

**©**EM AUTOMATIC

## INSERTION IMAGING & VISION



RUBY 3D Depth Camera

FROM NERIAN

PRODUCT NEWS

FROM NEOUSYS

## RELIABLE TECHNOLOGY

FOR AUTOMATIC SCREENING OF RENTAL CARS

DISCOVER THE NEW 5GIGE SOLUTIONS

FROM BASLER





# DISCOVER THE NEW 5GIGE SOLUTIONS FROM BASLER!

With 5x the data rate in the same small sugar cube size, our newest ace 2 Basic 5GigE cameras increase your speed without changing form factor. Combined with a comprehensive, perfectly matched hardware and software portfolio, our 5GigE vision systems ensure an easy upgrade from an existing GigE or USB 3.0 setup. Increase your application's profitability with one of the smallest, most cost-effective systems on the market.

## TAILOR YOUR 5GIGE SOLUTION TO YOUR NEEDS

#### **CAMERAS**

Twelve different ace 2 Basic models with Sony Pregius S 4th generation sensors with resolution from 5 up to 24 MP

#### **LENSES**

Basler Premium Lenses C23 and C11

## **PC CARDS & CABLES**

5GigE and 10GigE Interface Cards, GigE- and I/O cables

## **SOFTWARE**

pylon 7.1 and pylon vTools

## **BENEFITS OF BASLER'S 5GIGE VISION PRODUCTS**

- 5x faster data transfer in the familiar small ace 2 sugar cube format
- Perfectly coordinated vision system components, including hardware and software
- Reliable and market-proven pylon Camera Software Suite, tailor-made for 5GigE vision systems
- 1:1 replacement for existing GigE vision systems. Setup remains unchanged, with no additional hardware required
- Easy upgrade from USB 3.0 systems

- Attractively priced combination of small-format camera and five times the data rate keeps overall system costs low
- Higher speed enables higher throughput for increased efficiency and profitability of your application
- Single sourcing saves time and money in selecting, purchasing and integrating all vision components
- Reliable, meticulously tested vision products with optimized price/performance ratio

## IMAGING & VISION

OEM Automatic has many years of experience in products for imaging and vision applications. With us, you will find all components needed for your vision system; factory automation, robotics, medical or individual components to embed into your custom project. Our unique range combined with high-quality support and product knowledge makes us the obvious choice when selecting components for your vision project.

Thanks to our unique product range, we can offer the most suitable and cost-effective solution for each application. On top of that, together with OEM Automatics complete portfolio, we can offer one of the automation markets broadest product range. We operate in Sweden, Norway, Denmark and Iceland and through sister companies in UK and Finland.

#### LEADING MANUFACTURERS

The broad and unique product range is made possible by our partnering manufacturers that are specialized and market leading in their respective field. By being our partners' local organization with full responsibility for sales, we can ensure that you get the benefits of a local distributer but at the same time get access to world leading technology and products.



**TORBJÖRN FJORDE**Product Area Manager



#### **NUMBER 02/2022**

GRAPHIC DESIGNER Julia Ax Johansson PUBLISHER Jens Kjellsson EDITION 1550

## **Content**

02/2022

## **04** RUBY 3D DEPTH CAMERA - THE MULTI-TALENT FOR 3D DEPTH PERCEPTION

The new Ruby 3D depth camera from Nerian Vision Technologies combines the best features of stereo vision and structured light.

## **07** LET YOUR ROBOT PICK CARTONS FROM THE PALLET

Robots that unload pallets are the next revolution in logistics, where boxes can be randomly placed, and any type of pallet can be used.

## **08** RELIABLE TECHNOLOGY FOR AUTOMATIC SCREENING OF RENTAL CARS

Join us for an exciting customer case where we meet Wenn at Oslo airport and talk about automatic inspection of rental cars.

## 14 COMPACT PRODUCT NEWS FROM NEOUSYS

Three new industrial computers from Neousys.

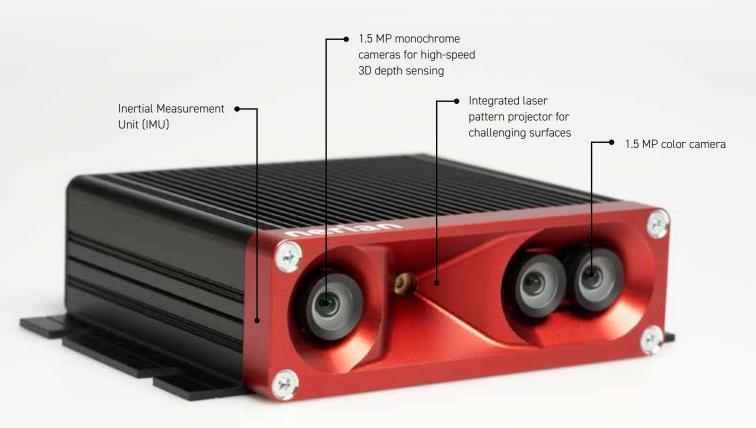




## **RUBY 3D DEPTH CAMERA**

## The multi-talent for 3D depth perception

Machine vision applications are as diverse as the 3D sensor technologies that enable those. Structured light, Time of Flight, laser triangulation and stereo vision are some of the available technologies. Stereo vision is the preferred technology when measurements are to be made in daylight and/or over long measurement distances, but it has difficulties with texture less surfaces.



