



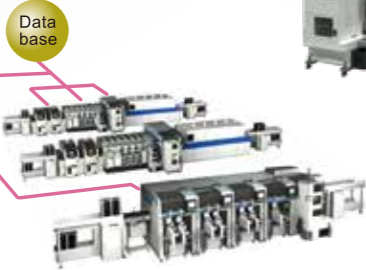
Production management system

Integrated production system



Connect SmartFAB to Nexim, the integrated production system, for comprehensive production data collection.

- Traceability
- Parts out warnings
- Part verification



Software for standalone use

Prevent part loading mistakes at the machine, and output production related reports with ease.

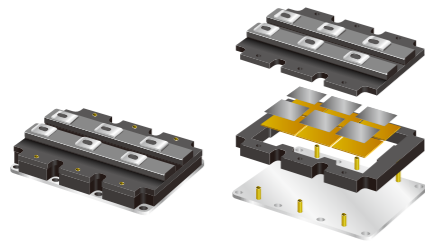
- Programming software (Job Editor)
- Local verification
- Production information viewer



Applications

Power module assembly

The SmartFAB assembles stacked parts, dispenses flux and handles dies at high speed and with high precision in a clean environment.



3D-MID placement *Under development

Assemble the parts you want onto various types of work. From standard placement on flat panels to 3D placement onto multifaceted bodies, SmartFAB enables new types of placement.



Extreme flexibility and limitless expandability

Modular Type Multi-purpose Automated Fabrication Machine

SmartFAB

Machine specifications

sFAB-D	
Work size (W x L)	48 x 48 mm to 435 x 500 mm (single conveyor) 48 x 48 mm to 410 x 340 mm (cut & clinch) 48 x 48 mm to 340 x 550 mm (Cut & clinch shift conveyance)
Work thickness	0.4 mm to 8.0mm
Reel capacity	Up to 30 types (when using radial feeders on an sMFU)
Placing heads	Carrier head: sH02 / sH01 / sG04 Processing head: sJD
Assembly accuracy	±0.050 mm (3σ) cpk ≥ 1.00
Applicable part size	sH02: 1608 to 200 x 200 mm (diagonal length of 282.9 mm) Height 75 mm sH01: 1608 to 190 x 190 mm (diagonal length of 268.7 mm) Height 75 mm sG04: 1608 to 25 x 25 mm (diagonal length of 29.7 mm) Height 25.4 mm
Part weight	sH02 / sH01: 200g sG04: 20g
Machine dimensions	W 1,000 x D 2,585 x H 1,665 mm

PCB assembly application standard specifications

Parts	Axial parts	Tape feed pitch: 5 mm / 10 mm Lead diameter: φ0.4 to φ0.8 mm Tape width: 52 mm
	Radial parts	Tape feed pitch: 12.7 mm / 15 mm Lead diameter: φ0.4 to φ0.8 mm
	DIP parts / odd-form parts	Up to 160 x 160 mm or diagonal length of 226.3 mm or less (standard nozzles) Up to 200 x 200 mm or diagonal length of 282.9 mm or less (long nozzles)
Production capability	Chip parts: 3,000 cph (1.2 sec / part) Radial parts: 2,100 cph (1.7 sec / part) Connectors: 1,900 cph (1.9 sec / part)	

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Modular Type Multi-purpose Automated Fabrication Machine

