

MODi relabeling station
100% traceability

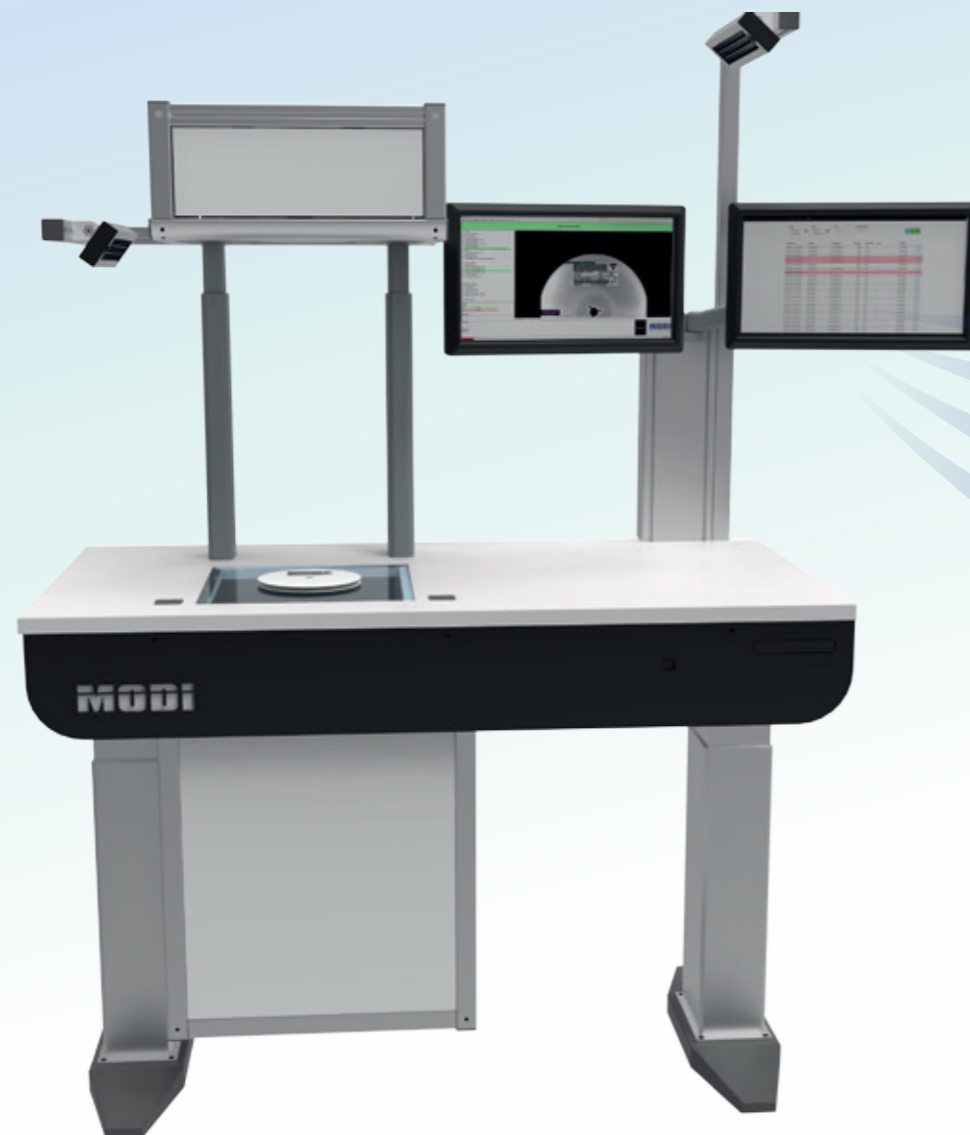


MODI relabeling station

100% traceability

For all types of barcodes on reels, drypacks and cardboard packaging

The system uses the sum of all barcode / data matrix code information from incoming goods in order to serve as a read / data / and traceability interface by saving information and sending them to the following processes.



Convince others!

Gapless traceability at customer and quality audits!

In modern industry all components must be able to be tracked throughout the entire production process. That way you ensure permanently which part with its charge / lot number / date code is placed where and at what time.

Make sure every article matches 100% your specification!

In the first reading process the system compares all read data with an article master database. Only if the information matches the master data the system releases the article.

Eliminate all misequipment costs due to wrongly marked parts!

While the system releases the article it prints out a customer designed barcode label. After relabeling the part it needs to be re-read to make sure that the printed label is readable and consistent to the producer label.

Most flexible ergonomical handling!

