

MIRAE SMT PICK & PLACE MACHINES

 InterElectronic

Mirae 



INTRODUCTION



InterElectronic Hungary Ltd. offers equipments, machines and different materials (ESD) of different production technologies (SMT/THT/LED). Including high quality, special request fulfilling soldering machines, devices, tools, instruments and materials for the electronic industry and services.

SERVICES

Our each and every product has a warranty granted by the InterElectronic Hungary Ltd. For more complex appliances our company offers a well-needed training for set up and usage. We grant the repair of all of the products traded by our company during and after the warranty period. As well as we guarantee the continuous supply of accessories and instruments.

DEMONSTRATON

In case if any of our products aroused your interest the InterElectronic Hungary Ltd. would be glad to visit your company and hold a presentation of the product of your interest. As far as possible we serve you by bringing demo devices with us. In the most cases of our products we are proud possessors of references nation-wide. Major machines also could be observed at our partners' site.

PRICE LIST

Most of the prices of our products can be requested on our website and will be sent via email to you. In case of special and more complex machines the prices are given after consultation individually through a price offer. If you are interested in more information or user manuals of our products we recommend you to visit our website (www.interelectronic.com), which is updated continuously with professional information. We also recommend you to visit our office, where you can purchase any of the needed devices and spare parts of the product of your interest.

ORDER/SHIPPING

Our soon to be partners are welcomed to be helped via telephone, fax or e-mail. We use different ways of delivery, depending on the preference of our partner. We can deliver your purchased product by ourselves, by freight or courier service. The way of delivery might be negotiated previously. We offer you cash on delivery nation-wide!

MIRAE SMT MOUNTER - MR SERIES & MX SERIES

Mirae's Complete SMT Solution

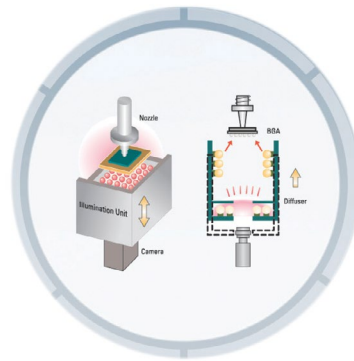


Mirae's Complete SMT Solution



Design

Ergonomic system design



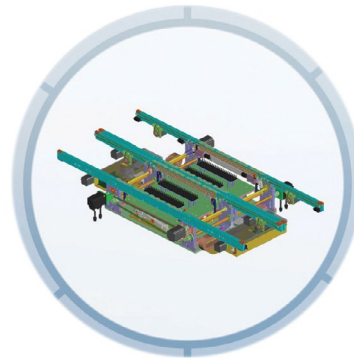
Vision System

Optimizing component placement by utilizing advanced recognition algorithm



4th Generation Linear Motor

Apply linear motor on X-Y Axis, allowing high-speed, low-noise, semi-permanent and more precision operation



Conveyor System

Single and dual conveyor for higher productivity



eX Feeder

Faster and more accurate
3rd generation Feeder



Software

Optimal solution for maximizing
job operation

MR20 Series

- Advanced mounter with a flexible placement system and improved productivity
- Single Gantry & Single Conveyor

► MR20L

- 6 axis modular heads for high productivity
- 2 axis precision head for all-in-one function

► MR20LP

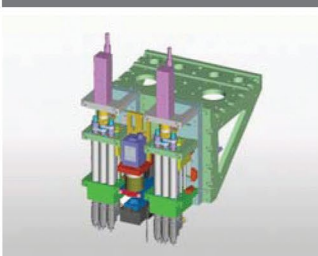
- 4 axis precision heads for better flexibility
- Improving responsiveness to specialist components by maximum height of 25mm



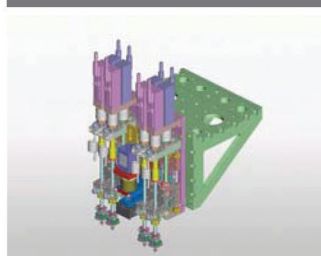
MR20 Series Specifications.

| MODEL | | | MR20L | MR20LP |
|----------------------------|---------|-----------------|-------------------------------|--------|
| CPH | Optimal | | 27,500 | 19,500 |
| Head | | | 6M(2P) | 4P |
| PCB Size (mm) L x W x T | Single | Standard | 700 x 510 x 5.0 | |
| | | Option (2 Step) | 1,200(950) x 510 x 5.0 | |
| Feeder Slot | | Standard | 60EA | |
| | | Option1 | 120EA (60x2) | |
| | | Option2 | 60EA / TF5 + 20EA | |
| Dimension (mm) L x W x H | | | 1,490 x 2,090 x 1,500 (Cover) | |

