

SIMPLIFYING
THE COMPLEXITY



iX Series

Unrivalled flexibility for the optimum line configuration



The iX-502 and iX-302 introduce integrated functionality and high-performance levels across a single, common platform offering the best Value of Ownership.

While maintaining their small footprint, the iX-302 and iX-502 can be scaled up/down in small steps to desired output capacity between 49.5K and 165K components per hour (CPH) (rated output), and can handle components from 01005m up to 45 x 45mm² fine-pitch QFP, BGA, μ BGA and CSP packages, and components up to 10.5mm tall.

With up to 260 feeding lanes, they are the most flexible Placement Systems in the industry.



iX 502 and iX302

Scalable output, High First Pass Yield

LED ASSEMBLY EQUIPMENT

Low-Cost equipment for LED Industry



HCT-550LW

Low-Cost High Speed SMT Mounter

HCT-550LW & HCT-610LV represent new class of offline, high speed SMT Mounters for LED industry.

HCT-550LW reaches real speeds up to 45,000CPH on LED Tube lights with vision alignment while HCT-860L can reach up to 250,000CPH.

HCT-610LV is a path-breaking new introduction for DOBs and LED PCBs, capable of reaching 35,000CPH on DOBs and 45,000CPH on LED PCBs.

HCT-330SV(LV) and HCT-530SV(LV) high-speed, entry-level semi-auto (LV—in-line) are ideal for low investment startups with one machine for LED PCBs and LED Drivers.

SMT PRINTING SOLUTIONS

High-Quality equipment for Electronics Industry

**HCX
axxon**

A MYCRONIC COMPANY

HP-500 is one of the most accurate low-cost SMT Solder Paste/Glue Printer in the industry.

Independent floating print heads ensures high repeatability.

With a fixed cycle time of less than 8s, and 25 μ m accuracy, it fits most applications easily.

Programmable Under-stencil cleaning modes (Dry/Wet/Vacuum) and 2D Inspection are available as standard functions making it extremely versatile.

Glue Dispensing option can be Field Retrofitted if required for special applications.

CL-1200 is also available for 1200mm applications.



HP-500

High-Quality, Low-Cost Stencil Printer

PROCESS EQUIPMENT

Semi-Auto Printer, Reflow Ovens & BHS



Reflow Ovens & BHS
Equipment For All Applications

PROSEM offers a complete range of Process Equipment from JAGUAR, including Semi-Automatic Printers, Reflow Ovens and Board Handling Systems for all applications.

Reflow Ovens are available in 3 different ranges – Economic Series (M-Series), High Quality Series (F-Series) and Dual Lane Ovens (R-Series).

Jaguar Ovens have been specially designed for different applications starting from LED Industry, up to applications with tight process windows such as Medical, IT, Defense, etc.

Board Handling Equipment such as Loaders, Unloaders, Conveyors, etc. are also available for all applications.

SAKI

INSPECTION EQUIPMENT

High Quality Affordable Inspection Systems

PROSEM offers High Quality Automated Inspection Systems from SAKI.

Automated Optical Inspection Systems include Desktop as well as Inline 2D AOIs, Inline 3D AOIs and Inline 3D Solder Paste Inspection Systems.

High End X-Ray Inspection Systems are also available 3D Component Level Defect Analysis.

Large Product Range available for variety of applications.



Reflow Ovens & BHS
Equipment For All Applications

REFURBISHED EQUIPMENT

High Quality SMT Equipment at a fraction of cost



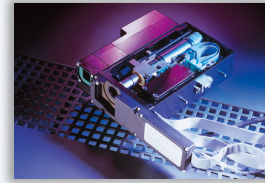
Refurbished Equipment
High Quality, Low Cost

PROSEM offers Fully Refurbished SMT Equipment with quality comparable to brand new equipment at a fraction of a cost.

We provide SMT Line solutions for all volumes, applications and budgets.

Equipment available from 5,000CPH up to more than 100,000 CPH outputs for various kinds of applications such as LED, Energy Meters, Chargers, Motherboards, and many more applications.

All equipment are refurbished using best machines and tools by highly qualified engineers. All equipment are supplied with warranty providing our customers complete peace of mind.



Single Placement Head



Intelligent Feeders



Placement Robot

FACTS ▶

<1
DPM

Placement
Quality

Up to
130
Kcph

Practical Output

Up to
260

Part Numbers
Handling (8mm)

±35µm

High Placement
Accuracy @ 3σ

Real-Time
Placement Force Control

Fully Controlled Pick
& Place Process

Bare Die Handling
Capability

Only TRUE
Scalable Platform

1.5-8N



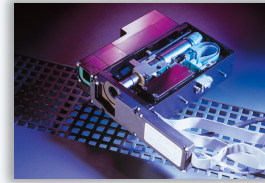
Features

Parameter
Less Than 1 DPM Placement Quality – Best In The Industry
Best Output Over All Applications (Approx. 6,500CPH Per Robot)*
High Feeder Count for Common Setups, Minimizing Changeovers
Continuous Monitoring of Component – Pick Up to Placement
Scale Up or Scale Down Production Volumes in Minutes
No Line Layout Change for Adding/Removing Robots
0201m and Bare Die Handling Capability on Standard Machine
Patented Real Time Placement Force Control
Lowest Energy Consumption

Specifications

Parameter	iX-302	iX-502
Rated Speed	8,250CPH per Robot	
Accuracy @ Cpk>1	35µm for Passives, 25µm for ICs	
Component Size	0.25x0.125mm (0201m) ~ 45x45mm	
Max. Component Height	10.5mm (Optional 12mm)	
Placement Force	Programmable from 1.5 to 8N	
Max. PCB Size	475 x 390mm	515 x 390mm
Max. Optional PCB Size	1,500mm	
Feeding Positions (8mm)	156 (Twin Tape)	260 (Twin Tape)
Footprint (L x W)	2,760 x 1,705mm	3,720 x 1,705mm

* Real Placement Outputs can be simulated based on customer's products with ±5% accuracy



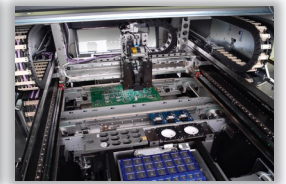
Single Placement Head



Dual Lane System



Intelligent Feeders



High Accuracy Head

FACTS ▶

<1
DPM

Placement Quality

Up to
51
Kcph

Practical Output of T4* Dual Lane

Up to
162

Part Numbers Handling (8mm)

±25µm

High Placement Accuracy (H1)

Real-Time Placement Force Control

Fully Controlled Pick & Place Process

Bare Die Handling Capability

Repairable Toolbits

Up to
40N



Features

Parameter
Less Than 1 DPM Placement Quality – Best In The Industry
Lightweight Graphite Axes for High Accuracy at High Speeds
High Feeder Count for Common Setups, Minimizing Changeovers
Continuous Monitoring of Component – Pick Up to Placement
Different Modes of Production (Dual Lane) for Wide Applications
Control Complete Line from Single Master Module
01005 and Bare Die Handling Capability on Standard Machine
Patented Real Time Placement Force Control
PTH, Press Fit Connectors & 50mm Height Capability (H1)

