ClearView Imaging

MACHINE VISION CONFERENCE 2022
STADIUM MK

MACHINE VISION DEMOS

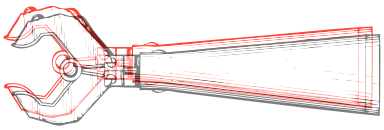
PRODUCTS & SYSTEMS

WORKING WITH YOU TO CREATE GREAT VISION SYSTEMS

UKIVA machine vision conference & EXHIBITION

28TH APRIL, 2022
STADIUM MK
STAND 48

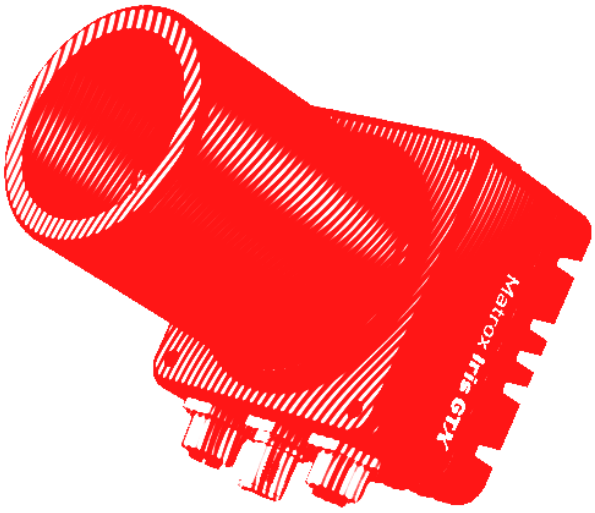
www.clearview-imaging.com



PICK AND PLACE FUNCTIONS

WITH MATROX SMART CAMERA

With the Matrox Iris GTR/GTX range of smart cameras, powerful pick and place solutions can be implemented for robot arms. Here we have the possibility of eliminating the need for a PC whilst running cutting-edge software applications with Matrox Design Assistant X.



What does it do?

- The Matrox Iris has constant video feed of the backlit machinery pieces below.
- Using the Geometric Model Finder function in Matrox Design Assistant, shapes can be identified from any angle.
- This information is then fed to the robot arm, which has been programmed to pick up each object from a particular angle.
- This system exemplifies the possibilities of a very capable smart camera running powerful imaging software from Matrox.

