

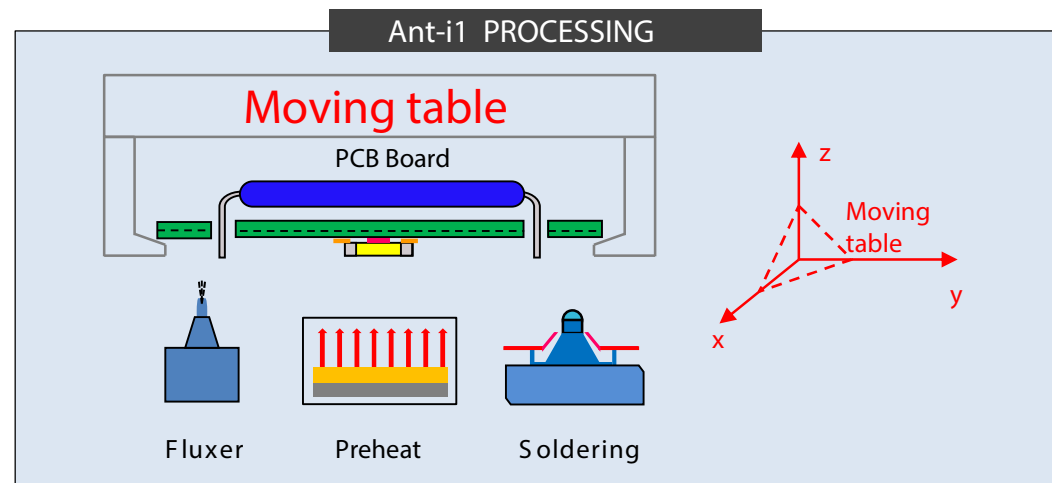
MODEL: Ant-i1  
OFFLINE SELECTIVE SOLDERING MACHINE



Machine working concept:

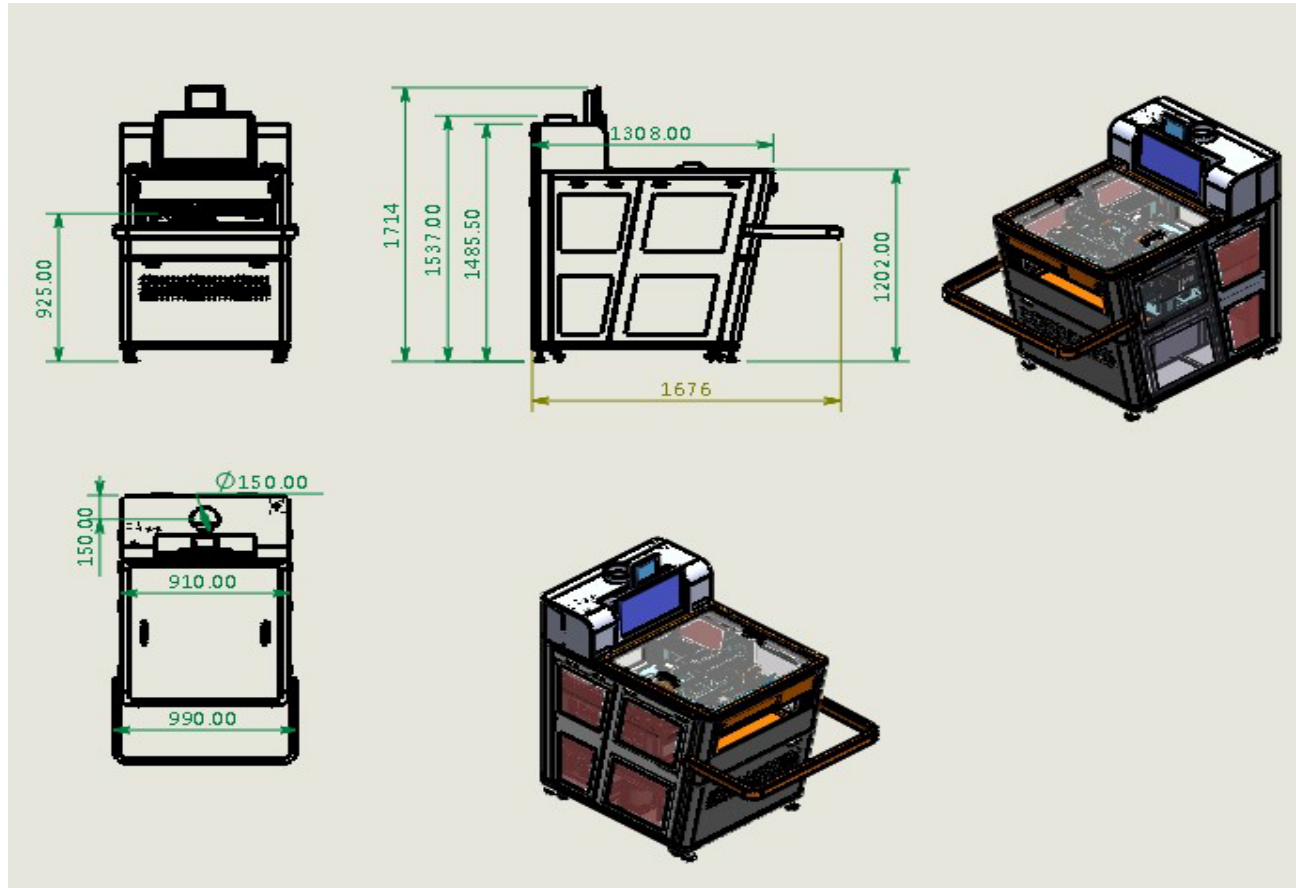
PCB is moved by X/Y table with servo motor, Solder pot is moved in Z with servo motor, drop jet flux is moved in Z with aircylinder.