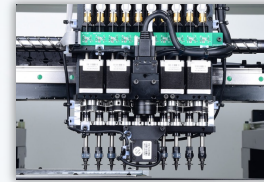
Specifications

Parameter	T4 T2	H1
IPC9850/9850A Output	51KCPH 24.3KCPH	7.1KCPH
Accuracy @ Cpk>1	40µm for passives, 25µm for ICs	
Min. Component Size	0.4x0.2mm (01005)	0.6x0.3mm(0201)
Max. Component Size	45 x 45mm	120 x 52mm
Max. Component Height	15mm	25mm
Placement Force	1.5-8N	4.0-60N
Max. PCB Size	555 x 558mm – Single Lane ; 555 x 254mm – Dual Lane	
Feeding Positions (8mm)	162 (Twin Tape)	
Footprint (L x W)	1,170 x 1,855mm	

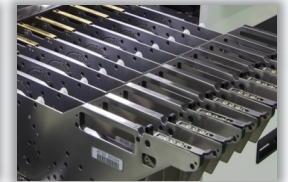
* Real Placement Outputs can be simulated based on customer's products with ±5% accuracy

HCT HCT-610LV

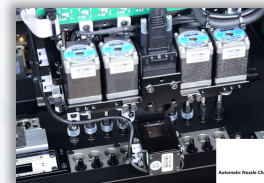
HIGH SPEED
DOB & LED DRIVER
SMT MOUNTER



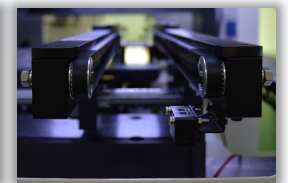
Precise 10 Nozzle Design



Electronic Feeders



Auto Nozzle Changer



In-Line Conveyor

FACTS ▶

55Kcph
45Kcph[#]

Rated Speed/
Real Speed

Placement
Accuracy

±50μm

26

Electronic Feeder
Positions (12mm)

Tall Component
Support

18mm

0603~
10mm²

Large Component
Range

Large Size PCB
Handling

600mm

1st
in its
class

Auto Nozzle
Changer

Lowest Cost of
Ownership

<\$40K

Features

Parameter	Details
Vision Parameters	Body Size LED Size LED Orientation Resistor/Capacitor Size IC Size IC Orientation etc.
Alignment Type	Vision Alignment by Camera
Auto Nozzle Change	Higher Speed for Larger Components
Motion System	High Precision Ball Screw System
PCB Transport	600mm long Transport Table
Feeder Type	Electronic Tape Feeders
High Components	Up to 18mm High Components (ELCOs) for DOB application

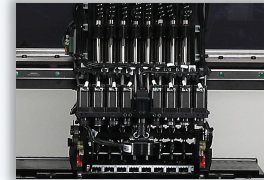
Specifications

Parameter	Value
Placement Speed (Rated) Real with Vision	55,000 CPH 45,000 CPH* ¹ 35,000 CPH* ²
Feeder Positions	26 (12mm equivalent)
Placement Accuracy	±50μm
PCB Handling	50x50mm ~ 600x500mm
Component Handling	0603 ~ 10mm ²
Feeding Types	8mm, 12mm, 16mm, 24mm Tape, Stick
Operating System	Windows 7
Dimensions Weight	1,230*1,350*1,360mm 1,500kg

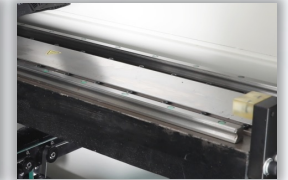
*1Real Speed on LED Lamp; *2Real Speed on DOB PCB

HCT HCT-800L

HIGHLY FLEXIBLE
MID VOLUME
SMT MOUNTER



Precise Head Design



Linear Motor



Electronic Feeders



Auto Nozzle Changer

FACTS ▶

32k
26.8k

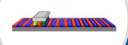
Rated Speed/
IPC9850 Speed (CPH)

70*

Electronic Feeder
Positions

0201~
35mm²

Large Component
Range



Maintenance Free
Linear Motors

Placement
Accuracy

±50μm

Automatic Conveyor
Width Adjustment



Smart Nozzle
Recognition System



Lowest Cost of
Ownership

<\$40K

Features

Parameter	Details
Vision Parameters	Body Size Lead/Ball Qty. Lead/Ball Size/Diameter Lead/Ball Pitch etc.
Alignment Type	On-The-Fly Head Camera (<10x8mm) & Fixed Camera (<30mm)
Motion System	Linear Motors for X and Y Axes
Feeding Options	Tape, Stick & Tray
Feeder Type	Electronic Tape Feeders, Stick Feeder
Tray Handling	Up to 2 Full JEDEC Trays
Nozzle Change	Automatic Nozzle Changer with Smart Nozzle Recognition System

Specifications

Parameter	Value
Placement Speed Optimum IPC 9850	32,000 CPH 26,800 CPH
Feeder Positions	35 (Front, Std.) 35 (Rear, Opt.)
Placement Accuracy	±50μm
PCB Handling	50x50mm ~ 500x350mm
Component Handling	0201 ~ 30mm ²
Operating System	Windows 7
Dimensions Weight	1,150*1,370*1,500mm 1,500kg

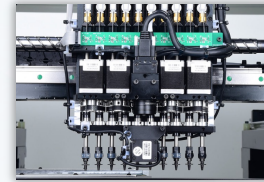
* 35 Position Front Side Feeder Station (Standard) + 35 Position Rear Side Feeder Station (Optional)

Contact – North: +91 98108 56806 | West & South: +91 97694 07646

PROSEM

HCT HCT-550LW

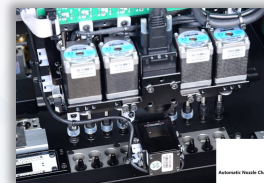
IN-LINE HIGH VOLUME
LONG BOARD
LED MOUNTER



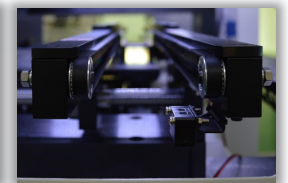
Precise 10 Nozzle Design



Electronic Feeders



Auto Nozzle Changer



In-Line Conveyor

FACTS ▶

55Kcph
45Kcph[#]

Rated Speed/
Real Speed

Placement
Accuracy

±50μm

26

Electronic Feeder
Positions (12mm)

Tall Component
Support

18mm

0603~
10mm²

Large Component
Range

Large Size PCB
Handling

1.2m

1st
in its
class

Auto Nozzle
Changer

Lowest Cost of
Ownership

<\$40K

Features

Parameter	Details
Vision Parameters	Body Size LED Size LED Orientation Resistor/Capacitor Size IC Size IC Orientation etc.
Alignment Type	Vision Alignment by Camera
Auto Nozzle Change	Higher Speed for Larger Components
Motion System	High Precision Ball Screw System
PCB Transport	1,200mm long Transport Table
Feeder Type	Electronic Tape Feeders
High Components	Up to 18mm High Components (ELCOs) for DOB application

