



scanware electronic GmbH

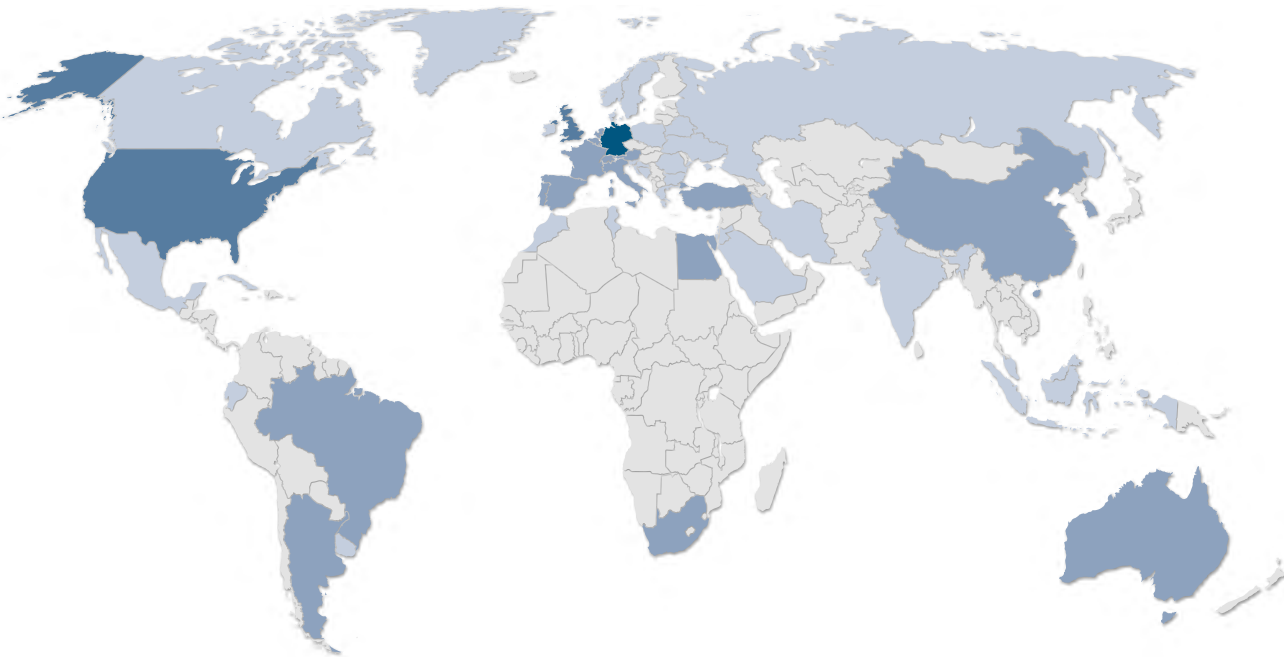
Inspection Systems

■ Our Company

scanware electronic GmbH is a privately owned company operating on an international scale. As an independent manufacturer we specialise in the development of inspection systems for quality control on

packaging lines for the pharma, cosmetics and food industries. For 25 years, scanware products have been tailored to the needs of producers, are highly specialised and compliant to GMP regulations.

Almost 2000 installations around the globe have gained us a reputation as a supplier of high-end technology to all major producers.



■ scanware Systems Worldwide

- Installed Systems
- > 500
 - 151–499
 - 10–150
 - < 10



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LYNX-SPECTRA PRODUCT INSPECTION

- LYNX-SPECTRA BW | Black & White Product Inspection
- LYNX-SPECTRA CL | Colour Product Inspection
- LYNX-SPECTRA HR | High-Res Colour Product Inspection
- LYNX-SPECTRA 3D | 3D-Product Inspection

