT3BC series** features high-performance LED backlights designed to provide high-power light output, excellent uniformity and contrast thanks to high-efficiency LEDs.

LT3BC backlights integrate a built-in smart driver and feature a standard 5-pin M12 connector with PNP/NPN/analog dimming input.

Their special design provides both powerful and uniform lighting in a compact and robust housing, suitable for industrial environments.



NEW LTSP series

60W LED Spot lights

LTSP series features high intensity spot lights designed to provide homogeneous light output from various working distances. LTSP spot lights come with 4 different lens options emitting various lights angles: 10°, 30°, 60° and 120°. These angles are ideal for applications that require a highly focused beam of light or a more diffused illumination. LTSP spotlights integrate a built-in smart driver to operate in continuous/boosted/strobe mode and feature a standard 5-pin M12 connector with PNP/NPN/analog dimming input.



CONTACT US

Opto Engineering Headquarters

str. Circonvallazione Sud, 15 • 46100 Mantova, IT
phone: +39 0376 699111

FOR MORE INFO:

press@opto-e.com

WWW.OPTO-E.COM