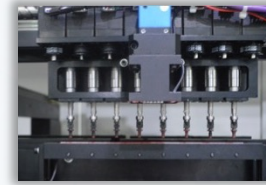
Specifications

Parameter	Value
Placement Speed (Rated) Real with Vision	55,000 CPH 45,000 CPH [#]
Feeder Positions	26 (12mm equivalent)
Placement Accuracy	±50μm
PCB Handling	50x50mm ~ 1,200x500mm
Component Handling	0603 ~ 10mm ² (Up to 18mm Height)
Feeding Types	8mm, 12mm, 16mm, 24mm Tape, Stick
Operating System	Windows 7
Dimensions Weight	2,050*1,350*1,360mm 1,500kg

[#] Real Speed on an LED Tube Light PCB with Vision Alignment

HCT HCT-1200SV

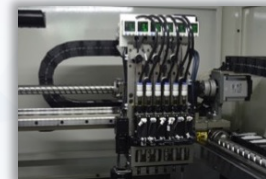
IN-LINE HIGH VOLUME
LONG BOARD
LED MOUNTER



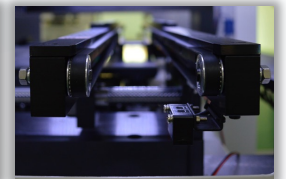
Precise 8 Nozzle Design



Electronic Feeders



Easy Maintenance



In-Line Conveyor

FACTS ▶

42Kcph
35Kcph[#]

Rated Speed/
Real Speed

20

Electronic Feeder
Positions (12mm)

0603~
10mm²

Large Component
Range

1ST
in its
class

Rigid Marble
Base

Placement
Accuracy

±50μm

No Feeder Related
Downtime

0

Large Size PCB
Handling

1.2m

Lowest Cost of
Ownership

<\$40K

Features

Parameter	Details
Vision Parameters	Body Size LED Size LED Orientation Resistor/Capacitor Size IC Size IC Orientation etc.
Alignment Type	Vision Alignment by Camera
High Speed Mode	Higher Speed without Vision
Motion System	High Precision Ball Screw System
PCB Transport	1,200mm long Transport Table
Feeder Type	Electronic Tape Feeders

Specifications

Parameter	Value
Placement Speed (Rated) Real with Vision	42,000 CPH 35,000 CPH [#]
Feeder Positions	20 (12mm equivalent)
Placement Accuracy	±50μm
PCB Handling	50x50mm ~ 1,200x380mm
Component Handling	0603 ~ 10mm ²
Feeding Types	8mm, 12mm, 16mm
Operating System	Windows 7
Dimensions Weight	2,000*1,150*1,400mm 1,680kg

[#] Real Speed on an LED Tube Light PCB with Vision Alignment

HCT HCT-860L

IN-LINE ULTRA HIGH SPEED LONG BOARD LED MOUNTER



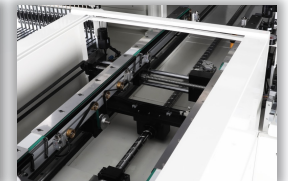
Up to 32 Head Design



Electronic Feeders



Easy Setup



Auto Conveyor Width

FACTS ▶

265K*

Placement
Speed (CPH)

Up to
64

Electronic Feeder
Positions (8/12mm)

0603~
8mm²

Large Component
Range



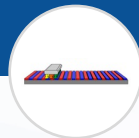
Intuitive User-
Friendly GUI

Maintenance Free
Linear Motor

Automatic Conveyor
Width Adjustment

Large Size PCB
Handling

Lowest Cost of
Ownership



1.2m

<\$65K

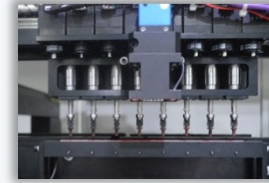
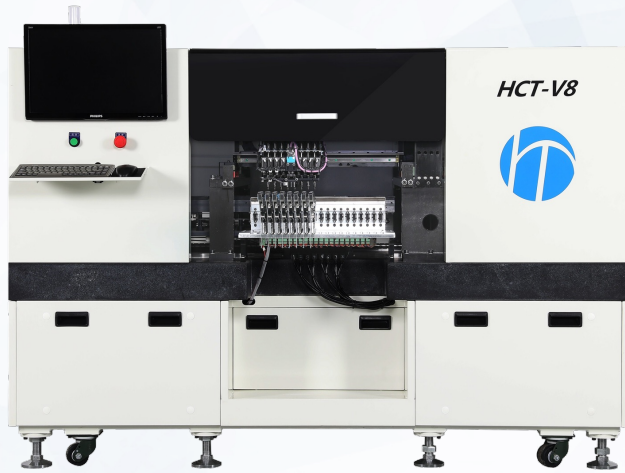
Features

Parameter	Details
Operation Method	Group Pick – Group Place
Motion System	Maintenance Free Linear Motor
Changeover Time	Less than 30 mins
PCB Transport	1,200mm Long In-Line Conveyor
Feeder Type	Electronic Tape Feeders
Cameras	5 pcs for Machine Setting & Fiducials
Flexibility	Customizable No. of Placement Heads

Specifications

Parameter	Value
Placement Speed (Rated)	265,000 CPH
Feeder Positions	Up to 64 (8/12mm equivalent)
PCB Handling	50x150mm ~ 1,200x300mm
Component Handling	0603 ~ 8mm ²
Feeding Types	8mm, 12mm, 16mm Tape
Operating System	Windows 7
Dimensions Weight	2,350*2,450*1,425mm 1,500kg

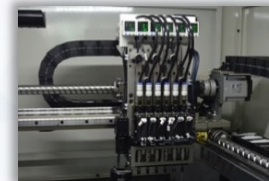
* Real Speed on an LED Tube Light PCB if all 64 Heads Used



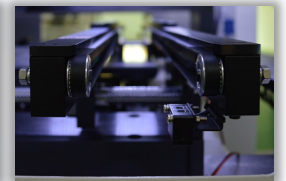
Precise 8 Nozzle Design



Electronic Feeders



Low Maintenance



In-Line Conveyor

FACTS ▶

40Kcph
32Kcph[#]

Rated Speed/
Real Speed

20

Electronic Feeder
Positions (12mm)

0603~
10mm²

Large Component
Range

1ST
in its
class

Rigid Marble
Base

Maintenance Free
Linear Motor

Placement
Accuracy

±50μm

Maintenance Free
Linear Motor



Large Size PCB
Handling

1.2m

Lowest Cost of
Ownership

<\$40K

Features

Parameter	Details
Vision Parameters	Body Size LED Size LED Orientation Resistor/Capacitor Size IC Size IC Orientation etc.
Alignment Type	Vision Alignment by Camera
LED Scanning	Pre-placed LED Scanning ensuring perfect placement of LENS
Motion System	High Precision Linear Motors
PCB Transport	1,200mm long Transport Table
Feeder Type	Electronic Tape Feeders