LYNX-FOCON PORE INSPECTION

LYNX-FOCON | 200 - 1000

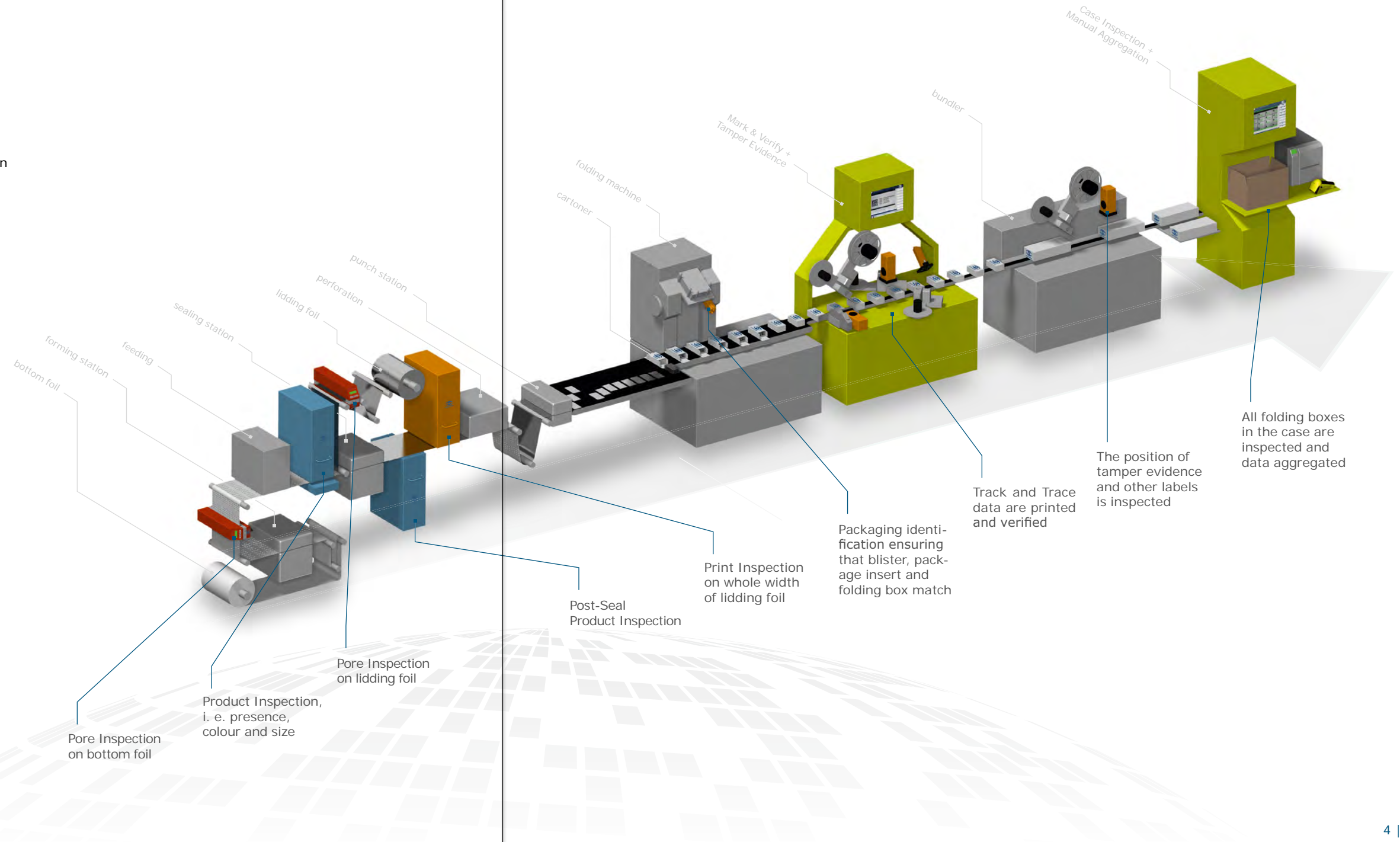
LYNX-SIGNUM CODE INSPECTION

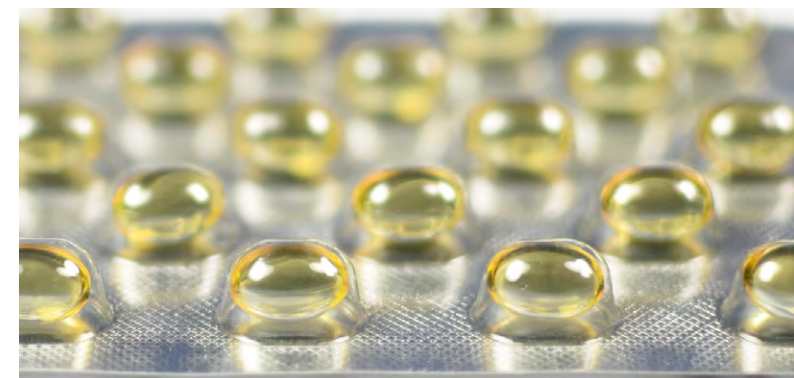
- LYNX-SIGNUM CL | Ring Code Inspection
- LYNX-SIGNUM 1 DC | Code Inspection
- LYNX-SIGNUM 2 DC | Code Inspection
- LYNX-SIGNUM HR | Print Inspection

LYNX-CAPA TRACK & TRACE SOLUTIONS

- LYNX-CAPA MV | Mark & Verify
- LYNX-CAPA TE | Tamper Evidence
- LYNX-CAPA CI | Case Inspection
- LYNX-CAPA MA | Manual Aggregation

As a supplier of turnkey solutions, scanware can equip your packaging line from start to finish. The operation of all scanware systems is based on the same structure and thus very user-friendly. Take a look at where our solutions are placed.





LYNX-SPECTRA BW

■ Black & White Product Inspection

Inspects a number of product criteria such as presence, position, shape as well as double fillings and broken items. The Black & White System is the cost-effective solution

for tasks when cross-contamination can be ruled out due to the technical surroundings such as mono lines. Soft- and hardware can always be expanded to enable colour inspection.

The Classic.
Easy-to-use, reliable,
infinitely upgradable.

