

tracker_

LINE | MACHINE LEVEL TRACK AND TRACE SOLUTION



SEAVISION

Track and Trace

Tracker is the line | machine level solution for Track and Trace.

Developed by SEA Vision with proprietary algorithms, Tracker is the pharmaceutical serialization solution capable of performing runtime checks of serialized codes printed on serialized drug packages, and perform parent-child aggregation operations.

- Extremely reliable and accurate
- Performs operations in real-time
- Ensures end user and supply chain safety
- Protects brands
- Compliant with GS1 standard



Fighting counterfeiting and complying with serialization directives with tracker

Concerning **serialization**, the software manages the in-line printing and inspection of variable data and serialized codes on primary or secondary packages. The correct units that pass the inspection are then commissioned, since Tracker communicates with yutrace (SEA Vision level 3 software) for serial numbers provisioning and posting operations.

Furthermore, the serialization system Tracker manages all the industrial devices installed on case packer and palletizers machines for the execution of **aggregation operations** between logistic units (primary, secondary, tertiary packages aggregation).

At the end of the serialization and aggregation processes, the communication with the level 3 system allows the subsequent notification to the level 4 platforms and Repositories.

Tracker supports any type of aggregation and serialization: PoDA, PoDA+ or Track and Trace, in accordance with the relevant regulators in all markets worldwide. No matter what it is the automation level of the machine, the communication capability of Tracker with the PLCs of the machines through the exchange of digital I/O signals, allows a smooth and automatized rejection management.



Controls

Control every detail of serialization

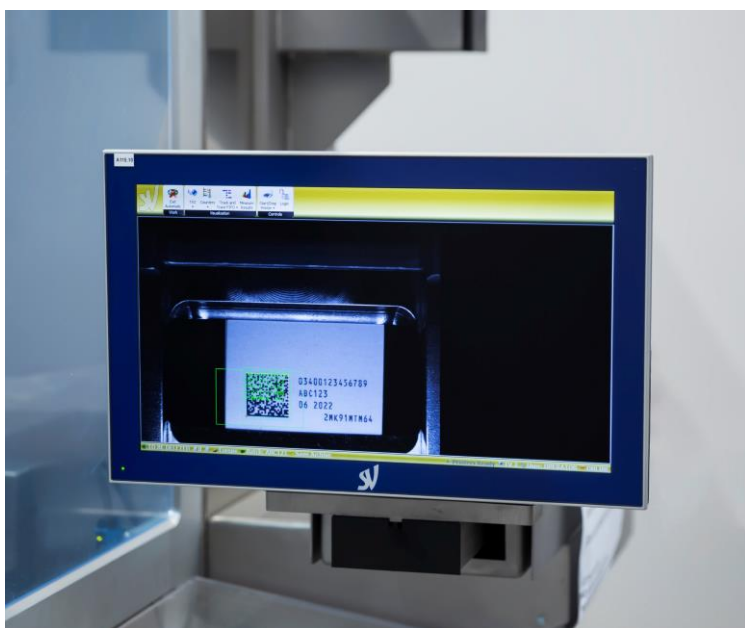
Tracker manages every detail of serialization and aggregation, acquires serial numbers from level 3 software and manages industrial printers in real-time for printing variable data and codes on each individual product.

The software learns, recognizes, and performs optical character verification (OCV) and optical character recognition (OCR) controls on every type of character to inspect variable data. Concerning codes, the serialization system not only controls their authenticity, but their print quality too – by carrying out the ANSI grading control in real-time.

The logic and status of the aggregation and serialization operations are all displayed on the HMI screen, so that the operator always has everything under control.

The software is natively integrated into yutrace, the centralized Level 3 solution, part of yudoo software suite and manages manual wireless scanners to perform in-line reworking operations, saving all the production data at site level.

Safe and reliable, this renowned serialization and aggregation system boasts many installations around the world on all the models of print and check, case packer and palletizer machines produced by all OEMs.



Software

Software features

Tracker makes use of industrial printers, cameras, and scanners to print and check the variable data and codes on 100% of the products. An accurate inspection is granted, in just milliseconds. The acquired images are processed by performing complex search operation, measures and comparisons with reference models and, if one of them is outside the tolerance range, the system automatically send a signal to the machine, allowing the rejection of the product.