Specifications

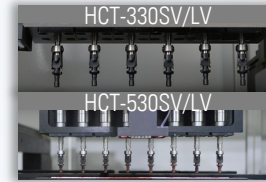
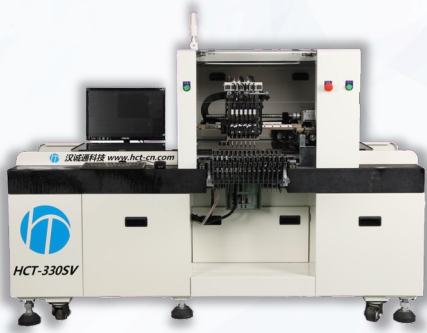
Parameter	Value
Rated Speed (LED)	40,000 CPH
Rated Speed (LENS)	18,000 CPH
Feeder Positions	20 (12mm equivalent) Vibratory LENS Feeder
Placement Accuracy	±30μm
PCB Handling	50x50mm ~ 1,200x460mm
Component Handling	0603 ~ 10mm ² , Height 12mm
Operating System	Windows 7
Dimensions Weight	2,000*1,400*1,400mm 1,680kg

[#] Real Speed on an LED Tube Light PCB with Vision Alignment

HCT

HCT-330/530SV(LV)

IN-LINE & SEMI AUTO HIGH VOLUME LED MOUNTER



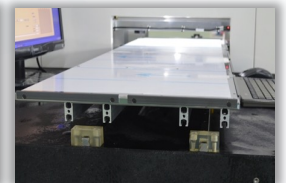
Precise 6/8 Nozzle Design



Electronic Feeders



Easy Maintenance



1,500mm Capability

FACTS ▶

45Kcph
41Kcph#

Rated Speed/
Real Speed

20

Electronic Feeder
Positions (12mm)

0603~
10mm²

Large Component
Range

1ST
in its
class

Rigid Marble
Base

Placement
Accuracy

±50µm

No Feeder related
Downtime

0

Large Size PCB
Handling

1.5m

Lowest Cost of
Ownership

<\$35K

Features

Parameter	Details
Vision Parameters	Body Size LED Size LED Orientation Resistor/Capacitor Size IC Size IC Orientation etc.
Alignment Type	Vision Alignment by Camera
Motion System	High Precision Ball Screw System
PCB Transport	1,500mm long Transport Table
In-Line Version	330LV and 530LV Available
Feeder Type	Electronic Tape Feeders
Non-Stop Mode	Non-Stop Production for Small PCBs

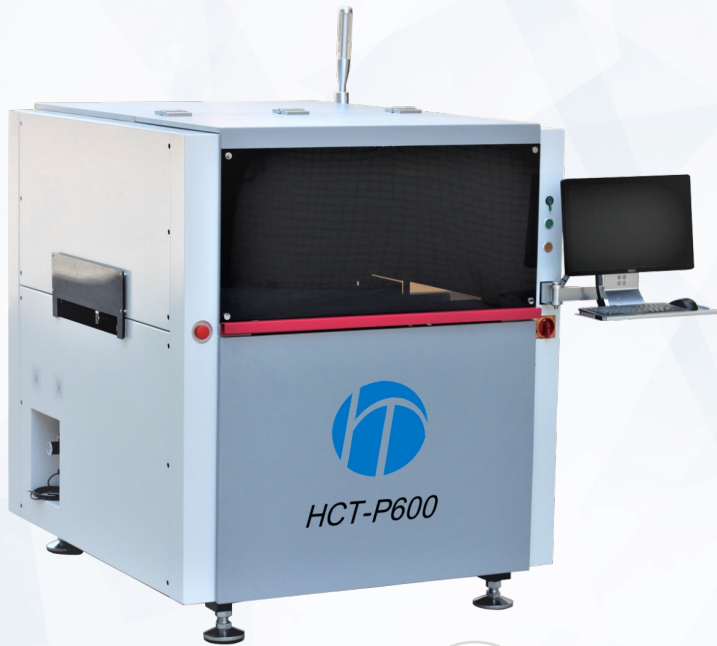
Specifications

Parameter	HCT-330SV	HCT-530SV
Placement Speed (Rated) Real with Vision	36,000 CPH 34,000 CPH	45,000 CPH 41,000 CPH
Feeder Positions	20	20
Placement Accuracy	±50µm	
PCB Handling	50x50mm ~ 1,500x400mm	
Component Handling	0603 ~ 10mm ²	
Feeding Types	8mm, 12mm, 16mm Tape	
Operating System	Windows 7	
Dimensions Weight	Approx. 2,000*1,150*1,400mm 1,400Kg	

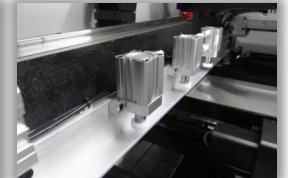
Real Speed on an LED Tube Light PCB with Vision Alignment

HCT P600

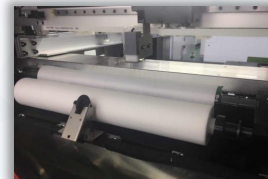
HIGH PRECISION FULLY AUTOMATIC STENCIL PRINTER



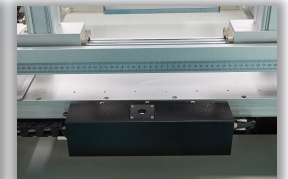
Efficient Drive Control



Flexible Stencil Clamping



Under-Stencil Cleaning



Precise Vision System

FACTS ▶



High Speed
<7.5s Cycle Time[#]



Precise Vision
System



High Speed
Underside Cleaning



SMEMA
Interface

Closed Loop Comm.
with SPI

Diagonal Warpage
Allowance

Compact Machine
Size

Lowest Cost of
Ownership



1%

<1.2m

<\$25K

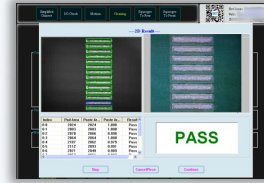
Features

Parameter
Floating Print Head
High Accuracy Alignment Camera with Telecentric Lens
Low Core Cycle Time
2D Vision Inspection & Analysis with Texture-based Image Recognition
Closed Loop Communication with SPI
StencilVision™ – Check Stencil & Enable Cleaning Automatically
Programmable Cleaning Mode (Dry Wet Vacuum)
SMEMA Compatibility

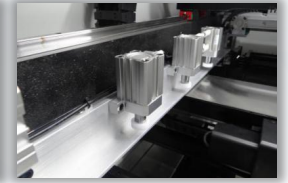
Specifications

Parameter	Value
Max. PCB Size	600*350mm
Stencil Size	370*400mm ~ 800*800mm
Allowed Warpage	Up to 1% Diagonal Length
Transport Speed	100 ~ 1,500mm/s (Programmable)
Squeegee Speed	10 ~ 200mm/s (Programmable)
Printing Accuracy	±15µm @ 6σ
Cycle Time	<7.5s [#]
Power	220VAC, 1φ, 50/60Hz 1.5KW
Dimensions	1,150*1,450*1,500mm

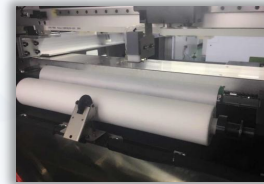
[#] Core Cycle Time (Excluding Printing & Cleaning Time)