The system keeps the operator from any validation and shows maximum process safety. With an infinitely variable height adjustment it can be adapted to any operator.

Unbeatable performance

Reading procedure and information check in less than two seconds!

Everything from one source!

Hardware and software engineering in the same location. We are able to react in a flexible way to customer requirements and to find finely tuned solutions.

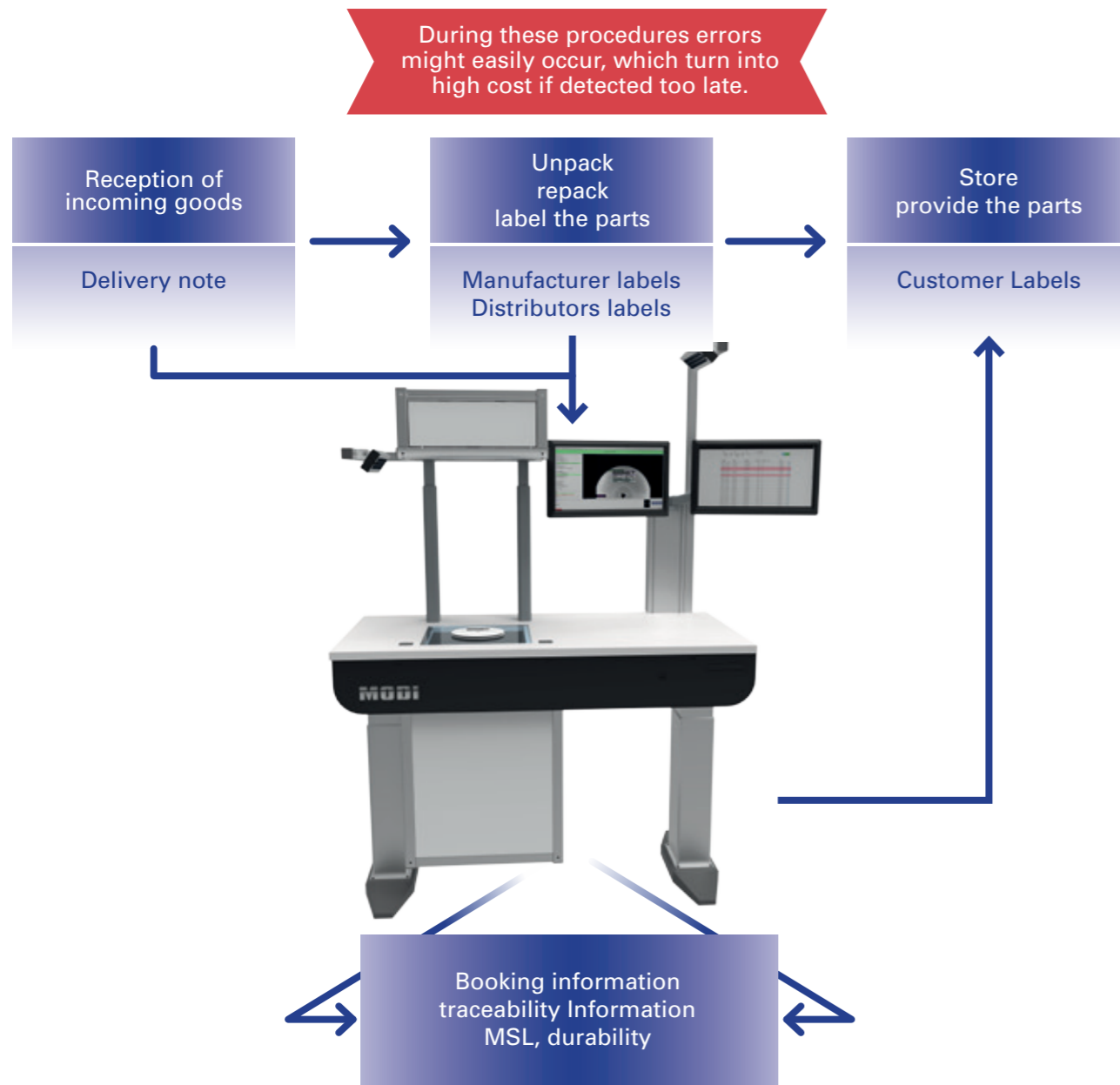
→ **REDUCE OF OUT-OF-STOCK COSTS!**

→ **ELIMINATE MISEQUIPPING!**

→ **RELEASE PRESSURE FROM YOUR OPERATORS!**

→ **REDUCE DOUBLE HANDLING ACTIVITIES, ACCELERATE YOUR PROCESS AND GAIN MAXIMUM RELIABILITY!**

Employment into the process of goods receipt



How do you make sure that ...