Such rapid elaboration times are possible thanks to Tracker in-house developed SIMD instructions, and smart proprietary algorithms (designed upon the concepts of spatial and temporal parallelism) programmed to make the maximum usage of all the threads available in the latest generation CPUs.

Since threads divide the core of a CPU into virtual multiple cores, the usage of all threads available allow a computer processor to perform multiple tasks at the same time, and faster.

Thus, using different parallel threads, the algorithms of Tracker improve theirselves software computing power; reducing the images processing times while performing more controls, guaranteeing at the same time the best result in terms of inspection accuracy and safety.

The different Trackers installed on the lines are in constant communication with each other and with the machines, avoiding the advancement of products discarded and wrongly reinserted on the line.

The system is **expandable** and additional controls can also be integrated later.



Hardware

Hardware features

Excellent software requires proper hardware. SEA Vision uses only **latest generation** components, such as **industrial computers** with **multicore, multithreaded** processors that are fully utilized by **proprietary algorithms** and instructions

Optics and light unit components are specifically designed and assembled for an optimal inspection and perfect integration with the machines mechanical design. With an optimized lighting management, the images acquisition speed is fast and accurate.

All displays are touch-screen with an optimized graphic interface that increases usability and interaction.

All serialization systems are equipped with **UPS** and **backup hard disk** for the safe and correct saving of data and the correct shutdown of the PC in case of power outages.



Software libraries

Endless capabilities

The following software libraries represent the foundation of Tracker software features.



Track&Trace features:

- Serialization
- Aggregation
- Real time operations
- Real time printer management
- Remote Batch connector (Start, Stop, Hold, etc...)
- In Batch Rework operation
- Adaptable configuration for manufacturing process



Automation features:

- I/O board for the exchange of signals with the machine's PLCs
- Electronic oscilloscope
- Internal soft PLC
- Shift register



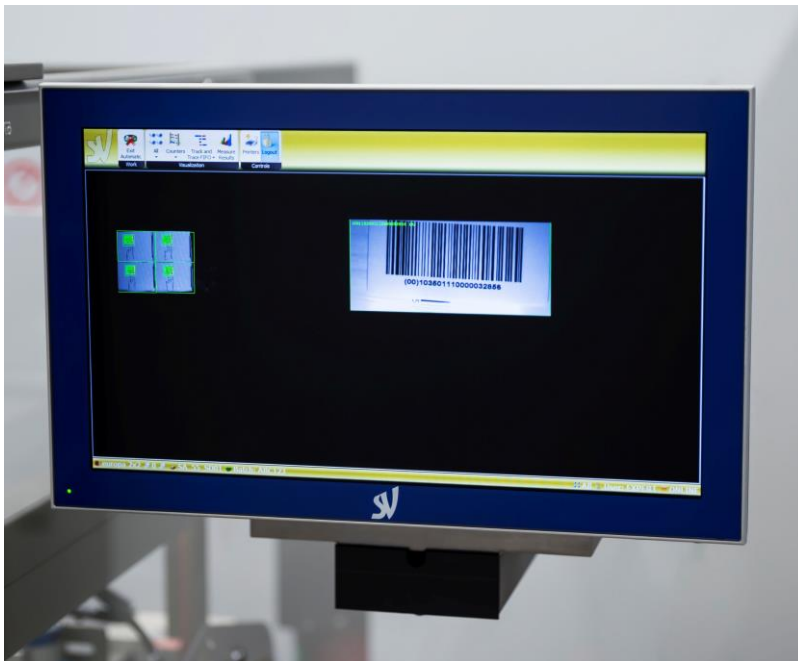
Vision inspection features:

- OCV-OCR check
- Linear, 2D Codes, QR
- ISO 15415-6 ANSI Grade



Compliance features:

- User management
- FDA CFR 21 part11 compliant
- Data Integrity functionality
- Data report



The software optimized for touch display makes the use simple and intuitive.

Perfect machine integration, result of a wide experience.



Vignette control on print and check machine



UV code control on case packer



Variable data and code control on labeler

A perfectly integrated solution

SEA Vision's expertise in integration is built on decades of experience working alongside machine manufacturers to satisfy the needs of pharmaceutical customers worldwide. There are **over 1500 serialization lines** in the world that use SEA Vision systems.

