

ISM500



Production
Empowerment



Time saving



Space saving



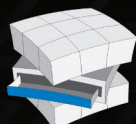
RH Control



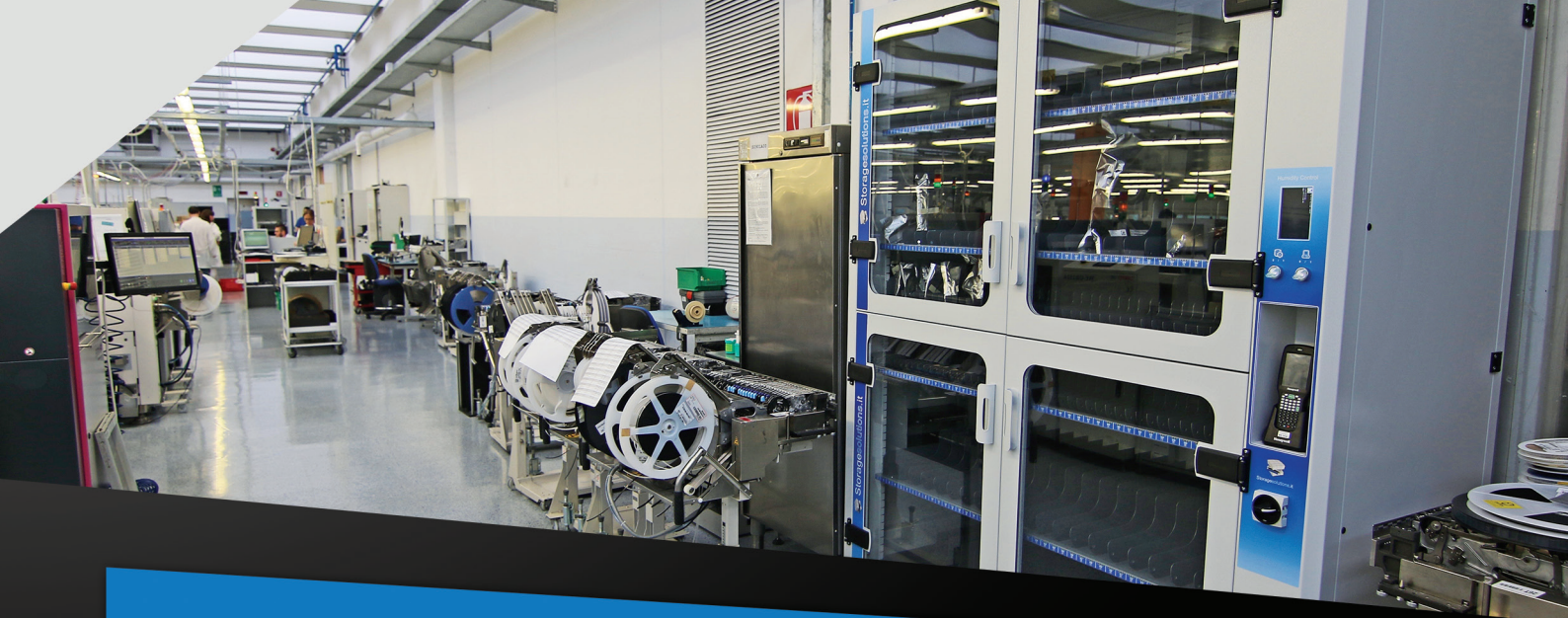
MSD Traceability



ROI



Storage**solutions.it**[®]
division



Production
Empowerment

*Increase P&P lines production
P&P set up preparation time saving*



Time saving

Operators time saving



Space saving

Space saving



Avoid human mistake



RH Control

MSD controlled environment (RH<5%)



MSD Traceability

Complete stock control



ROI

Money Saving (fast R.O.I.)

ISM 500

The ISM500 intelligent dynamic warehouse has been developed to satisfy the storage needs of the most varied types of components.