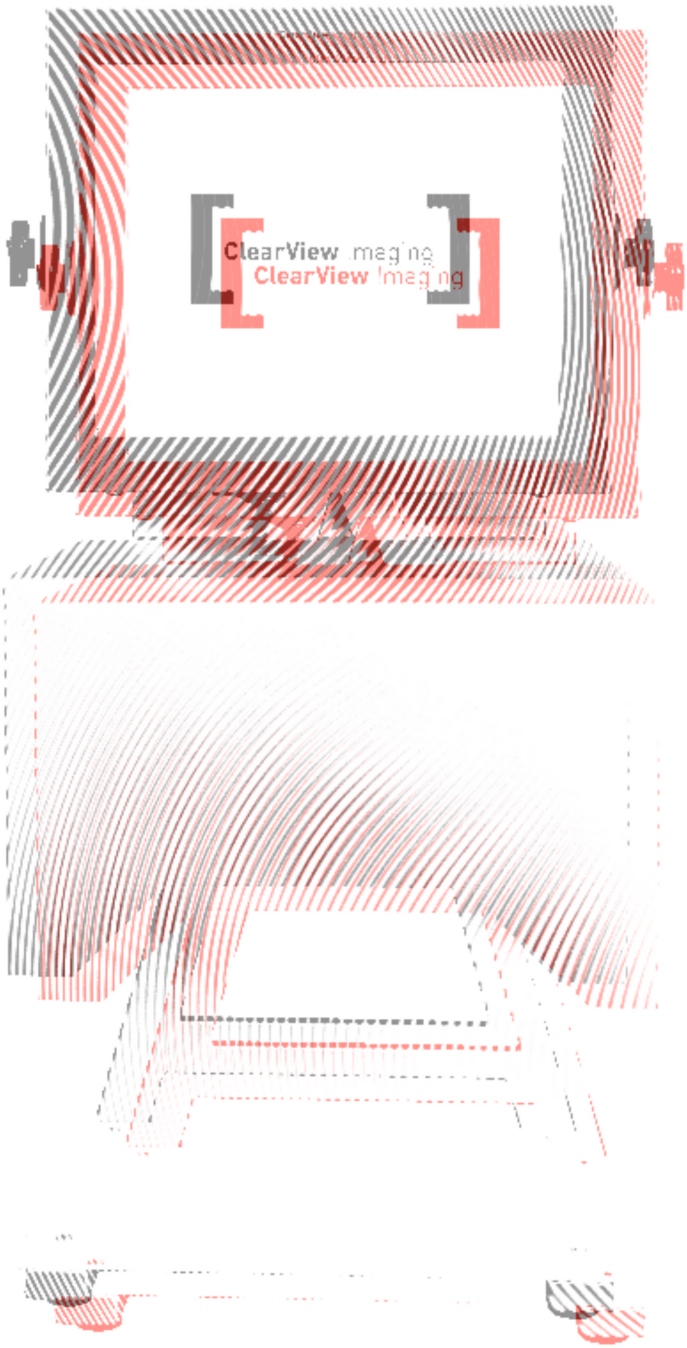
MATROX GTX DATASHEET

MATROX DA X DATASHEET

PART INSPECTION

WITH VISION BOX

Utilising our very own Vision Box software, this exhibit demonstrates the possibility of powerful off-line part inspection with radiator parts.



Utilising two compact 20MP machine vision cameras and a viewing bay with dedicated lighting, this imaging system is an out-of-the-box machine vision solution for part inspection.

Struggling to find the right solution?

Our experts are here to help you.

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Helping You To Create Great Vision Systems

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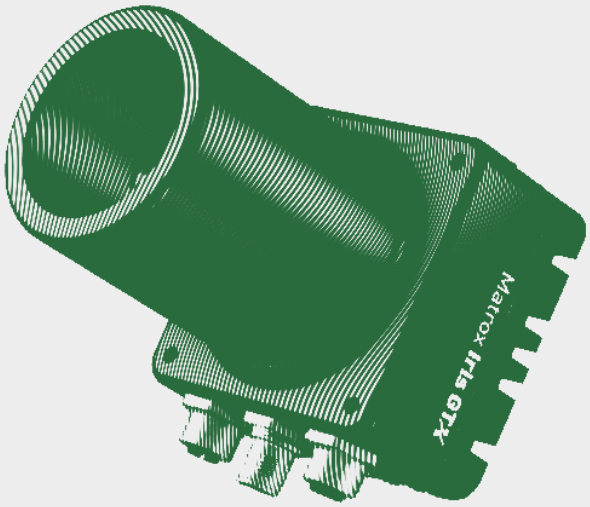
www.matrox.com/en/imaging

QUALITY INSPECTION

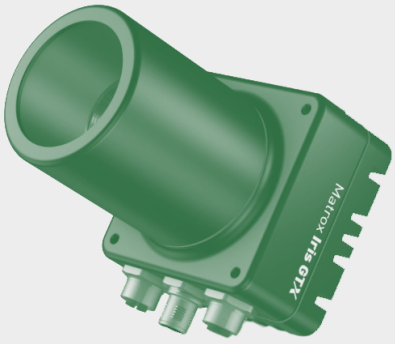
WITH MATROX IRIS GTX & DESIGN ASSISTANT X

Utilising Matrox's cutting-edge Iris GTX Smart Camera, this rotating table demo showcases the possibility of using an all-in-one smart camera in tandem with Matrox Design Assistant X to achieve quality inspection at the edge.



What does it do?

- The Iris GTX smart camera takes images of the printed circuit boards.
- If irregular assembly is detected, it is likely that there is a manufacturing fault in the board. Matrox Design Assistant (DA) X software uses image processing algorithms to then pass or fail each example.
- This system can be implemented on factory lines as a highly accurate indicator of poorly-assembled parts, ensuring that faulty parts are rejected.



MATROX IRIS GTX DATASHEET

MATROX DA X DATASHEET

3 D IMAGING WITH

MATROX ALTiZ

Some problems can't be solved with traditional 2D vision.

In this demo, we are using Matrox's Altiz camera in tandem with the Design Assistant (DA) software to show how depth information can be obtained from an image.

What is it?

- Matrox AltiZ is an all-in-one high-fidelity 3D profile camera.
- It's a great choice for those seeking depth information on factory lines.
- Matrox Design Assistant is the vision software used to visualise 3D images, used for onscreen 3D inspection.

