iNSPO

IMAGING & VISION

PEKAT VISION
NOW WITH
SMART CAMERA!

IP-RATED COMPUTERS
FROM NEOUSYS

HIGHER RESOLUTION WITH THE NEW BOOST SERIES
FROM BASLER

THE NEW GENERATION OF 3D SCANNER IS HERE!
FROM PHOTONEO

ARTIFICIAL INTELLIGENCE
WE OFFER ALL REQUIRED COMPONENTS TO DEPLOY AN AI SOLUTION

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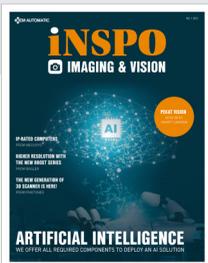
Thanks to our unique product range, we can offer the most suitable and cost-effective solution for each application. On top of that, together with OEM Automatics complete portfolio, we can offer one of the automation markets broadest product range. We operate in Sweden, Norway, Denmark and Iceland and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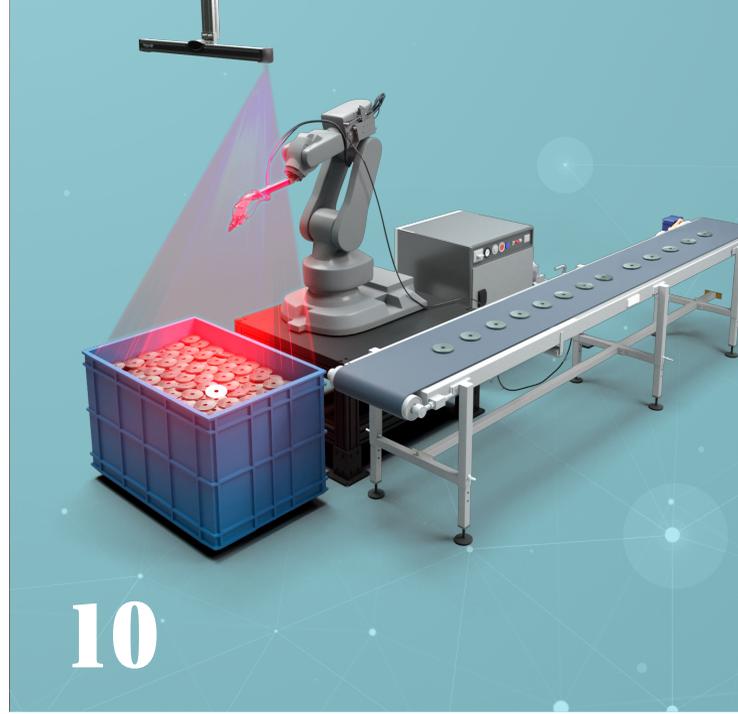
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ARTIFICIAL INTELLIGENCE

AI

PEKAT VISION
- NOW WITH SMART CAMERA!

Pekat Vision is now launching an attractive all-in-one solution for quality inspection with AI. Together with a powerful smart camera, Pekat Vision has succeeded in developing a solution where no other hardware such as GPU-computers or cameras are needed. The smart camera can be used in runtime but also for training - which is unique in the market. This makes the solution both flexible and cost-effective.

✓ **ALL-IN-ONE SOLUTION, NO ADDITIONAL HARDWARE REQUIRED**

✓ **UNSUPERVISED MODE - FOR UNKNOWN DEFECTS**

✓ **SUPERVISED MODE - FOR CATEGORIZATION**

✓ **UP TO 5 MP RESOLUTION**

PEKAT VISION

With user-friendliness in focus and with the self-developed deep learning algorithm, Pekat Vision is a very competent software for AI-based image analysis.

Pekat Vision can be run in two modes:

- Unsupervised mode. In this mode, it is enough to train the software with images of defect-free objects. It then finds everything that stands out from the defect-free objects it has been trained on.

- Alternatively, you can run it in Supervised mode. Here you train for the specific errors you want the software to find and you can also categorize the errors depending on what they are.

THE SMART CAMERA

- NVIDIA® Jetson ™ TX2 / Xavier for efficiency in product classification and defect detection
- Up to 5 MP resolution
- FPGA-based digital I / O for hardware triggering
- C-mount lens

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.