Standard equip Drop jet fluxer, bottom preheating, selective solder pot, inline N2 heater, auto wave height calibration, live-on camera, Windows 10 English software.



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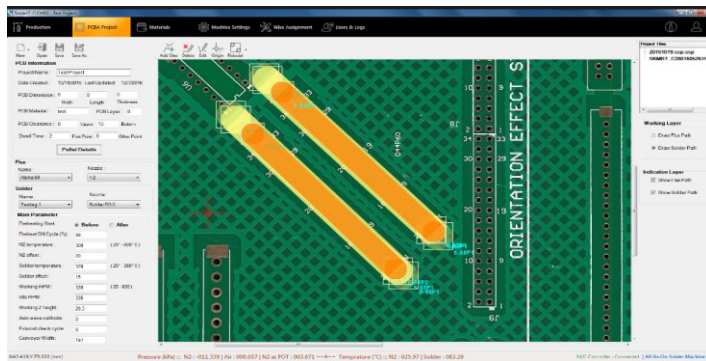
Manufactured by:  SASinn

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Software System  
Solder It

“Solder it” is windows10 based software. With board scanned picture or Gerber file, “POINT AND CLICK” to “draw and drag” motion path easily, make the initial programming in less than 10 minutes.

Path programming :



“Point and Click”

to draw path with scanned picture as background, easiest way for path programming.

Edit Solder Sites

Click on Site Name to View Point of the Site.

Name	Sequence	Use in Production?	Z-Offset	Pump RPM Offset	Empty Move Time	Site Working Time	Total Time
S2	1	<input checked="" type="checkbox"/>	0	0	1.803	15.192	16.995
S4	2	<input checked="" type="checkbox"/>	0	0	3.873	3.800	7.673
S1	3	<input checked="" type="checkbox"/>	0	0	1.707	3.800	5.507
S3	4	<input checked="" type="checkbox"/>	0	0	3.760	4.858	8.618

Production Time + Back to Origin Time (mm/Sec) : 12.828 27.649 40.478

Path point of : S2

Name	Vel (mm/s)	X	Y	Dwell [s]	Slop RPM	Slop Time
P1	30.000	20.828	36.576	2.000	0	0.0
P2	10.000	116.248	98.806	0.000	0	0.0

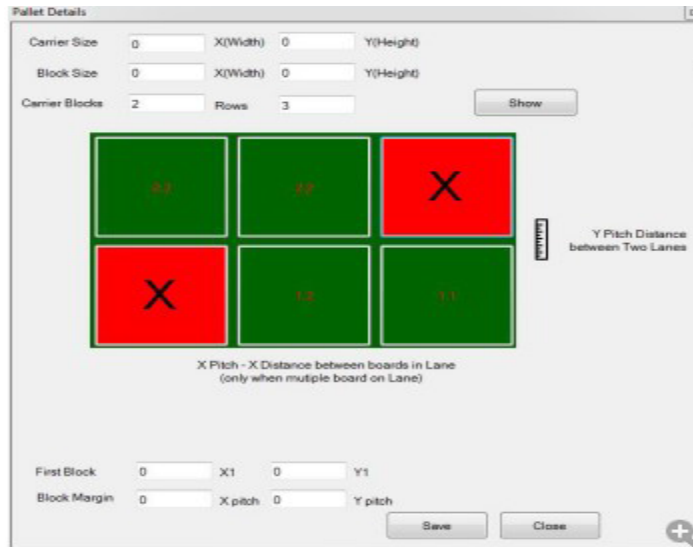
Global Dwell Time

Site First Point Dwell :  Site Other Point Dwell :

