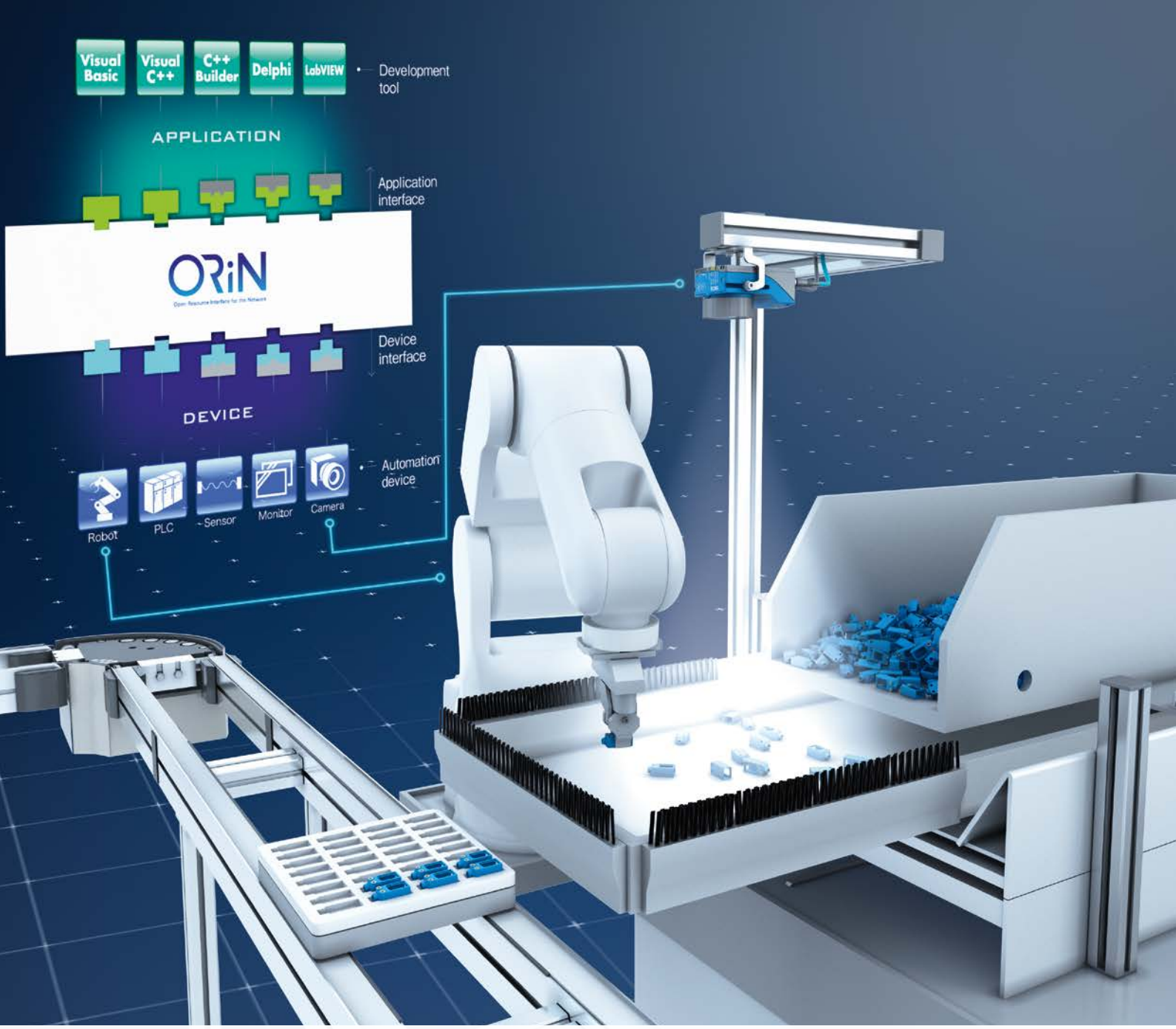


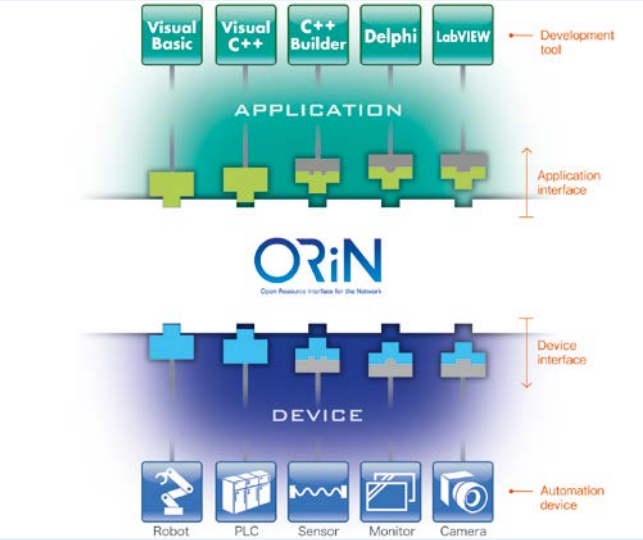
SICK NOW SPEAKS ORiN

PLOC2D ROBOT GUIDANCE SYSTEM AND TRISPECTORP1000 3D MACHINE VISION WITH ORiN PROVIDER

SICK
Sensor Intelligence.

WHAT IS ORiN?