CAMERAS

3D PRODUCTS

INDUSTRIAL COMPUTERS

INTERFACE SOLUTIONS

SOFTWARE

ACCESSORIES
Lenses, LED Lighting, Filter, Enclosures

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

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![BASLER - the power of sight]

HIGHER RESOLUTION WITH THE NEW BOOST SERIES

Are you looking for higher resolution camera with global shutter technology? Then our six new boost camera models are the right choice for you. The resolution ranges from 20-45 MP at frame rates of up to 45 fps. The new sensors from ON Semiconductor provide excellent image quality and are available in both color and monochrome versions.

Basler introduces six new outstanding camera models in the boost series with excellent image quality, thanks to sensors from ON Semiconductor's XGS series. The cameras are suitable for applications that require both high resolution and precision with a large field of view.

The new boost cameras offer resolutions of 20, 32 and 45 megapixels (8 k) and CoaXPress 2.0 interface. The models have high-performance CMOS sensors with state-of-the-art global shutter technology and provide frame rates of up to 45 frames per second. This makes them a perfect replacement for older CCD sensors, where the XGS sensors provide high resolution and outstanding image quality at higher frame rates and lower costs.

Thanks to the CXP 2.0 interface, Basler boost cameras are ideal for applications with image transfer distances of up to 40 m where high data speeds and resolutions are required. The new models are also available as a package together with the Basler CXP-12 Interface Card 1C.

- Up to 45 MP resolution (8192x5460)
- Up to 45 frames per second
- CoaXPress 2.0

AREAS OF USE

The new boost cameras are suitable for a wide range of applications:
- Inspection of screens, panels, batteries, solar panels
- Automatic optical inspection (AOI)/solder paste inspection (SPI)
- Logistics
- Food industry

THE NEW CAMERA MODELS

- boA4500-45cm, 20 MP, 45 fps, Mono
- boA4500-45cc, 20 MP, 45 fps, Color
- boA6500-36cm, 32 MP, 35 fps, Mono
- boA6500-36cc, 32 MP, 35 fps, Color
- boA8100-16cm, 45 MP, 15 fps, Mono
- boA8100-16cc, 45 MP, 15 fps, Color

NRU-120S & NRU-110V

RUGGED, COMPACT AND FANLESS EDGE COMPUTERS

Neousys launches NRU-120S and NRU-110V - rugged, compact and fanless edge computers with NVIDIA Jetson AGX Xavier ™. Perfect for intelligent video analysis, autonomous robots, industrial inspections, vehicles and embedded IoT edge applications.

With the latest development of AI, the demand for image processing and edge computing has increased drastically. Many have heard of NVIDIA Jetson AGX Xavier ™ and may even have used their development kit to evaluate. NRU-120S and NRU-110V with NVIDIA Jetson AGX Xavier ™ can deliver performance equivalent to a 120 W GPU with less than 30 W. Perfect for intelligent video analysis, autonomous robots, industrial inspections, vehicles and embedded IoT edge applications.

30 W FANLESS EDGE AI

NVIDIA® Jetson AGX Xavier ™ has an 8-core ARM processor, NVIDIA Volta GPU with 512 CUDA cores and 64 Tensor cores that offer a full 11 TFLOPS FP16 or 22 TOPS INT8 computing power at 30 W. While also providing access to a wide range of cost-effective NVIDIA® AI tools and frameworks for deep learning.
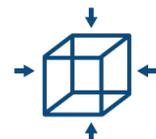

**MIN. POWER CONSUMPTION**   **FANLESS**   **POE+**   **HOT-SWAP TRAY**   **COMPACT**

ROBUST AND RELIABLE

With an efficient mechanical and thermal design, the NRU-120S and NRU-110V can operate under 100% CPU and GPU load under extreme conditions. In addition, they accept 8-35 V input voltage and are supplied with a damping kit and screw-lockable ports, which makes them reliable for harsh outdoor environments or in a moving vehicle.

