essemtec

FLX2010 Pick + Place

Super flexible SMD placement system

🇨🇭 swiss made

Modular pick+place for high mix production

The machine operation software Easyplacer is a key factor for the machine's flexibility. The powerful Windows based software features a fully graphical man-machine interface making operation and programming easy.

- **Changeover without downtime**

- **Large feeder capacity**

- **Graphical control software**

- **Inventory control and traceability**

- **Integrated dispensing system**

- **Modular machine concept**

Today's SMD assembly is characterized by small batch sizes and frequent product changes. Therefore, minimized changeover times are key characteristics of modern SMD pick+place systems. In addition, the growing product mix requires intelligent tools for production planning, documentation and traceability.

The FLX2010 pick+place series fulfils the requirements of a high mix SMT production. It offers an extraordinary large application range and allows production changes without downtime.

Feeders can be exchanged during the production run and the offline programming software allows a changeover with no downtime.

Feeder programming and control is achieved using a wireless bar code reader which assures a 100% correct setup. Each tape feeder lane features a LED status display.

Data integration

The Management Information System M.I.S. includes modules for inventory control, production planning and traceability.

Data can be exchanged with higher ranking modules such as ERP systems.

Upgradeable

The FLX2010 is fully modular. All options, such as vision alignment, integrated dispensing system, vacuum table or inline conveyor systems can be upgraded after installation at customer site.

Extremely flexible

The extremely large feeder capacity for 190 components (L-model: 310) offers enormous flexibility. The intelligent feeders are automatically recognized to minimize the feeder exchange time and effort.

Expandable

Expansion of feeder capacity or placement speed are possible any time by simply adding additional modules.

FLX2010-C   FLX2020   FLX2030

Operation and programming made easy
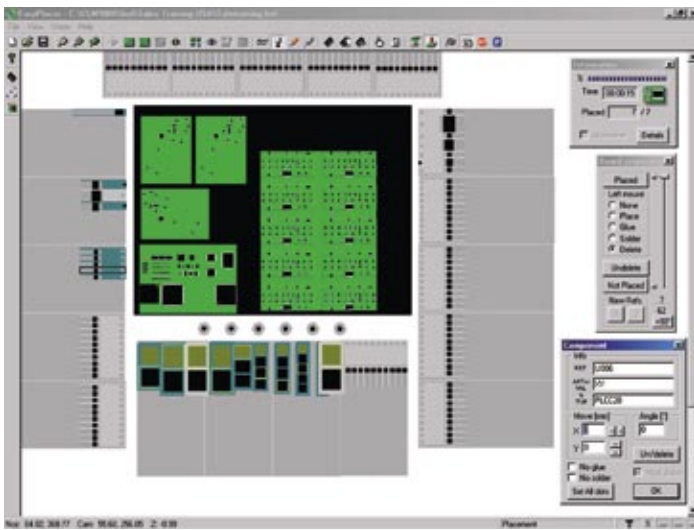
Software „Easyplacer": clear and easy operation.


Unique "virtual view" function.

Easyplacer is the powerful user interface of the FLX2010. All information is represented graphically. Complex placement data are shown understandable for everybody as virtual PCB.

The universal FLX-CAD interface converts data from layout programs (CAD) into placement files within seconds. The FLX2010 is delivered with an extensive component library. Additional forms can fast and easily be drawn by the installed „wizard".

Program changes are possible with one mouse click, for instance rotating, mirroring, moving and erasing of components. Multiple panels can be generated out of single PCB.

The unique „virtual-view function" allows test and correction of a program without placing a component.

With the software Easyplacer the user always has control over the machine's status, the feeders and the components. The software is continuously updated and improved in cooperation with our customers.
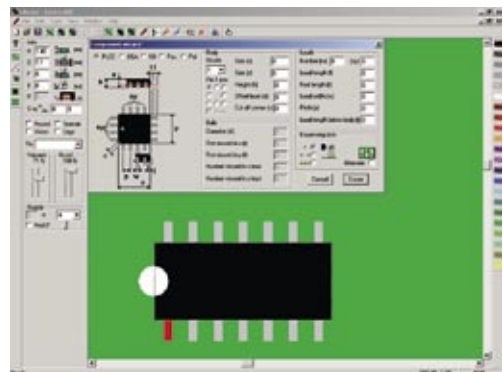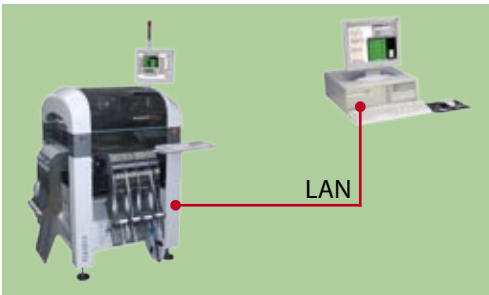