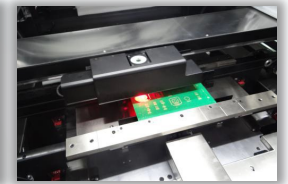
2D Inspection



Flexible Stencil Clamping



Under-Stencil Cleaning



Vision System

FACTS ▶



High Speed
<8s Cycle Time[#]



2D Inspection
(PCB & Stencil)



High Speed
Underside Cleaning



SMEMA
Interface

Allowable PCB
Weight

5Kg

Diagonal Warpage
Allowance

1%

Highly Accurate
Print Quality

±25µm

Lowest Cost of
Ownership

<\$35K

Features

Parameter

- Floating Print Head With Two Independent Motors
- High Accuracy Alignment Camera
- Low Cycle Time
- High Speed Under-Stencil Cleaning
- Single Stage High Speed Conveyor
- Programmable Cleaning Mode (Dry | Wet | Vacuum)
- 2D Inspection System (Paste Coverage & Stencil Aperture Check)
- Large Alignment Range (X,Y = ±7mm | θ = 2.0°)
- SMEMA Compatibility

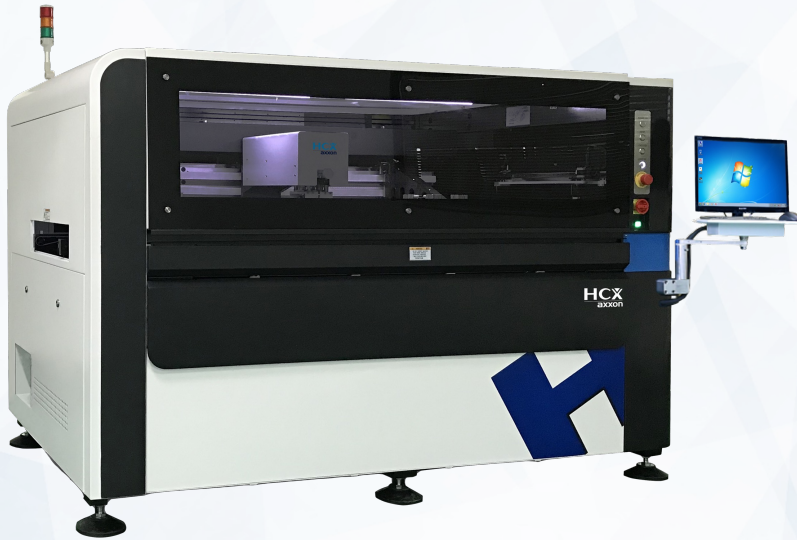
Specifications

Parameter

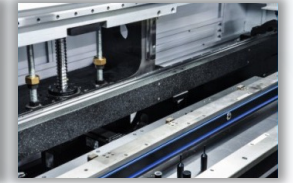
Value

- Max. PCB Size: 500*340mm*
- Stencil Size: 470*370mm ~ 820*737mm
- Allowed Warpage: Up to 1% Diagonal Length
- Transport Speed: 100 ~ 1,500mm/s (Programmable)
- Squeegee Speed: 10 ~ 200mm/s (Programmable)
- Printing Accuracy: ±25µm @ 6σ
- Cycle Time: <8s
- Power: 220VAC, 1φ, 50/60Hz | 1.5KW
- Dimensions: 1,250*1,440*1,505mm

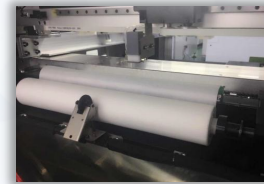
[#] Excluding Printing Time *600mm PCB Length available in HP-600



2D Inspection



Patented Granite Structure



Under-Stencil Cleaning



Advanced Vision System

FACTS ▶



High Speed
<12s Cycle Time[#]



2D Inspection
(PCB & Stencil)



High Speed
Underside Cleaning



SMEMA
Interface

Allowable PCB
Weight

5Kg

Diagonal Warpage
Allowance

1%

Highly Accurate
Print Quality

±25µm

Lowest Cost of
Ownership

<\$55K

Features

Parameter
Floating Print Head With Two Independent Motors
High Accuracy Alignment Camera
Low Cycle Time
High Speed Under-Stencil Cleaning
Single Stage High Speed Conveyor
Programmable Cleaning Mode (Dry Wet Vacuum)
2D Inspection System (Paste Coverage & Stencil Aperture Check)
Large Alignment Range (X,Y = ±7mm θ = 2.0°)
SMEMA Compatibility

Specifications

Parameter	Value
Max. PCB Size	1,200*360mm
Stencil Size	1,300*300mm ~ 1,500*737mm
Allowed Warpage	Up to 1% Diagonal Length
Transport Speed	100 ~ 1,500mm/s (Programmable)
Squeegee Speed	10 ~ 200mm/s (Programmable)
Printing Accuracy	±25µm @ 6σ
Cycle Time	<12s
Power	220VAC, 1φ, 50/60Hz 1.5KW
Dimensions	2,220*1,230*1,525mm

[#] Excluding Printing Time



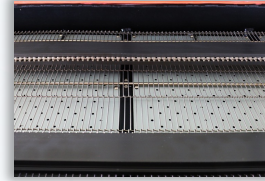
JAGUAR

M-SERIES

ECONOMICAL SERIES

LEAD-FREE

REFLOW OVENS (6,8,10 ZONES)



Mesh + Chain Transport



Efficient Thermal Design

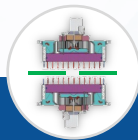


Auto Chain Lubrication

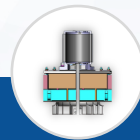


Fume Extraction System

FACTS ▶



Air Convection
Top & Bottom



Internal Cooling
Zone



PC Control



Dual Side SMD
PCB Handling

Running Power
Consumption

<7kW

Temperature
Accuracy

±1°C

In-Built Temperature
Profiler



Lowest Cost of
Ownership

<\$15K

Features

Parameter

Forced Air Convection on Top & Bottom Zones

1 Forced-Air Cooling Zone

Chain Transport for Dual-Side SMD PCB Handling

Windows 7 Based PC Control

In-built Temperature Profiler

Low Power Consumption

High Quality Heat Insulation

Low/High Abnormal Temperature Alarm

Lead Free Ready

Specifications (for M6)

Parameter

Value

Heating Zones | 6 Top + 6 Bottom Heating Zones

Heating Length | 2,500mm

Cooling Zone | 1 Zone, 300mm

PCB Transport | Mesh + Chain Transport

Transport Speed | 100 ~ 2,000mm/min

Max. PCB Width | 300mm (Chain)

Warm-Up Time | Approx. 20 minutes

Power Consumption | Start up | Running – ~18kW | 4-7kW

Dimensions | Weight | 3,600*1,100*1,490mm | 900Kg

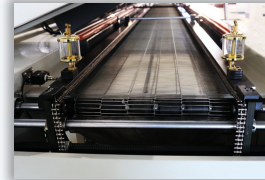
Please contact your local sales representative for 8/10 zones models. * Price indicated for 6 zone model.