Such experience guarantees correct machine integration, accurate signal exchange management, and integrated automation and rejection logic.

Tracker can be integrated on machines with different automation levels, from entirely automated or semi-automated to modules with a low automation level.

The graphical oscilloscope allows the observation of signal patterns and keeps them under control, facilitating the diagnostic operation.

The entire process is handled efficiently, from the control execution to the rejection of defective products.

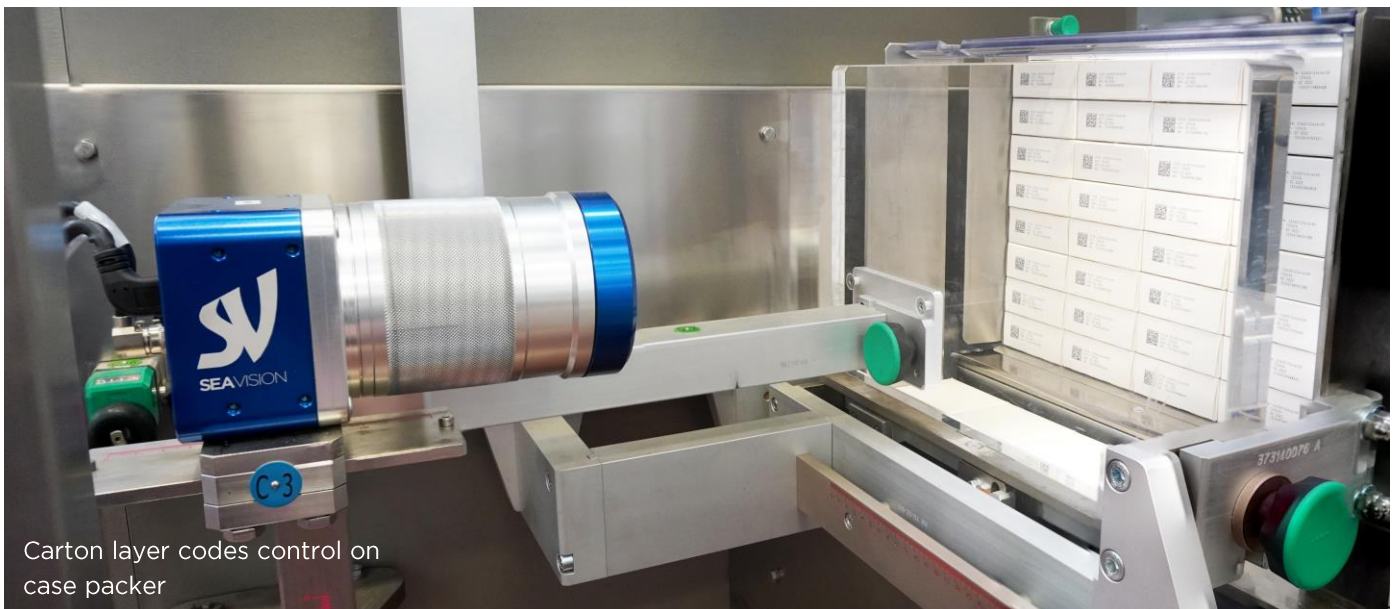


Case code control on case packer - pallettizer



Bundle label control on bundle machine

Pharma specific
 Specifically designed for the **pharmaceutical field**, the system is **entirely compliant** to all industry regulations. User access is regulated in accordance with the FDA regulation 21 CFR part 11 and annex 11. With Active Directory, only authenticated and authorized users can log in. All events are registered in an audit trail file. The system has features that ensure data integrity. Software development and validation follows Gamp 5 regulation.



Carton layer codes control on case packer



Fully integrated with yudoo

Tracker is natively integrated with **Yudoo, the 4.0 pharmaceutical software suite** for the full management of automation processes, digital quality, data analysis and for Track&Trace. A digital hub that is everywhere accessible through a secure-access web interface or dedicated devices.





Via Treves, 9 E Pavia (Italy)
Ph. +39 0382 529576



Connect with us, follow our social channels to get the latest news and event updates!
www.seavision-group.com