- all positions on the delivery note are complete?
- all items are marked correctly?
- every item matches the specification requirements?
- the traceability is given in case of a part change?
- designation changes will be detected without prior information by the supplier?

- an error of the supplier causes your stoppage in production or even customer reclamation?
- suspect parts are blocked before they get into the production area?

wether serial label printing from the ERP software, data entry via mobile scanner, booking of delivery note information or any other manual data entries: Wherever there is a need for visual control and manual data entries by an operator the risk rises along with the manual work done.

The solution



Example MODI WE Relabeling station with ERP interaction

Step 1

The process starts with the collection of the delivery note information. There are two options to acquire the needed information. Depending on the ERP software it is also possible to work with ASN (advanced shipping notification) data. Together this information comprises the expected total of material. By placing the delivery note onto the reading area the system reads out all information and compares it to the ASN.

Step 2

Now the operator starts the relabeling procedure. By placing the reel or cardboard packaging onto the reading area the system reads out the manufacturer label and checks it with a master database in less than one second. If all information correspond with each other and if the item is not blocked within the system the printing process starts. Now the printed label is placed onto the actual part. In a second scanning procedure the system checks if the right label is placed onto the right material. Now the procedure is finished for the operator.

Step 3

Once the system achieves the expected amount out of ASN and shipping note the booking is triggered. While all traceability mechanisms run in the background a wide range of information is saved in a special traceability database. All collected data, image documents, booking and release information are distinctly assigned to a printed customer label.

The MODI procedure (reading and data checking procedure)

The read information is compared with the item master database or via an interface with the expected ERP data. The query comprises all information necessary to clearly identify the article.

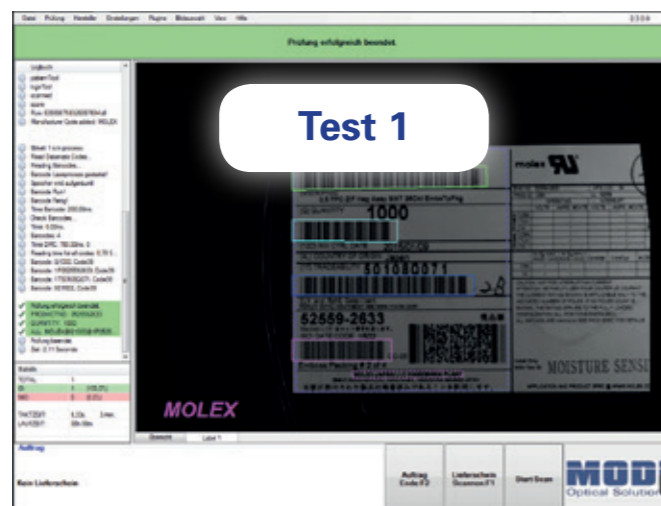
If all data are consistent and the article is released the test is completed successfully.



Touchpads to start the procedure

One of the two touchpads on the right and left of the reading surface can easily be used to start the scanning process.

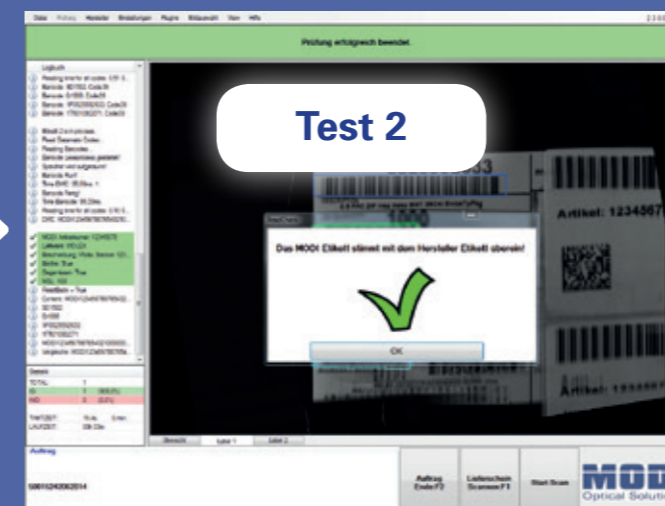
Reading procedure



Product master database or information from ERP

Product data:	
Customer Part No:	12345678
Alt. Part No:	
Manufacturer Part No:	912345678
Quantity:	1000
Manufacturer Name:	MOLEX
Manufacturer No:	87654321
Approved:	<input checked="" type="checkbox"/>
Unloaded:	<input checked="" type="checkbox"/>
M3:	368
Number of prod:	2
Readback:	<input checked="" type="checkbox"/>
Description:	Molex Stecker 32545678
User Message:	Feuchtheitsindikator prüfen

