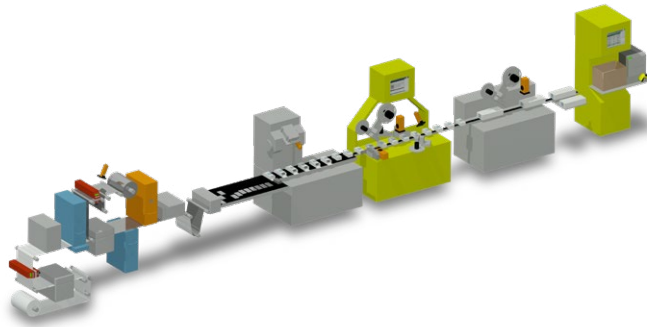


SYSTEM INFORMATION



LYNX-IMPERA Line Management

■ Description

LYNX-IMPERA is an encompassing software ideal for packaging lines. It monitors processes and controls all devices involved in these processes, e.g. printers, hand scanners and inspection systems. Visualization, operation and control of the components take place on the scanware GUI. Operation is easy and clear due to close alignment of system functions and processes under production conditions in practice. All settings and inputs are made on a touch screen, via selection buttons, on which the user is escorted by an interactive dialogue through the menu.

Further LYNX-IMPERA undertakes all data transfers between the manufacturer's data base and the devices. In detail it imports data from the producer's data base, processes it and re-transfers it after completion. This makes the system ideal to fulfill serialization requirements which are mandatory for European pharma companies as well as contract packagers as defined in the Pharma Directive EU/2011/62 ("Falsified Medicines Directive").

With LYNX-IMPERA, complex and multi-level data connections can be made in order to provide information to ensure traceability of all steps in the process.

The application software supports common international code standards and is modularly built so that the customer can configure the software according to his project-specific requirements and upgrade it if desired.

Communication occurs via VDMA-XML protocol, XML and CSV files.

■ Area of Application

- Line Management
- Machine and Device Control on Packaging Lines
- Serialisation, Aggregation and Deaggregation
- Mark & Verify of Folding-Boxes, Displays and Shipping Boxes

■ Highlights

- Modular and upgradable
- Functionality can be reduced to fundamental modules
- Individually configurably user interface
- Compatible with all scanware products
- Easy operation over scanware's GUI client
- Combination of decentral real-time data communication and centralized management of batch data
- Supports common code standards
- Job-related and intuitive graphical interface
- Fulfilment of customer-specific requirement profiles
- Flexible level 3 connection

Module

CORE SYSTEM

Broker (BROKER)

The broker serves as a central communication interface between the modules thus ensuring a trouble-free data exchange. In addition, it manages process information in real-time which can be subscribed by components. This ensures permanent information about states.

Process Handler (PROM)

The process handler takes over the decentralised communication and data handling in real-time. This allows components operating in groups to exchange data without affecting the network and the central event manager.

Database (DABA)

The database is used to manage and to store all system and runtime data on hard disks.

Real-time Interface (RETI)

The real-time interface coordinates data exchange between the modules and the (SQL) database to ensure real-time processing.

INTERACTION/CONFIGURATION

Variable Data Manager (VADA)

The variable data manager handles data records which include variable print data such as batch name, expiry date or serial numbers. Further country formats (date formats) and additional captions (prefixes) are managed, meaning the variable data manager is used to configure labels and their associated specific data.

Report Server (RPTS)

