

Automation Equipment Manufacturer

SS OTRON

www.ssotron.co.kr

Total Solution Provider for your Application



SS OTRON Co., Ltd

Company Profile

Sep. 2022



FANCO PRECISION (M) SDN. BHD.

Head Office : 30 Annam-Ro, 369 Beon-Gil, Bupyeong-Gu, Incheon, Korea (21312)
Tel : +82-32-519-5490 / Fax : +82-32-513-5490 / website www.ssotron.co.kr

-- Company History --

- Company : SS Otron Co., Ltd.
- President : Mr. Shin Kye-Chul
- Founded : 2006. 01
- Employee : 61
- Address : 30, Annam-Ro 369 Beon-Gil, Bupyeong-Gu, Incheon Korea (21313)
- Website : www.ssotron.co.kr
- Contact : Tel) +82 32-519-5490 FAX) +82 32-513-5490
- Business : Semiconductor/ Display/ Automation Manufacturing & Development

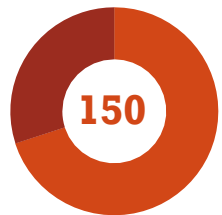
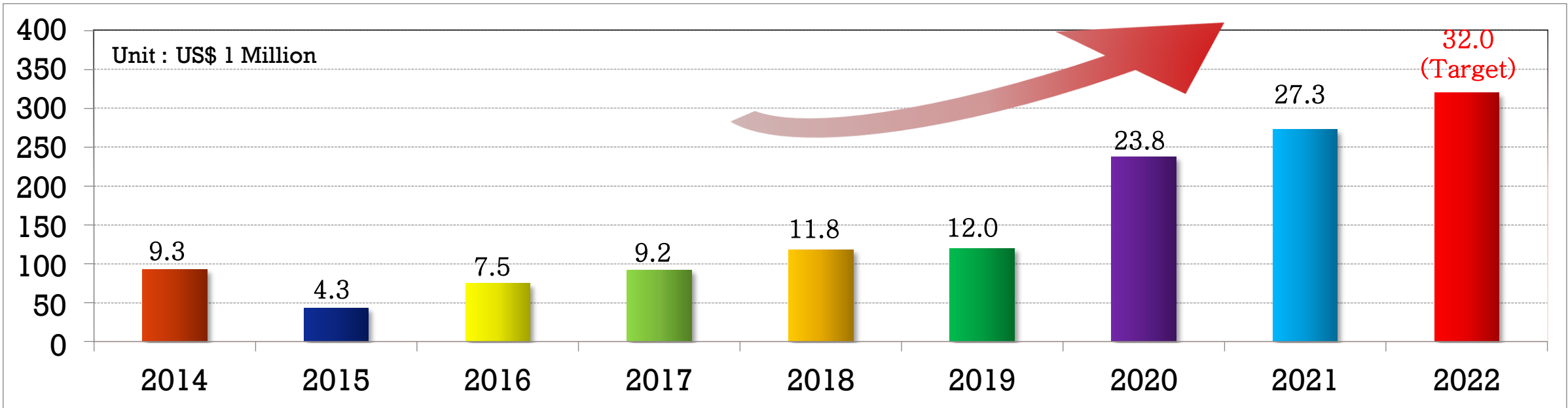
- 2006. 01** **Samsung Otron Founded**
- 2008. 07 ISO 9001:2008 & KS Q ISO 201:2009 Certification Acquisition
- 2009. 03 Promising company designated in Incheon
- 2010. 05** **Re-named SS OTRON Co., Ltd**
- 2010. 06 Incheon Predominant Company Technology Reward
- 2012. 06 Acquired export prominent Corporation.
- 2012. 12 **Registered PATENT** of Tray Automatic Multi Loading System for MLF
- 2013. 05 Commendation of Ministry of Science, ICT and Future Planning
- 2014. 12 US\$300 Million Export Top Reward
- 2017. 01 **Registered PATENT** for Semiconductor Chip Inspection Machine (Patent No. 10-1697119)
- 2018. 10 Registered PATENT for Semiconductor Package Tray Exchanger (Patent No. 0-1910354)
- 2022. 12** **Plan to transfer to New Factory at Chung-Ra**