New components can fast and easily be drawn by the installed „wizard".
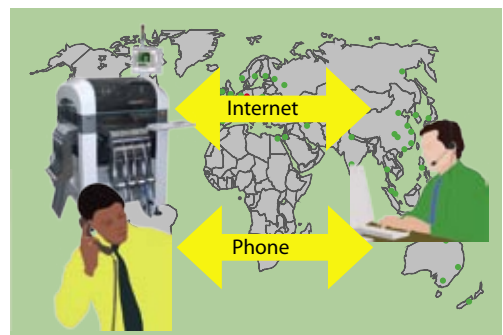
The internet based remote maintenance system facilitates short problem solving time and saves travelling expenses for experts. A basic license is included in all new machines.

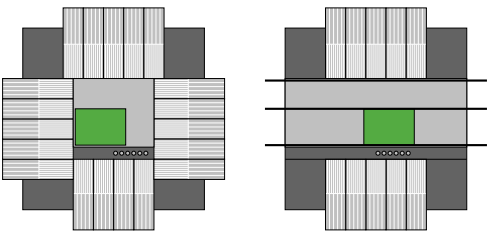# Changeover without downtime
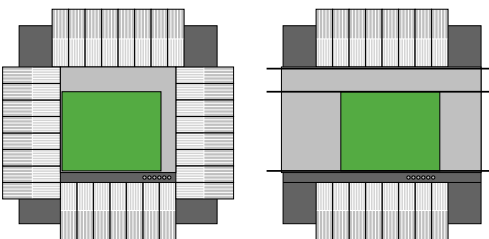

LAN

Time saving offline programming.

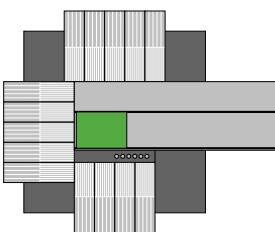Universal magnetic PCB holder.

The cassettes are exchangeable while the machine is working. Refilling is possible directly on the machine.

FLX2010: 190 x 8 mm tapes (left)
FLX2010-C: 100 x 8 mm tapes (right)

FLX2010-L: 310 x 8 mm tapes (left)
FLX2010-CL: 160 x 8 mm tapes (right)

Batch system (available in 2008)
FLX2010-B/BV: 140/130 x 8 mm tapes
FLX2010-BL/BLV: 230/220 x 8 mm tapes

In a high mix production, the changeover is the most important cost factor. With the FLX concept, the changeover cost and time can be minimized. Offline production preparation and programming in combination with intelligent feeders and a very large feeder capacity allow a product changeover with no downtime.

Feeder cassettes are automatically identified wherever they are installed. The actual feeder status is displayed by LED. With a feeder cassette, up to 10 components can be exchanged at once to minimize changeover work.

The feeder capacity of the FLX2010 placement system is extraordinary high. Therefore, large quantity of feeders can be reserved for the standard component range, leaving only specific parts to change.

Offline programming maximizes the productivity in a high mix production. The following jobs are prepared during the running production which minimizes the downtime.