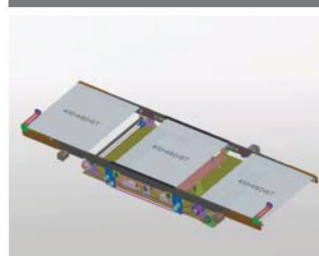
Module Head



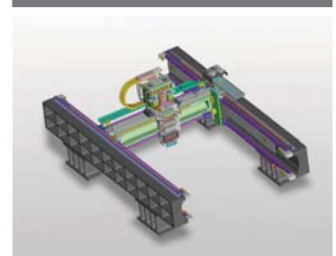
Precision Head



Single Conveyor



Single Gantry



MR40 Series

- Higher productivity per unit area with improved real productivity
- Dual Gantry & Dual Conveyor for MR40L and MR40LP
- Dual Gantry & Single Conveyor for MR40LS and MR40LSP

► MR40L

- 6 axis modular heads on each gantry for high productivity
- 2 axis precision heads on each gantry for all-in-one function

► MR40LS

- 6 axis modular heads and 2 axis precision heads on each gantry for high productivity
- Single conveyor with large board available

► MR40LP

- 4 axis precision heads on each gantry optimizing high-speed production for odd-shape component(s)
- Improving responsiveness to specialist components by maximum height of 25mm

► MR40LSP

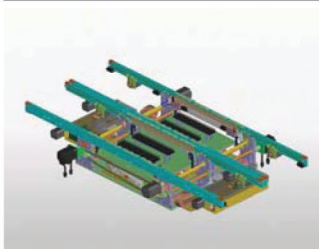
- 4 axis precision heads on each gantry optimizing high-speed production for odd-shape component(s)
- Single conveyor with large board available



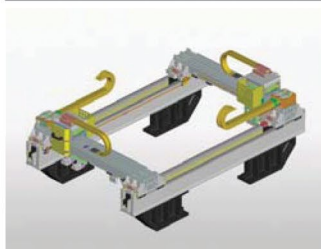
MR40 Series Specifications.

| MODEL | | | MR40L | MR40LS | MR40LP | MR40LSP |
|----------------------------|---------|----------|-------------------------------|-----------------|-----------------|-----------------|
| CPH | Optimal | | 55,000 | | 39,000 | |
| Head | | | 6M(2P) + 6M(2P) | | 4P + 4P | |
| PCB Size (mm) L x W x T | Single | Standard | 700 x 460 x 5.0 | 700 x 510 x 5.0 | 700 x 460 x 5.0 | 700 x 510 x 5.0 |
| | Dual | Standard | 700 x 250 x 5.0 | — | 700 x 250 x 5.0 | — |
| Feeder Slot | | Standard | 120EA (60x2) | | | |
| | | Option | 60EA / TF5 + 15EA | | | |
| Dimension (mm) L x W x H | | | 1,490 x 2,090 x 1,500 (Cover) | | | |

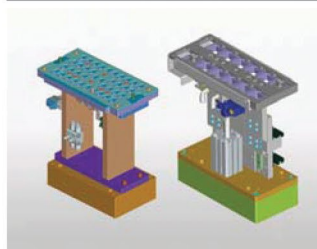
Dual Conveyor



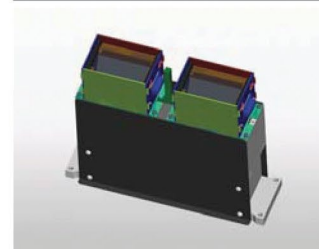
Dual Gantry



Automatic Nozzle Changer



Camera Module



Mx200 Series

- Cost effective mounter with flexibility
- Single Gantry & Single Conveyor

- ▶ Mx200
 - 6 axis modular heads for productivity
- ▶ Mx200P
 - 4 axis modular heads & 1 axis precision head
- ▶ Mx200L
 - Large Board available up to 680 x 460mm
- ▶ Mx200LP
 - Large Board available up to 680 x 460mm

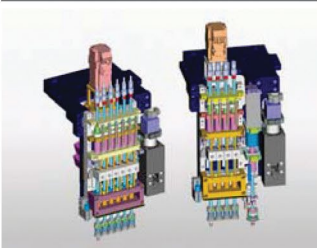


Mx200 Series Specifications.

