Project Flow Chart

Product Warehouse

Finished Product outbound Screen

7.Finished Product Outbound

END

8.Finished Product Delivery

6.DIP

SMT Production Line & Finished Product Assembly Workshop

Warehouse Stocking Screen

START

1.Supplier Arrival

2. Reel ID

Warehousing of finished products/semi-finished products

Transformed Intelligent Shelf

SMD Electronic Reel

Plug/Assembly Component

Warehouse Warehousing Screen

3. Putting the Components on the racks

4. SMD Work Order Preparation
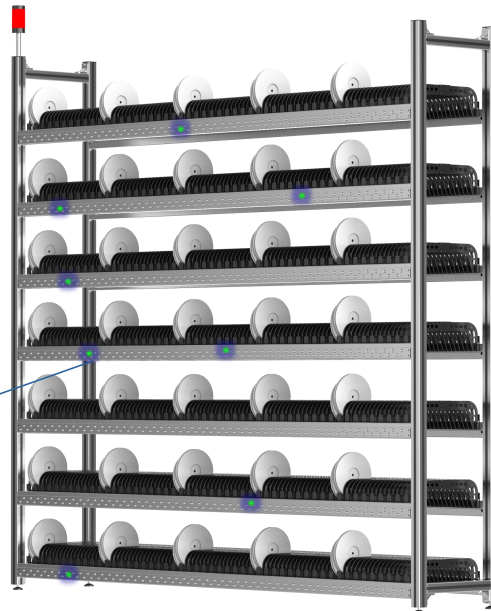
5.Table in-line

line Storage Area

Intelligent SMT reel racks

Raw Component Warehouse

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SOUTHERN MACHINERY

SIS7000A

- Suitable for 7inch reels, double-sided
- Slot width：17mm
- Size: 2170mm*400mm*1900mm
- Storage：7*100*2=1400 SLOT

SIS4000A

- Suitable for 13inch reels, single-sided
- Slot width：40mm
- Size: 2170mm*640mm*1900mm
- Storage：4*100=400 SLOT

LED Indicator

Intelligent SMT reel storage racks proposal

Parameter of intelligent SMT reel storage racks

Model	SIS7000A	SIS4000A
Name	7-inch SMT reel storage rack	13-inch SMT reel storage rack
Overall size(mm)	2170*400*1900	2170*640*1900
single size(mm)	17	40
Layers	7	4
Number of Reels	1400	400
Power (w)	100	100
Function	Storage 7-inch SMT reel	Storage 13-inch SMT reel
Illustrate	Optionally install casters or foot cups	

Electronic reels inbound and outbound control logic

| Warehouse | warehousing | Preparation | take out | Send to production workshop |

1. Each location on the rack corresponds to an LED light

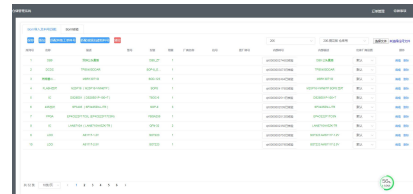2. The material has a unique code, which corresponds to the location one by one, and can be stored at will

3. Work order out of the warehouse, the system automatically calculates, first in first out, tailings first out principle

4. The corresponding warehouse location lights up, the warehouse clerk takes materials according to the lights, and the LED color of the multi-work order is different
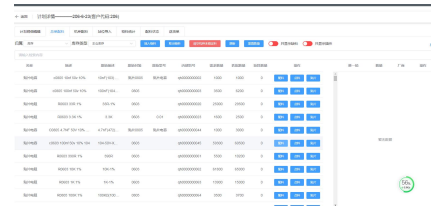
Distribution Process

Incoming Material Check

All incoming materials counted in the system and put up the QR code(include all the information of the material and the Unique Code)

→

BOM Importing

Import the original BOM list, generating the rack BOM list automatically. With the method of one by one matching, improving the system BOM list.

→

The Whole List Generated

Combined based on multiple BOM lists, can form into Production Plan.