LYNX-SPECTRA CL

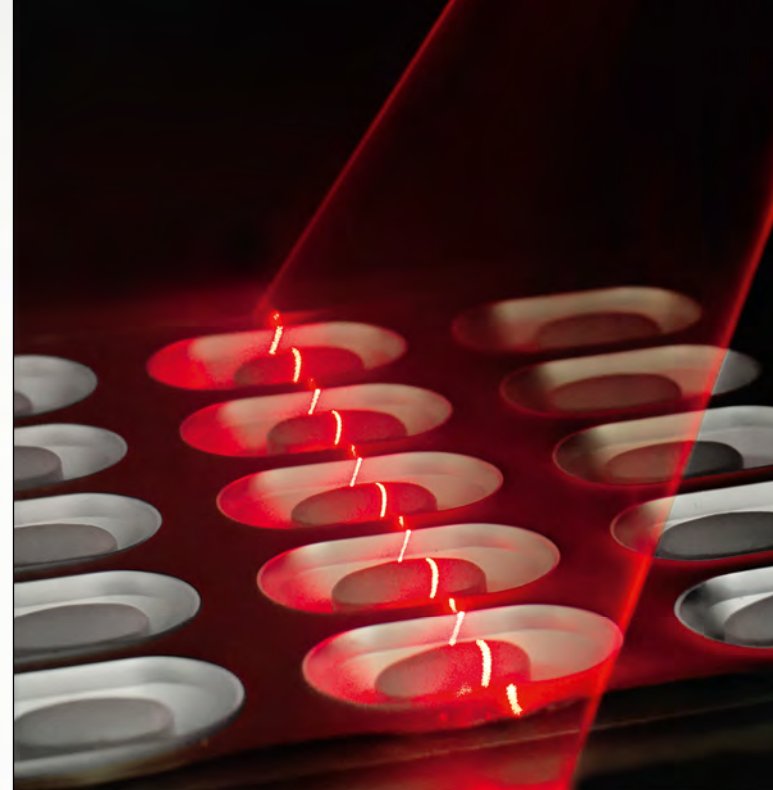
■ Colour Product Inspection

Inspection of tablets, sugar-coated tablets, soft and hard gel capsules to detect cross-contamination, size, position as well as broken products and

double fillings. Colour Inspection is the ideal solution for common inspection tasks. For use in complex tasks, soft- and hardware can be upgraded.

The Market Standard.
Our medium option
others cannot reach.





LYNX-SPECTRA HR

■ High-Res Colour Product Inspection

High Resolution Colour Product Inspection offers an extraordinarily high colour separation power due to the utilisation of 3CCD cameras. In combination with the most extensive software package, it opens up a number

of unique inspection and teach-in parameters. To increase the resolution for challenging combinations of product and packaging material, multiple cameras are cascaded. The system delivers high-end inspection.

The Expert.
Highest colour
separation with
elaborate options.

LYNX-SPECTRA 3D

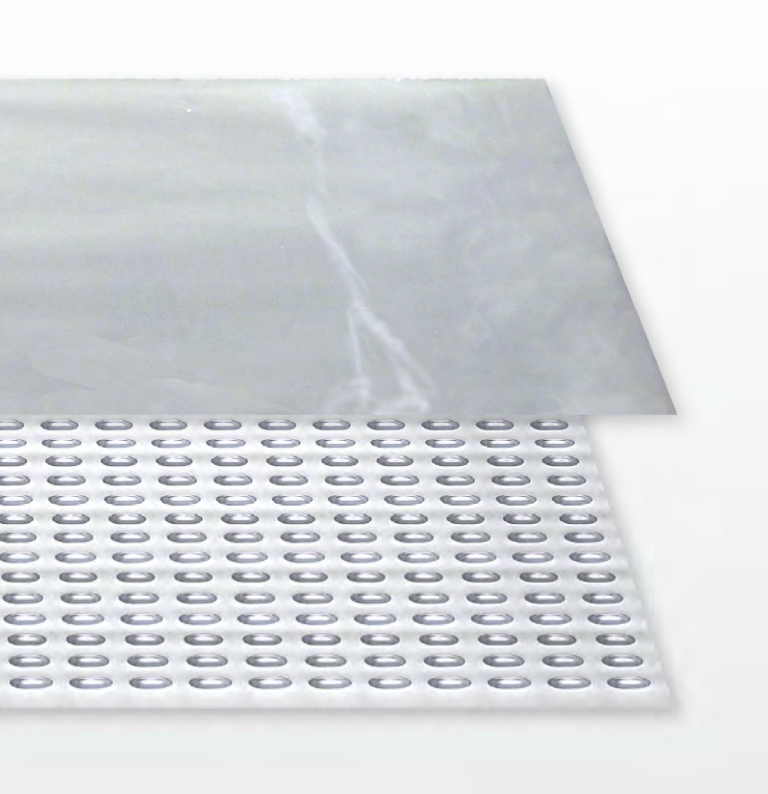
■ 3D-Product Inspection

The innovative, laser-based 3D system inspects geometry and volume of solid pharmaceutical products and packaging material. The high recognition power enables the most challenging inspection tasks.