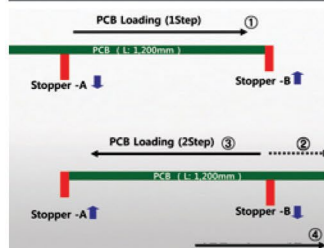
| MODEL | | | Mx200 | Mx200P | Mx200L | Mx200LP |
|----------------------------|----------|----------|-----------------------|--------|-----------------------|---------|
| CPH | Optimal | | 23,000 | 17,000 | 23,000 | 17,000 |
| | IPC-9850 | | 21,000 | 15,000 | 21,000 | 15,000 |
| Head | | | 6M | 4M +1P | 6M | 4M + 1P |
| PCB Size (mm) L x W x T | Single | Standard | 410 x 460 x 5.0 | | 680 x 460 x 5.0 | |
| | | Option | 680 x 460 x 5.0 | | 1,200 x 460 x 5.0 | |
| Feeder Slot | | Standard | 80EA (40x2) | | 100EA (50x2) | |
| Dimension (mm) L x W x H | | | 1,200 x 1,900 x 1,500 | | 1,450 x 1,900 x 1,500 | |

※ Board Size : L-Type Option : 750mm (L)

Head



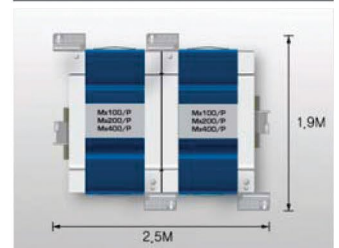
1,200mm (2 Step Motion)



P-ANC



Efficient Line-Up



Mx400 Series

- Realizing maximum productivity per unit area
- Dual Gantry & Dual Conveyor

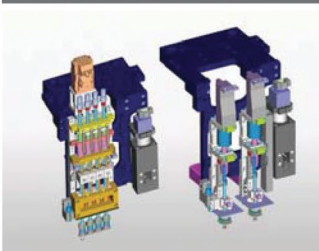
- Mx400 & Mx400L
 - 6 axis modular heads on each gantry optimizing the production of small component(s)
- Mx400P & Mx400LP
 - 6 axis modular heads on front gantry and 3 axis precision heads on rear gantry allowing high quality and flexibility.



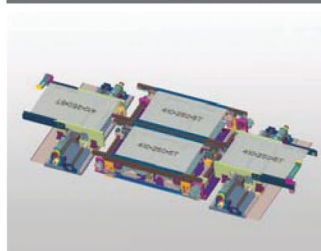
Mx400 Series Specifications.

| MODEL | | | Mx400 | Mx400P | Mx400L | Mx400LP |
|----------------------------|-------------------|-----------------|-----------------------|----------------|-----------------------|----------------|
| CPH | Optimal | | 46,000 | 40,000 | 46,000 | 40,000 |
| | IPC-9850 | | 42,000 | 31,000 | 42,000 | 31,000 |
| Head | | | 6M+6M | 6M+3P or 3P+3P | 6M+6M | 6M+3P or 3P+3P |
| PCB Size (mm) L x W x T | Single | Standard | 410 x 460 x 5.0 | | 680 x 460 x 5.0 | |
| | | Option (2 Step) | 680 x 460 x 5.0 | | 1,200 x 460 x 5.0 | |
| | Dual | Standard | 410 x 250 x 5.0 | | 680 x 250 x 5.0 | |
| | | Feeder Slot | Standard | 80EA (40x2) | | 100EA (50x2) |
| Option | 50EA / TF5 + 20EA | | | | | |
| Dimension (mm) L x W x H | | | 1,200 x 1,900 x 1,500 | | 1,450 x 1,900 x 1,500 | |

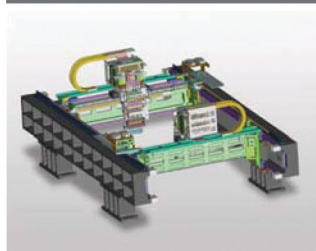
Head



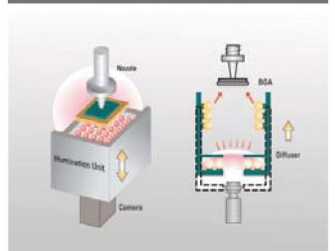
Dual Conveyor



Dual Gantry



Vision





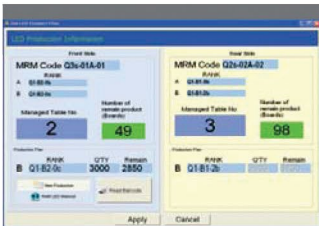
Standard Machine Software

Mirae Machine Software provides an easy to use GUI (Graphic User Interface) and efficient programming functions to manage high volume and complex production. This package consists of the machine control software, real-time vision software, GUI software and optimization software. This software package is installed on the machine to enable independent programming and production on a machine. (Component database editing, optimization of placement sequences, and production.) Mirae machine software is not only easy to use, but also designed to maximize flexibility and mass production. Software works on MS Windows environment.



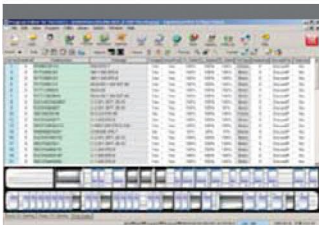
Option1 Feeder BarCode System

Barcode verification support for an error free feeder loading process. The barcode system ensures an error free replenishment of empty reels during production.