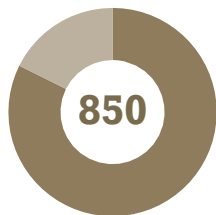
-- Patent & Certificate --



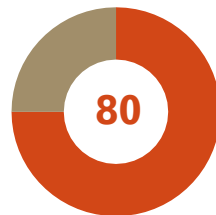
-- Sales Records --



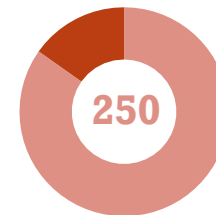
**105 set A
Automation**



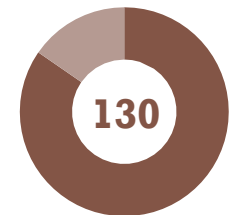
**700 set
LOADER UN
UNLOADER
DIVERTER**



**60 set
TRIM / FORM /
SINGULATION**



**212 set
JIG & STRIP
MARKING**



**110 set
PICK & PLACE**

Sales Status & Sales Target for 2022

-- Global Network --



■ Amkor Korea, China, Taiwan



■ Amkor Philippines & Malaysia



■ STATS Chip Pac



■ Hyundai



■ AT Semicon



■ Cypress (Infineon)



■ Intel



■ Hana Micron



■ SK Hynix (Hitech - Wuxi)



