Dear Reader,

Logistics companies make high demands on the degree of automation for different process steps. No matter whether it appertains to sorting, incoming and outgoing inspection, identification or optimal utilization of transport capacities: The automated recognition of parcel and customer-related data is the basis for optimizing logistical processes.

VITRONIC offers innovative machine vision solutions for courier, express and parcel delivery companies as well as for companies from the field of warehousing and distribution. The camera based identification system VIPAC identifies barcodes and 2-D codes, reads hand-written and machine-written address information, measures the volume and the weight, prepares overview images for material documentation and provides certified datasets.

For over 15 years we have been developing, producing and supplying turnkey identification systems both hardware and software. More than 2,000 machine vision systems delivered worldwide to medium-sized mail-order businesses as well as globally active courier services and logistics companies is a measure of our competence.

Take advantage of our many years of experience in the industry. We look forward to your projects.

Dr.-Ing. Norbert Stein
President and Sole Shareholder
Courier, express and parcel delivery companies

Fully-automatic parcel identification automates and optimizes logistics processes

Letter and parcel distribution centers must to a great extent automatically measure and identify incoming consignments. This holds true for machine suitable packages, as well as for packages which are not machine suitable. VITRONIC’s reliable solutions are utilized by virtually all the well known parcel carriers today. They therefore achieve a high degree of automation and revenue recovery.

Identification of address information and codes

The VIPAC identification system identifies all relevant information and codes with very high reading rates on up to six sides. This also includes hand-written and machine-written address information including barcodes, 2-D codes and specific customer codes. Thus the orientation of the package makes no difference. VIPAC even recognizes characters and codes behind foil.

Images are captured on sorting equipment with widths of up to 1.0 m, a focal length of 1.4 meters and through put speeds up to 3.0 m/s on conveyors and sorters. The core piece of the identification is the VICAM™ sensor unit, which combines a compact high resolution, dynamic auto-focus high-speed line scan camera and LED illumination into one device. Companies are utilizing more and more archived recordings for documentation and for verification vis-à-vis customers and suppliers.

Volume measurement

The measured parcel volume enables automatic invoicing and revenue recovery with country-specific certification.

The generated data is also the basis for optimizing logistical processes such as loading. The volume measurement system VOLUMEC HS2 measures the maximum dimensions in length, width and height with all packages, and subsequently calculates the smallest cube that each consignment would fit into.
Video coding

Together with video coding, VIPAC achieves an identification rate of nearly 100 percent. Non machine-readable or incompletely identified addresses are transmitted to video coding terminals via a fast, intelligent network. An image is sent to a free workstation where trained personnel process the information online or offline. Online video coding means that the information is immediately entered in a defined time and is made available for sorting and further processing. With offline video coding the personnel can process the information which is not required for sorting but for dispatch. The data can also be transmitted to central processing stations for several distribution centers for video coding.

Interfaces

VIPAC has all conventional interfaces at its disposal. The secure connection to the most varying sorter controls is a fixed element. Customer-specific interfaces can also be implemented.

This includes:
- Integration of dynamic scales
- Control of a labeling machine for attaching labels to free parcel areas
Warehousing and distribution

Machine vision creates the basis for more efficiency

Machine vision systems play an increasingly more important role in logistical sequences. No matter whether it is for incoming inspection, internal sorting and storage, identification or handling of returns, Machine vision contributes decisively to optimization and automation of sequences. The basis for more efficiency in logistics is the automatic recognition of product, packaging and customer-related data. This includes the identification of supplier information such as supplier numbers, amounts, item numbers, barcodes, 2-D codes and customer-specific codes as well as volume measurement and weight determination.

Incoming material identification

Incoming material is already identified upon arrival by means of machine vision. For instance, the material can be sorted for intermediate storage in high-bay warehouses. Companies are utilizing more and more archived recordings for documentation and for verification vis-à-vis customers and suppliers.

Sorting and storage

Sorting by means of machine vision of incoming goods is the basis for an automated storage process. With convex goods it is often necessary to ascertain the volume, thus ensuring that only machinable cartons are stored on high shelves and is used to full capacity.

Identification

Mail-order companies are increasingly utilizing machine vision systems for identification. Manufacturer’s barcodes and the OCR information are identified and compared with databanks. Goods can now be sorted for dispatch.
Outgoing inspection
A final inspection shortly before the loading ensures that the right material is also sent to the right recipient. The shipment of misrouted material and thus excessive costs of return are securely and reliably avoided as a result. The recorded images can be utilized in the same manner as the material income identification for documentation vis-à-vis customers.

Loading
Fully-automatic weight and volume determination supports optimized loading. Relevant parcel data is also being increasingly applied for utilization of transport capacities in the vehicle fleet. Machine vision technology measures the maximum dimensions in length, width and height with all packages, and subsequently calculates the smallest surrounding cube of the parcel.

Returned goods management
In companies with high return deliveries throughput, item numbers and reasons for return must be correctly identified and managed as fast as possible in the system. The barcodes on the labels as well as the handwritten reason for return are read during the process. VITRONIC’s identification system VIPAC reliably identifies differently packed return shipments – from flat ‘polypack’ to large parcels – and will read all information on uneven and undulating surfaces.
VITRONIC worldwide

We are here for you today, on four different continents. Please contact us: we have solutions to your challenges. A list of all contacts at www.vitronic.com.

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