The height profile of the object is illuminated by a laser. A high resolution 3D line camera takes a picture of the illuminated section. Then, the image is processed, digitalised and evaluated.

The Master.
Utmost security
with real 3D.



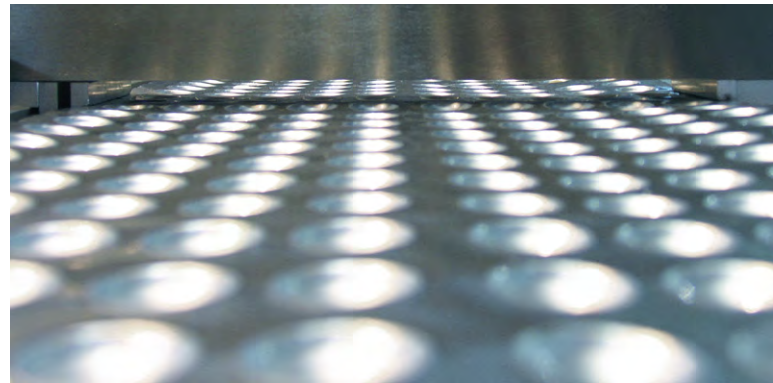
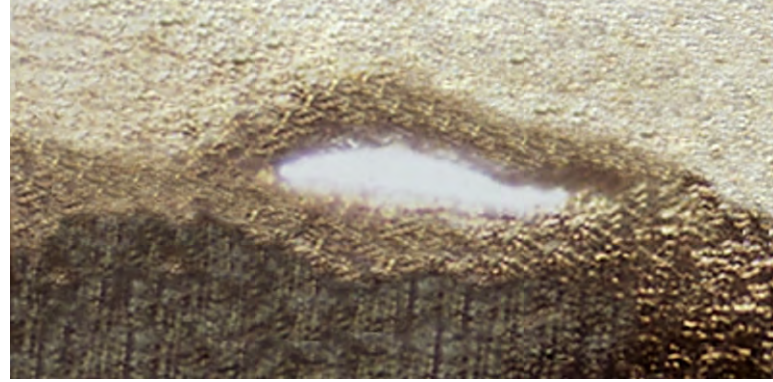


LYNX-FOCON

■ Pore Inspection

Optoelectronic detection of pinholes and microfissures on aluminium foil of up to 1000 mm width. The system is available in sensitivities of 25, 50 or

100 μm . Apart from the standard use with formed bottom foil, the inspection of lidding foil to establish its quality is increasingly more attractive.



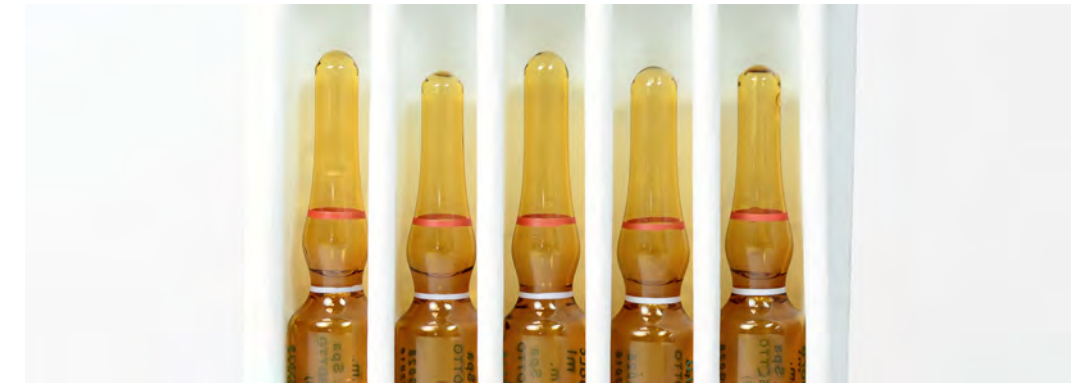
μm in m. Detection of pores in large foils.