SmartFAB

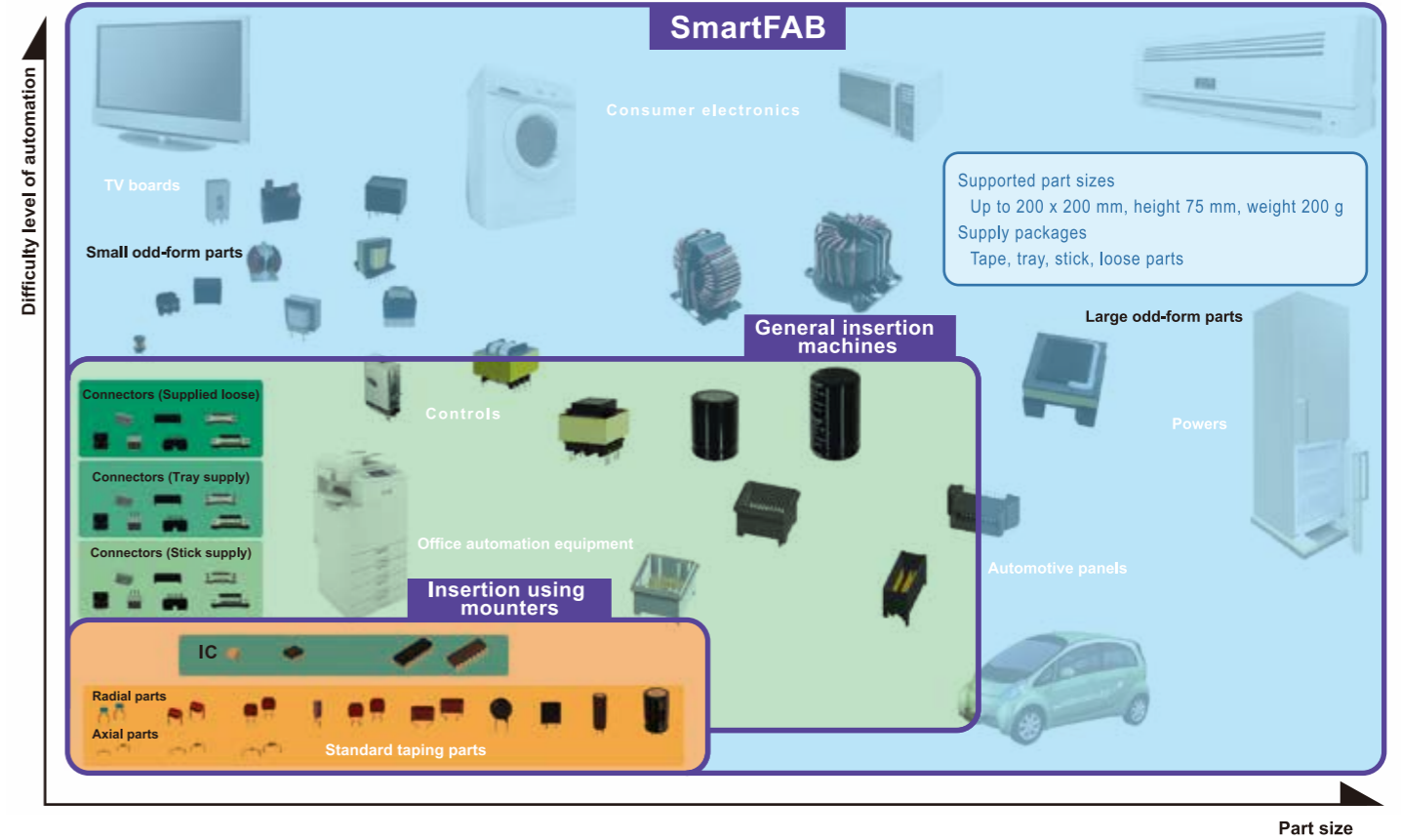
Automating manual work is the key to reducing costs

Manual work such as insertion or assembly occupies many workers in the production line. SmartFAB can be used to automate processes which were previously beyond the capability of machines. Match the production type or amount being produced with a flexible line configuration. Quality, cost, and delivery improvements for any production process through highly efficient automation.



Unparalleled part support range

Because the SmartFAB can handle large x heavy parts which aren't possible on other insertion machines, a wider range of applications can be automated and you can be sure of the work quality and time required to complete production.



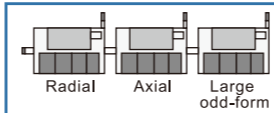
Build-up platform which can be set up quickly for production

The SmartFAB modularizes factors required for assembly work such as the parts supply, work conveyor and assembly head. Units can be connected to the base machine to build the perfect line that meets your needs.



Automation of many types of insertion parts

The SmartFAB doesn't just automate everything from axial and radial parts to large odd-form parts, it is the ultimate flexible machine which can even handle pre- and post-insertion processes in one machine.



Head

Carrier head

Head for high speed picking and placing of assembly parts



Processing head

Head equipped with many types of additional process abilities such as dispensing liquids or tightening screw



Dispensing
Screw tightening*

Work Conveyor Units

Single conveyor



Conveyor with cut and clinch



Parts Supply Units

sMFU



Tray unit
Radial tape feeders
Stick feeders
Return feeders
Axial tape feeders*

Supports a wide variety of parts

Axial part feeder*



Axial parts

Radial part feeders



Radial parts

Stacked stick feeder



Stick parts

Tray unit



Tray parts

BPU* (Bin picking unit)



Loose parts

Pivoting nozzle

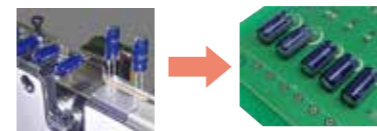
Parts can also be supplied with the leads facing sideways.



Pre-forming

L-bending feeder

Also supports parts with leads which are bent into an L shape for insertion.



Lead correction at the stick feeder

The leads only are pressed with correction performed by deformation before insertion.



Lead cutting unit

Cuts excess lead length ready for insertion.



Accurate insertion

Chuck for leaded parts

Accurately inserts parts by holding and correcting leads.



Mechanical chuck

Heavy parts can also be handled accurately.



3-in-1 chuck

Three sets of work can be handled by this one mechanical chuck tool. Parts can be inserted accurately by holding and correcting the leads.



Post-forming

Cut and clinch

Bends and fixes the lead tips to prevent parts from coming off or falling over after insertion. Replace existing insertion machines smoothly without disrupting your current line process.



Holder clinching

Bends holders after insertion to hold insertion parts in place.



Selective soldering

Parts are inserted into the panel and soldered in the same machine. No weight jigs or spacers between the panel and parts are required to aid part stability. Profiles can be set for each part.



*Under development