COMPACT AND ENERGY EFFICIENT

The NRU models measure only 230x173x66 mm and consume less than 30 W to deliver performance equivalent to a 120 W GPU, making it ideal for solutions that are space and energy constrained but require top performance. Perfect for mobile intelligent monitoring, vehicles and AGVs, for example.
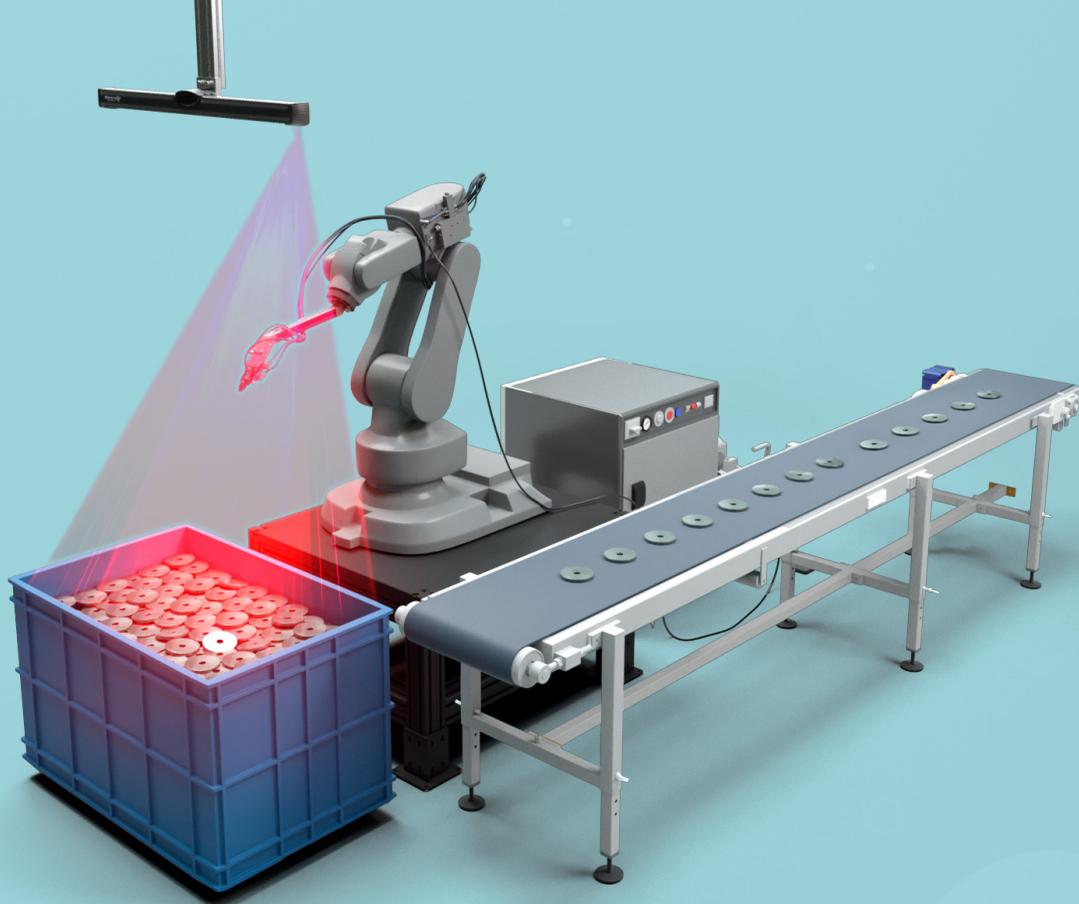
THE NEW GENERATION OF PHOTONEO PHOXI 3D SCANNER IS HERE!

The new PhoXi 3D scanner is here! More sustainable and built for tough industrial environments.

The improved design and software provide easier integration, better performance and higher flexibility than previous generation. Equip your robot with 3D vision from Photoneo for superior performance in your vision-driven robot projects.

POWER SUPPLY VIA POE OR 24 V

You now only need one cable to get both power and data connection - Power over Ethernet. Alternatively, you can power your device with a dedicated 24 V power supply. The two options ensure versatility, ease of use and performance even when using long cables (over 30 m).

TWICE AS FAST GPU

PhoXi 3D Scanner now uses the power of the new NVIDIA® Jetson TX2 4GB processor. This reduces the calculation time by 40 %, which makes the scan time about 200 ms faster.

UPDATED SOFTWARE

New algorithms for noise filtering and ambient light suppression. More user settings and scan control features. In addition, improvements in PhoXi Control with new troubleshooting tools that allow you to use your scanner even more efficiently.

## IP65 - DUST AND WATER PROTECTED

With protection class IP65, the PhoXi 3D scanner is dustproof and protected against low pressure water from all directions. M12 connectors with thread ensure a robust connection.