LYNX-SIGNUM CL

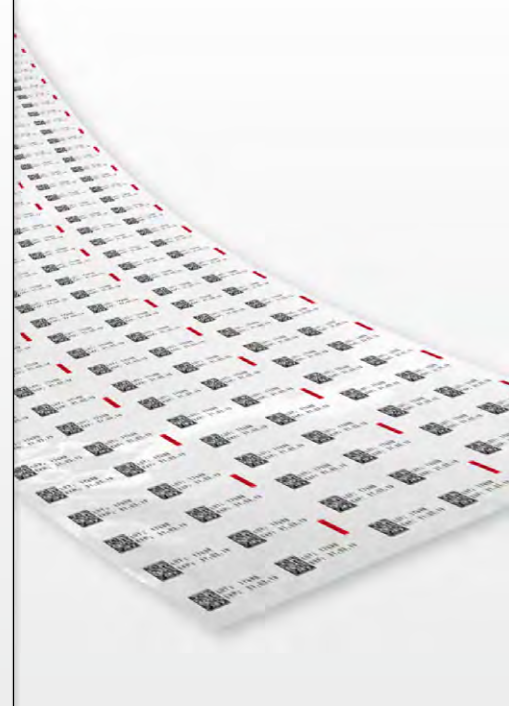
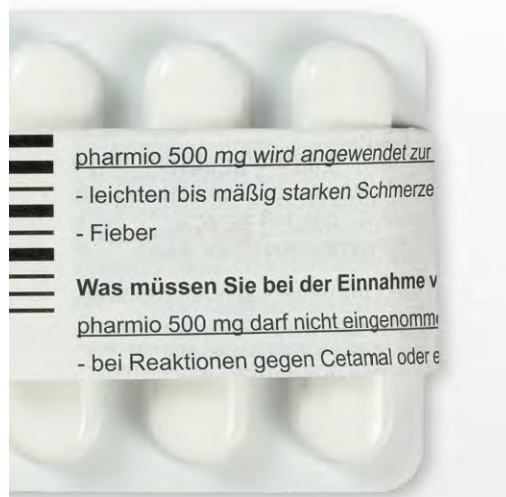
■ Ring Code Inspection

Inspection of colour codes on ampoules and vials. In a single inspection step, both ring code and labels of ampoules or the colour of the cap and labels of vials are verified. Thus,



incorrect products and cross-contamination are detected. Both single ampoules and multiple and different products in blisters and trays can be inspected.

Real colour recognition instead of smart camera for perfect ring code inspection.



LYNX-SIGNUM 1 DC / 2 DC

■ Code Inspection

Code Inspection for the verification of one- and two-dimensional codes on packaging material. The intelligent code readers can be operated via a

laptop, as part of a line management system or a designated terminal. On the LYNX interface, 12 code readers can be handled simultaneously.

More than just code reading. Visual adjustment aid and precise error analysis.

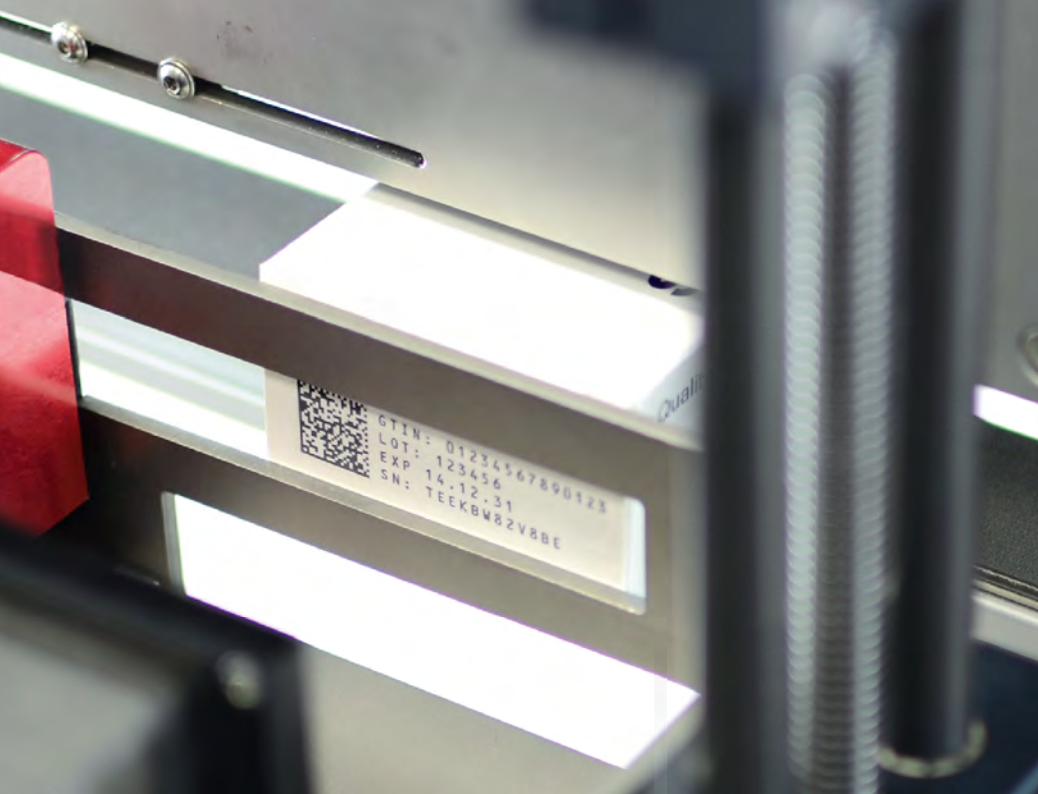
LYNX-SIGNUM HR

■ Print Inspection (OCV/OCR)

The high-resolution greyscale image processing system is used for the inspection of plain text (OCV/OCR), graphical symbols and codes on products and packaging material. The system can inspect a large number

of signs and codes simultaneously. As well as small areas, complete foil widths such as those on sachet and stickpack machines can be inspected, using multiple cameras.