JAGUAR

F-SERIES

HIGH QUALITY LEAD-FREE REFLOW OVENS (8,10 ZONES)



Mesh + Chain Transport



Efficient Thermal Design

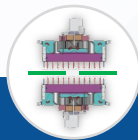


Fume Extraction System



Wide Range of Options

FACTS ▶



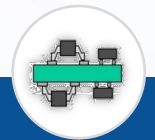
Air Convection
Top & Bottom



Internal Cooling
Zone



PC Control



Dual Side SMD
PCB Handling

Running Power
Consumption

<8kw

Temperature
Accuracy

±1°C

In-Built Temperature
Profiler



Lowest Cost of
Ownership

<\$25K*

Features

Parameter
Forced Air Convection on Top & Bottom Zones
2 Forced-Air Cooling Zones
Chain Transport for Dual-Side SMD PCB Handling
Windows 7 Based PC Control
In-built Temperature Profiler
Low Power Consumption
High Quality Heat Insulation
Low/High Abnormal Temperature Alarm
Dual Lane, N ₂ Options Available

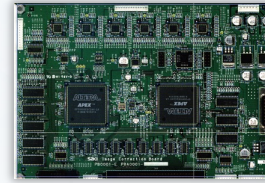
Specifications (for F8)

Parameter	Value
Heating Zones	8 Top + 8 Bottom Heating Zones
Heating Length	3,121mm
Cooling Zone	2 Zones, 345mm each
PCB Transport	Mesh + Chain Transport
Transport Speed	100 ~ 2,000mm/min
Max. PCB Width	400mm (Chain)
Warm-Up Time	Approx. 20 minutes
Power Consumption	Start up Running – ~40kW ~8kW
Dimensions Weight	5,300*1,320*1,490mm 1,800Kg

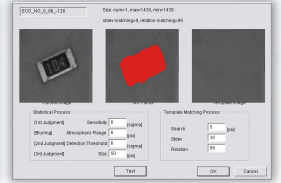
Please contact your local sales representative for 10/12 zones models. * Price indicated for 8 zone model.

SAKI 2D AOI

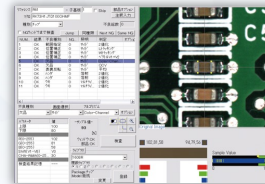
INLINE 2D
HIGH RESOLUTION
HIGH SPEED AOI



Complex PCB Inspection



Rotated Component Support



User Friendly Operation



Extra Component Detection

FACTS ▶



Line Color CCD
Camera



LED
Lighting Source



Color
Inspection



High Speed Inspection



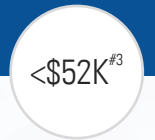
High
Resolution



Multi-Stage
Inspection



2D Barcode
Option



Lowest Cost of
Ownership

Features

Parameter

Line Scan Technology – Core Technology of Saki

Tele-centric Lens for Distortion-Free Images

Coaxial Parallel Light Illumination for Eliminating Shadows

20 Different Combinations for Best Inspection Results

Multiple Stage Inspection (Pre/Post Reflow/Wave)

Flat Belt PCB Transfer

Automatic Conveyor Width Adjustment

No Camera, Lens, Gantry Maintenance Costs

MTBF More Than 180 Months

Top + Bottom Side Scanning At The Same Time^{#4}

Specifications

Parameter

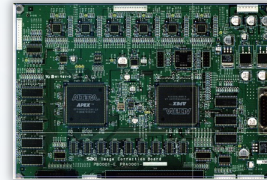
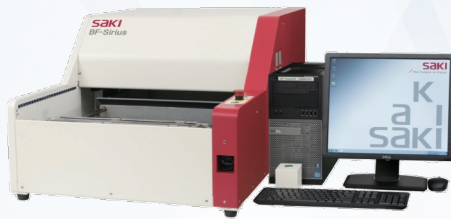
Parameter	BF-Frontier II	BF-Tristar II
Max. PCB Size	460*500mm	250*330mm
Inspection Parameters	Presence/Absence, Misalignment, Tombstone, Reverse, Polarity, Bridge, Foreign Material, Solder Absence, Insufficient Solder, Lifted Lead, Lifted Chip, Fillet Defect	
Camera	Line Color CCD Camera	
Tact Time	21s ^{#1}	21s ^{#2}
Resolution	18μm	10μm
Lens Type	Tele-Centric Lens	
Dimensions (mm)	850*1,340*1,230	850*1,295*1,130

^{#1} For PCB Size 460 x 500mm. ^{#2} For PCB Size 250*330mm. For smaller PCBs, Cycle time will be shorter.

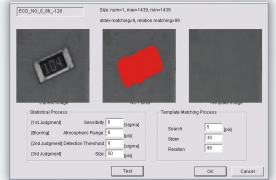
^{#3} Price Indication for BF-Frontier II. ^{#4} This feature is available only on BF-Tristar II

SAKI 2D AOI

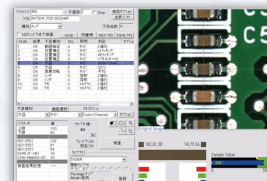
DESKTOP 2D
HIGH RESOLUTION
HIGH SPEED AOI



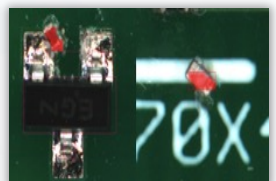
Complex PCB Inspection



Rotated Component Support



User Friendly Operation



Extra Component Detection

FACTS ▶



Line Color CCD
Camera



LED
Lighting Source



Color
Inspection



High Speed Inspection

High
Resolution



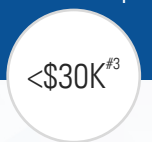
Multi-Stage
Inspection



2D Barcode
Option



Lowest Cost of
Ownership



Features

Parameter

Line Scan Technology – Core Technology of Saki

Tele-centric Lens for Distortion-Free Images

Coaxial Parallel Light Illumination for Eliminating Shadows

20 Different Combinations for Best Inspection Results

Multiple Stage Inspection (Pre/Post Reflow/Wave)

Flat Belt PCB Transfer

No Camera, Lens, Gantry Maintenance Costs

MTBF More Than 180 Months

2D Barcode Recognition Option

Specifications

Parameter

Max. PCB Size

BF-Sirius

460*500mm

BF-Comet

250*330mm

Inspection Parameters

Presence/Absence, Misalignment, Tombstone, Reverse, Polarity, Bridge, Foreign Material, Insufficient/No Solder, Lifted Lead/Chip, Fillet Defect

Camera

Line Color CCD Camera

Tact Time

18s^{#1}

18s/13s^{#2}

Resolution

18μm

10/18μm

Lens Type

Tele-Centric Lens

Dimensions (mm)

800*1,280*600

580*850*452

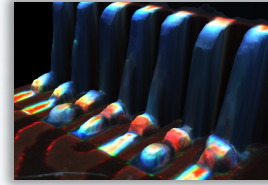
^{#1} For PCB Size 460 x 500mm.