Counter-check procedure



The data acquisition

Once a label is read it passes through a filtering process. About 80% of all label structures are identified here. This automatic detection is achieved via identifiers and shortcuts in front of the actual barcode content that clearly identifies it. If these

are not available it is possible to train the system for the manufacturer's label. This is done once per manufacturer's label type. Here user-defined information areas can be assigned to individual barcodes. Furthermore, even composite code

contents in string format can be broken down into their individual information. By this way, all contents even without identifier can be clearly assigned and identified.

Example: 2D Code with identifier

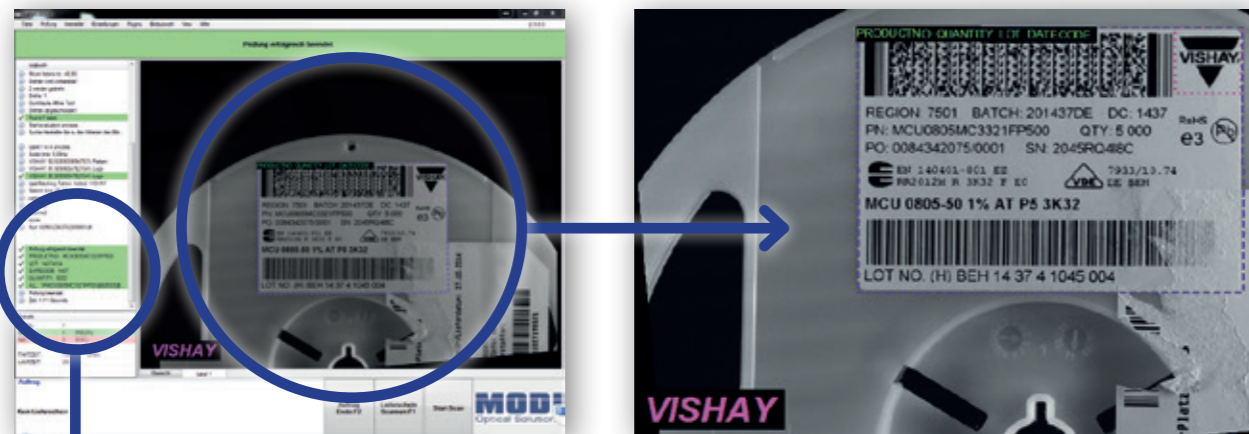


```

✓ Prüfung erfolgreich beendet.
✓ PRODUCTNO: TP5797180CKR
✓ LOT: 3000
✓ DATECODE: 1419
✓ QUANTITY: 3000
✓ ALL: 06@P@1PTP5797180CKR@6P@2PB@Q3000@V0033317@1T3940778NF2@4WTKY@D1419@5@31T4075084NFM@20LDLN@21LUSA@22LNFH@23LCHN@EG4@3Z1@260C@UNLUM@051914@L1808@TK@
(i) Prüfung beendet.
(i) Zeit: 1,28 Seconds.
    
```

Each identifier represents a certain content (Example: 1P for manufacturer product number, 1T for trace code / lot). The identifier can be added freely and linked with certain contents.

Example: PDF Code without identifier



```

✓ Prüfung erfolgreich beendet.
✓ PRODUCTNO: MCU0805MC3321FP500
✓ LOT: 14374104
✓ DATECODE: 1437
✓ QUANTITY: 5000
✓ ALL: 1PMC0805MC3321FP500@Q5000@1T14374104@6D1437
(i) Prüfung beendet.
(i) Zeit: 1,08 Seconds.
    
```

Traceability



All operations are saved in a traceability database. Here the required information, such as product ID and quantity (customer specified) and all other read contents are stored. Additionally, each process is documented as an image. Sometimes an important traceability information is placed as pictogram or in plain text on the material (for example MSL or lead-free information).