Solder path editing:

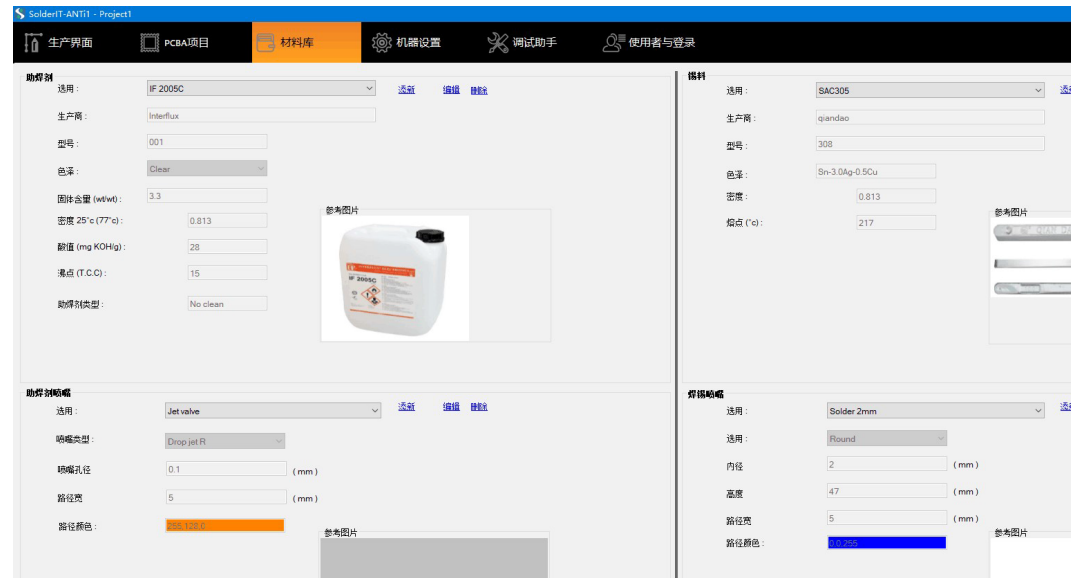
Moving speed,Z height, wave height, Dwell time, wave slope speed etc are editable, get max flexibility to fit different type of components on the board. Emph move time, site working time, total cycle time are estimated once path programming finished. Easy for balance production line.

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Support Pallet function :

only need to program one board on pallet, then input X/Y pinch to array the same programming. Also can choose which board no need to solder on the pallet.



Material database system:

Customer can save their flux information, solder information, fluxer nozzle information, solder nozzle information to the database. And when making the programming for board, engineer can choose which material used in this board. So a full programming for board will not only include motion information like path, speed, pasue time, Z height, dwell time, wave, temperature etc, it will also include what flux used, what solder used, which fluxer nozzle and which solder nozzle used. This will be helpful for repeating soldering quality.

