

Visit us at VISION in Stuttgart, Germany, we will exhibit at Booth C56 in Hall 8 from October 4 to 6, 2022

## **MVTec is setting new standards in machine vision with HALCON 22.11**

- **Synergy of classic machine vision and deep learning reaches a new level**
- **New feature allows bin picking of unknown objects**
- **To be released on November 22, 2022**

**Munich, September 29, 2022** – MVTec Software GmbH ([www.mvtec.com](http://www.mvtec.com)), a leading international provider of machine vision software, will launch the new release (22.11) of its HALCON standard machine vision software on November 22, 2022. In this release, the Munich-based company continues to rely on the successful combination of classic machine vision methods and deep learning. For example, a new feature combines traditional 3D vision methods and AI technology. This approach is particularly beneficial to logistics companies. In HALCON, MVTec is continuously developing the core technologies from both system environments: traditional and AI-based. The new release features a comprehensive toolbox with by now more than 2,100 operators. Users can thus implement powerful machine vision applications for a wide range of industry sectors, which significantly increases production efficiency in companies.

"With HALCON 22.11, we once more demonstrate that the targeted use of deep learning raises existing machine vision technologies to a new level. The 3D Gripping Point Detection, for example, offers an easy way to efficiently automate a complex application. With the new release, we are once again delivering on our promise to provide users with one of the world's most powerful and technologically advanced machine vision software solutions," remarks Mario Bohnacker, Technical Product Manager HALCON at MVTec.

### **Different editions available**

The new HALCON 22.11 release comes in a Steady edition and a Progress edition. While the latter is available by subscription and has a six-month release cycle, the Steady version is available through a one-off purchase with a release cycle of two years.

The new 3D Gripping Point Detection technology is a highlight of HALCON 22.11. It can be used to robustly detect surfaces on any object that are suitable for gripping with suction. In contrast to classic bin-picking applications, this new technology eliminates the need to train object surfaces. This means that no prior knowledge of the specific objects is required, enabling a much faster and therefore more cost-efficient implementation of typical bin-picking applications, such as those in the logistics industry.

HALCON 22.11 also introduces a new data type called “memory block”, which can be used to store and transfer binary data in HALCON as well as further process it with other applications. This increases the software's compatibility with machine communication protocols, such as OPC UA or image acquisition interfaces, e.g., for storing camera configuration files. In addition, this data type can be used to encrypt all data available in HALCON, which significantly increases data security. As a result, trained deep learning models can now also be encrypted. This allows users to protect their expertise and investment that went into collecting the data and training the models. Moreover, this ensures that only authorized users can use the particular model.

### **Better traceability of deep learning decisions**

Another new feature sheds more light on the deep learning black box, thereby increasing the traceability of corresponding processes. The Guided GradCam supplies even more precise clues, in the form of a heat map, as to which regions of the image are relevant for the decision made by the deep learning network. For example, this makes it possible to investigate misclassifications.

HALCON 22.11 now also supports HAILO AI acceleration hardware, which can be used via a plug-in to execute deep learning inferences very quickly. This broadens the range of available hardware and increases flexibility when it comes to using the best components for each application.

Finally, the new release also provides the option of licensing HALCON via a network. This is implemented via floating licenses. Here, developers share a predefined number of licenses using a network connection. Customers benefit from more flexible user allocation, while developers enjoy greater independence and flexibility in terms of their work location. Distributed development teams, or developers working remotely, can thus use HALCON's powerful machine vision algorithms even more effectively. In addition, working in virtual environments without a permanent physical host ID is possible.

### **About MVTec Software GmbH**

MVTec is a leading manufacturer of standard software for machine vision. MVTec products are used in all demanding areas of imaging: semiconductor industry, surface inspection, automatic optical inspection systems, quality control, metrology, as well as medicine and surveillance. By providing modern technologies such as 3D vision, deep learning, and embedded vision, software by MVTec also enables new automation solutions for the Industrial Internet of Things aka Industry 4.0. With locations in Germany, the USA, and China, as well as an established network of international distributors, MVTec is represented in more than 35 countries worldwide. [www.mvtec.com](http://www.mvtec.com)

### **About MVTec MERLIC**

MVTec MERLIC is an all-in-one software product for quickly building machine vision applications without any need for programming. It is based on MVTec's extensive machine vision expertise and combines reliable, fast

performance with ease of use. An image-centered user interface and intuitive interaction concepts like easyTouch provide an efficient workflow, which leads to time and cost savings. MERLIC provides powerful tools to design and build complete machine vision applications with a graphical user interface, integrated PLC communication, and image acquisition based on industry standards. All standard machine vision tools such as calibration, measuring, counting, checking, reading, position determination, as well as 3D vision with height images are included in MVTec MERLIC. Furthermore, the software is able to execute tools in parallel, increasing overall efficiency and improving the implementation of multi-camera-setups. MERLIC's features are all based on the latest state-of-the-art machine vision technologies, such as matching or deep learning. The software is available for Windows-based PC and embedded platforms, making it ideally suited for use in smart cameras. [www.merlic.com](http://www.merlic.com)

## **Press Contact MVTec Software:**

MVTec Software GmbH  
Press Requests  
Arnulfstraße 205  
D-80634 München  
Phone: +49 (0)89-457695-0  
Email: [press@mvtec.com](mailto:press@mvtec.com)  
Web: [www.mvtec.com](http://www.mvtec.com)

Schwartz Public Relations  
Tobias Möldner / Bianca Brodbeck  
Sendlinger Straße 42 A  
D-80331 München  
Tel.: +49 (0)89-211 871 -31 / -55  
E-Mail: [mvtec@schwartzpr.de](mailto:mvtec@schwartzpr.de)  
Web: [www.schwartzpr.de](http://www.schwartzpr.de)