■ Samsung



■ ASE Korea, Malaysia



■ SFA Semiconductor

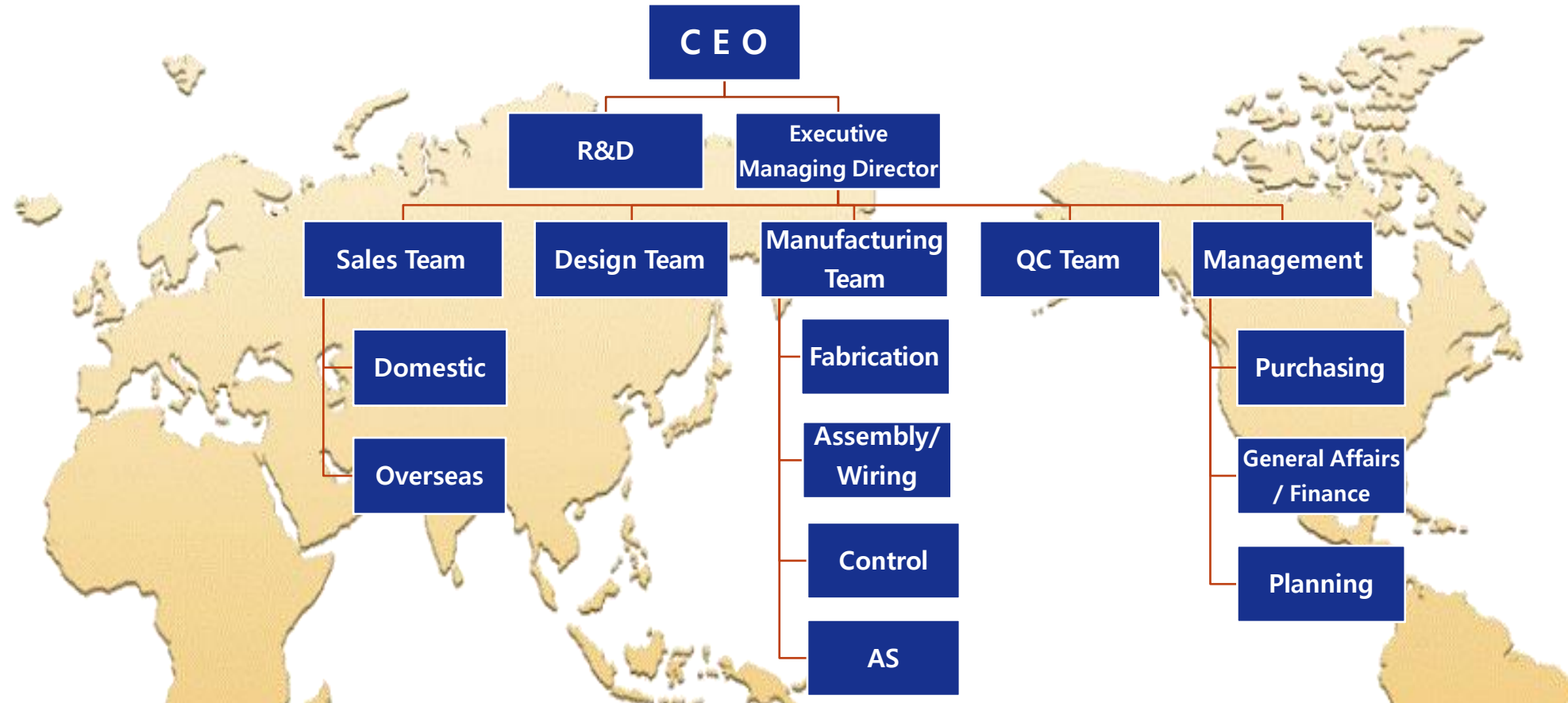


■ Amkor Japan J Devices



■ Nexperia

-- Organization --



Factory

- 1st Factory : Bupyeong
- 2nd Factory : Pochen
- 3rd Factory : Nonsan

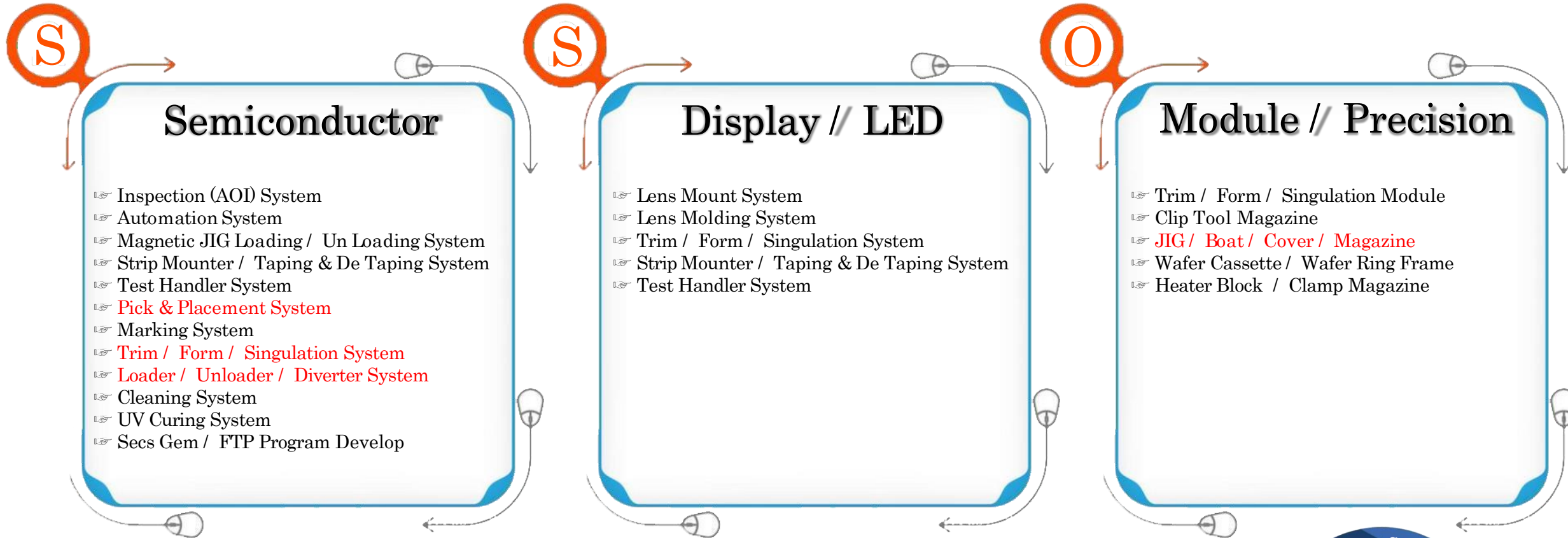
Design & Technology Staff

- Design : 15
- Control & Vision : 12
- Manufacturing : 16
- A/S : 14
- Sales & Management : 11
- outsourcing 30
- ◆ Total Staff : 98