THERMAL CALIBRATION

PhoXi's thermal stability is best in class thanks to hardware improvements along with the thermal calibration model. It ensures a stable and reliable scanning performance under changing temperature conditions.

- **40 % FASTER CALCULATION TIME THANKS TO NVIDIA® JETSON TX2**
- **POWER SUPPLY VIA POE**
- **ROBUST M12 THREAD CONNECTORS**
- **IP65 - DUST AND WATER PROTECTED**

The new generation of PhoXi replaces the older one, which was discontinued on 30 November 2020. However, Photoneo will continue to offer spare parts and support to the previous generation.

BIN PICKING STUDIO NOW EVEN MORE AFFORDABLE!

Bin Picking Studio is Photoneo's proprietary software created to be a picking solution for all robot integrators in the world. The intuitive and powerful software is the hub of the picking solution along with a PhoXi scanner and picking robot. The good news for everyone is that Bin Picking Studio is now reduced in price by up to 40 %, which makes the solution even more attractive for you who want to automate your picking station. Contact us to learn more about how Bin Picking Studio can make your everyday life more efficient!
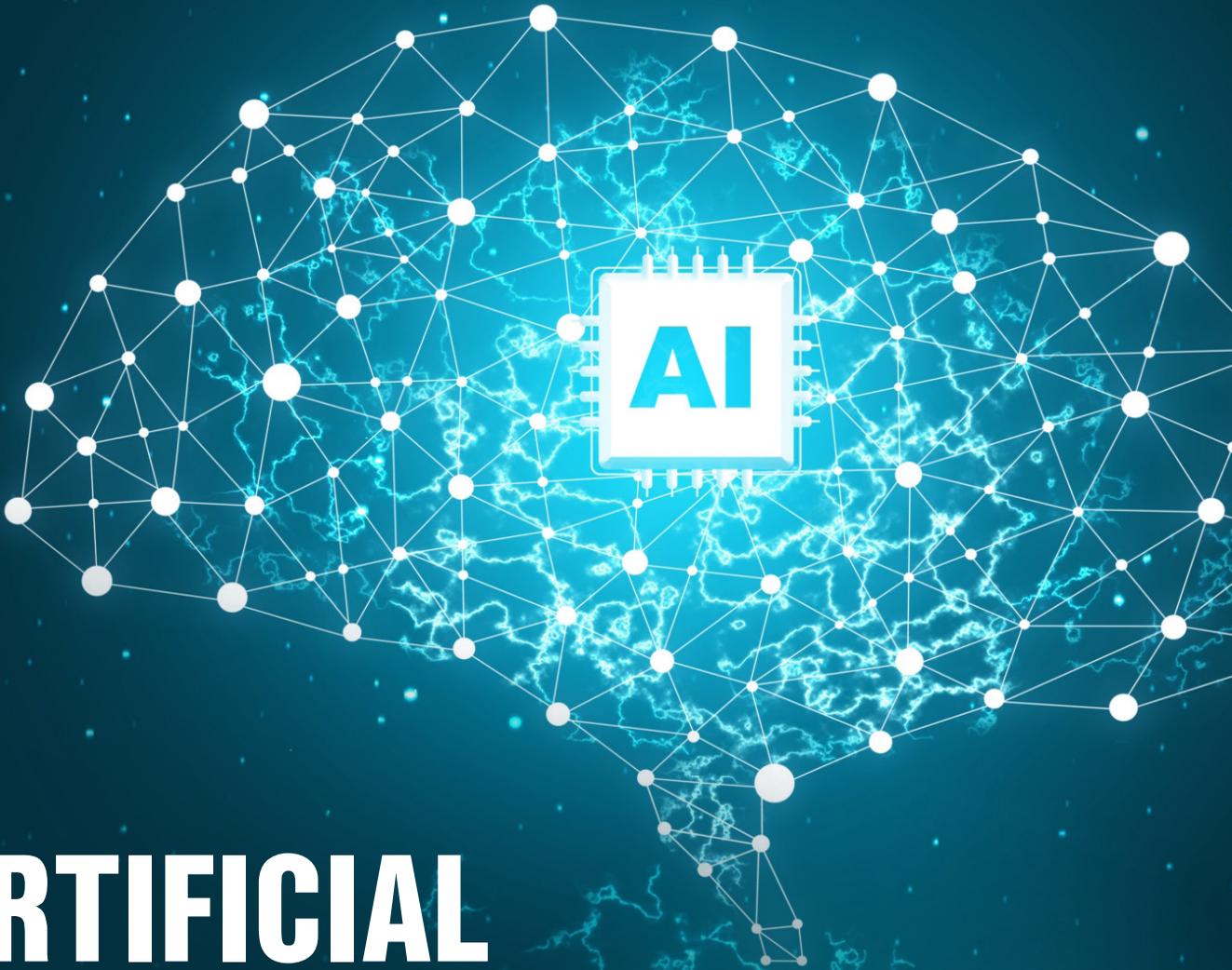
ARTIFICIAL INTELLIGENCE