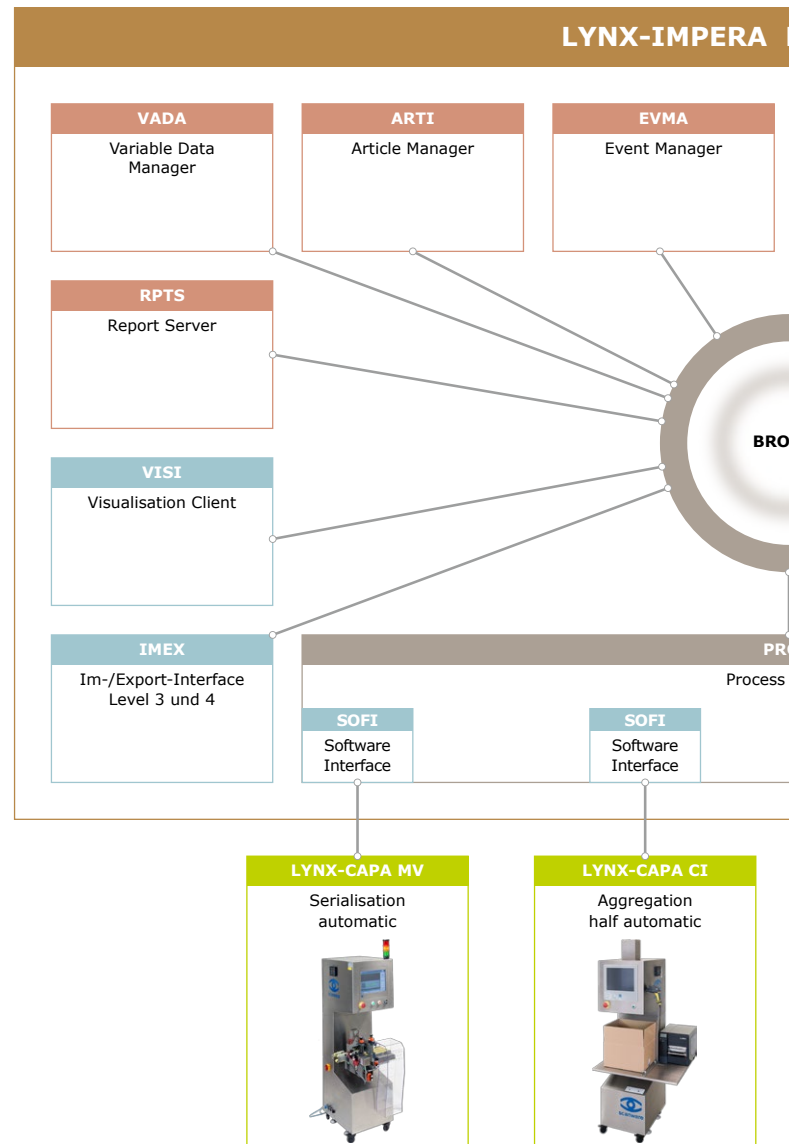
This module is used to generate and display various reports, such as statistics, communication logs and an event log (audit trail).

Article Manager (ARTI)

The article data is managed by the article manager. The article contains e.g. information about packaging materials, packaging schemes or print layouts. Each batch is assigned to exactly one article.

Event Manager (EVMA)

The event manager is the real-time state-machine which controls and monitors the serialization and aggregation processes. Here, sequences are combined with article and print data and forwarded to corresponding components. User-oriented process data is visualised to the operator.



Batch Management Module (BAMM)

The batch management module is used to manage batches by creating, releasing, editing and deleting them. Furthermore, batch quantities can be configured. Thus, the module maps all batch states.

APPLICATION MODULE

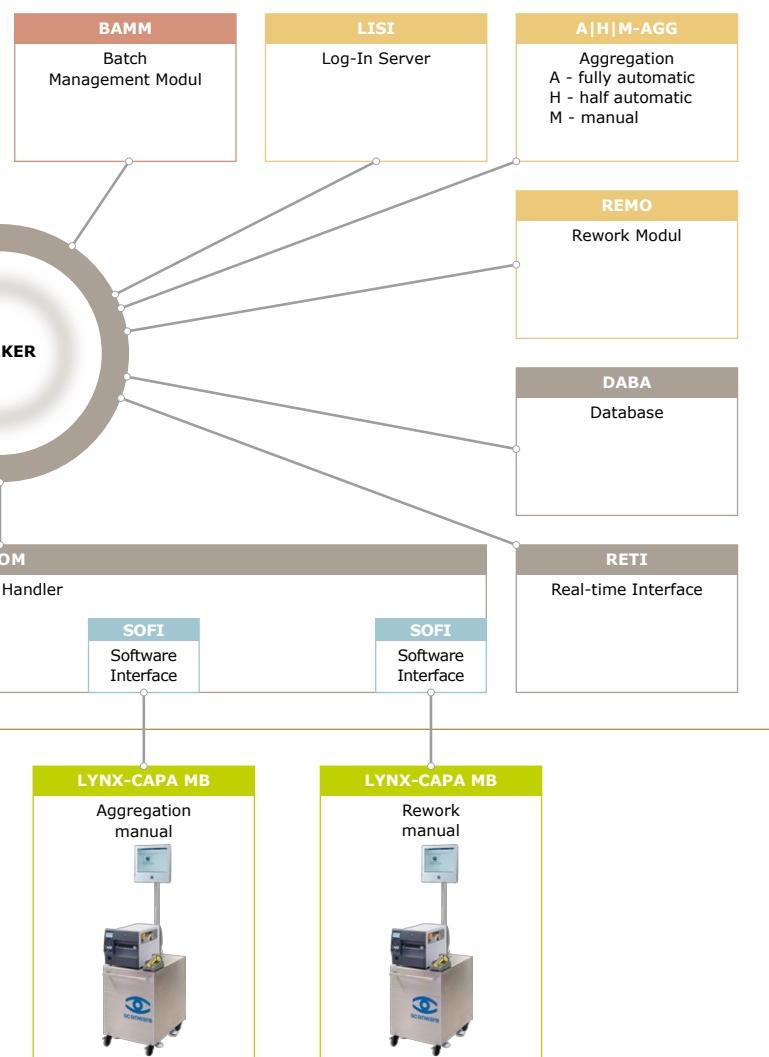
Log-In Server (LISI)

The log-in server provides a central user management to all scanware components on the line. With this all users and passwords can be managed centrally.