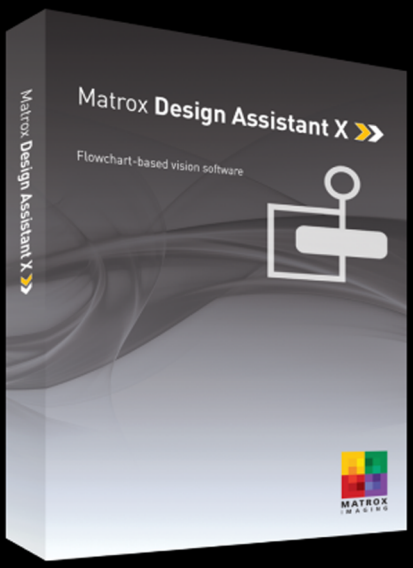
What does it do?

- Using two cameras, Matrox AltiZ is able to detect accurate depth information as the object passes through a projected laser line.
- DA then takes that information and displays it as a depth map image - this can then be used to pass or fail the object.

How can it help me?

- It can be installed on factory lines to solve problems such as stacked quantities in moulded packaging, reading embossed or engraved text, and height and shape measurement, ensuring goods are being produced and packed according to factory regulations.

MATROX
IMAGING



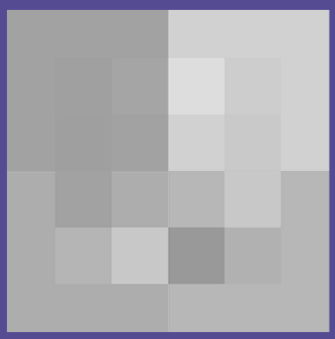
MATROX DA X DATASHEET

MATROX ALTIZ DATASHEET

Matrox AltiZ and Design Assistant.

Working together to level up your factory line.

Available at ClearView Imaging.



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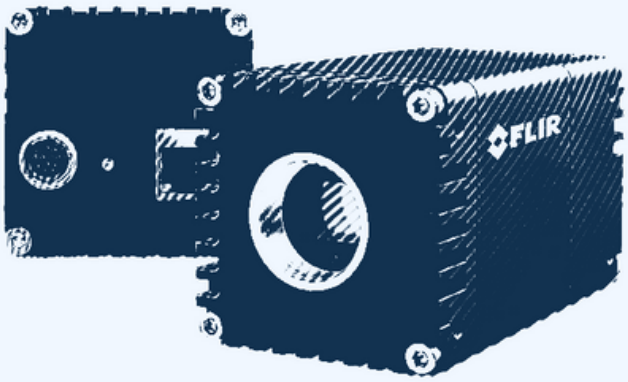
www.flir.co.uk/iis/machine-vision/

10GIGE CAMERAS

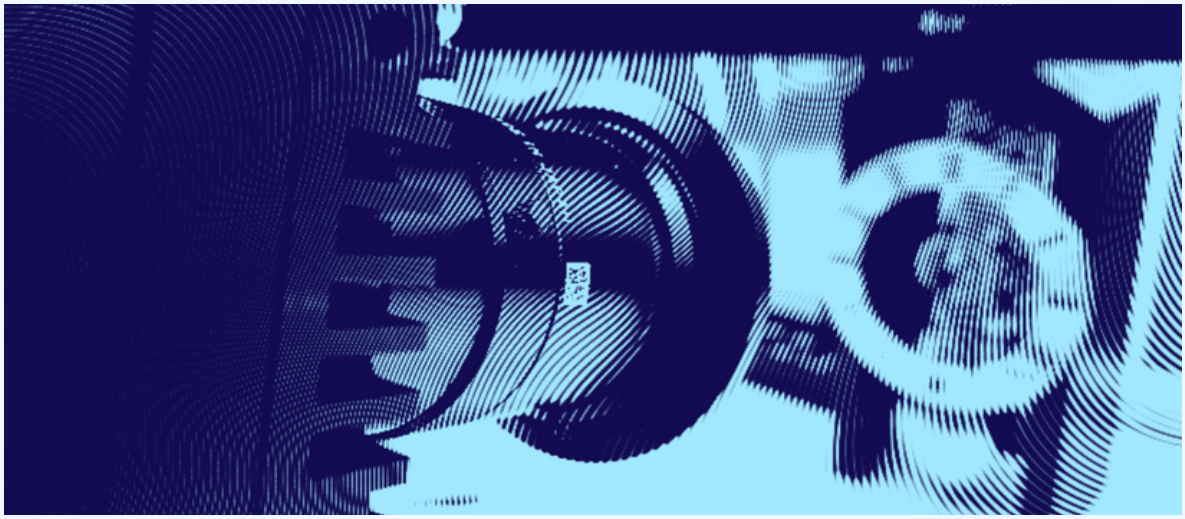
WITH HARDWARE OFFLOAD

Utilising a cutting-edge offload NIC board, this demo showcases the possibility of running multiple high-bandwidth 10GigE cameras in synchronisation with each other with low CPU usage and without dropping packets.