Option2 LED Rank Control System

Classifying LED components based on designated rank type and quantity along with barcord system for BLU (Back Light Unit) application

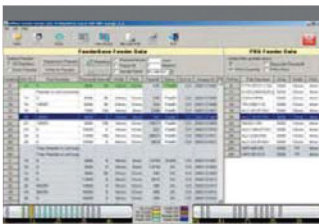


Option3 Offline Editor with Line Balance

Mirae Offline Editor Software is designed to program multiple inline machines, and provides high-quality programming functions to reduce total programming time and get the best efficiency.

Functions included in the package:

- Line balancing software efficiently allocates components on multiple machines
- Common feeder setup function optimizes same feeder configuration for family boards



Option4 Offline Feeder Setup with Trolley

The key feature of Mirae Offline Feeder Set up software is to minimize the job change over time and feeder replacement time during production. The intuitive GUI guides operators to setup feeders on the Offline Feeder Setup software without stopping the machines. Inline barcode guides to load feeders into the right feeder slots that ensures error free PCB assembling.



Option5 Mirae Management Software

Mirae management software is designed to manage the product line and efficient post management.

Functions included in the package,

- MLS(moisture Sensitivity Management)
- Component Validation system
- Traceability system
- Line Monitoring system

Reel Tape Feeder

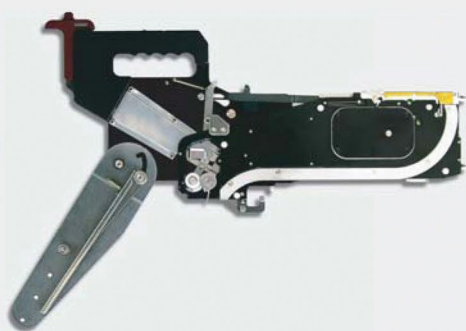
eX-Feeder



- Electrical feeder with motor & gear
- Automatic on the machine feeder calibration
- Higher productivity with faster feeding speed (60 ms)
- Compatible pitch on 8mm feeder : 2mm & 4mm
- 9 programable feeding speeds
- Discharged plastic cover tape storage
- Easy Reel Cover handling
- Auto Plug-in & Slide Guide
- Reverse and forward buttons
- Slot number and pitch display

| No | | [Pitch, mm] | | | | | | | | | | | | (mm) | Slot |
|----|------|-------------|---|---|----|----|----|----|----|----|----|----|----|------|------|
| | | 2 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | | |
| 1 | 8mm | o | o | | | | | | | | | | | 12 | 1 |
| 2 | 12mm | | o | o | o | o | o | o | o | o | | | | 23 | 2 |
| 3 | 16mm | | o | o | o | o | o | o | o | o | | | | 27 | 2 |
| 4 | 24mm | | o | o | o | o | o | o | o | o | | | | 35 | 3 |
| 5 | 32mm | | o | o | o | o | o | o | o | o | o | o | o | 43 | 3 |
| 6 | 44mm | | o | o | o | o | o | o | o | o | o | o | o | 55 | 4 |
| 7 | 56mm | | o | o | o | o | o | o | o | o | o | o | o | 67 | 5 |
| 8 | 72mm | | o | o | o | o | o | o | o | o | o | o | o | 83 | 6 |
| 9 | 88mm | | o | o | o | o | o | o | o | o | o | o | o | 99 | 7 |

C-Feeder



- Electrical feeder with motor & CAM
- Self-diagnosis
Error code, feeder address and pitch are displayed
Alarm notification for missing components
- Auto plug In
Power and signal are connected to machine automatically at connection of feeder
- Reel guide inner circulation
The used cover tape is routed to the waste bin through inside the feeder preventing entanglement, reducing friction and providing protection from external shock
- Unlimited discharge device
Unlimited plastic tape discharging system improves productivity

| No | Name | [Pitch, mm] | | | | | | | | | | | | Width (mm) | Slot |
|----|--------|-------------|---|---|----|----|----|----|----|----|----|----|-------|------------|------|
| | | 2 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | | | |
| 1 | 8mm-2p | o | | | | | | | | | | | 15,6 | 1 | |
| 2 | 8mm-4p | | o | | | | | | | | | | 15,6 | 1 | |
| 3 | 12mm | | o | o | o | o | o | o | o | o | | | 31,2 | 2 | |
| 4 | 16mm | | o | o | o | o | o | o | o | o | | | 31,2 | 2 | |
| 5 | 24mm | | o | o | o | o | o | o | o | o | | | 31,2 | 2 | |
| 6 | 32mm | | o | o | o | o | o | o | o | o | o | o | 42,6 | 3 | |
| 7 | 44mm | | o | o | o | o | o | o | o | o | o | o | 54,6 | 4 | |
| 8 | 56mm | | o | o | o | o | o | o | o | o | o | o | 66,6 | 5 | |
| 9 | 72mm | | o | o | o | o | o | o | o | o | o | o | 82,6 | 6 | |
| 10 | 88mm | | o | o | o | o | o | o | o | o | o | o | 108,3 | 7 | |

