

Introduction of Model: Σ-F8



Σ series
SIGMA

Hitachi High-Technologies Corporation
Hitachi High-Tech Instruments Co., Ltd.

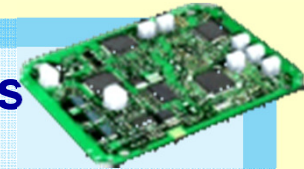
Trend of Mobile Product : More Functions & Smaller Size



More Functions → Shorter lifecycle, More components

Ex : A company's smart phone

of components : Current approx 1,000 → Next model approx. 1,100 (+10%)



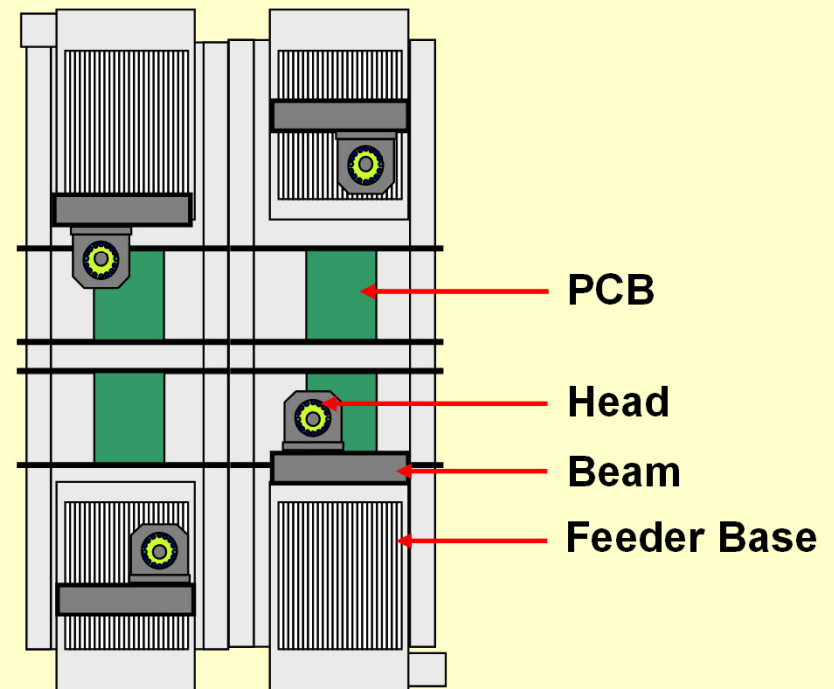
Smaller Size & Higher Density → Smaller components

Ex : B company's tablet PC : 97% by 3216 or smaller components (27% by 0402)

Smart phone: 97% by 3216 or smaller components (53% by 0402)

**Requirement for SMT Placement System:
Higher Productivity and Quality for Small Components**

Σ-F8 Machine Configuration



4 beams / 4 heads

Perfect Fit for Small Components

High Productivity

160,000 cph / module

Fastest in the market !!

High Quality

Accuracy: $3\sigma \pm 36\mu\text{m}$ (0402)

Highest in the market !! Easy Operation



Smart operation

Multi library

SL (Super Loading) feeder

Specifications

Item		Specifications
Model		Σ-F8
Configuration		4 heads / module
Throughput	Theoretical	160,000 cph (Dual), 136,000 cph (Single)
PCB size (mm)	Dual lane(Optional)	50 × 50 ~ 330 × 250
	Single lane	
Component coverage		0402~3216、T ≤ 2.0mm
Accuracy 3σ (mm)		±0.036 (0402)
Tape width		8mm tape
Kinds of components		80 kinds (8mm tape)
Dimension (mm)		L1,280 x D 2,240 x H 1,450 (same as Sigma G5)
Weight		1,900 Kg

High Productivity

Fastest in the market !!
160,000 cph / module

(1) 4 beams & 4 heads / module

- Employ 4 high speed heads per module

(2) 40,000 cph per head

- Enable high speed by newly developed head

(3) High throughput in short length

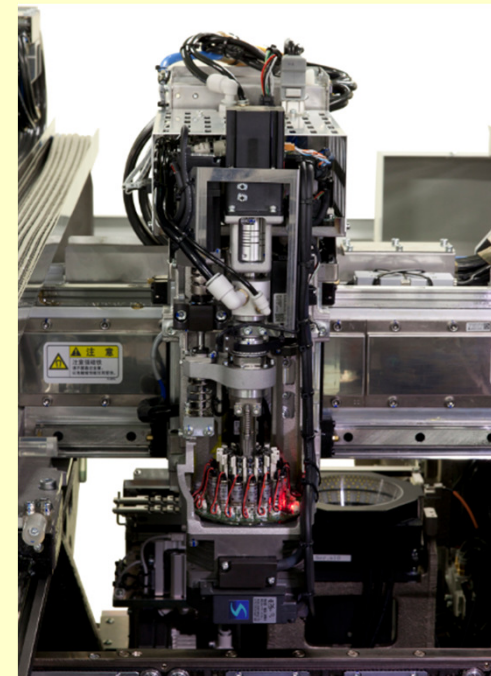
- 125,000cph / m

(4) New feeder

- Employ high speed servo motor (0.02 sec/chip)