ORYX 10GIGE DATASHEET

ORYX 10GigE cameras are perfect for applications that demand high quality imaging over a long distance. Utilising revolutionary new NIC offload, it is now possible to keep CPU usage lower than ever all whilst capturing super-smooth images, keeping the CPUfree to working on advanced imaging functions.



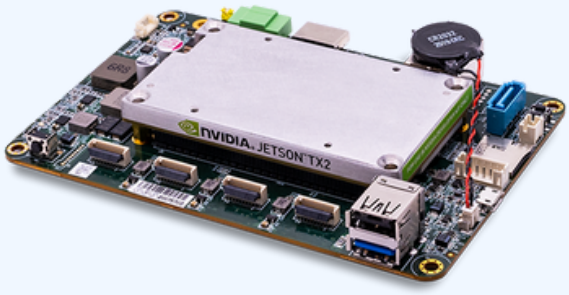
FOUR CAMERAS - FULL BANDWIDTH - ONE BOARD

QUARTET TX2

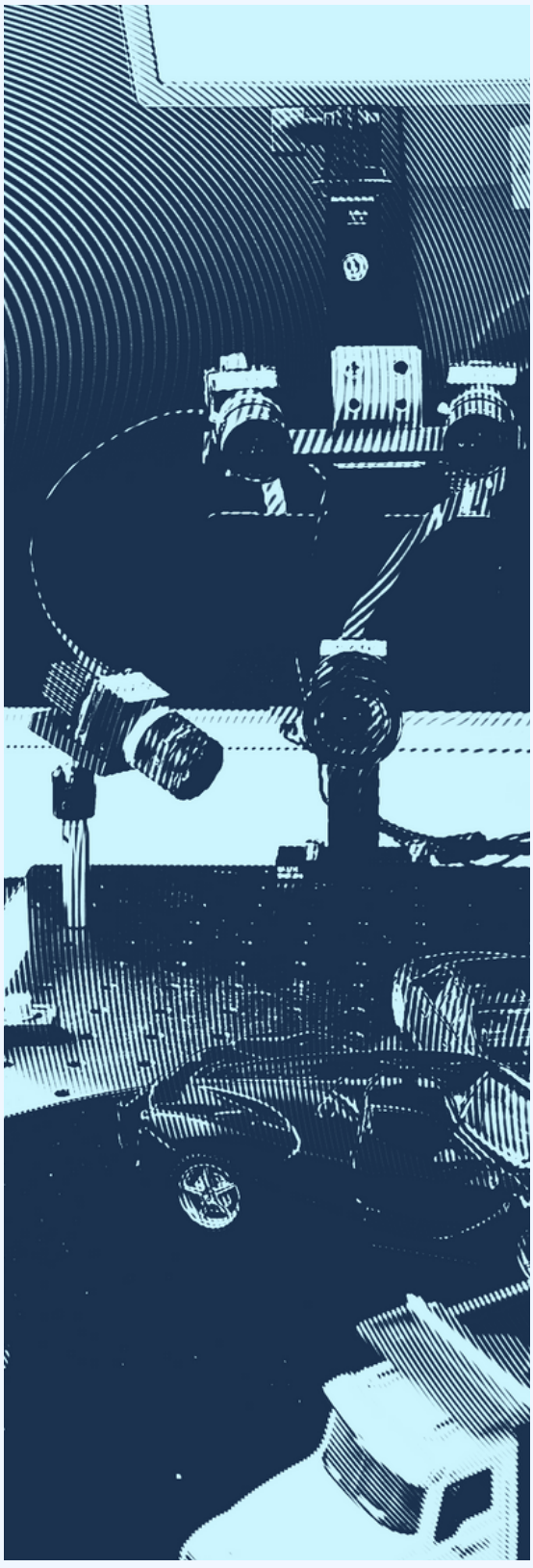
The Quartet Carrier Board for TX2 enables easy integration of up to 4 x USB3 machine vision cameras at full bandwidth.

The amazing Nvidia Jetson deep learning hardware accelerator makes for a complete decision-making system on a single compact board.

This custom carrier board provides a fully integrated SOM design which optimizes size and cost by eliminating the need for peripheral hardware and host systems.



