NEW

“Plug & Automate”

3D Machine Vision
Product Line

Ready-To-Use for Factory Automation

Scalable & Configurable.
From Sensor to Software

ISRA VISION
Best practice 3D Machine Vision: The key to higher automation efficiency

In development as Standard Product Line

Cutting edge technology for factory automation… Do-it-Yourself

- Standardized 3D machine vision product line design based on 30 years of ISRA VISION know-how for standardized applications and thousands of installations.
- Factory automation easy-to-use: 3D machine vision product portfolio providing ready-to-use products for the factory floor. Automation projects benefit from the quick, easy and efficient integration to increase the efficiency significantly.
- Configure and integrate in an efficient way to optimize your budget

Different options:
- Sensor
- Software
- Sensor package

Features
- For simple and complex tasks
- Easy teach-in
- Parameterization instead of programming – no expert’s knowledge necessary
- Advanced software
- Full support of robots, devices and automation architectures
- All industrial communication interfaces including GigE, Fieldbus, Ethernet Sensors

Standard 3D Machine Vision Sensor Product Line for efficient production and highest flexibility

- 3D Robot Guidance
- 3D In Line Gauging
- 3D Surface Measurement

Features
- All sensors GigE based
- Integrated LED based lighting control
- Fixed, mobile or robot mounted
- Measuring volumes from few cm³ to several m³
“Plug & Automate” Produktlinie

Software

Easy-of-use:
Few steps to the finished application.
Intuitive parametrization at the factory floor in modern design based on new GUI.

Features
- Point and click, touch, configure and test
- Ease-of-operation
- Clear workflow visualization
- Guided navigation
- Simple intuitive set-up for all communication channels
- Automated sensor and robot calibration
- Intelligent image processing tools
- Integrated plausibility checks
- User interface in modern design

Communication

CONactor – a connection unit for multi-sensor fusion and integration. CONactor handles the combination of data from multiple sensors to increase the efficiency during the integration. CONactor will help to link not only sensors but, lighting and I/O channels to easily set-up a complete application. Plug. Connect. Ready.

Industrial Interfaces

Industrial communication interfaces, including most fieldbuses, ethernet and digital signal exchange, are supported. Profibus, Interbus, DeviceNet, PROFINET, EtherNet/IP, CANopen, OPC, TCP/IP, Digital IO and others.

Ready for Robot Communication

Fully integrated ready-to-communicate modules for robots through PROFINET, Profibus, Digital IO and others.
## SHAPEMATCH3D Multi-line sensor

3D measurement of position and orientation

<table>
<thead>
<tr>
<th>Abstract</th>
<th>3D sensor based on multiple-line projection combined with 3D form matching, redundancy guarantees robust, highly exact measurements</th>
</tr>
</thead>
</table>
| Sensor parameter | Volume: up to 300 mm x 230 mm x 220 mm  
Resolution: down to 0,05 mm  
Working distance: 100 mm to 1,200 mm |
| Measuring object | Size: small to medium  
Positional tolerance: from 20 mm to 500 mm (depending on object size) |

## APS3D

3D measurement by point cloud

<table>
<thead>
<tr>
<th>Abstract</th>
<th>3D sensor based on stereo triangulation and phase-shift fringe projection. To capture dense 3D point clouds</th>
</tr>
</thead>
</table>
| Sensor parameter | Volume: up to 460 mm x 380 mm x 150 mm  
Resolution: down to 20 µm  
Working distance: 91 mm to 1,040 mm |
| Measuring object | Size: any  
Positional tolerance: size of measuring volume |

### Features

- Short measuring time
- Pre-calibrated
- Resolution down to several µm
- Covering all measurement volumes from a few cm³ to several m³
- Integrated, intelligent illumination
- Optimized and ready for either fixed, mobile or robot mounted
- Multiple sensor systems possible
- Pose determination from low variance object positioning to completely random picking

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Compact. Fast. Accurate:  
Single sensors for 3D Robot Guidance
... to multiple Sensor-System using CONact

IntelliPICK3D „Bin-Picking”
3D measurement with moving laser line to determine position and orientation of unsorted, random distributed objects
Abstract Sensor for the three-dimensional pose determination of unsorted, randomly distributed objects covering large depths of big containers based on a sensor with moving laser line
Sensor parameter Volume: up to 1.200 mm x 1.000 mm x 800 mm
Resolution: down to 0,5 mm
Working distance: 800 mm to 2.000 mm

3D Coordinates even of large objects, reliably captured: Multiple sensors arranged as a system „CONact“

CONact MONO3D Multiple Sensors
3D pose determination of large objects
Abstract Several MONO3D sensors combined together for highest measurement accuracy, especially for large objects based on multi-image photogrammetry
Sensor parameter Volume: 5.000 mm x 5.000 mm x 5.000 mm or larger
Resolution: down to 0,1 mm
Working distance: 500 mm to 5.000 mm
Measuring object Size: medium to large
Positional tolerance: from 20 mm to 500 mm (depending on object size), limited tilting