Universal print inspection. Simple handling, incredible speed.



LYNX-CAPA MV, TE

■ Mark & Verify

Printing of production data on folding boxes and subsequent inspection of the readability of the print. In case of insufficient readability, the box is ejected automatically. Serialisation and aggregation optional.

■ Tamper Evidence

Folding boxes are marked and verified. Afterwards, they are sealed with tamper evident labels; a bollino is placed if necessary. The correct position of the labels is verified by a designated camera.



**Spot-on.
Printing and labelling
with pinpoint precision.**



LYNX-CAPA CI, MA

■ Case Inspection

Inspection of a number of prints, for example on bundles and shipper cases. The utilisation of a high-end CPU guarantees a speedy evaluation of data. The scanware DataHandler includes functionality of aggregation.

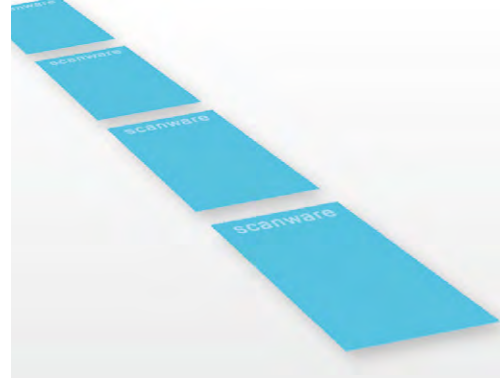
■ Manual Aggregation

Packaging units like bundles, cases and paletts are equipped with an identification label and verified by scanning. The data is then transmitted to the data base and aggregated if necessary.



**Aggregation.
Simple and swift.**





■ Specialist Applications

Seeking out our expertise, producers keep approaching us with specialist tasks. Quite often, solutions for almost impossible tasks are found. Among others, these include bulk,

powder, strips and pouches and post-seal inspection of multi-colour capsules, dialpacks, uncommon shapes and even blisters with tablets in multiple shapes.

Your task – our solution.
Innovative and reliable
specialist developments.



■ Hardware Features

The scanware system.
Long lifetime, flexible
and reliable.
Your safeguard for
like-for-like exchange
throughout the system
lifetime.



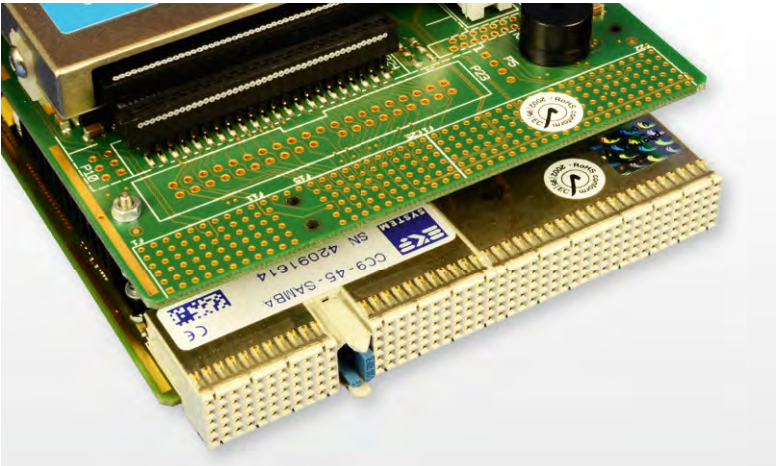
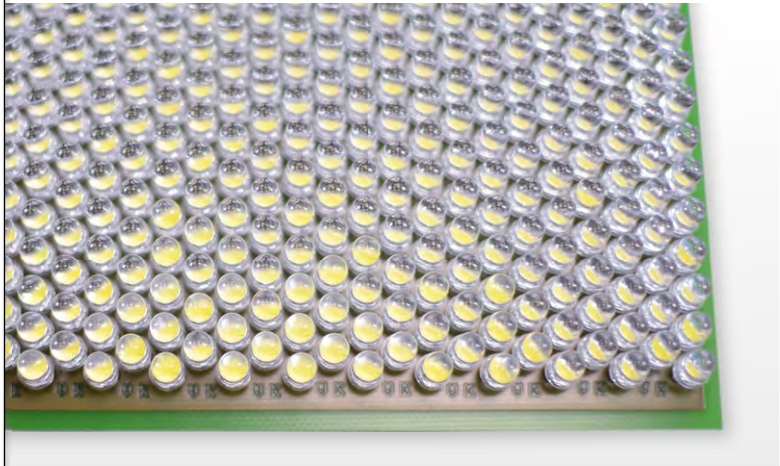
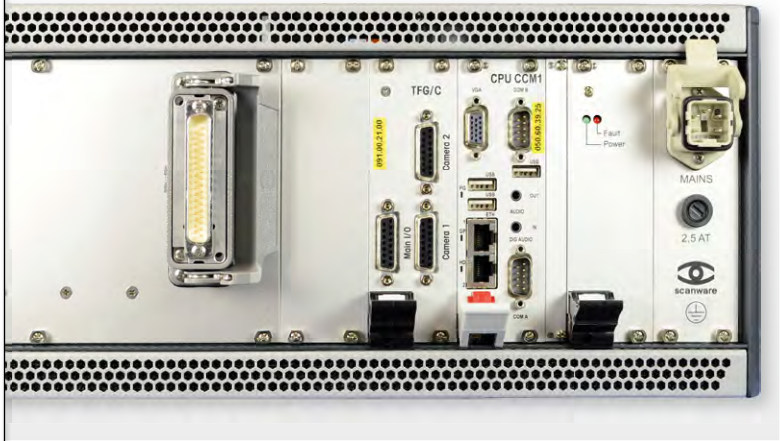
Modular Layout
All scanware systems share a modular framework to enable the flexible and project specific installation on any packaging line imaginable. The choice of processors available guarantees the long-term availability and thus like-for-like replacements. No repeat validation is necessary.