With the possibility of configuring up to 640 different positions, in the ISM500 intelligent static warehouse it is possible to insert 7 /13/15" reels, JEDEC trays, SMT and PTH tubes, screen-printing frames and foils, printed circuits, PTH components, etc...

Equipped with three luminous LED signals per position, the dynamic warehouse will indicate the position of the components to be extracted and, by reading the code with a PDA scanner, will prevent the incorrect removal of components. For the inserting phase the operator will only have to read the code to be inserted and the system will suggest the position. However, the operator will still have the possibility of inserting the component in a different position of his own choice. This offers a dynamic management of the positions in order to exploit the space available so as to reach maximum capacity. The ISM500 intelligent static warehouse is configured with the humidity control module*. It is thus possible to control and monitor humidity, to maintain an internal environment with a humidity of less than 5%.

Characteristics of the shelves

Up to 640 configurable positions (minimum position dimensions: 34 x 620 x 130 mm l width x depth x height) 3 LEDs per position to manage up to three extractions at the same time. It is possible to manage multiple items in each position:

- example ISM500 10 SHELVES: total capacity 3600 reels 7" H=8mm.
- example ISM500 16 SHELVES: total capacity 60.000 tubes.



VERSION	Positions for 7" reels, tubes, JEDEC trays, etc	Positions for 7/13/15" reels, tubes, JEDEC trays, etc	positions for tubes, etc
ISM 500 - Standard	80	160	
ISM 500 - 10 Shelves	400		
ISM 500 - 16 Shelves			640

TECHINCAL DATA

Dimensions:	Width: 1,754 m/ 5.75 ft
	Depth: 0,8 m/ 2.62 ft
Min Height (For transport):	2,15 m/ 7 ft
Operative Height:	2,20 m adjustable up until 2,26 m (7,2/7,4 ft)
Weight:	Weight: 350-850 kg (depending on configuration)
Power supply:	110V - 230V; 50/60Hz
Power consumption:	average 0,2 KWh - max. 0,8 KWh
Humidity control:	Up to 8 dehumifiers
Monitor:	Screen touch



Hardware Options for ISM500

HARDWARE AND SOFTWARE	Included by default	HARDWARE OPTIONS	On request
Humidity Control - 4 dehumifiers	✓	Humidity Control - 8 dehumifiers	✓
ESD Setup	✓	Fast recovery Unit	✓
Multi Item Management option	✓	Precision Camera Reader 5MP	✓
<p>At least one PDA has to be ordered to run the ISM500. One PDA can manage more than one ISM500. If needed, to carry out multiple extractions at the same time with different operators, it will be necessary to order one PDA for each operator. Each PDA has to be equipped with "PDA mobile software".</p> <p>One Server PC is enough to manage many ISM storages. The Server PC is a normal computer with minimum requirement as per description below. If not in the company Storaesolutions can provide a Server PC.</p> <p>● Items marked with this symbol are essential for the functioning of the system, therefore they should be added to the configuration as specified in the notes.</p>		Precision Camera Reader 13MP	✓
		● (PDA) Mobile computer with 1D, 2D (datamatrix) scanner	✓
		1D manual barcode scanner	N.A
		1D/2D manual barcode scanner	N.A
		2D Wireless manual barcode scanner	N.A
		● Server PC	✓
		Standard PC	✓
		External backup Hard Disk	✓
		External Camera Station	✓
		Barcode Label Printer	✓
		Electronick Lock	✓

Hardware Options Details

Humidity Control Module

With the Humidity Control Module, it is possible to adjust and monitor humidity, to maintain an internal environment below 5% RH. This way it will be possible to store properly all sensitive components. Thanks to the software interface, the humidity floor life of each component can be monitored in terms of humidity. (RH<5%, Software unit to control MSL life of every component managed inside the ISM systems, 8 dehumidifiers, 4 sensors: internal/external RH and internal/external temperature, Display to show internal/external RH and temperature)

ESD Setup

Shelves and separators are finished with anti static paint. ESD certified.

FRU - Fast Recovery Unit

The Fast Recovery Unit takes humidity down to optimal levels in a very short time even after longer periods with the doors open.

