VIPAC SOFTWARE SOLUTIONS
KEEPING AN EYE ON ALL YOUR DATA
The software solutions developed by VITRONIC work hand in hand with automated reading systems to provide you with a wide range of options for using captured shipment data. Targeted evaluation and integration of this data supports process optimization, while information captured in real time ensures greater transparency along the entire value chain—a key element in Logistics 4.0.

Our software packages are tailored to meet the complex requirements of digital supply chains. At the same time, they are especially user friendly when it comes to navigation and visualization, meaning captured shipment data (codes, characters, volume, and weight) can be used in a variety of ways. For example, our software works closely with integrated systems, such as warehouse management and ERP solutions, optimizing other customer- and object-relevant processes, such as automatic invoicing.

All information can be archived both locally and centrally and can be accessed by a web browser at any time. Detailed evaluations, which can even be performed across different sites, help you optimize your processes and ensure smooth operation of your reading systems.

Thanks to seamless data integration with the existing IT infrastructure, you can further increase the degree of automation in your process landscape and benefit from significant increases in efficiency and cost effectiveness.
Our software makes it easy to visualize shipment data captured by VITRONIC Auto-ID systems. Targeted data evaluation also enables more efficient workflows. Both the VIPAC VISION and VIPAC WEB user friendly software solutions are available for monitoring individual systems.

VIPAC VISION is your local interface to the VITRONIC reading system, providing all of the system’s important operating parameters, along with image and object information. In addition, system-specific statistics, such as package throughput and read results, also make analysis easier.

VIPAC WEB is your central, web-based interface to all VITRONIC Auto-ID systems in your network. VIPAC WEB provides you with structured information on the status of all systems, offers access to your archived data in VIPAC ARCHIVE, and supports you by providing an advanced search and export function, giving you an overview of your systems in real time, at any time and from any location in the world.

**Feature Overview:**

<table>
<thead>
<tr>
<th>VIPAC VISION</th>
<th>VIPAC WEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview of the read results including detailed view</td>
<td>Status overview of all systems including search and filter function</td>
</tr>
<tr>
<td>System status</td>
<td>Central access to the event log of the individual systems</td>
</tr>
<tr>
<td>Statistics</td>
<td>Extensive archive search and view of the archived data</td>
</tr>
<tr>
<td>System configuration</td>
<td>Export function</td>
</tr>
</tbody>
</table>
VIPAC CODE

CAPTURE BARCODES AND 2D CODES WITH THE HIGHEST READ RATES

VIPAC CODE is the 1D/2D code reading software developed by VITRONIC designed to reliably capture codes on packages, boxes, and goods.

VIPAC CODE offers efficient gray-value image processing, and can read an unlimited number of codes on an object.

It can reliably read even the most difficult-to-read codes that are damaged or even partially destroyed, displaced, poorly printed or located under foil—also at high conveyor speeds. Even barcodes only 2 mm in height can be read reliably thanks to innovative software algorithms.

Your Benefits at a Glance

» Automatic capturing of all standard 1D/2D code types

» Multi-code capturing

» Reading of poorly printed and damaged codes, also ANSI F possible to some extent

» Maximum read rates
In addition to barcodes and 2D codes, VITRONIC Auto-ID systems can also read handwritten and typewritten characters reliably, for example in addresses, product numbers, quantity details and supplier numbers specified on objects.

The VIPAC OCR reading software developed by VITRONIC enables automatic analysis of information specified in plain-text characters. It can even read various font styles reliably at high speeds. From label detection to the start of character classification, sophisticated image processing algorithms ensure that the software delivers the best read results, even if contrast is low or character quality is poor.

Character quality plays an important role in the reading of characters. Factors such as contrast, printing method, character size and the degree to which the label may have been soiled all come into play. To ensure maximum quality of data capture, the individual characters are classified using various independent processes (multi-stage classifier).

Your Benefits at a Glance

» Reliable and efficient capturing of typewritten and handwritten address information (OCR), even at high conveyor speeds

» Reliable reading of different fonts, including those in color, even when character quality is poor and the contrast is low or they are covered by foil

» Automatic handling and automatic sorting

» Automatic updating of the database improves service quality for your customers
VIPAC LIT
IDENTIFY LABELS AUTOMATICALLY

VIPAC LIT automatically checks the positioning of labels on objects. To do this, the system searches for previously learned forms, patterns and labels. VIPAC LIT can process all sides of the object captured by the cameras and reliably check these using the learned patterns.

Key Performance Features
» Identification of the relevant image area based on the position of a code
» Selection of the region of interest for video coding and OCR
» Detection of the typical code identification for specific label types
» Selection of the image area in a defined position relative to the code

Your Benefits at a Glance
» Providing additional information for sorting (e.g., customer labels) or of indicators of the package contents (e.g., logo and sample recognition)
» Increased read rates for character reading
If shipment data cannot be read 100 percent automatically, for example, because address labels or codes are damaged or poorly printed, we offer you a practical solution with the VIPAC VCD videocoding software and the associated videocoding station. With videocoding, data that has not been captured completely and any additional information is entered manually by trained staff at special workstations at a later point in time. This could be, for example, invoice information, COD references, or no-reads. The goal is always complete capturing of all relevant data and additional information without interrupting the sorting process.