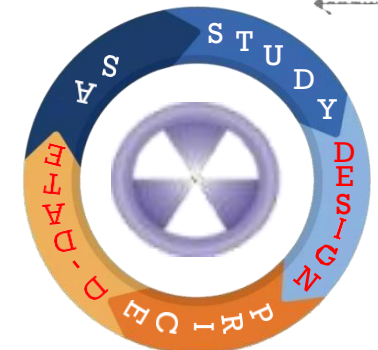
In-house Facility

- MCT / Wire Cutting
- Milling / Grinding
- EDM
- TTL : 18 sets

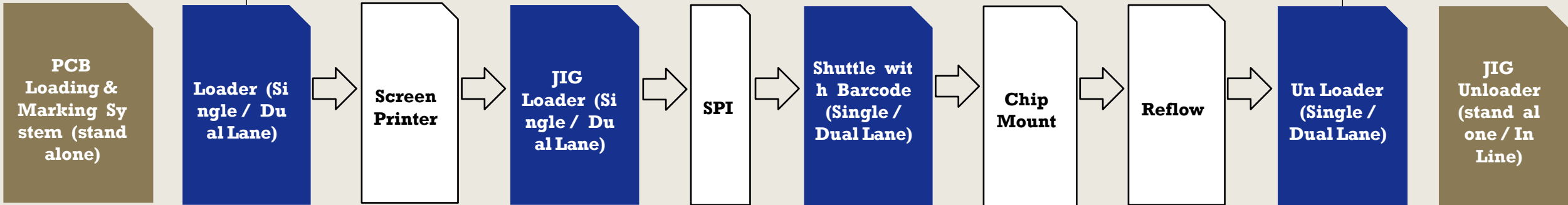
-- Equipment Line-Up --



Smart & Speed & Optimization
(SS OTRON)



SMT Line Configuration



PCB Loading Marking

Dual Loader

Dual JIG Loader

Dual Shuttle

Dual Un Loader

JIG Un Loader



Strip Loading & Marking System



System Performance

- Applicable Substrate : 95mm PCB
- Machine Size : **2,550 x 1,090 x 1,830mm** (W x D x H)
- Weight : 1,600 kg
- Magazine Load Capacity : 95mm PCB 4ea
- Control : PC with Touch Panel
- Utility : AC 220V 60Hz 3PHASE ; 7Bar & 12 Ø x 2
- Vision: Strip 2D Reading Vision ; Check Marking Vision
- SECS GEM ; FTP
- **Selectivity : CO2 Laser Marking / Green Laser Marking**
- Marking Letter Size : Minimum 1.5 Point (EO CO2 Laser)
Minimum Dot Size : 50~80 um
- Marking Performance : Marking Area 64 mm (Y axis)
Positioning Accuracy +/- 50 micron per Character
Maximum Power 50 w
Marked Character Size 2.0 Points Minimum (35.8 mil x 30.3 mil)

Dual Loader / Un Loader System

Dual Loader



Dual Un Loader



System Performance

- Applicable Substrate : 62 / 74 / 95 mm PCB & JIG
- Machine Size :
Loader 1,160 x 1,700 x 1,760mm (W x D x H)
Un Loader 1,250 x 1,500 x 1,600mm (W x D x H)
- Weight : Loader 600 kg ; Un Loader 800 kg
- Magazine Load Capacity :
Loader 95mm PCB 6ea / 95mm JIG 4ea (Dual Lane)
Un Loader 95mm PCB 8ea / 95mm JIG 6ea (Dual Lane)
- Rail Type : Fix / Shuttle & Auto Conversion Type
- Control : PC with Touch Panel
- Utility : AC 220V 60Hz 3PHASE ; 7Bar & 12 Ø
- Option : 2D Reading Vision ; SECS GEM ; FTP

Dual JIG Loader In Line System



System Performance

- Applicable Substrate : 62 / 74 / 95 mm PCB & JIG
- Machine Size : 1,420 x 1,970 x 1,920mm (W x D x H)
- Weight : 1,200 kg
- Magazine Load Capacity : 95mm JIG 6ea (Dual Lane)
- Out Put Rail Type : Shuttle & Auto Conversion Type
- Control : PC with Touch Panel
- Utility : AC 220V 60Hz 3PHASE; 7Bar & 12 Ø x 6
- Option : 2D Reading Vision ; SECS GEM ; FTP

Dual Shuttle System



System Performance

- Applicable Substrate : 62 / 74 / 95 mm PCB & JIG
- Machine Size : 1,800 x 380 x 1,210mm (W x D x H)
- Weight : 300 kg
- Rail Type : Shuttle & Auto Conversion Type
- Control : PC with Touch Panel
- Utility : AC 220V 60Hz 3PHASE ; 7Bar & 12 Ø
- Option : 2D Reading Vision