Option & Accessories

Tray Feeder (TF5)



Efficiently supplies up to 20 trays – SOP, QFP, BGA, CONNECTOR, etc. – provided by JEDEC trays, waffle packs or special type of trays. When the TF is equipped on a base, normal feeders cannot be used on the same base.

Manual Tray



This manual tray is placed on the feeder base to supply tray components such as QFPs, BGAS, connectors, etc. The other type of manual tray is placed behind conveyor to maximize feeder base capacity.

Trolley



Required for fast and frequent PCB job change overs. Trolley enables feeder set up for the next production job while machine is in use, being used for production. Offline Trolley Set up Kit is required for easy feeder set up.

Off-Line Trolley Setup Kit



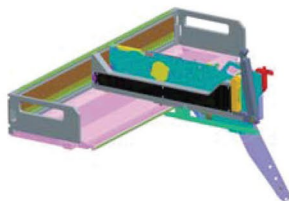
To minimize to job change over time, Offline Feeder Setup software and this kit are required. Two trolleys can be connected to the setup kit. To minimize feeder replacement time, it is also possible to set up a feeder before one becomes empty.

Reel Exchanger



Easy to load component reel on the feeders. Before a feeder becomes empty, operators can load another feeder and place on the Reel Exchanger to reduce feeder exchanging time.

Internal Reel Exchanger



This is placed on feeder base and makes it easy to change reel components. Before a feeders becomes empty, operators can load another feeder and place on the internal reel exchanger to reduce feeder exchanging time.

Feeder Stacker



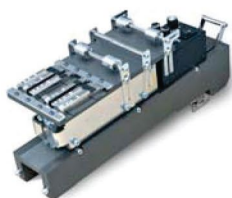
Easy to store and transport spare feeders to a machine or a storage room. Feeder Stacker helps to prevent damage to the feeders.
(Maximum 72 slots of 8mm feeder)

LSM2



The LSM2 supplies LED components to the machine in bulk, rather than requiring reel packaging of components.

Stick Feeder



One touch installation and automatic power connection without a cable. Vibratory Stick Feeder supplies components in the stick or tube.

Reel Tape Cutter



Cuts empty reel tape at programmable intervals and stores in dump box.

Feeder Precision Adjusting Station



This is a feeder pickup position inspection system with camera and automatic calibration software for periodic maintenance.
(PC is not included.)







Bar Code System













As a part of Offline Trolley Setup kit, barcode printer and scanner system prevent incorrect component loading.

Nozzles







· Module Head







| General Nozzles | | | | | | |
|--|---|---|---|--|---|---|
| Nozzle Name | A000 | B000 | C000 | D000 | E000 | P000 |
| Appearance |  |  |  |  |  |  |
| I,D x O,D (W x D) Application Parts | 0,5 x 1,0 1608 | Ø 0,7 x Ø 1,2 1608~3216 | Ø 1,2 x Ø 2,0 3225~6432 | Ø 2,0 x Ø 3,0 | Ø 4,5 x Ø 6,0 | Ring Ø 7,0 |







| Special Nozzles | | | | | | |
|--|---|---|---|--|---|---|
| Nozzle Name | A030 | A021 | A050 | D030 | D130 | E010 |
| Appearance |  |  |  |  |  |  |
| I,D x O,D (W x D) Application Parts | Ø 0,3 x Ø 0,5 0402 | Ø 0,4 x Ø 0,7 0603 | Ø 0,4 x Ø 1,0 1005 ~ 1608 | #4,7 PLCC, QFP, CVB | (4,9 x 2,5) Connector | #6,6 PLCC, QFP |

| LED Nozzles | | | | |
|-----------------|--|--|--|--|
| Nozzle Name | D140 | E090 | C010 | D070 |
| Appearance |  |  |  |  |
| I,D (W x D) | 3,1 x 5,0 | 7,0 x 2,2 | 2,0 | 3,5 x 2,9 |
| O,D (W x D) | 1,6 x 3,6 DP 1 | 0,6 x 5,0 DP1 | 5,0 | Ø 2,7 DP 1,5 |
| Application LED | 5630 LED PKG | 7020 BLU LED | 3014 LED PKG | 3528 LED PKG |