LEARN MORE ABOUT QUARTET TX2



THERMAL IMAGING

Teledyne FLIR are proud to present a wide variety of thermal imaging solutions.

In this demo, a smart FLIR A70 camera is used to detect accurate thermal information using infrared technology.

FLIR A50 and A70 Thermal Image Streaming Cameras are the right choice for users who want camera control capabilities and image streaming over Ethernet, as well as flexibility to perform analytics and raw data collection on thermal characteristics using preferred software applications.

FLIR A50/A70 DATASHEET

With options for Wi-Fi, an integrated visual camera, compressed radiometric image streaming, and ONVIF S compatibility, these small and lightweight fixed-focus automation cameras will optimize process control and quality assurance to improve yield, product quality, through-put time, and lower costs.

Teledyne FLIR
Machine Vision

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thinklucid.com

DEPTH MEASUREMENT WITH Helios 2™ & MIL X

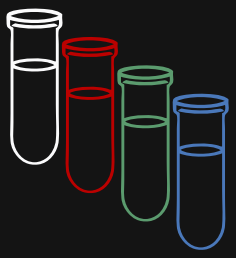
Powerful autonomous quantity detection and measurements can be acquired with the Helios 2 from LUCID Visions Labs. This forklift pallet setup demonstrates the possibility of using 3D imaging to calculate the quantity of units on a pallet, as well as make accurate height, width, and depth measurements. All this is made possible with Matrox Imaging Library.

How does it work?

- The LUCID Helios 2 camera uses time-of-flight 3D technology: IR light is projected from the camera unit onto the object, which is then received by the camera sensor. The time it takes for this beam to be emitted and received again is then used to gather depth information and create a point cloud of the object.
- The point cloud is then visualised as a depth map, making it possible to view a complete 3D image of the object - in this case, boxes on a forklift pallet.
- This system can be implemented in factories where fast indication of quantity is required, such as picking and packing applications.

LUCID HELIOS2 ToF DATASHEET

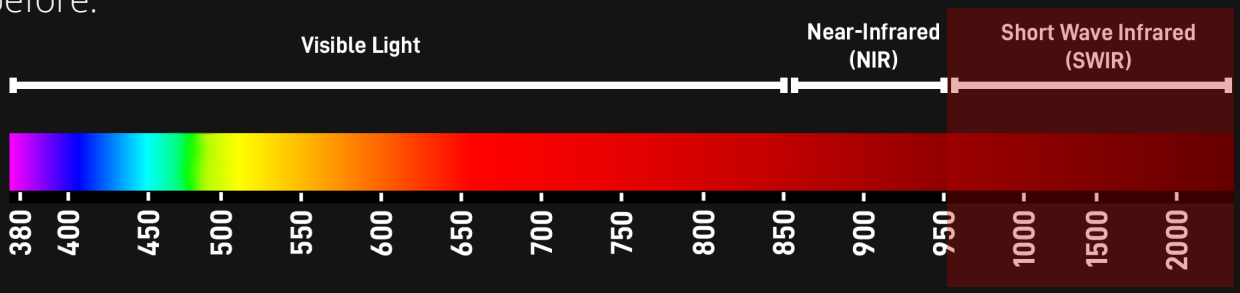
MIL X DATASHEET



LIQUID IDENTIFICATION WITH Atlas™ SWIR

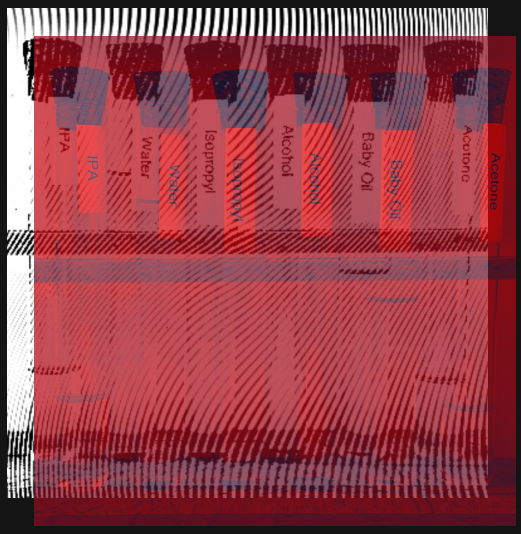
Some substances may appear identical with traditional imaging, but will appear very different within different ranges of the electromagnetic spectrum.

With the Atlas SWIR IP67 from LUCID Vision Labs, it is possible to observe differences between otherwise-identical substances more efficiently than ever before.



How does it work?