Start	End	User	Comments
18:00:00	18:00:01	admin	
18:00:01	18:00:02	admin	
18:00:02	18:00:03	admin	
18:00:03	18:00:04	admin	
18:00:04	18:00:05	admin	
18:00:05	18:00:06	admin	
18:00:06	18:00:07	admin	
18:00:07	18:00:08	admin	
18:00:08	18:00:09	admin	
18:00:09	18:00:10	admin	
18:00:10	18:00:11	admin	
18:00:11	18:00:12	admin	
18:00:12	18:00:13	admin	
18:00:13	18:00:14	admin	
18:00:14	18:00:15	admin	
18:00:15	18:00:16	admin	
18:00:16	18:00:17	admin	
18:00:17	18:00:18	admin	
18:00:18	18:00:19	admin	
18:00:19	18:00:20	admin	
18:00:20	18:00:21	admin	
18:00:21	18:00:22	admin	
18:00:22	18:00:23	admin	
18:00:23	18:00:24	admin	
18:00:24	18:00:25	admin	
18:00:25	18:00:26	admin	
18:00:26	18:00:27	admin	
18:00:27	18:00:28	admin	
18:00:28	18:00:29	admin	
18:00:29	18:00:30	admin	

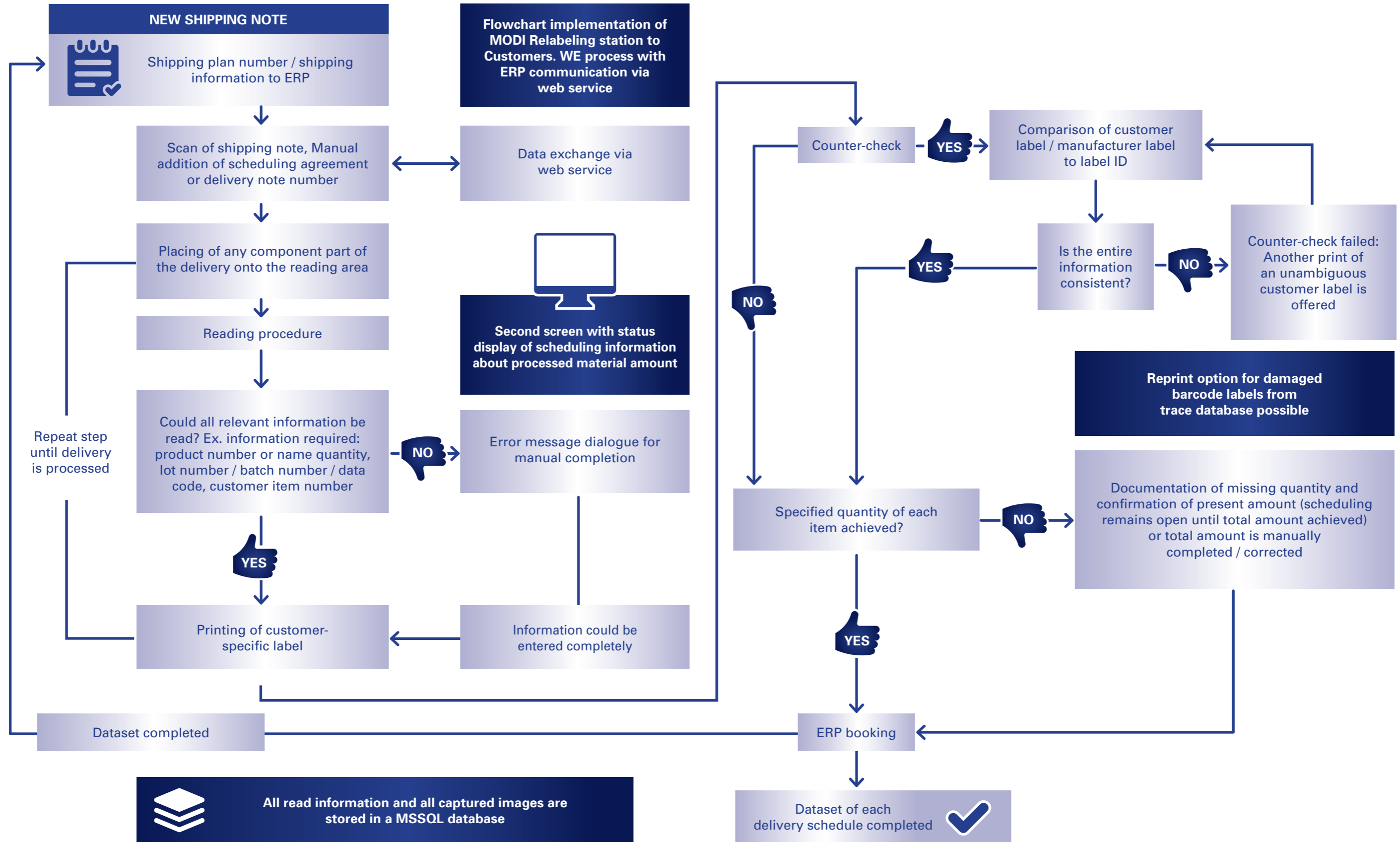
Details

ExaminationModel

- ID: 2572
- TIMESTAMP: 18:00:17 18:00:18
- MANUFACTURER: PH1000000011
- DATACODE: 1715
- ORDERNUMBER: 001100032
- MATERIALNUMBER: ---
- QUANTITY: 1000
- PRODUCTNUMBER: 004370118110
- MSLLEVEL: 00225428
- REELID: 013.0306
- CUSTOMERPARTNR: ---
- UNLEADED: X
- INFOSEC: 004370118110
- USER: MODI

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Example: Process diagram with ERP integration via web service



The technology

Heart of the Relabeling station is the Adomo camera technology. The overview camera detects the exact position of all labels that are placed onto the 400x400mm large reading area.

The detail camera is looking into a deflection mirror which moves towards the exact position of the individual labels. By this way the camera resolution is completely focused only on

the label to be read. The entire hardware performance is efficiently directed only towards this area. This results in shortest cycle times and highest reading accuracy.

Technische Daten

Scanning area:	360mm x 360mm
Products:	Reels, drypacks, cardboard packaging, trays
Scanning time:	less than 2 sec.
Technology:	5 megapixel overview camera 5 megapixel detail camera Adomo deflection mirror technology
Interfaces:	Label printer (individually definable) Web Service, RFC, IDOC, API, etc TCP/IP Interfacefree string design
Code types:	Int. 2/5, Code 39, Code 128, UPC/EAN, 4-State, Postnet, Planet, RSS, Code 93, Codabar, PDF 417, Symbology, Data Matrix, QR Code.

Optional

Conversion of the date code

Component manufacturers encrypt their production date on the roll.