CONact STEREO3D Multiple Sensors
3D pose determination of large objects
Abstract Mutually calibrated combination of several STEREO3D sensors to cover larger objects
Sensor parameter Volume: 5.000 mm x 5.000 mm x 5.000 mm or larger
Resolution: down to 0,05 mm
Working distance: 200 mm to 400 mm
Measuring object Size: middle to large
Positional tolerance: size of measuring volume

CONact SHAPEMATCH3D Multiple Sensors
3D pose determination of large objects
Abstract Mutually calibrated combination of several SHAPEMATCH3D sensors to cover larger objects
Sensor parameter Volume: 5.000 mm x 5.000 mm x 5.000 mm or larger
Resolution: down to 0,05 mm
Working distance: 200 mm to 400 mm
Measuring object Size: large
Positional tolerance: size of measuring volume
3D In Line Gauging

**GGS3D Geometry Gauging Sensor**

Stationary or robot mounted gauging using form matching

Abstract
Geometry Gauging Sensor GGS3D allows measurement of 3D-coordinates with high precision

<table>
<thead>
<tr>
<th>Sensor parameter</th>
<th>Volume:</th>
<th>up to 50 mm x 75 mm x 35 mm</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Resolution:</td>
<td>down to 0.02 mm</td>
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<tr>
<td></td>
<td>Working distance:</td>
<td>200 mm to 1.000 mm</td>
</tr>
</tbody>
</table>

**SGS3D Smart Gauging Sensor**

Mobile in line gauging of geometrical features

Abstract
The Smart Gauging Sensor SGS3D is designed for the use on the robot arm. Due to his compactness even hardly reachable gauging points can be measured precisely – of course temperature-compensated

<table>
<thead>
<tr>
<th>Sensor parameter</th>
<th>Volume:</th>
<th>60 mm x 45 mm x 35 mm</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Resolution:</td>
<td>down to 0.02 mm</td>
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<tr>
<td></td>
<td>Working distance:</td>
<td>100 mm to 150 mm</td>
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</table>

**GFS3D Gap & Flush Sensor**

Mobile in line gauging of features such as gaps

Abstract
The Gap and Flush Sensor GFS3D is designed for the robot-based in line gauging of gap and flushness on painted or unpainted surfaces. Very robust measurement due to the combination of two sensors

<table>
<thead>
<tr>
<th>Sensor parameter</th>
<th>Volume:</th>
<th>45 mm x 60 mm x 35 mm</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Resolution:</td>
<td>down to 0.03 mm</td>
</tr>
<tr>
<td></td>
<td>Working distance:</td>
<td>150 mm to 250 mm</td>
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</table>

**Features**

- For in line gauging tasks from 2D to 3D
- 3D form matching integrated
- Configurable for high accuracy gauging
- Temperature compensated
- All typical gauging features included:
  - holes, drillings, areas, angles, slotted holes, bolts, egdes, diameters and much more
3D Surface Measurement

Features

- Exact 3D measurement via:
  - 3D depth
  - 3D form
  - 3D point cloud

- For the most difficult surfaces: from very low to very high reflectivity
- Capture of different depth areas
- Capture of large gauging areas, surfaces and volumes

### APS3D

**Abstract**
3D sensor based on stereo triangulation and phase-shift fringe projection. To capture dense 3D point clouds

**Sensor parameter**
- Volume: up to 460 mm x 380 mm x 150 mm
- Resolution: down to 0.20 µm
- Working distance: 91 mm to 1,040 mm

**Measuring object**
- Size: any
- Positional tolerance: size of measuring volume

### PAINTSCAN Lackdefekte in 2D und 3D

**Abstract**
Sensor for fully automated in-line inspection of painted surfaces for topological and non-topological defects including 3D measurement of defects

**Sensor parameter**
- Volume: 750 mm x 620 mm x 150 mm or smaller
- Resolution: 0.3 to 0.1 mm
World class automation

ISRA VISION has been a leading supplier of high-performance quality inspection, robot guidance and production logistics systems for more than 30 years. ISRA systems are used in the automotive industry throughout the world. Our goal is to offer a complete portfolio of standard solutions which meets the full spectrum of requirements along the entire process chain.

Thousands of successful installations worldwide demonstrate ISRA’s experience and technological expertise in machine vision.

A summary of the advantages

Customers choose ISRA over the competition for the following reasons:

- Our development activities are fully focused on the needs of our customers.
- We consistently invest in our own knowledge base in all of the core areas of machine vision.
- At our company, the customer relationship does not end when a new system leaves our shipping dock. The Customer Support Center operates a range of services including a telephone hotline, teleservice, on-site service and maintenance to support our customers in operating their systems and equipment and to help them increase their productivity.
- More than 700 team members at our locations in Europe, the Americas and Asia are committed to helping you achieve success.

ISRA VISION

<table>
<thead>
<tr>
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Optimize your ROI with the technology leader ISRA

www.isravision.com