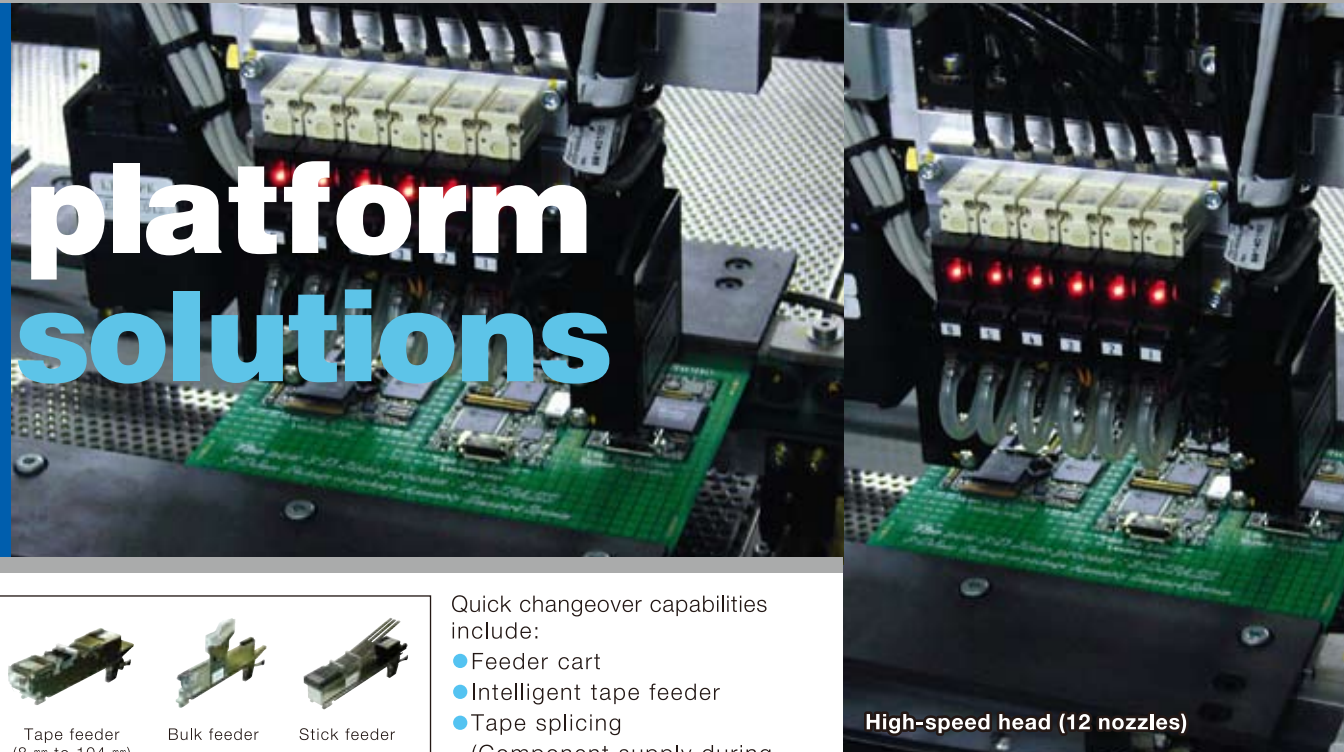




Our Solutions, Your Value

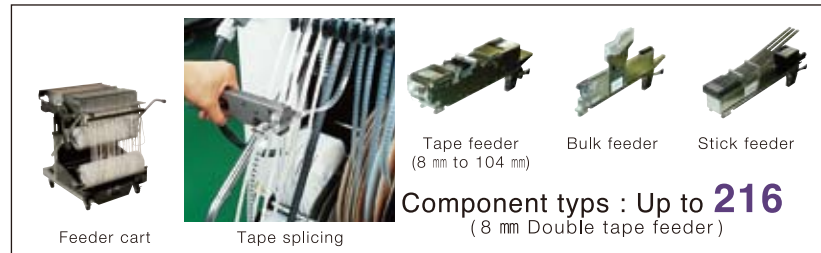
one platform solutions



High-speed head (12 nozzles)



Quick
changeover
capabilities

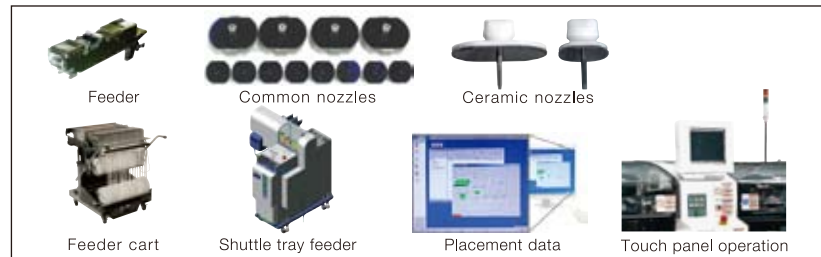


Component types : Up to **216**
(8 mm Double tape feeder)

Quick changeover capabilities include:

- Feeder cart
- Intelligent tape feeder
- Tape splicing (Component supply during operation)

High modular
compatibility



High compatibility with CM402 series realized through modular manufacturing concept.