If you want to use this date to calculate the durability of the component, you have to convert it into a "real" date.

The Labels software now offers this option.

Using the option of storing the date code format for each article, the scanned date can be automatically converted accordingly.

This converted date can then be used in all further systems to ensure optimal use of the components. The same is also true for other code types in the date format.

The screenshot shows a software window titled "Product data" with the following fields and options:

- Customer Part No: [Text input field] [Packsize button]
- Alt. Part No: [Text input field]
- Manufacturer Part No: [Text input field]
- Quantity: [Text input field]
- Manufacturer Name: [Text input field]
- Manufacturer No: [Text input field]
- Approved:
- Unleaded:
- MSL: [Text input field with value 0]
- Number of prints: [Text input field with value 1]
- Readback:
- Description: [Text area]
- Required Fields: [Text area]
- Date Format: [Text area]
- User Message: [Text area]
- [Save button]

Block production batches with the "rejected batches DB"

If a defective component batch was delivered, it is important that this batch is never returned to production. MODI makes it possible to block these batches and thus prevent storage with a new database.

Pick & place interfaces

MODI offers interfaces to the most common component pickers and placers. This allows the material, including all important traceability information, to be passed directly to the processing machines. By assigning a unique ID for all scanned materials, only this number is necessary for recording at subsequent processes. All information such as HTN, quantity, lot, date code, ... are already known to the downstream systems.

Customised connection (ERP)

The Labels software can be connected to various ERP, trace and storage systems. Through customised processes, the goods receipt scanner can be integrated deep into the workflows, thereby offering the best combination of economy and safety.

Extensive trace database

All scans are stored in a traceability database. You can find all scanned information as well as the corresponding pictures of the process here. Extensive options are available for filtering, searching and exporting. It is a powerful tool that can save a lot of time and money.