PDA Mobile computer with 1D, 2D (datamatrix) scanner

It is the mobile device used to control one or more ISM500 and will be the interface between operator and main software. (see PDA Software)

Server PC

It is the PC where to install the SERVER software. Separate SERVER PC shall be used to install SERVER software when customer has more than 10.000 unique ID inside his database. Specs: CPU Intel i7, 16GB RAM, 256GB SSD RAID HARD DISK.(monitor not included)

Standard PC

It is the PC where SERVER software and/or CONSOLE software can be installed when less than 10.000 unique ID are inside his database. Specs: CPU Intel i3, 4GB RAM, 60GB SSD HARD DISK.(monitor not included)

External Camera Station

This option allows to take pictures, from a camera station that can be placed over a table. All pictures will be saved inside the DB in order to be able to visualize the picture of the reel easily. (very useful for any complain with supplier).

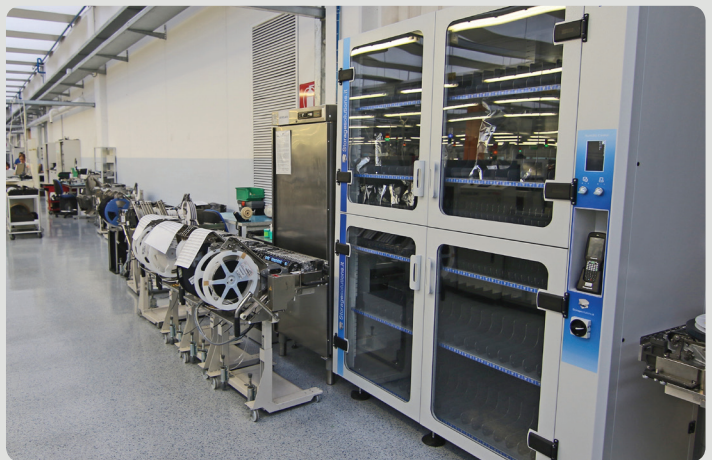
Precision Camera Reader 5 or 13MP

This camera allows the automatic identification of cases height.

- allows the insertions of cases of different heights.
- reads 2D (datamatrix) barcodes and is able to give omnidirectional reading of the standard 1D barcodes (for this last possibility check specifications before). Through this camera the system will handle the Reels Pictures Traceability **Option**.

Electronick Lock

It is an automatic lock that helps increase security and reduces extraction/load errors by controlling accesses to the warehouse.



Software Options for ISM500

SOFTWARE OPTIONS		On request
SMT Lite Software	or This	✓
SMT Software SERVER	or This	✓
THT Software SERVER	or This	✓
Software CONSOLE		✓
SMT Dynamic External Storage module		✓
THT Dynamic External Storage module		✓
PDA Stock Management Software		✓
PDA Pick & Place extraction Management Software		✓
LED Binning Management option		✓
SMT/THT Static External Storage option		✓
Reels Pictures Traceability option		✓
API+ERP/P&P software Interfacing option		✓
Join Button option		✓
Feeder Management option		✓

The SMT lite software or SMT Software server and THT software server are **one time purchases**. Each can handle multiple machines.

At least one Software console is needed to manage one or more ISM500. One software console is enough for a full installation with several ISM storages.

● Items marked with this symbol are essential for the functioning of the system, therefore they should be added to the configuration as specified in the notes.

Software Options Details

SMT LITE Software

SMT Lite software allow to control reel ID and component codes. Extraction of material will be done by selecting manually the codes to extract, by importing an existing .csv list or by scanning a list of barcodes. It has an easy and user friendly interface.

SMT Software SERVER

SMT software SERVER is the software that allows the dynamic control and the management of SMD. This software uses a dedicated logic to manage SMD material. This software is needed to manage one or more ISM systems. It can be installed inside the Customer Server, inside an external PC or inside the PC of one ISM system (last case with a maximum of 3 ISM installed or when the customer has less than 10.000 unique ID inside his database).