- The LUCID Atlas IP67 camera uses specialised Sony IMX990/991 sensors to detect short-wave infrared (SWIR) light.
- Different liquids will naturally have different densities, and this information can physcially be seen using SWIR light.
- This system can be implemented in food and beverage industries where fast identification of different substances is essential.



LUCID ATLAS SWIR IP67 DATASHEET

LEARN MORE ABOUT ARENA SDK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photon focus

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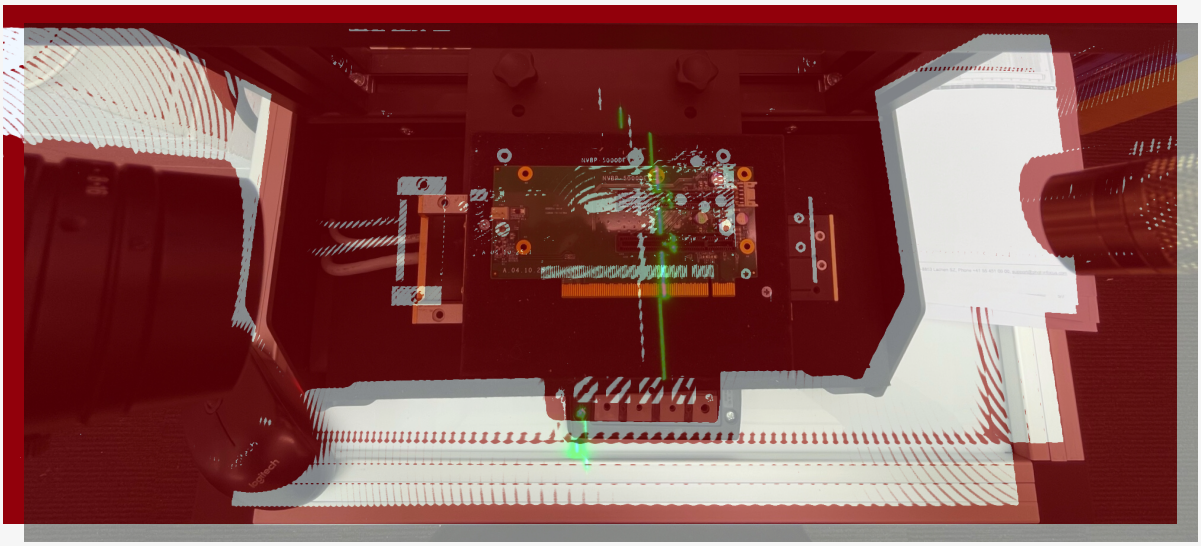
3D IMAGING

MACHINE VISION SOLUTIONS

Some problems can't be solved with traditional machine vision.

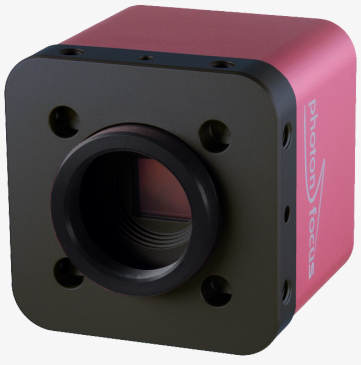
With the MV1 3D camera series from PhotonFocus, accurate depth information can be obtained efficiently with the use of laser triangulation.

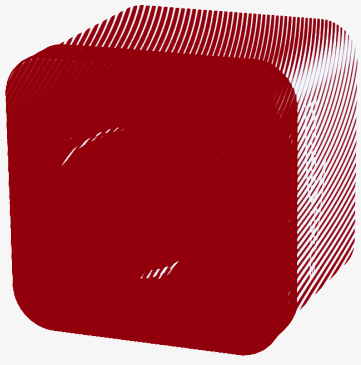
The laser line passes over the parts as they move along the conveyor. This way of 'scanning' the object is extremely accurate as highly detailed measurements - 'profiles' - can be pieced together to form a point cloud using machine vision SDK software.



The 3D CMOS camera MV1-D2048x1088-3D06-768-G2 was developed for laser triangulation systems with high triangulation rates. The CMOSIS CMV2000 CMOS image sensor V3 is optimized for high sensitivity and is combined in this camera with a robust algorithm for line determination.

The camera includes the detection of a laser line. The laser line detection algorithm is able to compute the peak position of a laser line with sub-pixel accuracy. Thus, the height profile of an object gets computed within the camera, meaning there is no need for additional calculations in the PC.





MV1 3D SERIES DATASHEETS

3D IMAGING FROM PHOTONFOCUS


photon focus