The advantages of AI-assisted technology are multifaceted and can nowadays be found in our everyday lives - especially in industrial workplaces. In addition to dramatically boosting and sustaining work precision and efficiency, it also can help to enforce personal safety in hazardous environments. We offer all required components to deploy an AI solution, but in the following section we focus on the computers and software.

HARDWARE FOR TRAINING

Training the system with image and data sets is a very hardware resource consuming task. To do this efficiently, a top-of-the-line PC with fast CPU and GPU is always recommended. We partner up with Neousys to be able to offer a broad range of computers, all rugged and of industrial grade. For AI training, the typical choice would be a shoe box style computer with lots of expansion capabilities such as the Nuvo-8240GC which supports dual NVIDIA® Tesla T4 GPU and Intel® Xeon® E CPU.

ON THE EDGE

While you can use the same PC for inference as for training, there are more dedicated alternatives available for on the edge applications. One reason for selecting dedicated PC's is to lower the cost in multi-instance applications, another is to have a computer more suited for tough and/or constricted spaces. The NRU-120S, which is powered by NVIDIA® Jetson AGX Xavier™, is a compact and cost efficient, yet very capable choice for on the edge inference. For even more demanding applications the IP67 protected SEMIL series which can be equipped with NVIDIA® Tesla T4 or Quadro P2200 GPU is up to the task.

SOFTWARE

For vision based industrial AI applications, we offer the excellent software from Pekat Vision. With ease of use in focus, it uses its own proprietary focused-learning algorithm which goes beyond deep-learning. Focus-learning works like a human eye - It can focus on specific details and needs only a few images for learning and understanding the task. This means that even from a small data set of images, it can recognize when an object or material is flawless and when it is defective. You can use Pekat Vision to find anomalies, detect and classify defects and check surfaces on materials and objects where traditional machine vision systems cannot.

In the unsupervised mode, the software detects defects which does not have to be specified on beforehand. This means that it is enough to train the software only using images of defect-free objects. In supervised mode the software can be trained to search for and categorize specific defects such as scratches, rust, holes etc.

The inspection results can continuously be used to take further actions using for example an in-line robot. For this, there are multiple options such as command line scripts, HTTP requests, Profinet/TCP connections to PLC's. For image acquisition, a GenICam compliant camera can be directly connected to the Pekat Vision software.

PEKAT VISION
BRAIN BEHIND THE EYE

NEOUSYS
TECHNOLOGY

IP-RATED COMPUTERS FROM NEOUSYS

Neousys now launches the groundbreaking SEMIL series: IP67-compatible GPU-computers with focus on durability and reliability. SEMIL takes industrial computers to a new level and enables installation and use in extreme conditions.

IP67 RATING
SEMIL is an extremely robust computer enclosed in a stainless steel and aluminum chassis to avoid corrosion. This in combination with specially cast O-rings and waterproof M12 connectors means that it can achieve IP67 rating for dust and water tightness.