· Precision Head

| General Nozzles | | | | | | |
|--|---|---|---|--|---|---|
| Nozzle Name | QP A | QP B-1 | QP C | QP D | QP E | QP P2-1 |
| Appearance |  |  |  |  |  |  |
| I,D x O,D (W x D) Application Parts | Ø 0,5 x Ø 1,0 1005 ~ 1608 | Ø 0,7 x Ø 1,2 1608 ~ 1632 | Ø 1,0 x Ø 2,0 3225~6432 | Ø 2,0 x Ø 3,0 6,3Cap, tran6273 | Ø 4,5 x Ø 6,0 9210~17x8,SO,SOJ | Ø 8,5 x Ø 10,0 14 x 22~35 x 35 PLCC, QFP |

| Special Nozzles | | | | | | |
|--|---|---|---|--|---|---|
| Nozzle Name | QP A-S01 | QP A-S02 | QP A-S03 | QP B-1-S01 | QP B-1-S02 | QP C-S01 |
| Appearance |  |  |  |  |  |  |
| I,D x O,D (W x D) Application Parts | (8,0 x 1,6) Connector | (22 x 4,4) PCMCIA-Connector | (12 x 2,6) Connector | (1,2 x 1,2) Connector | Ø 2,7 x Ø 1,5 White Plate Tip | (3,6 x 1,0) Connector |

| Nozzle Name | QP H-4-S01 | QP P2-1-S01 | QP P2-1-S02 | QP P2-1-S03 | QP G-2 | QP G-3 |
|--|---|---|---|--|---|---|
| Appearance |  |  |  |  |  |  |
| I,D x O,D (W x D) Application Parts | Ø 6,0 x Ø 0,45 0603 | Ø 6,0 PLCC, QFP, PBGA | Ø 8,0 PLCC, QFP, PBGA | Ø 12,0 PLCC, QFP, PBGA | 8,0 x 7,2 Socket, Connector | 6,6 x 4,0 Socket, Connector |

Sample SMT Lines (Standard PCB/ F-PCB Line)

SMT Line 1 _ 36,000 CPH (IPC-9850 Standard)



| | Loader | printer | MR20L | MR20LP | Work Table | Reflow Oven | Unloader | Total |
|-------------|--------|---------|-------|--------|------------|-------------|----------|--------|
| Length (mm) | 1,490 | 1,570 | 1,490 | 1,490 | 900 | 4,308 | 2,090 | 13,338 |
| Weight (kg) | 180 | 1,200 | 1,700 | 1,700 | 100 | 2,000 | 200 | 7,080 |

SMT Line 2 _ 57,000 CPH (IPC-9850 Standard)



| | Loader | Printer | MR40L | MR40LP | Work Table | Reflow Oven | Unloader | Total |
|-------------|--------|---------|-------|--------|------------|-------------|----------|--------|
| Length (mm) | 1,490 | 1,570 | 1,490 | 1,490 | 900 | 4,308 | 2,090 | 13,338 |
| Weight (kg) | 180 | 1,200 | 2,000 | 2,000 | 100 | 2,000 | 200 | 7,680 |

SMT Line 3 _ 114,000 CPH (IPC-9850 Standard)



| | Loader | Printer | MR40L | MR40L | MR40LP | Work Table | Reflow Oven | Unloader | Total |
|-------------|--------|---------|-------|-------|--------|------------|-------------|----------|--------|
| Length (mm) | 1,490 | 1,570 | 1,490 | 1,490 | 1,490 | 900 | 4,308 | 2,090 | 14,828 |
| Weight (kg) | 180 | 1,200 | 2,000 | 2,000 | 2,000 | 100 | 2,000 | 200 | 9,680 |

Sample SMT Lines (Large PCB Line)

LED Line_57,000 CPH (IPC-9850 Standard)



| | Loader | Printer | MR40L | MR20LP | Work Table | Reflow Oven | Unloader | Total |
|-------------|--------|---------|-------|--------|------------|-------------|----------|--------|
| Length (mm) | 1,710 | 1,650 | 1,490 | 1,490 | 900 | 4,308 | 2,090 | 13,638 |
| Weight (kg) | 240 | 1,400 | 2,000 | 1,700 | 100 | 2,000 | 200 | 7,640 |

LCD Module Line_114,000 CPH (IPC-9850 Standard)



| | Loader | Printer | MR40L | MR40L | MR40LP | Work Table | Reflow Oven | Unloader | Total |
|-------------|--------|---------|-------|-------|--------|------------|-------------|----------|--------|
| Length (mm) | 1,710 | 1,650 | 1,490 | 1,490 | 1,490 | 900 | 4,308 | 2,510 | 15,548 |
| Weight (kg) | 240 | 1,400 | 2,000 | 2,000 | 2,000 | 100 | 2,000 | 260 | 10,000 |

※ The above specifications are subject to change without notice.

