



PALLOC

Flexible automation of depalletizing with 3D color vision based on deep learning

SICK
Sensor Intelligence.



Technical data overview

Part localization time	(1 s (Fast mode, robot mounted at distance of 1.2 m), 3 s (Long distance mode, stationary mounting at distance of 1.5...3.5 m))
Localization accuracy	< +/- 5 mm and < +/- 1° (typical)
Enclosure rating	IP67



Product description

The PALLOC robot guidance system makes it easy to locate boxes of various sizes and appearances with high accuracy. The 3D color camera delivers up to 30 full-frame images per second with sub-millimeter resolution. These 3D and color images ensure that the individual boxes and layers can be detected and measured in an accurate and reproducible way. The camera has a pre-installed and pre-trained deep learning neural network localization algorithm that allows it to locate virtually unlimited variations of boxes. PALLOC reports the position coordinates of the boxes to the robot, allowing it to pick them one-by-one or several at the time, in a configurable picking order.

At a glance

- Extensively pre-trained neural network
- Robot software interface packages for many brands
- Camera, with embedded neural network processing, directly connected to the robot
- 3D color camera
- Web-user interface
- Software tool to backup/restore device configuration and to record/play back image data

Your benefits

- Localization function based on deep learning ensures reliable depalletizing
- Pre-calibrated camera, pre-trained neural networks, and available robot interface packages allow fast commissioning
- Embedded sensor with no need for external industrial PC (IPC) fits with tight return of investment calculations
- Combination of 3D and color images enables even tightly stacked or mixed-size boxes to be accurately located
- Reliable robot automation removes need for manual depalletizing
- Easy-to-use, intuitive web interface and app tailored for depalletizing
- Powerful embedded processing ensures high picking speed
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Fields of application

- Depalletizing of boxes in the inbound area of logistics distribution warehouses
- Depalletizing of incoming boxed raw material in manufacturing processes

Ordering information

Other models and accessories → www.sick.com/PALLOC

Localization accuracy	Calibration	Dimensions, system (L x W x H)	Type	Part no.
< +/- 5 mm and < +/- 1° (typical)	✓	162 mm x 93 mm x 78 mm (without cooling fins)	PALLOC-VS	1139985

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com