The new Ruby 3D depth camera from Nerian Vision Technologies combines the best features of stereo vision and structured light. The depth camera has three image sensors: two monochrome sensors for depth perception and an additional color sensor. In addition, an infrared pattern projector has been integrated, which improves depth perception but is invisible to the color sensor.

This makes our Ruby 3D depth camera one of the most flexible 3D vision solutions at a very affordable price!







## TYPICAL APPLICATIONS

### MOBILE ROBOTICS

Solid 3D obstacle and path detection are important for smooth movement of mobile robotics applications, e.g. logistics. Ruby provides reliable 3D depth data to control your autonomous vehicle or robot as well.

#### AGRICULTURAL ROBOTICS

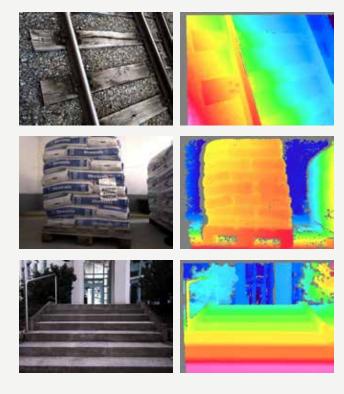
Reliable detection of 3D depth information and the output of color information is essential to check the soil condition or growth status of the crop.

#### CONSTRUCTION AUTOMATION

Thanks to the inertial sensor (IMU) and robustness against dark and bright light conditions, our Ruby 3D depth camera is an optimal complement for your application in the field of construction site 4.0 - navigation, mapping, obstacle detection.

#### OUTDOOR

Stereo vision is robust against daylight due to its passive mode of operation. Therefore, our Ruby 3D depth camera can be optimally used outdoors, even in bright sunlight conditions.



## **OUR RANGE**

Product area Image Analysis & Vision has many years of experience in products for image and vision applications. With us, you will find all the components needed for your vision system - from optics and cameras for both 2D and 3D to industrial computers and software and everything in between.















Do not miss

THAT YOU CAN ALSO GET THE MAGAZINE DIGITALLY

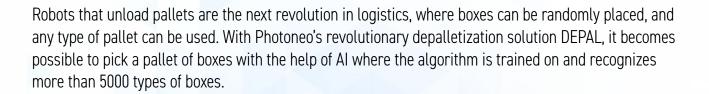
**SIGN UP FOR OUR NEWSLETTER** 

Do you no longer want our printed magazine? Email to inspo@oemautomatic.se

oemantomatic.se



## LET YOUR ROBOT PICK CARTONS FROM THE PALLET



#### THIS IS HOW THE DEPALLETING SOLUTION WORKS

The depalletization solution can be made fully or semi-automatic. A pallet loaded with boxes is placed within the robot's range. The 3D scanner PhoXi scans the pallet and sends the 3D data to the vision controller where the 3D data is processed by a machine learning algorithm. Thanks to the large database of pre-learned boxes, it can instantly translate 3D data and recognize each box separately. Finally, it is a matter of sending the correct coordinates to the robot, which will perform picking with an accuracy of +-3 millimeters. The entire pallet is quickly unloaded with minimal or no need for human interaction.

## **ADVANTAGES**

- The boxes do not have to be in a predetermined pattern
- More than 5000 pre-programmed boxes
- · Self-learning on new boxes
- · 99.7% pick result
- Pallet size: Up to 1.2x1x2.2 m
- Working depth: Up to 2.5 m
- Min-Max box dimension: 10x10x10 cm 60x60x60 cm (or customized)
- Min-Max box weight: 0.1 25 kg
- · Cycle time: Up to 1000 boxes/hour
- · Supports: ABB, Fanuc, Yaskawa and other robot brands on request

#### **ANYPICK SOFTWARE**

With the Anypick software, you get an Al-based solution for your logistics that can process parts that vary in shape and size. The fully loaded pallet with goods is placed accessible to the robot, either manually or automatically depending on the functions of the depalletizing line. Then PhoXi 3D scans the pallet and transfers the 3D data to the vision controller. The Al algorithm in the vision controller then looks for pickable goods and calculates which path the robot should take to get there without colliding with anything. The coordinates and robot movements are then sent to the robot so that the box can be picked and unloaded. The goods can be unsorted and you can use any type of pallet.