JIG Un Loader (Stand alone) System



System Performance

- Applicable Substrate : 74 / 95 mm PCB
- Applicable Tools : 74 / 95 mm JIG & Cover
- Weight : 800 kg
- Magazine Load Capacity : 95mm PCB 7ea / 95mm JIG 4ea
- SPH : Min 120 SPH (Based on JIG Cover to PCB)
- Control : PC with Touch Panel
- Utility : AC 220V 60Hz 3PHASE ; 7Bar & 12 Ø
- Option : 2D Reading Vision ; SECS GEM ; FTP

Flip Chip BGA Line Configuration

- ◆ Boat Loader System (Matrix Boat / Single Boat)
- ◆ Diverter PSI System (Matrix Boat / Single Boat)
- ◆ Diverter / Dual Long shuttle System (Matrix Boat / Single Boat)
- ◆ Boat Un Loader System (Matrix Boat / Single Boat)

- ◆ Flux Cleaner Boat Cover Recycle Loader System (Matrix Boat / Single Boat)
- ◆ Flux Cleaner Boat Cover Recycle Un Loader System (Matrix Boat / Single Boat)

- ◆ Unit Pick & Place System

Single loader

Diverter +PSI

Diverter

Single Un Loader

Boat Cover Recycle Loader

Boat Cover Recycle Un Loader



Single / Matrix Boat Loader System

Single Boat Loader



Single Boat Un Loader



System Performance

- Applicable Substrate : A Variety of Units
- Applicable Tools : Single / Matrix Boat
- Machine Size :
 - Loader 1,040 x 1,730 x 1,850 mm
 - Un Loader 1,460 x 1,730 x 1,650 mm
- Weight : Loader 800 kg / Un Loader 1,200 kg
- Magazine Load Capacity : Matrix Boat MGZ 4ea
- Control : PLC with Touch Panel
- Utility : AC220V 60Hz 3Phase ; 7 Bar & 12 Ø
- Vision : Boat 2D Reading Vision
- Option : SECS GEM ;

Diverter + PSI / Diverter System

Diverter + PSI



Diverter



System Performance

- Applicable Substrate : A Variety of Units
- Applicable Tools : Single / Matrix Boat
- Machine Size :
Diverter + PSI 800 x 1,400 x 1,600 mm
Diverter 1,460 x 1,730 x 1,650 mm
- Weight : Diverter + PSI 1,400 kg ; Diverter 400 kg
- Control : PLC with Touch Panel
- Utility : AC220V 60Hz 3Phase ; 7 Bar & 12 Ø
- Vision : PSI Inspection Vision
- Option : SECS GEM ;

Boat Cover Recycle Loader / Un Loader System

Boat Cover Recycle Loader



Boat Cover Recycle Un Loader



System Performance

- Applicable Substrate : A Variety of Units
- Applicable Tools : Single / Matrix Boat ; Single / Matrix Magnetic Cover ; Daughter JIG
- Machine Size :
Loader 2,540 x 1,765 x 1,720 mm
Un Loader 2,330 x 1,740 x 1,660 mm
- Weight : Loader 2,000 kg / Un Loader 1,800 kg
- Magazine Load Capacity : Matrix Boat MGZ 4ea
- Control : PLC with Touch Panel
- Utility : AC220V 60Hz 3Phase ; 7 Bar & 12 Ø
- Vision : Boat 2D Reading Vision
- Option : SECS GEM ;

JIG to Boat / Boat to JIG Pick & Place System



- 🔧 JIG to Boat & Cover Loading / Un loading
- 🔧 Boat to JIG & Cover Loading / Un loading
- 🔧 Cover Exchange

System Performance

- Applicable Substrate : A Variety of Units
- Applicable Tools : Matrix Boat / JIG ; Cover
- Machine Size : 4,235 x 2,275 x 2,040 mm
- Weight : 3,200 kg
- UPH : Min 3K (8x2=16 up Based)
- Magazine Load Capacity : Matrix Boat MGZ 4ea
- Control : PC with Touch Panel
- Utility : AC220V 60Hz 3Phase ; 7 Bar & 12 Ø x 4ea
- Vision : Unit /JIG(Boat) 2D Reading Vision
Cover Orientation Check Vision
PRS Vision
- Option : SECS GEM ; RMS ; 3D Vision ; Ink Marking