MR Series Specifications

| Item | | | MR20L | MR20LP | MR40L | MR40LS | MR40LP | MR40LSP |
|-----------------------------------|-----------------------------------|--------------------|---|-------------------------------|--|-----------------|-------------------------------|-----------------|
| Optimal Condition | Chip (1005) | | 27,500 CPH (0.13sec/chip) | 19,500 CPH (0.184sec/chip) | 55,000 CPH (0.065sec/chip) | | 39,000 CPH (0.092sec/chip) | |
| IPC-9850 Standard | Chip (1005) | | 21,000 CPH (0.171 sec/chip) | 15,000 CPH (0.24sec/chip) | 42,000 CPH (0.086sec/chip) | | 30,000 CPH (0.12sec/chip) | |
| | QFP (208) | | | 7,500CPH | | | 15,000CPH | |
| Placement Accuracy | Chip (3 σ) | | 0.050mm | | | | | |
| | QFP (3 σ) | | 0.035mm | 0.025mm | 0.035mm | | 0.025mm | |
| Number of Heads | | | 6 Module (inc. 2 P) | 4 Precision | 6 Module (inc. 2 P) + 6 Module (inc. 2 P) | | 4 Precision + 4 Precision | |
| Maximum Component Height | | | Module10.5mm | Precision : 25mm | Module 10.5mm | | Precision : 25mm | |
| Component Range (FOV 36mm) | Single FOV (All Spindles) | | 0603 ~ □9mm | 0603 ~ □11mm | 0603 ~ □9mm | | 0603 ~ □11mm | |
| | Single FOV (Center Inspection) | | 38 x 28mm | | | | | |
| | Multiple FOV | | ~ □ 50mm, 90°30mm | | | | | |
| Minimum Lead Pitch | | | 0.3mm | | | | | |
| PCB Size | Minimum (L x W x T) | | 50 x 50 x 0.4mm | | | | | |
| | Single Lane (L x W x T) | Standard | 700 x 510 x 5.0mm | | 700 x 460 x 5.0 | 700 x 510 x 5.0 | 700 x 460 x 5.0 | 700 x 510 x 5.0 |
| | | Option (Inline) | 1,200(950) x 510 x 5.0mm | | 1,200(950) x 250 x 5.0 mm | | | |
| | Dual Lane (L x W x T) | Standard | N / A | | 700 x 250 x 5.0 | — | 700 x 250 x 5.0 | — |
| | | Option (Inline) | N / A | | 1,200(950) x 250 x 5.0mm | | | |
| Feeder Slot | Standard | | 60EA (60x1) | | 120EA (60x2) | | | |
| | Option1 | | 120EA (60x2) | | N/A | | | |
| | Option2 | | 60EA / TF5 + 15EA or 20EA | | 60EA / TF5+15EA | | | |
| Conveyor Width Adjustment | | | Automatic Width Adjustment | | | | | |
| Power Requirements | | | 3 phase 200 / 208 / 220 / 230 / 240 / 380 / 400 / 415 / 430 [V] , 50/60Hz | | | | | |
| Power Consumption | | | Approx. 3 KVA | | Approx. 5KVA | | | |
| Air Pressure | | | 0.5Mps | | | | | |
| Air Consumption | | | Approx. 130NI/min | Approx. 90NI/min | Approx. 240NI/min | | Approx. 180NI/min | |
| Weight | | | Approx. 1,700Kg | Approx. 1,700Kg | Approx. 2,000Kg | | Approx. 2,000Kg | |
| Dimension (L x W x H), Cover Only | | | 1,490 x 2,090 x 1,500mm (Cover) 1,580 x 2,090 x 1,500mm (Conveyor) | | | | | |

* 0402mm (01005 inch) Option * The above specifications are subject to change without notice.