(5) High productivity by dual lane (option)

- Support both shared mode and independent mode



High Quality

Highest Quality in the market!!
 $3\sigma: \pm 36\mu m (0402)$

(1) High rigid design

- High rigid head, beam, frame

(2) Optimized combination of parts

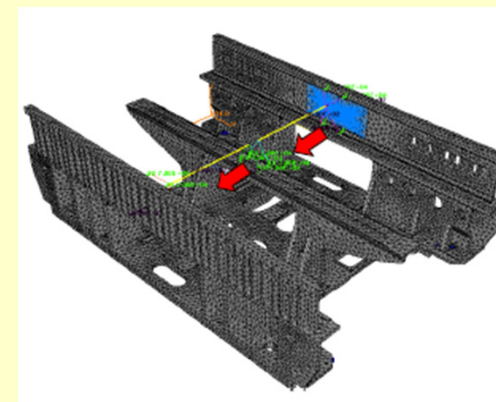
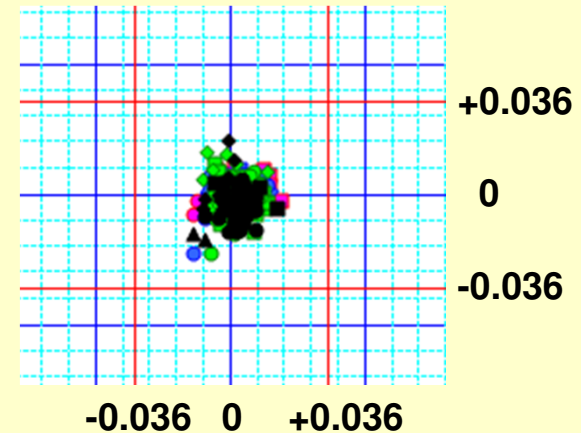
- All axes synchronized control and low vibration

(3) Auto calibration

- Dynamic auto calibration to secure high accuracy

(4) Precise feeder movement

- Employ high accuracy servo motor



Easy Operation

Maximize OEE!!

Easy operation, flexible operation

(1) Smart operation

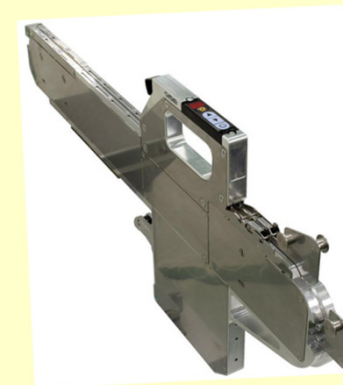
- Integrated operation by any module in a line
- Share PCB data with all modules in a line

(2) Multi library support

- Switch alternative components on the fly

(2) SL (Super Loading) feeder

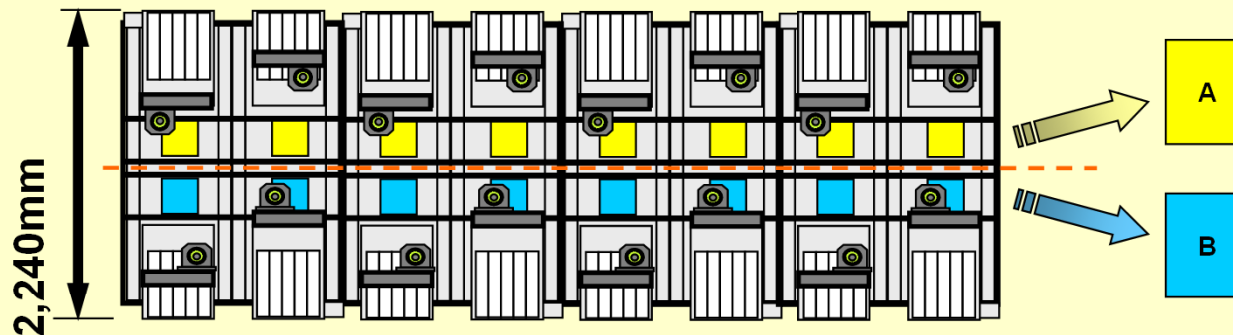
- Splicing less components supply



Support both Single lane and Dual lane

Shared mode and Independent mode are available

Equivalent to 2 lines in 2,240 mm



Flexible for various production type