Timestamp	Serial ID	Lot Number	Quantity	Date Code	User	Part No
9/27/2017 1:34:27 PM	58,227801	PH1688993101	1300	1715	---	612,9399
9/27/2017 1:34:18 PM	58,225438	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:34:08 PM	58,225432	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:33:54 PM	---	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:33:15 PM	---	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:33:09 PM	58,225426	---	1300	1715	---	612,9399
9/27/2017 1:32:59 PM	58,225432	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:26:33 PM	---	---	---	---	---	---
9/27/2017 1:24:27 PM	58,227800	PH1688993101	1300	1715	---	612,9399
9/27/2017 1:24:15 PM	58,225424	PH1688993801	1300	1715	---	612,9399
9/27/2017 1:24:04 PM	58,227806	PH1688993411	1300	1715	---	612,9399
9/27/2017 1:23:54 PM	58,227806	PH1688993801	1300	1715	---	612,9399
9/27/2017 1:23:41 PM	58,225417	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:23:29 PM	58,227806	PH1688993101	1300	1715	---	612,9399
9/27/2017 1:23:19 PM	58,225415	PH1688993801	1300	1715	---	612,9399
9/27/2017 1:23:10 PM	58,227801	PH1688993101	1300	1715	---	612,9399
9/27/2017 1:23:01 PM	58,225426	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:22:51 PM	58,225432	PH1688993811	1300	1715	---	612,9399
9/27/2017 1:20:30 PM	58,227800	PH1688993101	1300	1715	---	612,9399
9/27/2017 1:20:18 PM	58,225424	PH1688993801	1300	1715	---	612,9399
9/27/2017 1:20:08 PM	58,227806	PH1688993411	1300	1715	---	612,9399
9/27/2017 1:19:57 PM	58,227806	PH1688993801	1300	1715	---	612,9399
9/27/2017 1:15:47 PM	58,225417	PH1688993811	1300	1715	---	612,9399

Browser-based trace database

The trace database is now available in your browser. All important component information can be retrieved from almost any device. No matter if the operator wants to see the data on a tablet or the quality-control person wants to see it on a desktop PC.

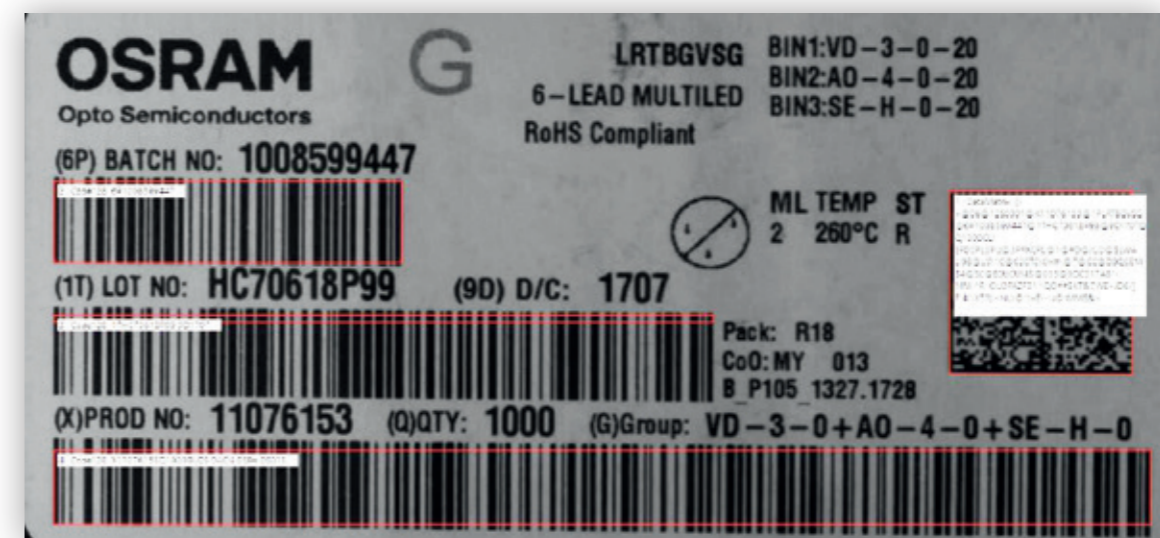
LED classes 100% traceability

Often the binning information is indicated through LEDs with different coding. With a new feature in MODI, it is possible to summarise this information and transfer it to the downstream system.

For example, Osram label with up to 5 different binning classes on one container: Each individual binning class is divided into four components, each with four different prefixes. The

Labels LED Add-on allows the individual components to be scanned and compared as a combined string with ERP article master data. It is also possible to attach the LED information to the scanned product number. This offers the convenience of not having to make changes to existing article master data because the software can process the data accordingly.

Example of a typical LED label design:



Scan results:

Found 3 barcodes:

1:DataMatrix, []>@06@12S0001@X11076153@1PLRTBGVSG@6P1008599447@1THC70618P99@9D1707@Q1000@1LVD@1C3@1U0@1I20@1P@2LAO@2C4@2U0@2I20@3LSE@3CH@3U0@3I20@4L@4C@4U@4I@5L@5C@5U@5I@COMY@S013

The prepared LED BIN information can then look like this:

LRTBGVSG	VD3020	AO4020	SEH020
----------	--------	--------	--------

Or alternatively attached to the product number:

HTN	BIN 1	BIN 2	BIN 3
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Advanced user management

Scanning processes can now be carried out by the user. Extensive rights management allows critical processes to be handled by authorised employees only.