Introduction to various Pick & Place

◆ Boat to Tray / Tray to Boat P&P System



Applicable Units :
12 x 12mm ~ 50 x 50 mm

UPH : 4K

Size : 3,700 x 1,610 x 1,830mm

◆ Boat to Tray & Flip / Tray to Boat P & P System



Applicable Units :
20 x 57 mm ; 35 x 57 mm

UPH : 2.5 K ~ 3.5 K (20x57 mm)

Size : 3,800 x 2,400 x 2,100 mm

◆ Tray to Boat P & P System



Applicable Units :
12 x 12mm ~ 45 x 45 mm

UPH : 4K

Size : 3,200 x 1,800 x 2,100mm

◆ NG unit Sorter P&P System



Applicable Units :
25 x 25 mm ~ 50 x 50 mm

UPH : 180

Size : 1,500 x 1,400 x 1,800mm

World 1st SOT1210 Trim/Form/Singulation System with Refill Buffer

Loading Trim Form Sing' Sorting Tube Offload

Major Feature

1. Side Inspection for Coplanarity & Stand-off height
2. 90ea Singulation a stroke and 90ea units pick-up
3. Bulk Bin and Reject sorting for Trim/Form/X-mark
4. Cover type on the Track chute
5. Refill buffer for rejected vacancy
6. Tube offloading

90 unit picker 90 unit Buffer Track Cover Track

Singulation & Offloading

Side Inspection

Transfer Robot

Side Inspection Die

Bulk & Reject Bin

Tube Offloading

Refill Buffer

Trim / Form / Singulation System



Key Features

- High Numbers of Fabrication Record (105EA) for Major OSAT companies
- 30 years experience for Tool and System Design, Application and Optimization
- Broad Package Equipment Portfolio (SOT / TQFP / TSSOP PDIP/ SOIC / MCPP PBGA/ PSOP / LFPAK)
- Many Different Trim/Form (Gul form, C-form, J-form Dejunk, Degate, Dambar, Spank. L/L cut, Preform, Final-form)
- Different off loading at One System (Tray, Tube, Bulk) with AOI

Introduction to various AOI System

◆ Ring Frame to Tray & Tube 6 Side Inspection System



Applicable Units :

Chip 4 x 4 QFN (2 x 2 ~ 8 x 8 mm Chip feasible) W

afer Frame : 8inch Wafer Frame & Conversion Kit U

PH : Max 9K

Size : 2,400 x 1,500 x 1,640mm / Weight : 2,500 kg

Process : Ring Frame → AOI → Tray / Tube (Rework → Tray ; Reject → Bin Box)

Control : PC Base / Utility : AC 220V 60 Hz / 3Phase / 7Bar & 12 Ø

Option : SECS GEM

◆ Tray to Tray / Tube P & P & 6 Side Inspection System



UPH : 9 k without AOI / 6 k with AOI

Size : 2,240 x 1,370 x 1,640mm

Control : PC Base / Utility : AC 220V 60 Hz / 3Phase / 7Bar & 12 Ø

Other Automation System - 1



Stencil Incoming Inspection System



Full Auto Stencil Stocker



Auto Flux & Paste Management System



Blister Kitting System (SD Card Auto Packing System)

Other Automation System - 2



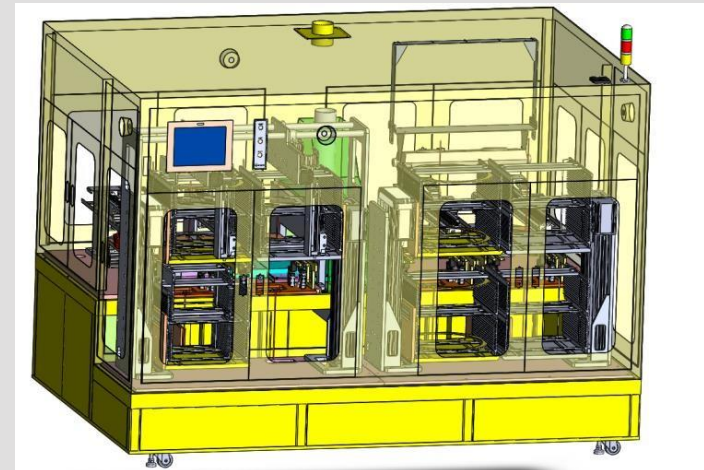
Auto Pre-cleaning System



Burn Board ↔ Tray P&P System



Auto Lamination System



Auto UV Cure System

Precision Parts

▷ Trim & Form Spare Parts

● Black Diamond Coating(DFC) ● VARIOUS TRIM/FORM SPARE PARTS for FORM PUNCH / DIE