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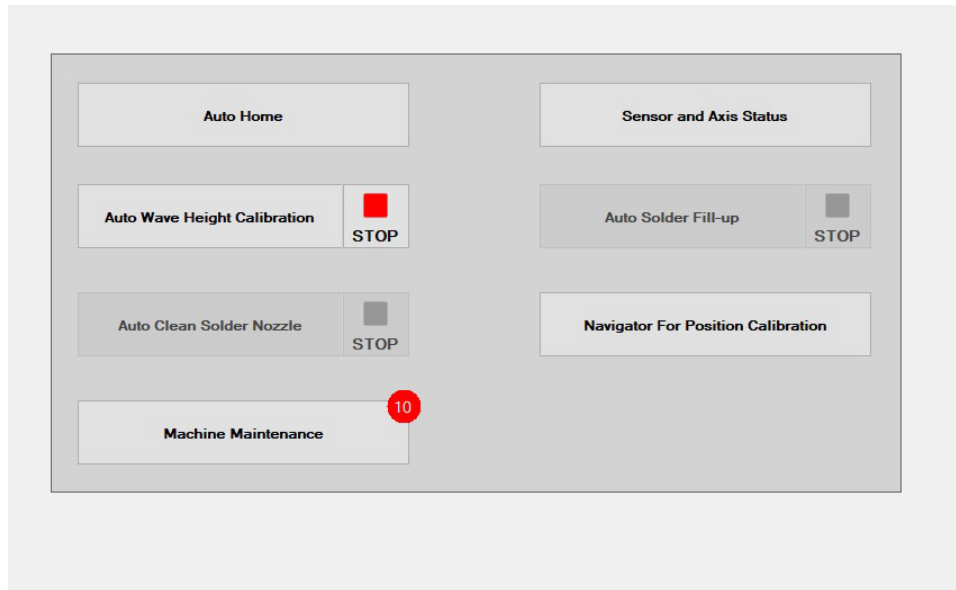
Sequence	Machine Part	Estimated Maintenance Time	Cycle (Hrs)	Actual Used Time (Hrs)	Remaining time (Hrs)	Last Maintenance Done	Action
1	Clean Flux nozzle	5mins	0.1	0	0.1		
2	Check if Flux Nozzle(s) blocked	15mins	0.1	0	0.1		
3	Clean Flux Sensors	10mins	8	7.67	0.33		
4	Flux X and Y guide lube oil	10mins	168	22.51	145.49		
5	Flux X and Y origin coordinates	1hours	168	22.51	145.49		
6	Flux Electric box cleaning	1hours	168	23.78	144.22		
7	Flux Lube oil on transport guide rail	10mins	720	407.95	312.05		
8	Check Flux the rail gauge	10mins	720	407.95	312.05		
9	Flux Lubricate the cylinders	1mins	720	407.95	312.05		
10	Preheat Clean sensor	-	1	14.82	-13.82		
11	Preheat Electric box cleaning	-	168	22.51	145.49		
12	Preheat Lube oil on transport guide rail	-	720	407.95	312.05		
13	Check Preheat the rail gauge	-	720	407.95	312.05		
14	Check Preheat heat pipe is working properly	-	4320	407.95	3912.05		
15	Check whether Solder nozzle is oxidized	-	0.45	0	0.45		
16	Clean the tin slag in solder pot	15mins	8	7.48	0.52	6/5/2018 9:32:31 AM	NA
17	clean the solder dross around solder level sensor	10mins	168	22.51	145.49	6/4/2018 6:30:35 PM	NA
18	Check Solder Temperature(using Thermometer)	10mins	168	22.51	145.49	6/4/2018 6:30:41 PM	NA
19	Replace the solder in solder pot	1hours	0.32	0	0.32	6/1/2018 3:05:31 PM	NA
20	Clean the tin slag in wave pump	1hours	0.33	0	0.33	6/1/2018 3:05:31 PM	NA
21	The wave chain adds lubricant	10mins	0.34	0	0.34	6/1/2018 3:05:30 PM	NA
22	Wave - peak impeller bearings adds lubricating	10mins	0.35	0	0.35	6/1/2018 3:05:29 PM	NA
23	Manual Wave calibration	1mins	1	14.7	-13.7	6/4/2018 6:37:48 PM	Done
24	Clean N2 diffusion ring	30mins	0.01	0	0.01	6/1/2018 3:05:29 PM	NA

Maintenance & replacement assisting function :

we know how important the maintenance for a selective soldering machine. In the software, we list all maintenance job, time taking, consumable parts life and remain life, etc. It can export to excel list, engineer can check what parts need to replace in next 3 month or 6 months, in this way to they can prepare everything in advance.

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Log function:

Can set 3 level different users. All logs will be saved and customer can check who use the machine and what happen.

Wise assignment:

contains every basic feature which are used to prepare machine before starting production, including Auto Home, Sensor and Axis Status, Auto Wave Height Calibration, Auto Solder Fill-up and Navigation for position calibration.

The screenshot displays the software's user management and logging interface. It includes a navigation bar with options like 'PCBA项目', '材料库', '机器设置', '调试助手', and '使用者与登录'. Below this, there are input fields for user search and a '删除' (Delete) button. The main area is divided into two sections: '用户管理' (User Management) and '日志' (Log).

**用户管理 (User Management) Table:**

用户名	日期	用户类型	删除
sasinn	14/03/2019 10:08:59 AM	Manufacturer	Delete
Operator	08/04/2019 08:58:53 PM	Operator	Delete

**日志 (Log) Section:**

Activity Log (活动日志):
 

- 显示今天日志
- 显示日志
- 显示日志从: 24-04-2019 至 05-05-2017

 View Log (视图) button.