BUILT-IN SUPERCAP UPS
The patented UPS module based on supercap technology prevents data loss during a power outage. It has a lifespan of over 10 years and offers greater reliability and longevity compared to a traditional battery-UPS.
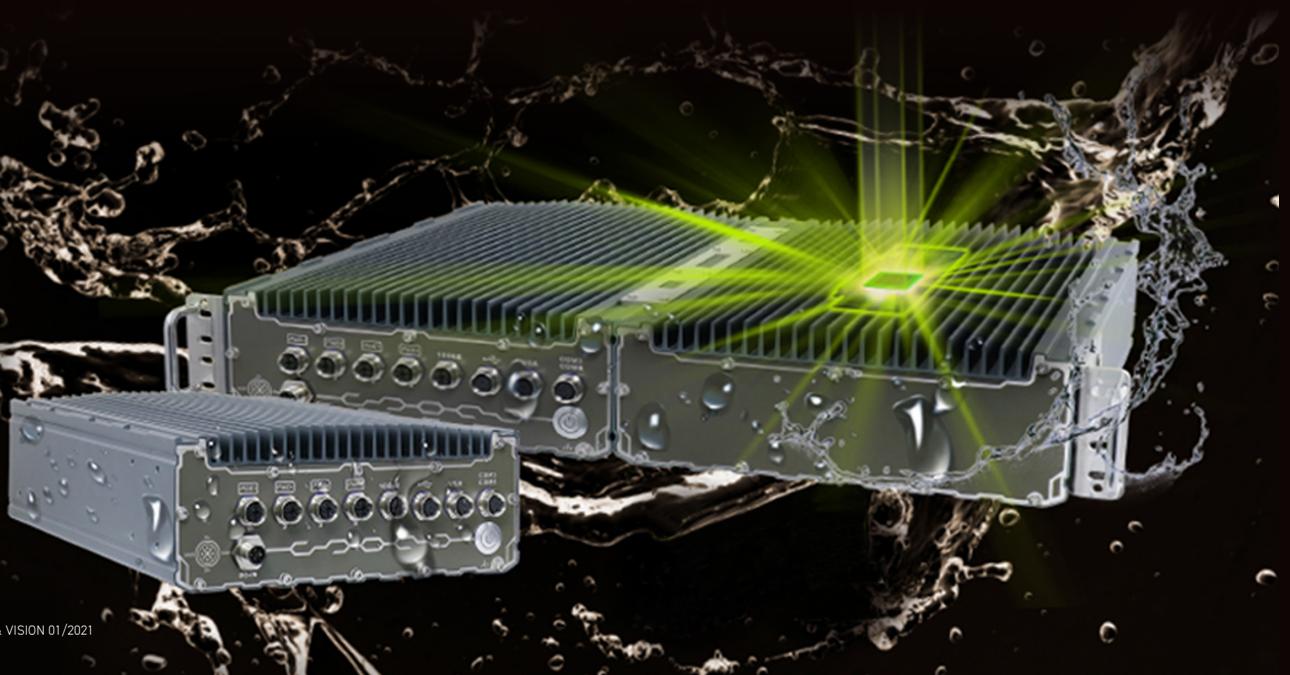
FANLESS GPU
SEMIL is a true fanless GPU computer that supports the NVIDIA Tesla T4 / Quadro P2200 and can operate in up to 62 ° C ambient temperature with full GPU power.

RACK MOUNT
The SEMIL series form factor allows them to be attached to standard 2U 19" racks. The unique mounts make the installation very flexible.

CONTACT US

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

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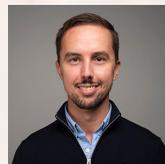Support Engineer

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MATROX
IMAGING

MATROX® ALTIZ,
HIGH QUALITY 3D PROFILE SCANNER

Matrox® is now launching a series of high-quality 3D profile scanners. AltiZ has dual image sensors and a laser that together with unique algorithms generates reliable 3D data such as profiles, depth maps and point clouds. If you need 3D data with very high accuracy, AltiZ is the perfect choice!

FLEXIBLE OPERATION
The two image sensors can either be run synchronously for maximum robustness and quality or alternately for double speed. The scan volume - which affects the scan speed, can be set to optimize the performance of the data transfer.

SOLID CONSTRUCTION AND MOUNTING
Matrox® AltiZ has a robust IP67-rated aluminum housing with M12 connectors that make it perfectly suitable for harsh environments. Mounting points for M4-threaded screws are available for a solid mounting of the scanner.

STANDARDIZED INTERFACES
The communication and data interface is a standard Gigabit Ethernet port with GigE Vision communication protocols. The scanner's 24 V-compatible digital I / O can be connected to incremental encoders and synchronized to multiple scanners, which is useful when an object needs to be viewed from multiple angles or for large objects. The scanner can be powered via PoE or with a stand-alone 24 V power supply.

OEM AUTOMATIC

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