Illumination Units
W-LEDs, developed by scanware, provide ideal, homogenous optical surroundings. The lighting units can be adjusted in 16 levels to achieve the best contrast between product and packaging material. Depending on application, top light, side light and backlight in standardised illumination units are being used.

Frame grabber
The frame grabbers developed by scanware are optimised for the use with the real-time operating system QNX®. Depending on project specifics, some software tasks are implemented in hardware.

Signal Exchange
The I/O unit processes all exchanges of signals and triggers with the production machinery. When necessary, a PLC can be introduced which manages signal adaptations, error shift register functions and even the overall machine control. The PLC is fully 21 CFR Part 11 compliant – all parameter changes are registered in an audit trail.

Cameras
The use of carefully selected and tested cameras by the best manufacturers enables outstanding image processing. Depending on application, cameralink 1CCD, 3CCD or multiple cameras are used. All of them can be upgraded and are future-proof even if production requirements increase.



■ Software Features

Operating System

The use of the hard real-time operating system QNX® minimises system failure. It is often used in life-sustaining technology and aerospace environments due to the high security level. Data exchange occurs within splits of a second and no UPS is needed. Furthermore, computer viruses are highly unlikely.

Operating Menu

All scanware systems are operated in the same, uniform menu. This enables the user to handle any system intuitively. The menu structure is self-explanatory – the user needs no prior knowledge but can start working after a short introduction. The handling via the TFT screen offers high convenience for the user. The large keys on the virtual keyboard facilitate fast data input.

Automatic Teach-in

The automated teach-in speeds up the process so production can start quickly. Object positions, blister geometry as well as product colour and code position and orientation are recognised respectively. Manual teach-in is also possible.

Evaluation Statistics

Elaborate statistical options enable the producer to optimise the production and lower reject figures. Among these are lane and pocket feeding statistics, lane view, recognition of cellotape and automatic mask tracking which offsets irregularities in foil transportation.

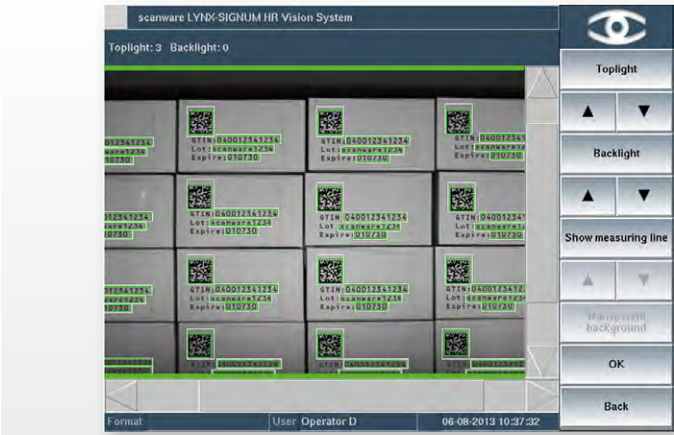
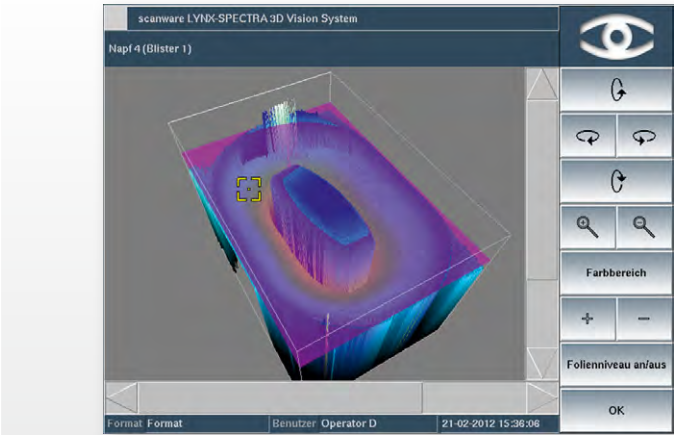
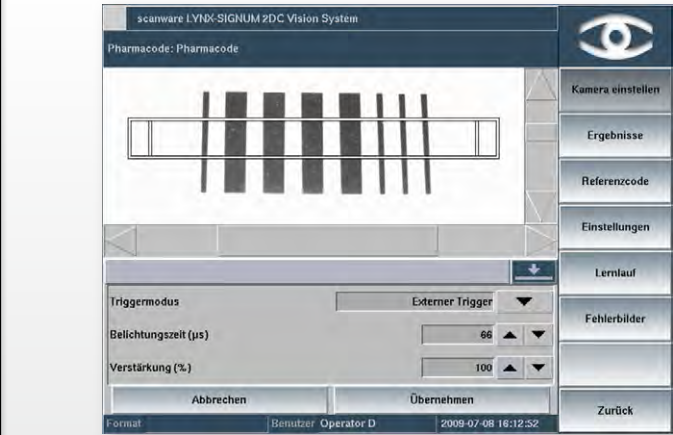
Diagnosis Deluxe