- Al-based solution for logistics, e-commerce and warehouses
- Processing of objects that vary in shape and size
- · No CAD models are needed
- High speed up to 500 picks per hour
- Simple integration
- Integrated with Phoxi or Motioncam 3D scanner



## Reliable technology for automatic screening of rental cars

Join us for an exciting customer case where we meet Wenn at Oslo airport and talk about automatic inspection of rental cars. How has Wenn succeeded in revolutionizing the car rental process, what challenges did they face and how did we support in living up to them? Continue to read about how we at OEM Automatic give you access to quality products from carefully selected manufacturers and help with development projects.



Mattias Andersson (OEM Automatic), Gian Kolbjørnsen and Roald Wikene (Wenn).

A

SIMPLIFIED CAR DAMAGE PROCESS
By combining powerful technology
with a strong focus on positive customer experience, Wenn has contributed to a more worry-free car claims
management for vehicle administrations, insurance providers and car
workshops. Through their new product
CarEye, Wenn aims to eliminate all

friction in car claims management through intelligent processes with advanced technology, which adds value to everyone through every step of the chain.

## WENN'S WORDS ABOUT THE COLLABORATION WITH OEM AUTOMATIC:

- OEM Automatic gives us the opportunity to streamline purchasing and is involved in fulfilling our customers' wishes
- A technical partner with experience and good knowledge of new technology
- · An engineering support you can trust

CHALLENGES BEFORE THE CREATION OF THE SOLUTION When Wenn created the CarEye solution, they faced some obstacles in addition to the challenges faced by garages and various insurance companies. The solution must also be able to process material quickly and it must be possible to compare the current state with a previous one. It was also of great importance that the selected components were very reliable.

THE IMPORTANCE OF RELIABLE TECHNOLOGY
After working with our sales engineer Mattias, Wenn decided to use cameras from Basler and computers from Neousys in their product. This is a stable combination and a reliable solution.

## THIS SOLUTION OFFERS A TECHNICAL ADVANTAGE THROUGH:

- Remote management
- Real-time processing
- High volume throughput
- Dynamic environment
- Reduced maintenance cost



QUALITY PRODUCTS FROM LEADING MANUFACTURERS Our carefully selected manufacturers are specialized in their field and leaders in their industry. By having us as a partner, you get access to quality products, help with development projects and the opportunity to streamline your purchases. In this development project, we offered the technically best solution with products from Basler and Neousys.

#### **BASLER**

Basler is a global supplier of the highest quality industrial cameras for a wide range of applications and is a market leader in vision technology. We have many customers who integrate Basler's cameras into their own products. Basler has products with different interfaces, sensors, resolutions, light sensitivity and frame rates etc. Thanks to Basler's wide range of models, it is easy to find the right camera for your machine vision application.

#### **NEOUSYS**

Neousys are specialists in industrial computers, which are designed for use around the clock in harsh environments such as temperatures from -25 to +70 °C as well as dust and moisture. The range includes everything from small compact computers for installation to powerful computers for advanced AI and vision systems.



CAREYE CAPTURE WITH CAMERA FROM BASLER CarEye® Capture is a tool with photo technology, structured light and AI technology that enables automatic external evaluation of a vehicle, detection of irregularities and offers decision support.

#### BENEFITS OF CAREYE CAPTURE:

- Automatic registration of the car's external condition
- Direct transfer of data from CarEye Capture to cloud solution
- Automatic recognition of the vehicle registration number
- Possibility to expand sensors and functionality

#### THE CLOUD SOLUTION OFFERS:

- Collection of vehicle data from the motor vehicle register
- Identification and annotation of damaged area on photos
- Generation of claims
- APIs that enable integration with other systems
- Each end customer has their own dedicated place in the cloud solution, where only selected personnel have access

#### THE CAREYE FLEET DAMAGE MANAGEMENT TOOL

CarEye Fleet is a claim management tool that collects the necessary information so that the right decision can be made as early and efficiently as possible. This tool provides full and continuous control over the external condition of the car. The car's external condition is captured with CarEye Capture, which will form a basis for comparison and history. This provides unique control over the condition of the car, and contributes to an improved customer experience.

#### FUNCTIONALITY:

- Collection of optimal images and data/images either via CarEye Capture and/or CarEye Inspect for damage evaluation
- Identification of damage and note of damaged area on photos
- Photo comparison from one date to another
- The solutions are fully GDPR compliant



## THIS IS HOW THIS TECHNICAL SOLUTION INFLUENCED THE CAR RENTAL INDUSTRY

When we talk to one of the customers, a car rental company, several improvements that could be achieved in connection with the use of CarEye Capture emerge. It becomes clear that the tool has changed the working day to the better for them.