⚠ Safety Cautions

● Please read the User's Manual carefully to familiarize yourself with safe and effective usage procedures.

● To ensure safety when using this equipment all work should be performed according to that as stated in the supplied Operating Instructions. Read your operating instruction manual thoroughly.

eco ideas Panasonic Group products are built with the environment in mind.
<http://panasonic.net/eco/>

ISO 14001 Panasonic Group builds Environmental Management System in the factories of the world and acquires the International Environmental Standard ISO 14001:2004.

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● Changes in specifications and appearance may be made without notice for product improvement. ● Recycled paper is used this Catalog.
● Homepage <http://panasonic.net/pfsc/>

CM602-L

Model ID

CM+PLUS Ver.5

Model No. NM-EJM8A

- Generalized Ver.5 (Optional)
- High-flexibility LS 8 nozzles
- Newly optimum engine Ver.5 (Optional)
- High-speed 12 nozzles

● Modular High Speed Placement Machine

● With further increased productivity and enhanced component handling capabilities, the reliable, proven CM Platform has evolved to a placement machine that realizes excellent line balance and easier handling.

CE * It may not conform to Machinery Directive and EMC Directive in case of optional configuration and custom-made specification.

Model ID	CM602-L
Model No.	NM-EJM8A
PCB dimensions	L 50 mm × W 50 mm to L 510 mm × W 460 mm
● High-speed head	12 nozzles
Max. speed	100 000 cph (0.036 s/chip (Type A-2))
Placement accuracy	± 40 μm/chip (Cpk ≥ 1)
Component dimensions	(01005") 0402 chip *5 to L 12 mm × W 12 mm × T 6.5 mm
● High-flexibility head	LS 8 nozzles
Max. speed	75 000 cph (0.048 s/chip (Type A-0))
Placement accuracy	± 40 μm/chip, ± 35 μm/QFP ≥ □24 mm, ± 50 μm/QFP < □24 mm (Cpk ≥ 1)
Component dimensions	(01005") 0402 chip *5 to L 32 mm × W 32 mm × T 8.5 mm *8 When the generalized Ver.5 is optionally selected (01005") 0402 chip *5 to L 100 mm × W 50 mm × T 15 mm *6
● Multi-functional head	3 nozzles
Max. speed	20 000 cph (0.18 s/QFP (Type B-0))
Placement accuracy	± 35 μm/QFP (Cpk ≥ 1)
Component dimensions	(0201") 0603 chip to L 100 mm × W 90 mm × T 25 mm *7
PCB exchange time	0.9 s (Board length : up to 240 mm Under optimum conditions)
Electric source	3-phase AC 200, 220, 380, 400, 420, 480 V, 4.0 kVA
Pneumatic source *1	0.49 MPa, 170 L/min (A.N.R.)
Dimensions	W 2 350 mm × D 2 290 mm *2 × H 1 430 mm *3
Mass *4	3 400 kg

*Values such as maximum speed and placement accuracy may vary depending on operating conditions. *Please refer to the 'Specification' booklet for details.
*1: Only for main body *2: Dimension D including direct tray feeder: 2 565 mm *3: Excluding monitor and signal tower
*4: Standard configuration: excluding batch exchange cart and tray feeders. This may differ depending on configuration.
*5: The 0402 chip requires a specific nozzle/feeder. *6: When T is more than 11.5mm, special nozzles are needed. Please consult us separately.
*7: When T is more than 21mm, special nozzles are needed. Please consult us separately.
*8: When T is more than 6.5mm, special nozzles are needed. Please consult us separately.

one platform solutions

for world-class manufacturing

A wide range of variations

The most suitable module can be selected to place components from microchips to odd-shaped components, as well as depending on the products and the production volume.
*Heads configuration can be changed after purchase.

Machine configuration

Direct tray feeder
Placement head

Support for micro-chips
High-speed head (12 nozzles)

Support for small and middle-sized components
High-flexibility head (LS 8 nozzles)

Support for large components
Multi-functional head (3 nozzles)

Direct tray feeder DT50S-20

- JEDEC trays are supported.
- Up to 20 types of trays can be stocked.
- Components can be supplied from trays during operation.