THT Software SERVER

THT software SERVER is the software that allows the control and the management of THT components/material. This software use a dedicated logic to manage THT material. It can be installed inside the Customer Server, inside an external PC or inside the PC of one ISM system (last case with a maximum of 3 ISM installed)

Software CONSOLE

Software Console is the interface between operators and software SERVER. If the Customer needs to have some other places where he want to check, manage and control the stock it's possible to order one software Console for each needed position.

SMT Dynamic External Storage module

Mobile software is the software that allows the control and the management of SMT material that can not be fitted inside ISM systems or that are allocated in some external positions. This software will control in a dinamic logic the external shelves or any other external position. It shall be installed together with SMT software SERVER. The Mobile software works together with a PDA mobile to guide the operator in managing and controlling the material.

THT Dynamic External Storage module

Mobile software is the software that allows the control and the management of external stock. This software will control in a dinamic logic the external shelves or any other external position. It shall be installed together THT software. The Mobile software works together with a PDA mobile to guide the operator in managing and controlling the material.

LED Binning Management option

this option allow to calculate automatically the number of PCBs that is possible to produce, in relation to the LEDs and resistors that are fisically available on stock. It will allow to divide the production in different set-ups, depending on the number of PCBs that is possible to produce with

the correct BIN/resistors setting.

SMT/THT Static External Storage option

This option allow to set material in any external position. Storagesolutions software will know and will indicate to the operator the position of this material, but the picking will be done by following a standard paper list like any other standard kitting procedure.

Reels Pictures Traceability option

This option allows taking a picture of each reel inserted and managed by Storagesolutions systems. All pictures will be saved inside the DB and it will be possible visualize the pictures of the reel easily (very useful for any complaint with supplier). Pictures will be shoot automatically from the ISM internal cameras (if installed), or from an External Camera Station.

API+ERP/P&P software Interfacing option

Automatic import of items; automatic import of reels; automatic import of boards; automatic import sessions; automatic import of file on commit; export sessions; export modified reels; export on commit.

Join Button option

JoinButton gives the possibility to join two work sessions together even if production has already started. This allow the customer to add a new product/s to an existing multi-job without having to recalculate all common reels needed for the new job.

Feeder Management option

This option helps o manage feeder positions and feeder types. You will have indication not only in which line the reels are, but the exact position in the P&P.

Multi Item management option

Multi ITEM management in each single position (ISM400 and ISM500).

PDA Stock Management Software

PDA mobile software is the software used to control Storagesolutions MOBILE software trough a PDA. PDA specs: Win Mobile 6.5 or higher, win CE 5.0 or higher; min. resolutions display 240x320.

PDA Pick & Place extraction Management Software

This software allows to make the extraction of the assigned stock material directly from the P&P lines. In this way all spare reels can remain inside the ISM systems until the operator will need them. It is a big advantage in case of moisture sensitive components, it will avoid to have a lot of spare reels closed to the production lines and will reduce the possibility of mix up of the codes from the operators.

ISM Software

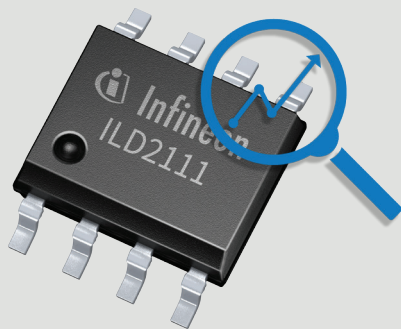
The ISM software springs from direct needs that have emerged in more than 17 years working in the electronics industry.

Thanks to a close collaboration with the most diverse realities in the electronic field and to four years of development, the ISM Software can meet the needs of the electronic production at 360°.

The quantity control, component traceability, automatic extraction depending on the job order, the automatic calculation of the components used and their inventories, etc., are just some of the features of this software especially designed for warehouse management of electronic components.

Life cycle reel management: incoming, tracing and updating

The software monitor the life cycle of each single reel / tube or other format, from incoming until it is exhausted, constantly updating its position at each loading or unloading and the quantity of components still present after each production.



