



## Laser triangulation rangefinders, micrometers scanners and laser modules

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Laser triangulation rangefinders, micrometers and scanners produced by our company are designed for industrial application in the field of contactless measurement of surface geometry, distances and displacements. They are applied in the area of industrial automation, quality surveillance as well as for production facilities where robots and CNC machines are used.

Our company core advantages in the market are reliability, compatibility and high-speed work, all at very attractive price.

# Application of our laser products



Manufacturing of  
products from metal  
and polymers



Electronics  
contract  
manufacturing



Food  
industry



Transport and  
logistics repair  
sector



Manufacturing  
and other  
companies





## Tree-dimensional scanning of surfaces:

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- Products are integrated with linear, radial drives, robots, lines for the accumulation of three-dimensional data about products.



## Scanning of cavities, inside surfaces of tubes, holes:

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- Small dimensions and high reliability of our devices allows to apply our scanners in difficult conditions, for instance, for moving landing gear.



## The control of geometry of articles, preparations, stamps:

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- High accuracy of our devices allows quick and accurate measurements of the details of any complexity.



# Additional options



## SDK, service software:

We support all our products during its life time by the means of its development and our unique software for its set-up and parametrization.



## Embedded custom software:

With the help of our SDK we provide the opportunity to run custom programs in the scanner.



Our main products

# Laser profilometers series 3iScan 1

## Principle of operation:

- The radiation of a semiconductor laser is formed as a line and projected onto an object.
- The radiation dissipated on the object by the objective is going on two-dimensional CMOS-matrix.
- The resulting image of the contour of the object is analyzed by the signal processor, which calculates the distance to the object (Z coordinate) for each of plenty of points along laser line on the object (X coordinate).



## Possibilities

# The scanner is intended for contactless measurement and control



Of the profile of the surfaces, locations, moving, sizes as well as for definitions of defects in the objects.



Mapping of their locations as well as for recognition of technological objects.



Construction and 3D modelling.



Our main products

# Triangulation Rangefinder

## Principle of operation:

- The basis of the sensor is based on the principle of optical triangulation.
- The radiation of a semiconductor laser is focused by the lens on the object.
- The radiation scattered on an object is collected by a lens on a linear matrix. The signal processor calculates the distance to the object by the position of the image of the light spot on the linear matrix.

3iRange 1



## 3iRange 1 possibilities

Triangulation rangefinder will determine the distance to the object, the offset relative to the meter in real time, the surface geometry



Contactless measurements of the distance to the objects.



High frequency measurements.



Measurements of minimum or maximum distance.



Integration with robots, machines, automatic production processes





Our main products

# Optical micrometer

## Principle of operation:

- Optical micrometers are intended for contactless measurement and the control of diameters, backlashes and situations of technological objects. The micrometer consists of two modules: radiator and receiver.
- Radiation of semiconductor laser is collimated by a lens. At placement of the object in the area of a collimated beam, the generated shadow image is scanned with a CCD photodetector part.
- The geometry of the object is calculated from the position of the shadow border.

3iMicro 1



## 3iMicro 1 possibilities

Optical micrometer is designed for contactless measurement and control of diameters, gaps and positions of technological objects



High precision measurements of geometric parameters and object position.



Measurements of the dimensions in cross section and average diameter of an object.



Product quality control without disassembling and dismantling.



Ability to integrate with robots, machines, automatic lines.



Our main products

# Scanner using diffractive optical elements

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## Principle of operation:

- Three to five scanner beams in the form of parallel straight lines or crosshairs allow you to perform surface analysis, calculate the dimensions of parts, determine the direction of the joints.

3iScan 1



3iScan 1 possibilities

# Tree-dimensional analysis of the surface and parts in one frame



Highly accurate measurement of geometric parameters and object position.



Product quality control without disassembling and dismantling the object.



Ability to integrate with robots, machines, automatic lines.



# AN-0XL MODULE SERIES

## ADVANTAGES OF OUR LASER MODULES



Wide wavelength range



High stability of the laser beam parameters and the radiation axis



Degree of protection IP67



Any beam shape at the output (dot, cross, etc.)



Wide range of power and supply voltages



Long service life



Wide range of radiation divergences, including the lowest



Stable operation in various temperature ranges



One hundred percent repairability



# AN-01L MODULE SERIES

The AN-01L series laser modules provide high alignment between the emission axis and the housing axis. The size of the modules in this series allows the use of red laser diodes up to 150 mW or green/blue laser diodes up to 120 mW.

This series includes commercially available laser kerf pointers (laser kerf pointers, laser cut line pointers, laser rulers) for woodworking machines.

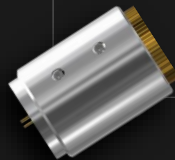


# AN-02L MODULE SERIES

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The AN-02L series laser modules are designed for use with diffractive optics for projecting various kinds of images or as pilot lasers, including diode-pumped solid-state lasers or high-power gas lasers.

These are medium-sized modules for a variety of applications.



# We Take Pride in Our Numbers

>10

Years of  
Experience

>100

Business  
Partners

>15

Custom products  
developed

>10

Countries World  
Wide







bringing your business  
to the next level

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