(Optional)

Configuration type		12 nozzles / 12 nozzles	12 nozzles / 8 nozzles	8 nozzles / 8 nozzles	12 nozzles / 3 nozzles	8 nozzles / 3 nozzles	3 nozzles / 3 nozzles
Head combination	A	Type A-2	Type A-1	Type A-0	—	—	—
	B	—	—	—	—	—	Type B-0
	C	—	—	—	Type C-1	Type C-0	—
Direct tray support	One side	D	Type D-3	Type D-2	Type D-1	Type D-0	—
		E	—	—	—	—	Type E-0
	Both sides	F	—	Type F-2	—	Type F-1	Type F-0

Improves actual productivity with lighter high-speed head and new optimization



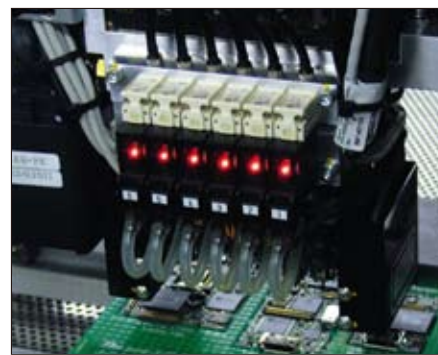
New high-flexibility 8 nozzles head Further component handling capability



Improves area productivity with compact feeder carts

Increases placement reliability by the 3D sensor

Multifunctional transfer unit supporting PoP and C4

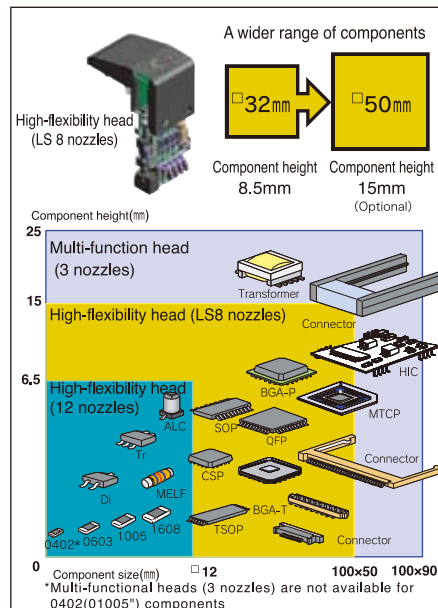


Actual productivity (IPC9850)
69 500 cph (Type A-2)

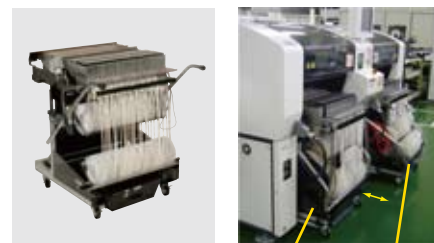
	Tact time
Conventional Ver.4	Tact time
Newly optimum* engine Ver.5	Tact time Reduction

*PT200 Ver 7.70.00 or later

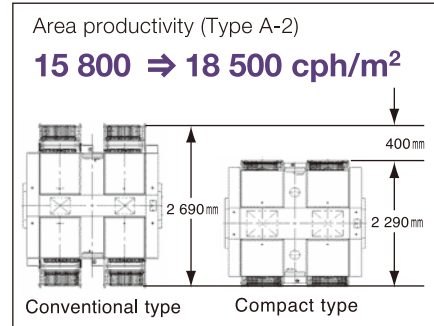
Lighter high-speed head and new manufacturing sequence optimization has increased productivity by **7%** compared to the former optimization model Ver.4.



The generalized Ver.5 (optional) expands existing component range. A wide variety of components, ranging from a 0402 chip to 50mm and a large size connector (100 x 50mm), have become mountable. The 3D sensor and direct tray feeder can be installed as before providing superior handling capabilities for odd-shaped components.



Feeder cart (Compact type) Compact type Conventional type



200mm decrease in Feeder cart size

- Area productivity has increased by 17%
- Equipment maintenance has improved

*The Compact Feeder Cart has compatibility with Conventional Feeder Cart. Both types of the Feeder Carts can be used at the same time.

Head-installed type
For High-speed head (12 nozzles)

Chip thickness measuring sensor (Optional)

- Component bring-back check function
- Component thickness measurement function after components are changed
- Nozzle tip check function

Main body-fixed type
For High-flexibility head (LS8 nozzles)

Chip thickness measuring sensor (Optional)

Component thickness measurement function after components are changed

• Board warp measuring sensor (Optional)

■ Placement height is controlled by measuring board warp

High-quality placement for IC component via the 3D sensor

Detects all leads of components
(i.e.; QFP, SOP, SOJ)

BGA, CSP
• Detects solder ball position and measures ball height

3D sensor (Optional) Ball lacking CSP

High-speed detection via batch scanning.

- Highly versatile unit accurately transfers solder/flux for PoP top packaging/C4 mounting on the bump side
- High-speed PoP placement**
Transfer material auto-feed



Placement speed 0.65s/chip
4 components x two-time batch transfer by high-flexibility heads (LS8 nozzle)

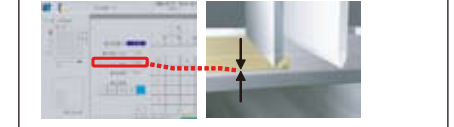
Maintenance through easy operation



Squeegee Installation & removal without tools
Scraper Installation & removal without tools

Changeable film thickness

Programmable squeegee gap using data
Changeable on film thickness each component



	Max. dimension
8 nozzles	□20mm
3 nozzles	□38mm

*High-speed heads (12 nozzles) are not supported.