Stock analysis for purchases planning

The software stores the components necessary to produce a variety of boards. With this information the user can easily insert the number of boards to be produced and check whether in the stock is available the sufficient amount of components to complete the production or not. Otherwise, the software processes the list of missing components for the purchasing department.

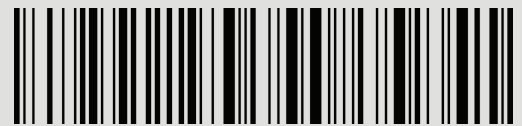
Warehouse analysis for production planning

The software is able to analyze the availability of components for more productions at the same time, verifying the feasibility also based on the sequence of estimated launch.

Flexible set of logical tracking, analysis and extraction

The system is able to use both linear bar codes and 2D (Data Matrix) according to customer's specification.

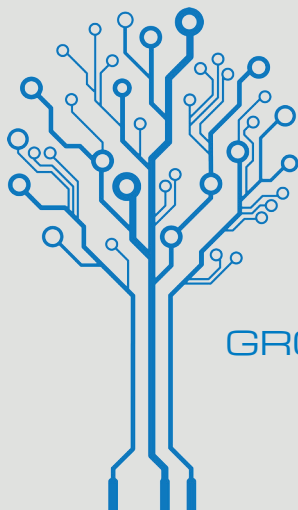
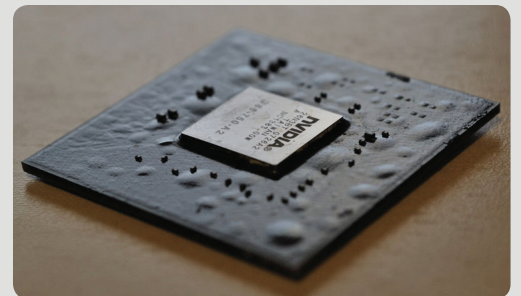
For example it is possible to design tailed 1D and 2D labels, set the system to extract multiple reels of the same component to speed up pick & place production or prioritize the extractions using FIFO or based on the shelf-life of the reel.



ISM-SOFTWARE

Humidity monitoring and SMD components management

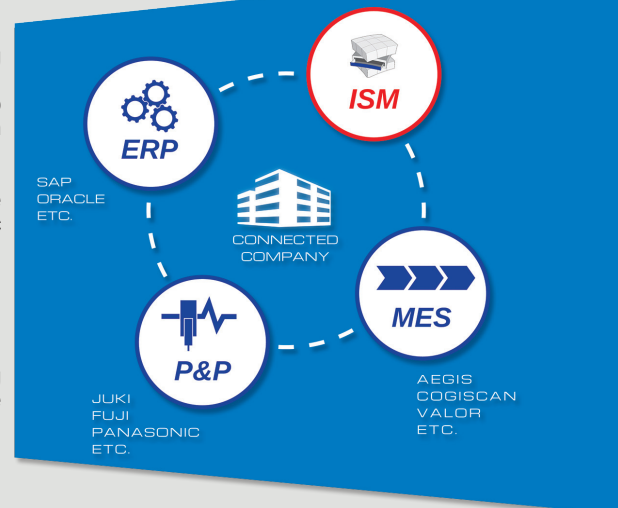
If at least one of the purchased warehouse is equipped with Humidity Control Unit, the software will track for each reel the humidity levels to which it is exposed and for how long, indicating in the analysis the components in stock that have exceeded the level of exposure allowed. In the case of mixed systems, sensitive components can be set to be stored only in machines with humidity control.



GROWING
SOFTWARE

Other Software Features

- SMT stock management
- THT stock management
- External storage management
- Mobile Software
- PDA Mobile Software
- **NEW:** Led Binning Management
- **NEW:** External storage management
- **NEW:** Reels Pictures Traceability
- Software unit for automatic extraction from Pick and Place
- API ERP/P&P software interfacing module
- Feeder management
- F.I.F.O logic



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