Deep Learning-based sensor solution PACS simplifies pallet handling

Jury honors PACS with the “Best Product” award in the “Identification, Packaging and Loading Technology, Load Securing” category

**Stuttgart, 31 May 2022 – With the pallet classification system from SICK – PACS for short – based on Deep Learning algorithms, customers can now automate the process of classifying pallets, which up to now has been manual and time-consuming. The system can also save costs and increase transparency in pallet handling. That’s how PACS impressed the jury of the “Best Product” award at LogiMAT and won in the “Identification, Packaging and Loading Technology, Load Securing” category.**

Until now, pallet classification has been a resource-intensive manual process that is also prone to error. With PACS, intralogistics specialists can now automate this process for the first time and differentiate between pallets with a deposit and those without. In addition, the system, which is based on Deep Learning algorithms, makes it possible to achieve more transparency about which pallets are in circulation. “For our pilot customer, it was important to only have pallets in circulation that have certain quality characteristics. This is what makes it possible for them to ensure that the load can be transported safely, even under high stress, in order to prevent damage to both people and goods,” explains Tobias Zimmermann, Head of Application Engineering New Technologies Logistics. To do so, PACS checks for the presence of certain features on the pallet and assigns them to previously defined categories.

PACS has a modular design and consists of a combination of hardware and software components from SICK. Depending on the requirements, one or more Midicam color cameras are used for image recording. The SIM1012 Sensor Integration Machine handles processing and evaluation of the recorded data, execution of the trained neural network, and communication to the controller.

Its special feature: Users can train the neural network on their own using the dStudio web service, which is part of the SICK AppSpace Eco-System – they don’t even need in-depth knowledge of image processing or machine learning programming. Once filled with a few images, the system can use artificial intelligence to classify objects directly on the SIM1012. New object classes can be added quickly and easily.

**Awarded “Best Product”**

Sensor manufacturer SICK entered this solution in the “Best Product” competition at LogiMAT – and won. Mats Gökstorp, Chairman of the Executive Board of SICK AG, accepted the prize: “Deep Learning lets us enter a new dimension in the field of automation. We want to automate and simplify time-consuming, tedious and error-prone tasks in the future. PACS is the perfect illustration of the possibilities that Deep Learning offers us with our sensors. With this system, we significantly increase efficiency and productivity while ensuring a safe working environment. The ‘Best Product’ award honors this achievement. Thanks for this award go to our logistics automation sales and technical team as well as to our customers who help us master these impressive developments.”

The field of intralogistics has been growing for years and is characterized by a high level of dynamism. The pallet is gaining importance as a universal load carrier. “For our intralogistics customers, it is also important to reduce losses in this process and gain more transparency about the pallets in circulation,” explains Mats Gökstorp, Chairman of the Executive Board of SICK AG.

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Picture: Produktbild PACS Sick

PACS helps classify pallets automatically using a deep learning algorithm. This saves costs and increases transparency in pallet handling.

Contact

Melanie Jendro │PR Manager │melanie.jendro@sick.de

+49 7681 202-4183 │+49 151 741 035 31

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