→

Scanned and Put on Shelf

The reels with QR code can be put on the shelf by PDA scanning, and can be based on needs and the reel package form.
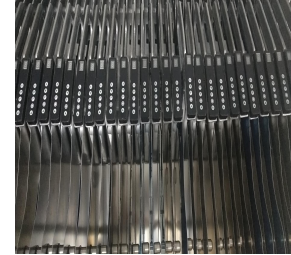
Production Process

Material Issuing

Based on the production plan, the system automatically generates the priority reel and the back-up reels, the priority reels are put to the feeder shelf rack, and the prepared reels are put on the back-up reels storage rack.

→

In-line

Based on the light status change with PDA, put all the materials indicated by lights, and put them in-line based on the Pick&Place Machine stations.

→

Priority Reel

All priority material from the warehouse is put in the line storage area, and the production department can choose the machine type for production with PDA.
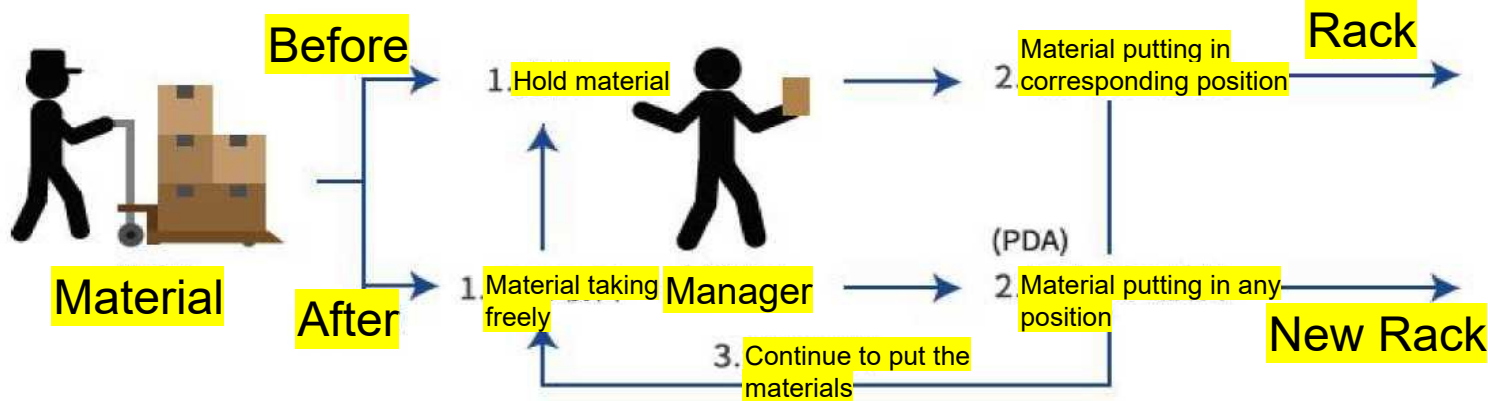
→

Back-up Materials

The lacked material in the in-line process and be searched in the back-up reel storage rack by scanning the QR code on the reels with PDA.

Material to the Warehouse Process Analysis

Before

1. Hold material
2. Material putting in corresponding position → **Rack**

Material

After

1. Material taking freely
2. Material putting in any position → **New Rack**
3. Continue to put the materials

Manager

(PDA)

Item	Project	Current Status	Improved Status	Effect	Remark
	Warehouse Staff				
1	Staff Training	90 Days	2 Days	98%	Improved: Staff training days reduce by 97%
2	Staff Skill Influence	Yes	No	100%	Improved: No skill requirement for staff skills, reducing by 100%
3	Staff Change Influence	Yes	No	100%	Improved: No influence for warehouse work left by staff change
4	Time Consumption for 100 Reels	50	16	300%	Before: 50 min/100 reels After:16min/100 reels, efficiency improves by 300%
5	Labor	8	3	63%	Improved: 63% staff are cut down, efficiency improves by 300%

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— **Worldwide Support**

— **Free Installation/ Training**

— **1 day lead-time (spare parts)**

— **1 Month customize solution**

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