^{#2} For PCB Size 250*330mm on BF-Comet10 and BF-Comet18 respectively. For smaller PCBs, Cycle time will be shorter. Includes scanning time.

^{#3} For BF-Comet

saki 3D AOI

INLINE 3D
HIGH RESOLUTION
HIGH SPEED AOI



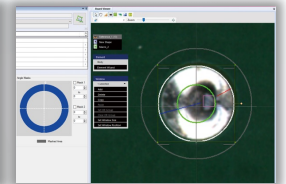
Advanced Inspection Algorithm



High Res. Optical Unit

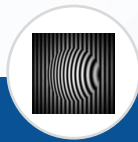


High Accuracy OCR/OCV



Fujiyama Algorithm

FACTS ▶



Fringe Pattern
Projection



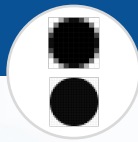
LED
Lighting Source



Color
Inspection



High Speed Inspection



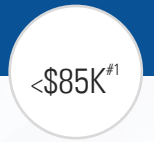
High
Resolution



Multi-Stage
Inspection



2D Barcode
Option



Lowest Cost of
Ownership

<\$85K^{#1}

Features

Parameter

High Res. Optical Head with Multi Frequency Digital Projector

CoaXPress Camera for Faster Inspection & Measurement Process

Scalable Optical Resolution of 12µm and 18µm

High Resolution Linear Scale for Accurate Positioning

Multiple Stage Inspection (Pre/Post Reflow/Wave)

Phase Measurement Profilometry for Height Range 1-20µm

Feedback to Pick & Place

Automatic Conveyor Width Adjustment

Through-hole Device Solder Inspection Verification (Fujiyama Algorithm)

Specifications

Parameter

3Di L Series

Max. PCB Size

500*510mm

Inspection Parameters

Presence/Absence, Misalignment, Tombstone, Reverse, Polarity, Bridge, Foreign Material, Solder Absence, Insufficient Solder, Lifted Lead, Lifted Chip, Fillet Defect

Camera

12MP CoaXPress Camera

Resolution

12µm | 18µm

Recognition Speed (mm²/s)

3,600 | 5,700

FOV Size (mm)

36*42 | 41.5*41.5

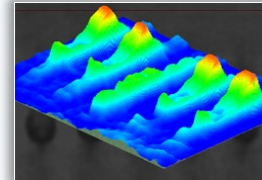
Dimensions (mm)

1,040*1,440*1,500

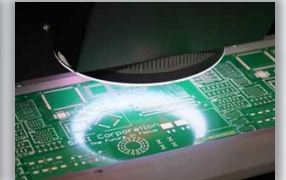
^{#1} For 3Di-LS2-L

saki 3D SPI

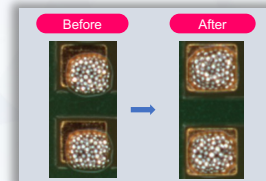
INLINE 3D
HIGH RESOLUTION
HIGH SPEED SPI



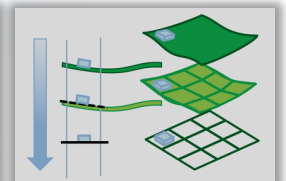
3D Inspection Algorithm



CoaXPress Camera

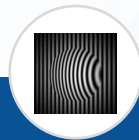


Feedback to Printer



Auto Warpage Compensation

FACTS ▶



Fringe Pattern
Projection



LED
Lighting Source

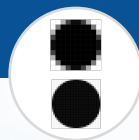


Color
Inspection



High Speed Inspection

High
Resolution



High Quality
Camera Optics



2D Barcode
Option



Lowest Cost of
Ownership

<\$65K

Features

Parameter
High Resolution Optical Head with Multiple Projectors
CoaXPress Camera for Faster Inspection & Measurement Process
Scalable Optical Resolution of 12µm and 18µm
High Resolution Linear Scale for Accurate Positioning
Phase Measurement Profilometry for Height Range 1-20µm
Feedback to Printer
Automatic Conveyor Width Adjustment
Saki Self-Programming (SSP) Software for Fast Programming
Dual Lane Option Available

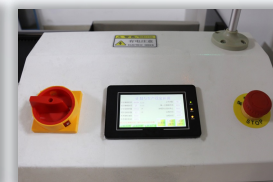
Specifications

Parameter	3Si L Series
Max. PCB Size	500*510mm
Inspection Parameters	Solder Paste Height, Volume, Area, Bridging, Offset and Shape
Camera	12MP CoaXPress Camera
Resolution	12µm 18µm
Recognition Speed (mm ² /s)	5,500 6,400
Height Measurement Range	500µm
Height Resolution	0.1µm
Dimensions (mm)	1,040*1,440*1,500

#1 For 3Si-LS2-L



PLC Controlled



LCD Control Panel



Precise Up/Down Cylinder



SMEMA Interface

FACTS ▶



LCD Control Panel



PLC Control



High Quality Motor



Japanese LM Guides

Selectable Pitch (Loader/Unloader)



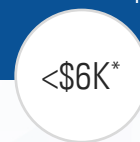
Standard Magazine Rack



SMEMA Interface



Lowest Cost of Ownership



Features

Parameter
Automatic Magazine Changeover with User Selectable Pitch
Solid Casted Base for Machine Stability
Dual Pneumatic Clamping for Magazine Alignment
Adjustable Pressure for PCB Pusher Arm
PLC Controlled
LCD for User Parameter Programming
SMEMA Interface for Interconnection Upstream & Downstream
JB-330/390 & Other Board Handling Equipment Also Available

Specifications

Parameter	JB-250-LD	JN-250-ULD
Max. PCB Size	250*330mm	
Lift Up/Down Mechanism	Step Selection of 10, 20, 30 & 40mm	
Control System	PLC Based LCD Panel	
Conveyor Height	900±20mm	
Conveyor Direction	Left-Right (Right To Left Available)	
Interface	SMEMA Interface	
Power	1φ, 220VAC, 50/60Hz	
Dimensions (mm) [#]	900*770*1,250	1,730*770*1,250

* Magazines not included | # Without Signal Tower



S-Series

SEMI-AUTOMATIC STENCIL PRINTER



FACTS ▶



Touch Screen
Control



PLC
Control



PANASONIC
Motor



Japanese
LM Guides

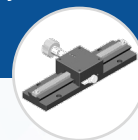
Dual Metal
Squeegee



PCB Table
Up-Down



PCB Position
Adjustment (X|Y|R)



Lowest Cost of
Ownership

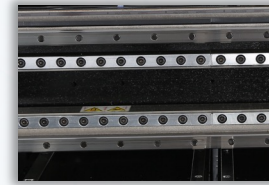
<\$6K*

Specifications

Description	S400	S600	S1200
Max. PCB Size	400*300mm	600*300mm	1,200*300mm
PCB Thickness		0.2 – 2.0mm	
PCB Positioning System		Reference Pin/Blocks	
PCB Adjustment Range		±10mm in X & Y R adjustment by combination of X & Y	
Printing Accuracy		±0.02mm	
Printing Repeatability		±0.02mm	
Air Pressure		0.4 – 0.6MPa	
Power		1φ, 220VAC, 50/60Hz	
Dimensions	900*700*1,650mm	1,100*700*1,650mm	1,700*700*1,650mm