When they accompany the customers to the car, they always explain to them how CarEye works. The information is always received positively as CarEye means that all parties receive the same thorough documentation before and after the rental period. There is also a clear pattern that the customer threshold for reporting, even for small accidents, has been lowered because customers know that everything is captured on video anyways.

Before CarEye, the car rental company used to spend hours every day on claims follow-up, complaints, documentation and extra work arising from conflicts. If there is room for doubt, there is always a risk of a dispute developing. With Wenn's technology, the rental company is on the same page as the customer and they can spend time on more important and pleasant things. With CarEye Capture, disputes have been radically reduced and now they can instead concentrate on improving the rental experience for their customers. Better for the customers and a contributing factor to a more pleasant working environment for the employees of the car rental company.

IN WHAT WAY DOES THE TOOL FACILITATE THE END CUSTOMER AND WHAT ARE THE BENEFITS FOR THE CAR RENTER?

- Real-time processing = reduced handling time = customer satisfaction
- Comparable conditions from collection and return of car = fewer conflicts
- True, honest and proven discovery of damage = higher willingness to pay

## COMPACT PRODUCT NEWS FROM NEOUSYS



## POC-465AWP

IP65 Waterproof Computer with Intel® Atom® x6425E, 2x 2.5GbE and Isolated COM Ports

- IP65-rated waterproof and dustproof design
- Intel® Elkhart Lake Atom® x6425E guad-core 2.0GHz/ 3.0GHz 12W processor
- 2x 2.5GbE Ethernet ports via M12 X-coded connectors
- 1x isolated RS-232 and 1x isolated RS-422/485 via M12 A-coded connectors
- 2x USB 2.0 ports via M12 A-coded connectors
- 1x VGA port via M12 A-coded connector
- 8-35V DC input with ignition power control input via M12 A-coded connector



## NRU-52S

Powered by NVIDIA® Jetson Xavier™ NX SOM bundled with JetPack 4.6.1

- Rugged -25°C to 70°C fanless operation
- 4x IEEE 802.3bt PoE++ GbE ports with screw-lock
- 2x mini-PCIe sockets for WIFI/GNSS/NVMe/CAN modules
- 1x 3042/3052 M.2 B key socket for 4G/5G mobile communication
- 1x hardware configurable RS232/RS422/RS485 port
- 8V to 35V wide-range DC input with built-in ignition power control
- MII -STD-810G and FN 50155 certified.



### NRU-51V

Rugged NVIDIA® Jetson Xavier™ NX Fanless Computer - A GMSL2 Camera Sensor Hub

- Powered by NVIDIA® Jetson Xavier™ NX SOM bundled with JetPack 4.6.1
- Rugged -25°C to 70°C fanless operation
- Support 4x GMSL2 automotive cameras via FAKRA Z connectors
- 1x 10GBASE-T 10Gb and 1x 1GBASE-T 1Gb Ethernet port
- 2x mini-PCle sockets for WiFi/ GNSS/ NVMe/ CAN modules
- 1x M.2 3042/ 3052 B key socket for 4G/ 5G mobile communication
- 1x isolated CAN, 1x configurable RS232/422/485 port, and 1x GPS PPS input
- 8V to 35V wide-range DC input with built-in ignition power control



## **CONTACT US**

Do not hesitate to contact us if you have any questions.



TORBJÖRN FJORDE Product Area Manager

- **\** 075-242 41 51
- ★ torbjorn.fjorde@oemautomatic.se



**DAVID PERSSON** Product Manager

- **C** 075-242 42 58
- ⋈ david.persson@oemautomatic.se



**JESPER OLSSON** 

Purchaser

- **\** 075-242 41 01
- iesper.olsson@oemautomatic.se



JONAS TELL

**Business Engineer** 

- **○** 073-817 57 09
- ⋈ jonas.tell@oemautomatic.se



PER-ANDERS GÖREBRANT **Business Engineer** 

- **\** 076-548 32 24
- □ per-anders.gorebrant@oemautomatic.se



ANDREAS KÄLLMING

Product Manager

- **■** 075-242 41 21
- □ andreas.kallming@oemautomatic.se



**ELOF JÖNSSON** 

Support Engineer

- **C** 075-242 43 14
- ⋈ elof.jonsson@oemautomatic.se



**JOHAN KASTENSSON** 

Sales Manager

- **○** 075-242 43 34
- ⋈ iohan.kastensson@oemautomatic.se



**MATTIAS ANDERSSON** 

Sales Engineer

- **○** 075-242 42 73
- ™ mattias.andersson@oemautomatic.se



TORSTEIN NICLASEN

Sales Engineer

- **C** 075-242 41 79
- torstein.niclasen@oemautomatic.se































































B



SVERIGE PORTO BETALT