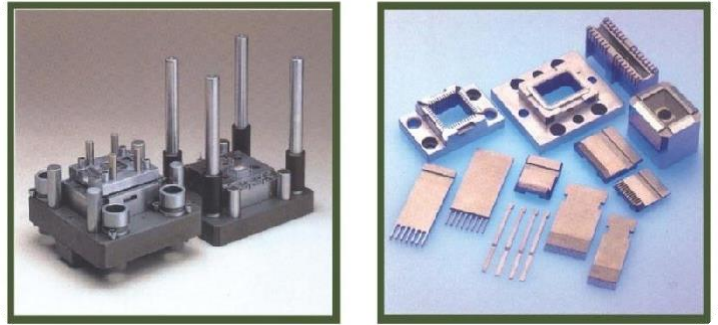


- LOCATION PIN
- PILOT PIN
- INDEX PIN



- INDEX BIN
- PILOT BIN

▷ Trim & Form Module



▷ JIG & Cover

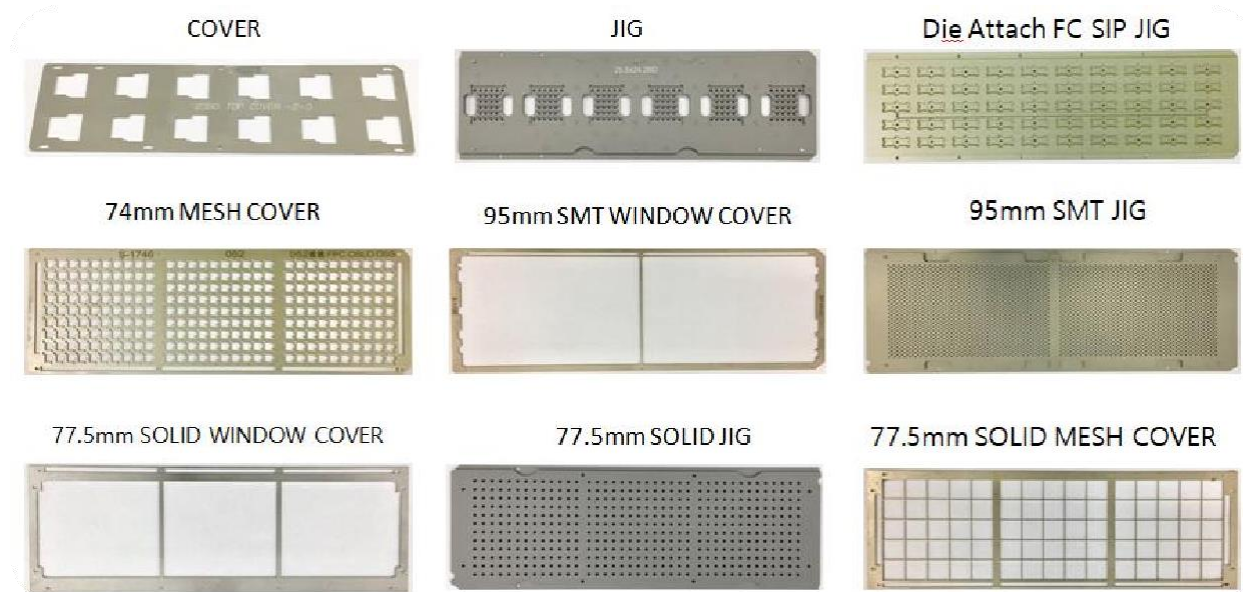


▷ Clamp Magazine



Precision Parts

▷ JIG & Cover



To make a resume			
Unit Size	UP Q'ty	Unit Size	UP Q'ty
4.0 x 6.0mm	490 UP	3.0 x 3.3mm	490 UP
7.2 x 5.5mm	312 UP	5.0 x 3.0mm	490 UP
8.2 x 5.5mm	276 UP	7.40 x 9.48mm	225 UP
10.7 x 10.7mm	189 UP	11.8 x 11.0mm	198 UP
4.15 x 6.55mm	325 UP	5.0 x 7.0mm	346 UP
8.0 x 13.5mm	170 UP		



SS OTRON

Thank you!!

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