There are two different types of videocoding: With online videocoding, data that is relevant for sorting is added during the sorting process and is further processed for sorting prior to the first outfeed. With offline videocoding, the data does not need to be used immediately for sorting and is therefore added later, for example, for delivery processes. These two techniques can also be combined. Input screens can be adapted to customer requirements with plug-ins.

To familiarize users with our software, we also offer a training mode, which can be used independently of the sorting process. Multiple videocoding stations can also be monitored using our videocoding manager, thereby allowing performance to be analyzed.

Your Benefits at a Glance

» Capture additional information and increase data capture rates
» Intuitive user navigation
» Database connection
» Flexible applications thanks to online and offline video coding
» High coding throughputs of up to 750 objects per station per hour, depending on employee training and the number of data fields to be supplemented
» Increased level of automation for data capture
» Shorter throughput times
The VIPAC DIM software module determines the length, width, and height of all packages from the data captured by the VOLUMEC HD volume measuring system and calculates the smallest cuboid enclosing the package, which corresponds to the volume.

The objects can be positioned in any location on the conveyor—even very small, very flat and dark items are captured reliably.

With its tamper-proof saved data, VIPAC DIM supports automatic invoicing and compares the package information provided by the customer with the measured data. The volume data can also be used as a basis for calculating transport capacities, optimizing vehicle loads and route planning, as well as other follow-on processes.
Your Benefits at a Glance

» In-motion detection of box deformations
» Simultaneous volume measurement and deformation detection
» Optimized storage placement processes when storing boxes in automated high-rack warehouses
» Maximum measurement accuracy
» Early detection and removal of damaged goods

VIPAC SHAPE

RELIABLY DETECT DEFORMATIONS

As well as calculating the volume, the additional VIPAC SHAPE software module can detect any deviation from the ideal box shape, such as bulges, dents and damages. For this purpose, VIPAC SHAPE calculates the smallest cuboid enclosing the box, and uses this as a basis for fast, reliable detection of deviations from the ideal shape as well as deformations.

This approach ensures that boxes are only placed in storage if they are free of damage, and prevents malfunctioning of the automated warehouse technology and reductions in throughput when storing boxes in automated high-rack warehouses. In addition, deformed boxes may indicate that the goods inside are damaged, which means they can be inspected and removed if necessary prior to storage or prior to delivery.
VIPAC ARCHIVE
MANAGE DATA SECURELY

The archiving system belongs to our VITRONIC Auto-ID systems portfolio and automatically saves all captured data, such as codes, characters, weight, volume, and image information. The archived data is visualized with VIPAC WEB. This web-based application allows you to easily display, filter, and export data. In this way, weak points in the process chain can be detected in sufficient time and specific processes optimized.

The VIPAC ARCHIVE COMPACT software automatically saves captured shipment data from one VIPAC Auto-ID system in one location for a specified period of time. In addition to the functions available in the basic version, VIPAC ARCHIVE ADVANCED bundles the archived data from all VIPAC Auto-ID systems in one location. The storage volumes and periods can also be extended to meet customer requirements. VIPAC GLOBAL ARCHIVE connects the systems from all locations and archives all object data and compressed images in one global archiving system.

The causes for no-reads, for example, codes/labels outside the specifications or bothersome straps, can be analyzed subsequently. The saved images serve as evidence of the cause of the issue.

Your Benefits at a Glance

» Subsequent verification of packages and supplementary package data
» Process optimization based on the stored and analyzed data
» High level of data security thanks to redundant data storage
» Images from external sources can also be integrated
» Images as evidence/claims management
» Transparency and traceability of data as a basis for Logistics 4.0
LIFETIME SERVICE FOR SATISFIED CUSTOMERS

All VITRONIC systems are developed and produced using the highest quality standards, and combine reliable functions with maximum durability and cost-efficient operation.

If you have any questions about the maintenance or operation of our systems, need help with troubleshooting, or if you would like to request a service technician, we can be contacted 24 hours a day, 365 days a year. Our maintenance specialists ensure that your Auto-ID solutions work reliably at all times, even under demanding conditions. This means that your investments are guaranteed the best possible protection over the long term.

We offer extensive consultation for the planning of your specific application and services to upgrade your system, as well as training to suit your needs.

Our services and their descriptions are based on European standard EN 13306:2010 as well as the Information Technology Infrastructure Library (ITIL) for IT services of the British Office of Government Commerce (OGC).
VITRONIC WORLDWIDE

VITRONIC is a global leader in the field of industrial machine vision headquartered in Wiesbaden, Germany. Since its foundation in 1984, the privately owned company has been offering highly innovative solutions in industrial automation, logistics automation and traffic technology. Today, VITRONIC supports customers in over 60 countries via a global network of subsidiaries, service centers and partner companies.

All of the companies’ products are developed, designed and manufactured by VITRONIC in Germany. They range from standardized to fully customized solutions.

Feel free to contact us – we look forward to hearing about your projects.

Full contact details and further information are available at www.vitronic.com