LANGKE L500/L800

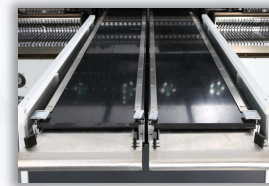
HIGH-SPEED STRIP LIGHT LED MOUNTER



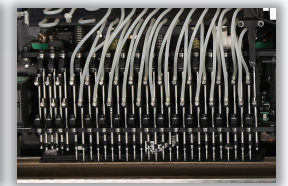
High-Power Linear Motor



Dual-Motor Feeders



Dual Lane Transport



Dual Nozzle Structure

FACTS ▶

540K
CPH

Maximum
Speed[#]

6.5

Minimum Head Pitch

10

Sets of Cameras



Intuitive User-Friendly GUI

Maintenance Free
Linear Motor



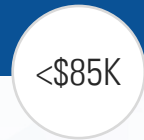
Infinite PCB
Handling



Application
Example



Lowest Cost of
Ownership



Features

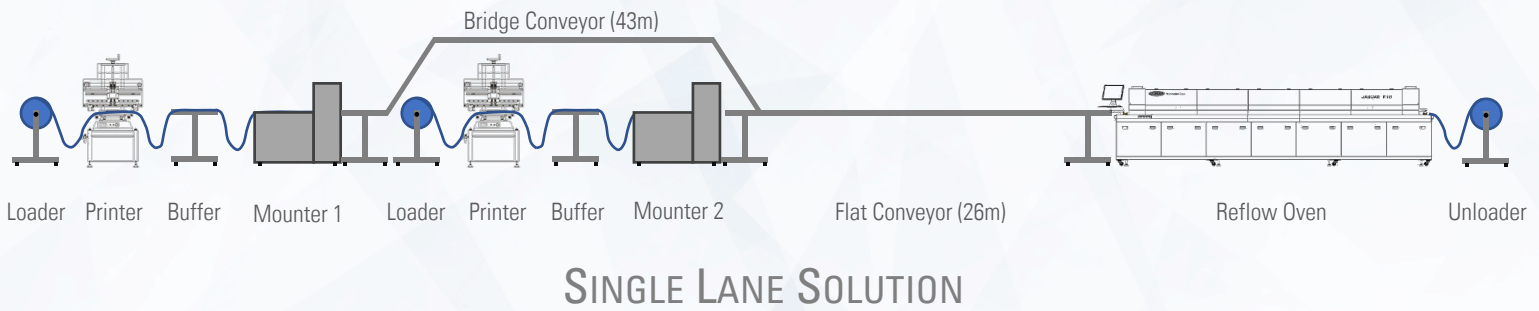
Parameter	Details
High Speed	Highest Output in the Industry for Strip Light SMT Assembly
Adjustable Heads	Adjustable Head and Feeder Pitch to Match PCB Design
Linear Motors	High Power Linear Motors for High Accuracy and High Output
Dual Nozzle Structure	Dual Nozzle Structure Enabling 6.5mm Pitch
No Missing Components	(Optional) Missing Component Mounting Eliminating Manual Rework
Feeder Type	Electronic Tape Feeders

Specifications

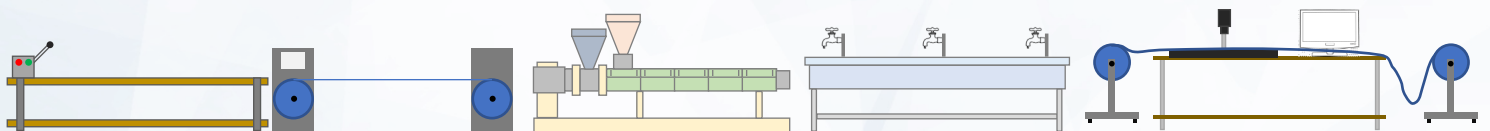
Parameter	L500	L800
Placement Speed	Up to 270KCPH [#]	Up to 540KCPH [#]
PCB Handling	Any Length * 280mm	
Feeder Positions	64	128
Nozzles Standard Optional	2 Groups 32/Head, Total 64 38/Head, Total 76	4 Groups 32/Head, Total 128 38/Head, Total 152
PCB Lanes	Single-Lane	Dual-Lane
Head Pitch	Minimum 6.5mm	
Power Air	380V 3φ 0.5~0.8 MPa	
Dimensions	2,900*2,550*1,550	3,680*2,600*1,650

[#]Real Speed on Strip Light with 6.5mm Pitch, 38 Strips per Panel, 240 LEDs per meter

LED STRIP LIGHT – SMT SOLUTION



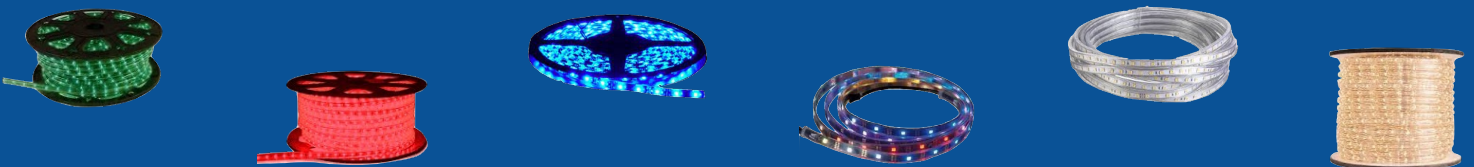
LED STRIP LIGHT – EXTRUSION/DISPENSING



PVC/SILICONE EXTRUSION (UNLIMITED LENGTH)



PU/SILICONE DISPENSING (5/6.5M)



PROSEM is an acronym for Professional Solutions for Electronic Manufacturing. Since starting business in 2002, PROSEM has been a One-Stop fully integrated supplier of world class Equipment and Services for the Electronic Manufacturing Industry in the Indian subcontinent.

Our Head Office in New Delhi, caters to the customers in the North and East of India, and regional offices in Chennai, Pune and Mumbai, cater to the customers in the South and West of India.

PROSEM is the exclusive representative of Kulicke & Soffa (Assembléon Line) make SMT Pick & Place Machines in India. PROSEM also represents HCT, HCX (a Mycronic Company) & Jaguar amongst other brands, covering an entire range of Pick & Place equipment, Printers, Reflow Ovens, Process Equipment, Board Handling Equipment, etc and SAKI covering the entire range of Inspection Equipment such as AOIs, SPIs and X-Ray systems.

STENCIL PRINTERS

PICK & PLACE MACHINES

LEAD FREE REFLOW OVENS

WAVE SOLDERING MACHINES

INSPECTION EQUIPMENT

BOARD HANDLING EQUIPMENT

PROCESS EQUIPMENT

REFURBISHED EQUIPMENT

WHY CHOOSE US?

- ❖ Over 16 Years' Experience
- ❖ Professional & Trained Engineers
- ❖ 24/7 Customer Support
- ❖ Pan India Presence
- ❖ Production & Process Support
- ❖ Spare Parts Support

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