The error diagnosis views precisely which criterion is violated with every erroneous object. Moreover, using repeat teach-in, criteria like product size and colour can be retaught to optimise evaluation. Depending on the software package, error images can be saved and format tests executed.

Ideal Illumination Setting

Illumination settings are determined within the software environment. All settings can be saved for each format. Depending on project requirements, the object can be inspected at two illumination levels simultaneously.

Perfect multitasking.
All parameters run simultaneously in real-time.
The most user-friendly GUI. Uniform on all scanware systems.



scanware cares for every project throughout its lifetime, from consultation through installation, validation and training to technical support.

Consultation and Project Planning

Every inspection task poses specific challenges to our systems. Consequently, extensive consultation and detailed project planning take place to provide the ideal solution. This includes extensive project documentation.

Installation

All systems are installed by our technical service team. Extensive preparation and careful handling lead to a fast and cost-effective realisation. Due to the testing before installation, the configuration is sped up even more.

Qualification and Validation

The validation of our systems according to GAMP, GMP and 21 CFR Part 11 can be executed by our technical support team. Standardised and project-based installation and operation qualification documents are the solid foundation in the process.

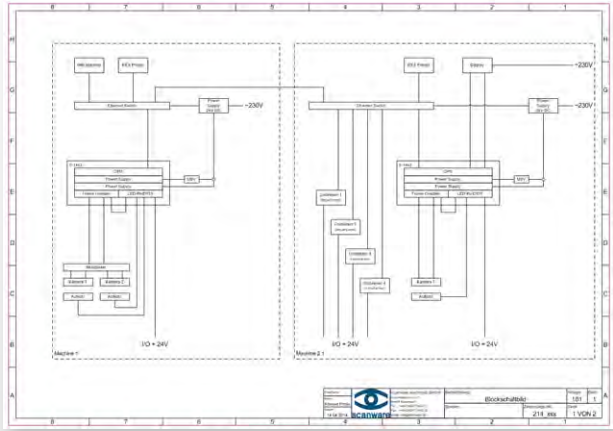
Training

The smooth interaction between human and machine is facilitated in our audience-oriented training courses on site or on customer premises. All contents are based on customer requirements.

Technical Support

After installation, our technical support is always dedicated to your needs. For all parts, a 10 year warranty is guaranteed. In emergencies, particularly line stops, scanware will find a solution within 24 hours. Identical loaner and replacement units are provided so production can continue as soon as possible.

**Our performance –
your security.
Project supervision
and customer care for
the whole lifetime.
Unique 24 hour service
and 10 years availability
on replacement parts.**



Qualification Documentation

LYNX-SPECTRA CL PN 000.000.00.00.00

Customer / Machine / Line

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Document No.: 000.00.000.00

1.2.9 System-defined User Roles and Related Access Authorisations

Verify the system-defined user roles and their related access authorisations linked with those roles.

Test Specification:

- Call **<System>** → **<Users>** → **<Role management>** to display the list of system-defined roles
- Call each of the roles **<Change>** displayed in the list one after another and verify whether the access authorisations marked with (+) in the list below are activated with **Yes**.
- Check acceptance criteria
- Leave **Roles** with **<Done>** and return to main menu with **<Menu>**.

Acceptance Criteria:

- The access authorisations of the individual system-defined user roles are in accordance with those specified and marked in the list below.

Access Authorisations for Menu/Functions	Guest User	User Group 1	User Group 2	User Group 3	Documentation	System admin.
Change format parameters			+	+		+
Teach-in			+	+		+
Format parameter limits			+	+		+
Load format	+	+	+	+		+
Save format			+	+		+
Backup data			+	+	+	+
Restore data			+	+	+	+
Delete data			+	+	+	+
Display reference image	+	+	+	+	+	+
Current production report	+	+	+	+	+	+
Reset statistic			+	+		+



Quality is visible.



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