Delete Log (删除日志):
 

- 删除今天的日志
- 删除日志的日期
- 删除日志之前
- 删除所有日志

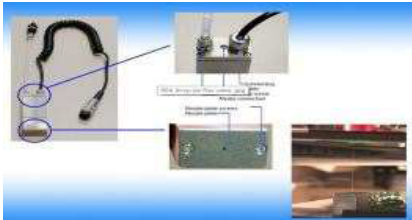
 Log Size: 795 Bytes

**Log Table:**

用户名	日期	类型
sasinn	24/04/2019 03:35:37 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:37 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:31 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:31 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:31 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:31 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:31 下午	ResourceNotFound.
sasinn	24/04/2019 03:35:31 下午	ResourceNotFound.
sasinn	24/04/2019 03:32:07 下午	Project Loaded
sasinn	24/04/2019 03:31:53 下午	ResourceNotFound.

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Spray Flux



Flx-DropJet : Standard equipped with drop jet valve from Germany originally, which can meet dia 2mm flux dot dimension.

Selecting Soldering Pot

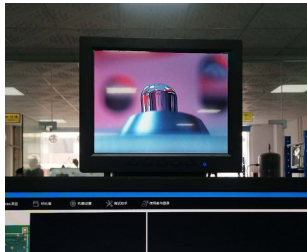


Titanium soldering pot, 100% capable for lead free application. Standard equipped with mechanical pump, easy for maintenance.

N2 direct heating system is standard equipped, enhance the wetting ability for lead free soldering.

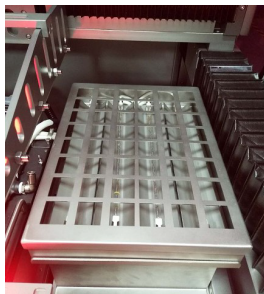
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Preheating

Sod-ProcMoni: Without open machine's door, operator can see soldering process in real time.



Pre-BPRE: Bottom preheating zone, before soldering PCB will move here to heat up setting time under setting temperature.



Sod-WetNoz: Standard equipped with wet nozzle for customer's universal applicaiton. Can also design solder nozzle according cusotmer's application

Manufactured by: 



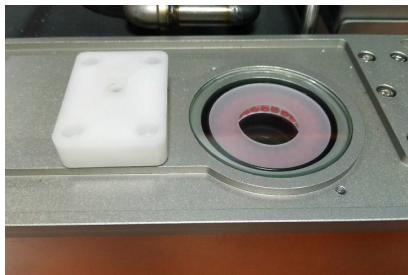
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Controlling system



All brand electrical parts, such as Nidec, ABB, Mitsubishi etc. All wiring certified by CE. Industrial PC for controlling.

Option



Sof-FICC: The monitor camera is used to fiducial checking

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Ant-i1 Specifications

General	
Operating power/Max power	4KW/6.5KW
PCB dimension	50x50--350x260mm (Can manually rotate board to 180degree to meet L700mm x W260mm)
Machine dimension	W990mm x D1308mm X H1714MM
Net weight	400KG
Power supply	1PH 220V 50HZ MAX 30A Equip 40A contactor in factory
Air supply	3-5 bars
Exhausting required	200M3/h
PCB Robotic Platform	
Axes of Motion	X, Y, Z
Motion Control	Servo motors for X,Y,Z
Position Accuracy	+ / - 0.05mm
Solder Management	
Standard Solder Stations	1
Solder Pot Capacity	15 kgs
Solder Temperature Control	PID
Heat-Up Time	About 30mins
Max Temperature	380 C
Solder Pot heater	2kw
Solder Nozzles	
Mini Wave Nozzles	Dia 4, 6,8,10,12mm
Customized nozzle	Available
Nozzle Material	Proprietary Alloy
(N2) Inertion Management	
N2 heater	Standard Equipped
N2 Temp PID Control Range	0 - 350 C
N2 Consumption per Nozzle	1.5m3/H
Required N2 Purity	>99.99%
Flux Management	
Spray Flux Nozzle	Standard equipped with drop jet nozzle made in Germany
Flux Capacity	1L
Flux Tank	Constant pressure tank
preheat	
IR heater	2kw
Controlling System	
Industrial PC	Yes
Typical Program Time	10 Minutes
Program method	Draw path in scanned picture of board
Controlling system	PC

Manufactured by:

