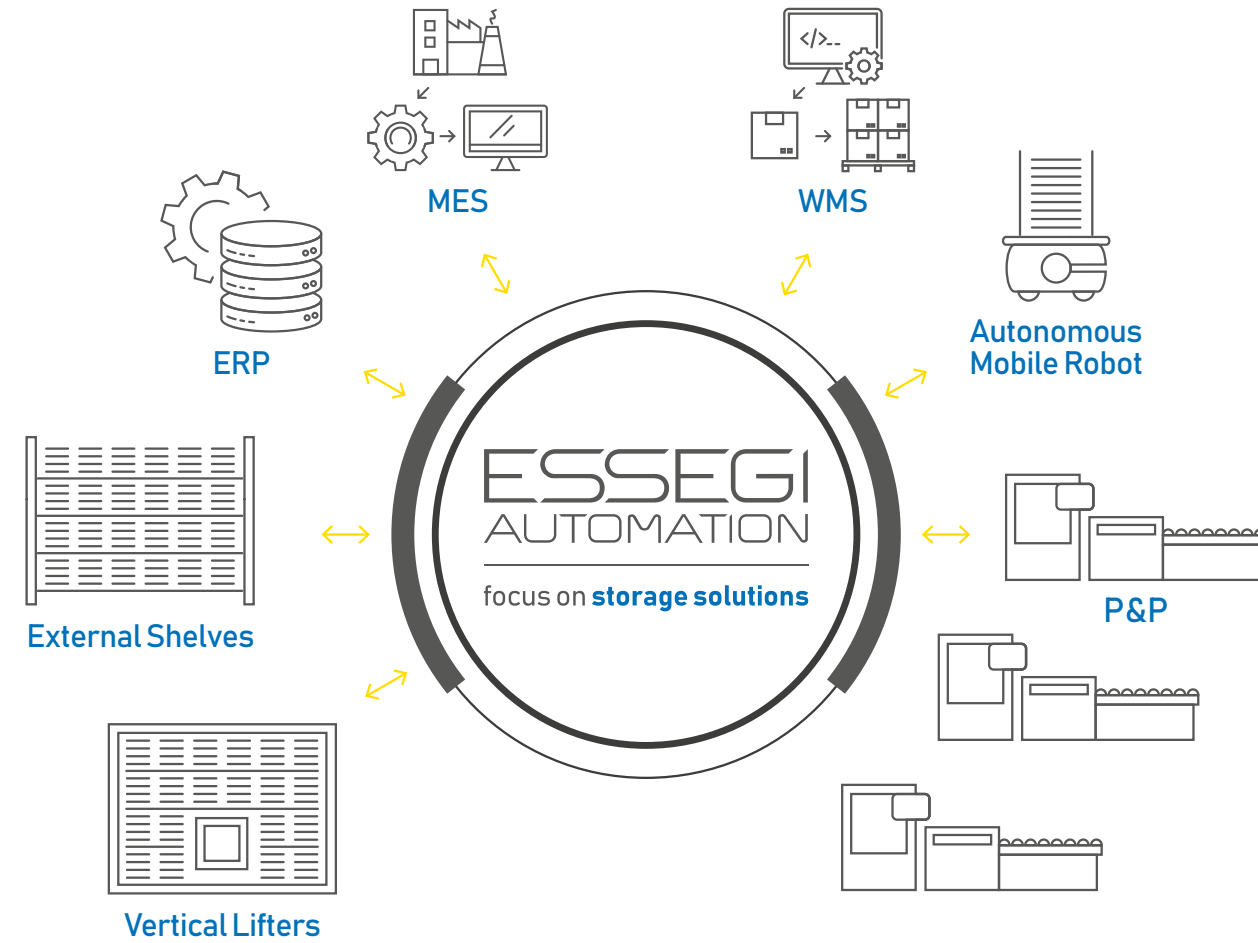


System integration

Open and ready for integration



With the advent of Industry 4.0 and, in particular, the strong evolution of software for industrial automation, integration between all company management systems has become a strategic imperative. Essegi Automation's ISM Server Software has been developed with the aim of **advanced integration** of storage management products **with all the major management and automation systems already present in the company: ERP, WMS, Autonomous Mobile Robot, Pick & Place.**



Integration with all company software

Essegi Automation offers **various possibilities for integration** with corporate software systems in two development modes:

- ✓ Through a package of web service functions (API) that allows the customer to independently manage the integration structure with the company's application software
- ✓ By partnering with the company and a team of specialists to define and implement a custom-made integration project

Integration benefits

- ✓ Increased efficiency through faster processes and less duplication
- ✓ Cost reduction and increased productivity
- ✓ Centralized information to ensure data quality and ease of access
- ✓ Robust IT infrastructure

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focus on **storage solutions**

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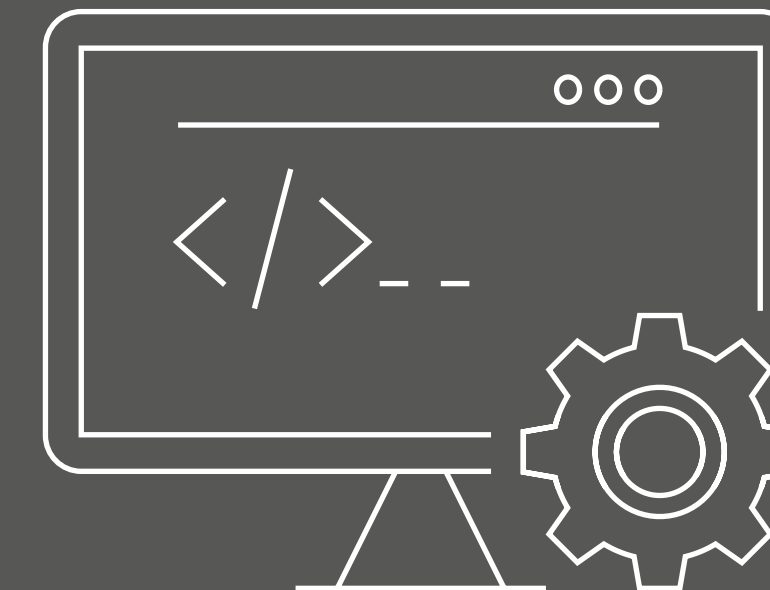
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ISM Server Software

From automation to integration



ISM SERVER SOFTWARE

The ISM Server software is the **core management tool for all Essegi Automation** products: the intelligent towers of the ISM Ultraflex 3600 series, the ISM 500 series Pick to Light cabinet, and the Incoming Material Station.

In addition to fulfilling the primary function of **tower control** with **inventory monitoring** and **component traceability**, the ISM Server software has evolved to become the central hub for **advanced integration with all other software systems** in the company.

Key functions

- ✓ Real-time traceability of materials and operations
- ✓ Constant monitoring of humidity and temperature values
- ✓ Management of SMT/THT component inventory (PN and UID)
- ✓ Real-time updates on the status and quantity of each unique ID
- ✓ Work order planning and material selection
- ✓ Analysis and distribution of material pick lists
- ✓ Line stoppage prediction
- ✓ Alternative part selection

Key advantages

- ✓ Material availability at the right place and time without delays
- ✓ Material traceability and expiration management
- ✓ Up-to-date and comprehensive inventory of all available material information
- ✓ Centralized information in a single reference tool



A The ISM Server software is a comprehensive **management tool** for all Essegi Automation products and is the **centerpiece of integration** with corporate software systems.

ISM Server Software is equipped with **MODULES**

B **MSL Management:** regulates internal RH within Essegi towers. The module provides complete monitoring, traceability, and reporting of values for individual components.

C **Connections with Pick & Place:** enables bidirectional communication for product creation, quantity updates, and replacement materials requested by the line.

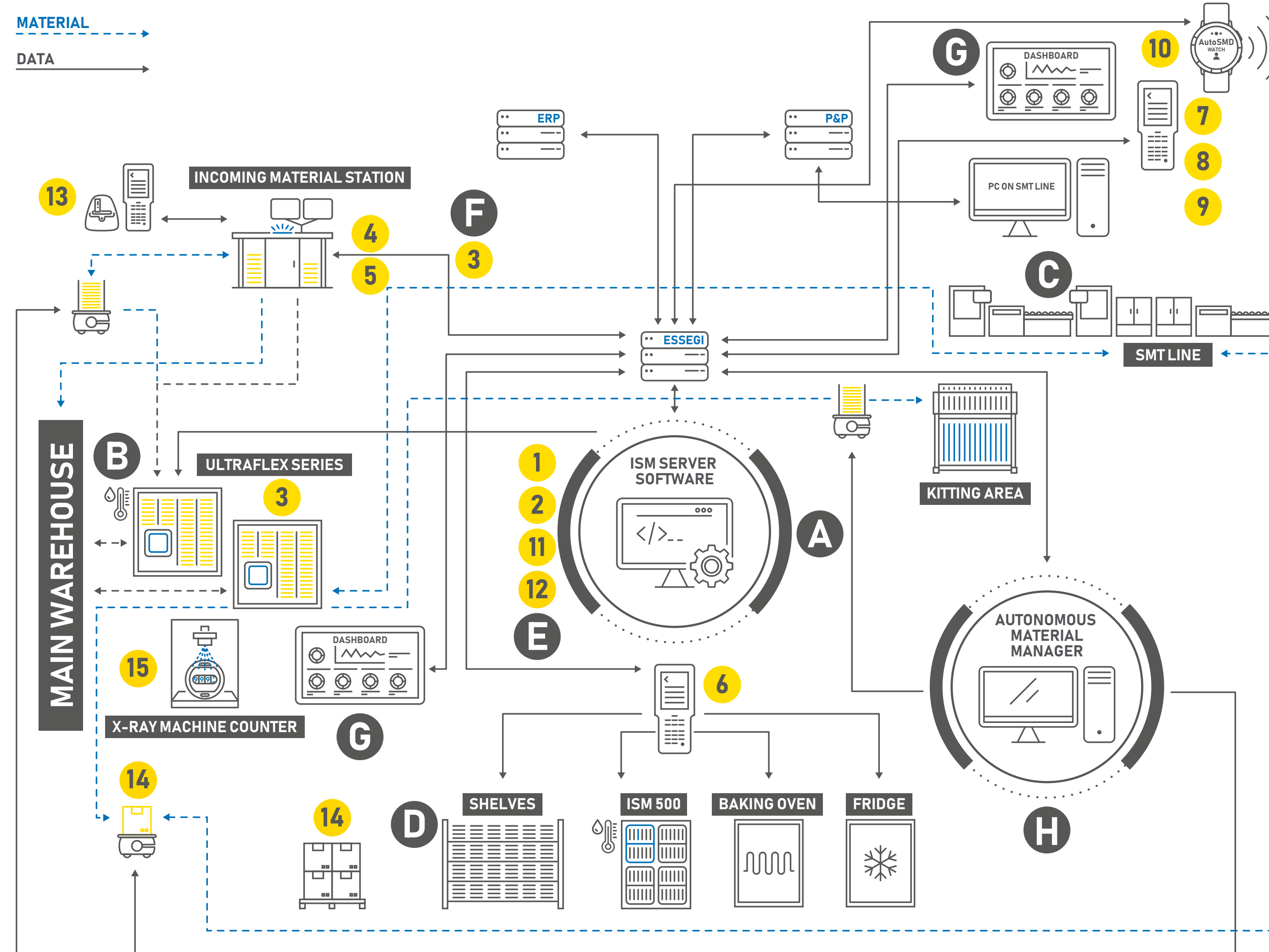
D **Dynamic Warehouse Management:** allows control, dynamic management, and tracking of materials stored on shelves or other externally labeled positions with unique codes, and the creation of areas for specific functions (e.g., Baking, Dry areas, Refrigeration).

E **Buffer/Supermarket Management:** the efficiency of storage space by ensuring materials needed for scheduled production are always available in the Buffer/Supermarket area. Full reporting of status and operator tools to effectively manage buffer materials.

F **Advanced Material Receiving:** automates the receiving process and combines with the UID labeling to save time and error-proof the process. Interface with ERP significantly reduces the steps in the process and provides a document archive and full traceability.

G **Dashboards:** provide real-time information to operators on the system's status and performance with a clear and intuitive interface.

H **Automated Material Handling:** autonomous delivery of materials to/from the storage towers and throughout the factory using Autonomous Mobile Robots (AMRs). User definable delivery stations in locations such as receiving, areas, and production lines.



Options

- 1** **Work Order Control:** each item can be configured and exclusively designated for a specific customer/supplier/project. The system selects only items assigned to the same "supplier".
- 2** **Alternative Part Management:** the software can identify and manage multiple alternative components to meet production needs, including using only specific manufacturer part numbers for a given internal part number.
- 3** **Traceability with Photo Archive:** the software records and archives images of reels scanned by the Incoming Material Station or inserted into an Ultraflex series tower, ensuring complete traceability of each individual reel.
- 4** **Approved Vendor List Management:** the software automatically checks the manufacturer's part number against an approved vendor list, assigns the correct internal part number, and prevents the initialization of un-approved materials.
- 5** **Purchase Order Matching:** the software automatically checks each item received against open purchase orders and automates the receipt process using an interface with ERP software.
- 6** **Location Tracking with mobile devices:** through barcode scanning, the software allows the location of materials in the intelligent ISM 500 dynamic warehouse and in other externally labeled positions, with unique codes. Audible feedback and on-screen notifications provide positive or negative feedback to the operator, preventing human error.
- 7** **Material Picking with mobile devices:** this function allows the extraction of the next material required during production by simply scanning the previous material. This reduces the chance of lost materials and minimizes exposure time for moisture sensitive materials.
- 8** **Feeder Setup Verification:** mobile device displays guidance along with notifications and sounds to guide the operator in verifying the correct feeder setup.
- 9** **Feeder Setup Display:** the software displays each material's assigned feeder location to eliminate paper setup sheets and error proof the setup process.
- 10** **Smart Watch App:** an app with a simple "swipe and tap" interface on Smart Watches to view the status of every ISM machine in the system and have full control over extraction queues through push notifications from the server.
- 11** **Solder Paste Management:** the software provides useful information on the solder paste's status to operators preparing materials for production.
- 12** **Baking Process Management:** manages the backing process to automatically regenerate expired moisture sensitive parts.
- 13** **Mobile Autoincoming and Label Printing:** portable hardware and software to scan manufacturer's labels and generate internal unique ID labels.
- 14** **Box, Pallet and Case Traceability with CASE BOX Functionality:** a feature that allows managing the traceability of the entire contents of boxes, pallets, and trays outside of Essegi Automation warehouses with a single unique ID code. It eliminates the need to scan individual pieces and allows the dissociation of some elements within the container if necessary.
- 15** **Connection with X-ray Inspection Systems:** full automation of x-ray component counting. Essegi Automation towers automatically move reels into x-ray component counters according to a used defined schedule and return them to the tower after counting. Virtually eliminates the need for human interaction and obsoletes cycle counting.