Large range of applications
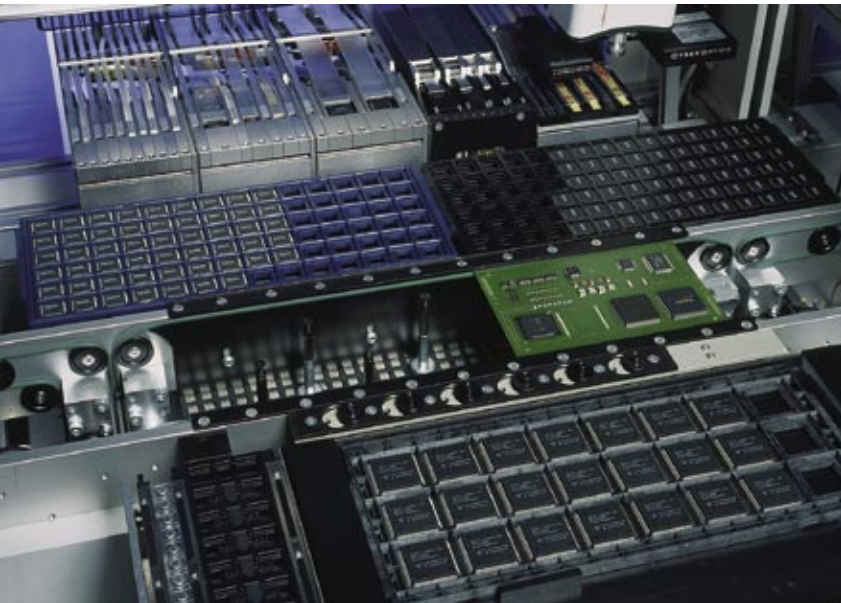
Standard feeders for tapes, sticks, trays and tape strips.
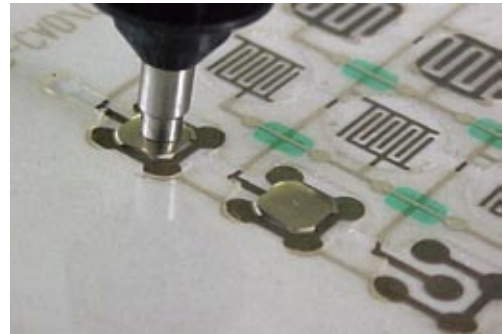
Metal dome placement (FLX2010-MK).

Placing only chips and ICs from tape, stick and tray is not enough in a high mix production environment. Therefore, the FLX2010 pick+place system can accept nearly any kind of feeding system. Even an independent unit can be used as feeder, such as a vibratory bowl feeder for bulk components with no electrical connection to the machine. The feeder flexibility enables customer specific applications far beyond standard SMD placement.

Standard feeders are available for tape, stick and trays. 8 to 72 mm tapes can be fed in cassette or single type feeders. Tray tables, tray changers or tray stackers can be used for palettes. The vibratory type stick feeders are universal for all stick widths. The universal tape strip feeder is a great tool for prototyping or small batch manufacturing. This universal feeder can be loaded with strips of any width or length.

Application specific feeders can easily be implemented. Bulk feeders, chip on board placement, through-hole LED assembly, metal dome placement for keyboards or pin in paste connector placement are just a few examples of realized projects.

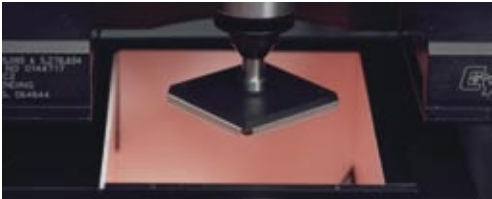LED placement with customized nozzle.

Die-Bonding (FLX2010-CVD).

Both: high speed and accuracy

High speed: Fast on-the-fly Cyberoptics laser centring for chip and fine pitch placement.

The FLX2010-V is equipped with three optical systems, a laser alignment, a top-down and bottom-up vision. The combination of all parts facilitates the fast placement of discrete components and the precise placing of fine-pitch and BGA in a machine.

High accuracy: Cognex SMD4 bottom vision with Patmax technology for full lead inspection before placement.

Top-down-Vision: Finds reference marks automatically.

Dispenser for adhesives and solder paste

The FLX2010 can be delivered with a screw and/or time-pressure dispenser for metering adhesive spots or solder paste. The valve is mounted on the back of the placement head.

For dispensing no additional programming is necessary. The coordinates of the adhesive or solder paste points are stored in the component library.

The combination of the placement system with a dispensing system saves costs and place of additional equipment.

Optional single or double head dot dispensers increase the application range of the pick+place machine.

Management Information System

The M.I.S. is a machine oriented software package for production optimization and cost reduction. It features a real-time data base for traceability and stock management which can be linked with existing planning systems. For detailed information refer to the brochure Management Information System available from Essemtec.

Flexibility made in Switzerland

Product range

- Dispenser
- Printer
- Pick+Place
- Reflow oven
- Wave soldering system
- Component storage system and software
- Handling system
- Turnkey lines
- Customer specific solutions
- SMT production planning software

Essemtec AG in Aesch, Switzerland, is developing, building and distributing flexible production systems. Founded in 1991, the enterprise has become a world leading manufacturer of machines for electronics production.

Customer's investment is always protected: the compatibility of the products allows the expansion of an existing line capacity or performance at any time.

The machine's software and hardware are developments of Essemtec. Therefore, customer specific solutions can be realized in short time.

Essemtec delivers SMD turnkey lines complete with the process know how.

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