Up to six freely definable rights can also be customised and added (optional).

All processes can be logged. So scanning and other operational activities can be assigned to individual operators.



Retrofit option for existing tables

The TopScan is compatible with the re-labeling station and can be retrofitted with existing systems.

OCR – Text recognition

New features make it possible to scan non-encoded information in an error-free and secure manner.

This means that > 99% of the labels on the market can be recorded in the future.

Through automatic quality recognition, well-printed content is scanned without manual checking and passed on to the downstream systems. For poorly printed information, the operator is

given the opportunity to check, change or confirm this information.

A classic example are labels without barcodes for the information required for unambiguous identification.



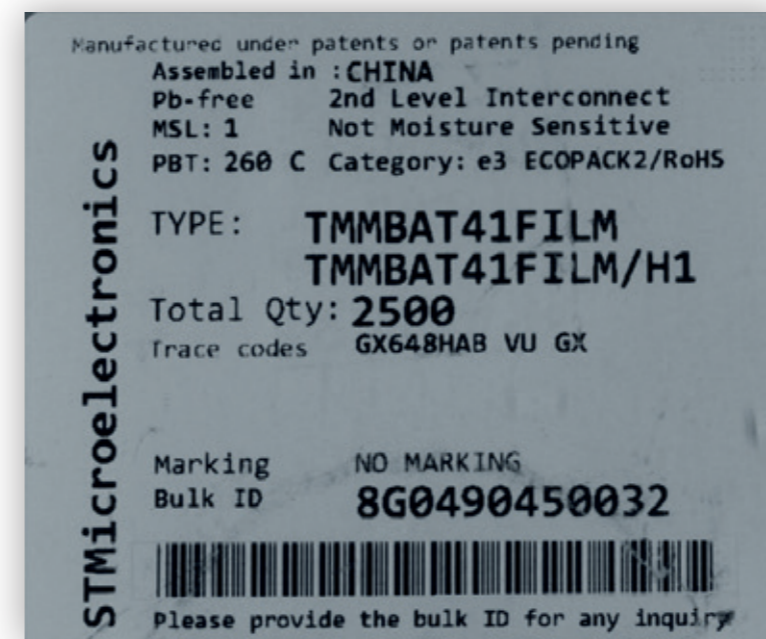
Scan from TOP and BOTTOM

Some components need to be scanned from two sides due to packaging.

The MODI scan table can now be extended with a top camera.

The roll no longer needs to be rotated. This also simplifies the attaching and scanning of printed labels!

The MODI TopScan is also equipped with stepless height adjustment. This ensures that the same distance between the camera and the label to be scanned is always maintained regardless of the packaging size.



This label can only be processed by means of manual input by the employee without OCR recognition. The MODI 100% traceability solution provides an analysis of the text information. All information is now read out automatically and can be forwarded like scanned barcode information to downstream systems and the trace database. Labels that have hitherto represented a great deal of effort are now only a small issue in terms of additional handling and security.

**Labels mobile
(extension of the relabeling station)**

- Labels mobile recording at goods receipt or on the production line
- WiFi communication with WE relabeling station
- All features for scanning codes on labels are equally available
- The result of the check is displayed on the tablet

- Optional mobile printer to print customer labels
- 100% traceability for large and heavy materials that do not allow for handling on the table

Everything at a glance

Highlights

- OCR recognition
- Scanning of 1D, 2D, PDF codes of all kinds is continuously expanded)
- High working speed / short cycle times thanks to innovative ADOMO camera technology
- Ergonomically flexible through stepless adjustment of working height
- Secure recording of all contents, simultaneous scanning of several labels on the scanning surface
- Customised connection to various ERP systems
- Complete traceability
- TOP and Bottom Scan



Convince yourself

Make an appointment and convince yourself of the functionality of the system in our showroom with your material, problem cases are desirable In a workshop on site we are happy to introduce you to the custom options of the system.

Your sales contact:
Phone +49 2261 91552-0
info@modi-trace.de

Follow this link and you get to see an interesting product video:



www.modi-gmbh.de/Downloads/Videos/modi-wareneingang14022015.mp4



Recorded picture is sent via WiFi to WE station

Result of the test is transferred to mobile labels and presented on the display (optional: printing of customer labels on mobile printers)

Notes

MODi
Vision for Identification

Your partner for industrial identification

Hilpert
electronics

Ihr Vertriebspartner/ Votre représentant:

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