Mx Series Specifications

| Item | | Mx200 | Mx200P | Mx200L | Mx200LP |
|-----------------------------------|-----------------|---|------------------------------------|--|------------------------------------|
| Optimal Condition | Chip (1005) | 23,000 CPH (0.157sec/chip) | 17,000 CPH (0.212sec/chip) | 23,000 CPH 0.157sec/chip) | 17,000 CPH (0.212sec/chip) |
| IPC-9850 Standard CPH | Chip (1005) | 21,000 CPH (0.171sec/chip) | 15,000 CPH (0.240sec/chip) | 21,000 CPH (0.171sec/chip) | 15,000 CPH (0.240sec/chip) |
| | QFP 208 | N/A | 1,200CPH | N/A | 1,200CPH |
| Placement Accuracy | Chip (3σ) | 0.050mm | | | |
| | QFP (3σ) | N/A | 0.025mm | N/A | 0.025mm |
| Number of Heads | | 6 Module | 4 Module + 1 Precision | 6 Module | 4 Module + 1 Precision |
| Maximum Component Height | | Module : 10mm | Module : 10mm, Precision : 18mm | Module : 10mm | Module : 10mm, Precision : 18mm |
| Component Range (FOV 24mm) | Single FOV | 0603 ~ 24*18mm | | | |
| Component Range (FOV 36mm) | Single FOV | N/A | 42*32mm | N/A | 42*32mm |
| | Multiple FOV | N/A | ~ □ 50mm, 90*30mm | N/A | ~ □ 50mm, 90*30mm |
| Minimum Lead Pitch | FOV 24mm Camera | 0.30mm | | | |
| | FOV 36mm Camera | N/A | 0.38mm | N/A | 0.38mm |
| PCB Size (L x W x T) | Minimum | 50 x 50 x 0.4mm | | | |
| | Single Lane | 410 x 460 x 5.0mm / 680 x 460 x 5.0mm(Option) | | 680 x 460 x 5.0mm / 1,200 x 460 x 5.0mm(Option) | |
| | Dual Lane | - | | | |
| | Weight (max.) | 2.0kg | | | |
| Conveyor Width Adjustment | | Manual Width Adjustment / Automatic Width Adjustment (Option) | | | |
| Feeder Slot | Standard | 80EA (40x2) | | 100EA (50x2) | |
| | Option 1 | N/A | | | |
| | Option 2 | N/A | 40EA / TF5 | | 50EA / TF5 + 20EA |
| Monitor & Operation Panel | | Front Standard / Rear (Option) | | | |
| Power Requirements | | 3 phase 200 / 208 / 220 / 230 / 240 / 380 / 400 / 415 / 430 [V] , 50/60Hz | | | |
| Power Consumption | | Approx. 3 KVA | | | |
| Air Pressure | | 0.54Mps | | | |
| Air Consumption | | Approx. 180NI/min | Approx. 160NI/min | Approx. 180NI/min | Approx. 160NI/min |
| Weight | | Approx. 1,200Kg | | Approx. 1,300Kg | |
| Dimension (L x W x H), Cover Only | | 1,200 x 1,900 x 1,500mm | | 1,450 x 1,900 x 1,500mm | |

Mx Series Specifications

| Mx400 | Mx400P | Mx400L | Mx400LP |
|--|------------------------------------|---|------------------------------------|
| 46,000 CPH (0.078sec/chip) | 40,000 CPH (0.090sec/chip) | 46,000 CPH (0.078sec/chip) | 40,000 CPH (0.090sec/chip) |
| 42,000 CPH (0.086sec/chip) | 31,000 CPH (0.116sec/chip) | 42,000 CPH (0.086sec/chip) | 31,000 CPH (0.116sec/chip) |
| N/A | 3,500CPH | N/A | 3,500CPH |
| 0.050mm | | | |
| N/A | 0.025mm | N/A | 0.025mm |
| 6M + 3P or 3M + 3P | 6 Module + 3 Precision | 6M + 3P or 3M + 3P | 6 Module + 3 Precision |
| 10mm | Module : 10mm, Precision : 20mm | 10mm | Module : 10mm, Precision : 20mm |
| 0603 ~ 24*18mm | | | |
| N/A | 42*32mm | N/A | 42*32mm |
| N/A | ~ □ 50mm, 90*30mm | N/A | ~ □ 50mm, 90*30mm |
| 0.30mm | | | |
| N/A | 0.38mm | N/A | 0.38mm |
| 50 x 50 x 0.4mm | | | |
| 410 x 460 x 5.0mm / 680 x 460 x 5.0mm(Option) | | 680 x 460 x 5.0mm / 1,200 x 460 x 5.0mm(Option) | |
| 410 x 250 x 5.0mm / 680 x 250 x 5.0mm(Option) | | 680 x 250 x 5.0mm / 1,200 x 250 x 5.0mm(Option) | |
| 2.0kg | | | |
| Automatic Width Adjustment | | | |
| 80EA (40x2) | | 100EA (50x2) | |
| N/A | 40EA / TF5 | N/A | 50EA / TF5 + 20EA |
| Front & Rear | | | |
| 3 phase 200 / 208 / 220 / 230 / 240 / 380 / 400 / 415 / 430 [V], 50/60Hz | | | |
| Approx. 5 KVA | | | |
| 0.54Mps | | | |
| Approx. 300NI/min | Approx. 240NI/min | Approx. 300NI/min | Approx. 240NI/min |
| Approx. 1,550Kg | | Approx. 1,700Kg | |
| 1,200 x 1,900 x 1,500mm | | 1,450 x 1,900 x 1,500mm | |

* The above specifications are subject to change without notice.

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