The module decodes the user command and passes it to the respective module after checking the access authorisation level of the user. In return, module responses are passed to the user interface. A connection to an Active Directory can also be configured.



Line Management



Aggregation (A|H|M-AGG)

The Aggregation serves the customer-oriented mapping of the aggregation procedure as well as the product-related visual support of the packaging process.

Statistical reports are presented in a user-optimized manner.

The aggregation can take place at different points of the packaging process. Various modules are available for this purpose:

AAGG – Fully automatic Aggregation (e.g. Casepacker)

- AAGG F – for the aggregation of primary packaging (e.g. blisters) into folding boxes
- AAGG B – for the aggregation of folding boxes in bundles
- AAGG S – for the aggregation of shipper boxes
- AAGG P – for the aggregation of shipper boxes on a pallet

HAGG – Half-automated aggregation for synchronous capture of all folding boxes in a bundle (HAGG B) or a shipping box (HAGG S) (e.g. LYNX-CAPA CI)

- HAGG B – for the aggregation of folding boxes in bundles
- HAGG S –for the aggregation of shipper boxes

MAGG – Manual capture for aggregation of various packaging units (e.g. LYNX-CAPA MB)

- MAGG B – for the aggregation of folding boxes in bundles
- MAGG S – for the aggregation in shipper boxes
- MAGG P – for the aggregation of shipper boxes on a pallet

Rework Modul (REMO)

The rework module is adapted to the given work processes in a customer-oriented manner. This allows the analysis and modification of data-related packing conditions. Deaggregation and sampling are part of the functions as well as the possibility to return products to the production process. An intuitively operable graphical interface is provided to assist the operator.

INTERFACE

Visualisation Client (VISI)

The visualisation client is provided as a software module for installation on a wide range of operating systems. A customizable configuration allows an intuitive operation for appropriate workstations. The module can be installed on a control terminal on the line or as an office variant.

Available versions:

- Windows 7® Visualisation Client
- QNX® Visualisation Client

Im-/Export Interface (IMEX)

The import / export interface is the interface to a higher-level system. Two basic methods are provided:

- File-based data exchange
- Port-based communication

Various file formats (csv, XML, etc.) can be configured customer-oriented. Standardised protocols (VDMAXML_P, EPCIS) are available for port-oriented communication.

Software Interface (SOFI)

The Software Interfaces are the interfaces to the individual devices used on the packaging line. These can be scanware systems or systems from other providers.



■ Technical Data

Implemented Coding Standards	all int. standards like: GS1, IFA, CIP 13, ITS, Bollino, IPZS, Royal Vignette Belge, Lot- and Date-Control
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Interfaces / Communication	VDMA-XML-protocoll, XML-files, CSV-Data
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LYNX-IMPERA system hardware

Housing Construction	19", 42 TE, 4 HE, IP20
Bussystem	CompactPCI Serial
CPU	Intel Core-i7, 2,1 GHz
RAM	8 GB
UPS	SITOP UPS 500S
Hard drive	256 GB SSD
Operating system	QNX®
I/O Modul	Wago TCP Modbus DIO16
Nominal Voltage	24 VDC

LYNX-IMPERA RAID extension

Housing Construction	19", 42 TE, 4 HE, IP20
Bussystem	Compact PCI Serial
RAID HOST Adapter	SX2 CPCI-Serial
RAID TARGET Adapter	SXS-STRING CPCI-Serial
Hard disk carrier	4× SATA SSD
Hard drive	4× SATA SSD, 256 GB SSD
RAID System	RAID 10

■ The scanware Benefits

- Modular built for a multitude of installation options
- Real-time operating system QNX® for security and speed
- Uniform graphical interface and easy-to-follow menu structure
- Fully 21 CFR Part 11 compliant
- Hard- and software are expandable and upgradable
- Wear-free, electronically controllable scanware W-LED illumination
- Easy to install on all common packaging machinery
- Communication with machine via a VDMA-XML protocol
- Simultaneous use of numerous inspection parameters
- Variety of statistical tools
- Development of special tasks and requirements on your request
- Availability of all parts guaranteed for 10 years
- Service offering solutions and support within 24 hours

LYNX-IMPERA	Line Management
LYNX-SPECTRA	Product Inspection
LYNX-SIGNUM	Code Inspection
LYNX-FOCON	Pore Detection
LYNX-CAPA	Track & Trace Solutions

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