ORiN (Open Robot/Resource interface for the Network) is a standard middleware specification developed for systems in factory automation. ORiN2, the second version of this specification, offers a standard interface for applications, sensors, controls and data schemes including standard communication protocols. Provider modules (expansion modules), which are created based on this specification, enable standardized access methods for different devices. This makes it possible to improve the reusability and reliability of IT systems in a factory, to shorten system development times and achieve quicker implementation.



THE BENEFITS OF ORiN

As a rule, a production line consists of robots, robot controls, system controls and peripheral devices from various manufacturers. Each of these components is controlled by the individual communication specifications of the respective manufacturer. This results in a complex communication system in the production line and therefore in longer development times and higher maintenance costs. Due to the use of general programming languages and the uniform interface of the ORiN platform, application software can be used for robots with devices of different manufacturers and for various robot types. The result is reduced development time and minimum maintenance costs.

ORiN-compatible add-ins are used in the robot controls so that external devices such as PLCs, cameras or sensors can be used with common interface specifications. These add-ins are referred to as providers. SICK has recognized the benefits of ORiN and expanded its extensive range of sensors for robotics to include the first providers for the PLOC2D robot guidance system and the TriSpectorP1000 programmable 3D camera.

The benefits for end users:

- A manufacturer-independent system environment which is easy to create
- Option for process monitoring and remote maintenance of the production line

The benefits for system integrators:

- Easy integration of the PLOC2D robot guidance system and the TriSpectorP1000 3D camera into the robot system
- Quick commissioning with the use of the standard ORiN interface
- Minimum programming effort with ORiN provider (DLL libraries)

The benefits for device manufacturers and OEMs:

- Shortening of processes in the development of communication interfaces and tests
- Collaboration with other manufacturers

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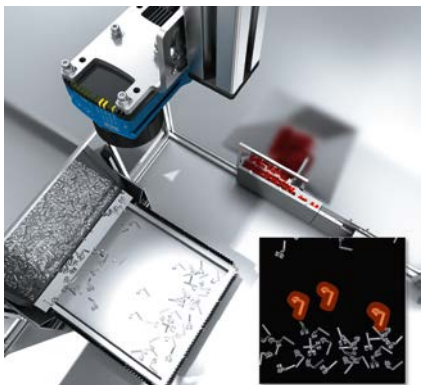
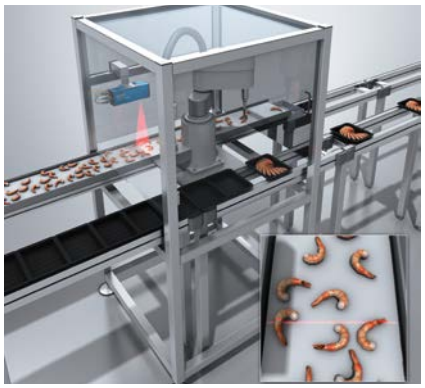
SAMPLE APPLICATIONS



Part localization in the AnyFeeder

An AnyFeeder machine conveys and flips small parts without refeeding and without the use of conveyor belts. In this case, small parts are randomly aligned. The PLOC2D robot guidance system quickly and reliably detects their position and transmits position data and orientations to the robot control system using the ORiN provider. Thanks to the standardized ORiN interface, smooth communication between the PLOC2D and the robot control is guaranteed. Using the recorded information, the robot is able to pick up the properly aligned parts and feed them to the next process. Incorrectly aligned parts are ignored and realigned by pulsed vertical oscillations after the properly aligned parts are picked up.



3D belt picking

A TriSpectorP1000 3D camera mounted over the conveyor belt measures products in 3D. This allows the handling robot to pick up and sort food quickly and precisely. The packing format must have a harmonious appearance to fulfill high customer standards. Only perfect products are packaged. The TriSpectorP1000 supplies important data for quality determination such as product position, volume and features. The standardized ORiN interface enables the 3D camera to easily and perfectly transmit the captured data to the robot control.

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PLOC2D robot guidance system – at a glance

- 2D position determination of parts
- Comparison of coordinate systems of robots and sensor systems
- Tools and functions for easy calibration of the FLEX variants
- Intuitive human machine interface for set-up and maintenance of system components
- Stand-alone sensor system – no external PC required

Your benefits

- Can be used immediately for part localization
- System set-up and operation are simple, no special machine vision knowledge required
- Flexible adaptation to specific requirements thanks to quick, easy calibration of the FLEX variants of the sensor system and the wide range of lenses and illumination accessories
- Powerful teach-in functions and high accuracy for reliable operation
- Can be integrated easily into countless robot models and PLCs

→ www.sick.com/PLOC2D

For more information, simply enter the link or scan the QR code to get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more.

TriSpectorP1000 3D machine vision – at a glance

- 3D, 2D and profile inspections of moving parts
- Image processing, illumination and analysis - all in a single device
- SICK AppSpace, programmable 3D camera
- Full flexibility for tailored solutions
- SICK Interface & Algorithm API and HALCON
- Factory calibrated 3D data
- Web user interface

Your benefits

- Extremely flexible automation thanks to real shape data (in mm) regardless of the contrast
- SICK AppSpace development environment for tailor-made solutions
- Cost-efficient solutions with stand-alone 3D camera, ready for Industry 4.0
- Higher quality and less scrap thanks to inline inspections of all parts in three dimensions
- Simple operation via customized web interface
- Easy commissioning and simple device exchange thanks to guaranteed field of view
- IP67 housing for operation under harsh ambient conditions

→ www.sick.com/TriSpectorP1000

For more information, simply enter the link or scan the QR code to get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more