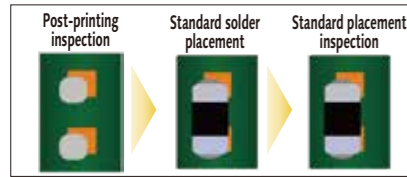


APC system

Feedforward to placement heads

Analyzes solder position measurement data, corrects the component mount position (X, Y, θ).

Objects: Chip components (0402C / R ~)
Package components (QFP, BGA, CSP)



After reflow

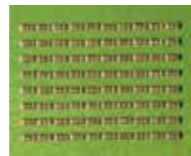


Height sensor option (Placement height control)

Improves mounting quality by measuring the PCB warpage and parts thickness, and controlling the placement height automatically.



Without PCB warpage measurement

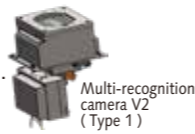


With PCB warpage measurement

Multi-recognition camera V2

Type 1

Equipped with camera same as NPM-X series to improve component recognition. Possible to build up with type 2 or 3 to realize high-quality placement.



Type 2

[Flip detection]
Checks components with lead for reverse.

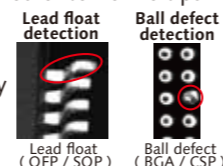
[Component thickness measurement]
Measures component thickness and reflects the result to the placement height.

[Nozzle tip check]
Checks the nozzle height regularly for any error.

[Ejection detection]
Checks any foreign matters adhered onto nozzle tips during component ejection.

Type 3

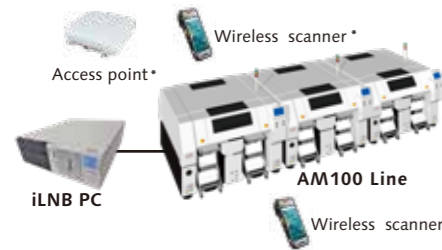
Possible to detect the coplanarity of any leads of QFP, SOP, etc., and the presence / absence of any ball on BGA, CSP, etc.



Component Verification option

Prevents setup mistakes during changeover. Provides an increase of production efficiency by easy operation.

For Wireless scanner (PDA)



- Component setup mistakes prevention
Prevents setup mistakes by verifying the production data and exchanged component barcode data.
- Interlock function
Equipment stops when there is an incorrect and / or incomplete verification.
- PanaCIM-EE Gen2 verification
Prevents setup mistakes by matching labels on reels, trays, solder pots, etc. With the material control function, parts location control, remaining quantity control, moisture parts control, supports parts allocation and picking instructions linked to production planning.

*Please prepare a wireless scanner and related accessories by customers.

Mounting MES software (PanaCIM-EE Gen2)

Helps improve the entire factory's productivity and quality by supporting / directing operators and contributing to better management of the factory.

- Material verification
- Production monitor
- Material control
- Production analysis
- Traceability
- Maintenance
- Enterprise Link

Automation reduces labor and helps improve quality

Automation reduces labor and helps improve quality.



Feeder maintenance unit

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.

Panasonic Group products are built with the environment in mind.

For details here



Panasonic GREEN IMPACT

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All data as of April 1, 2024

Ver. April 1, 2024

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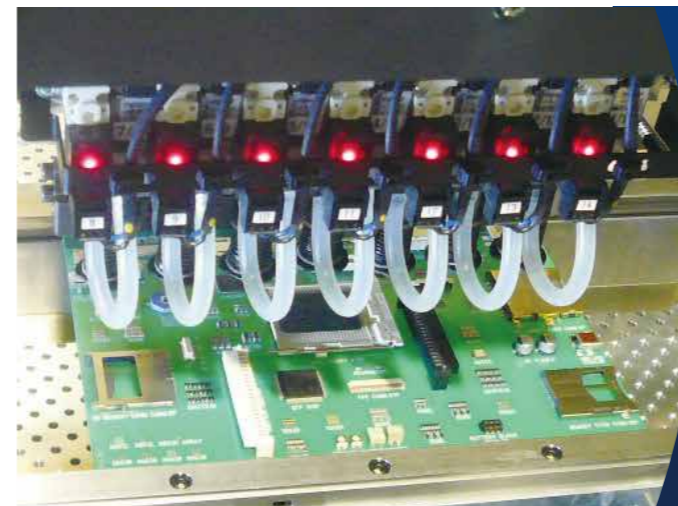
● Changes in specifications and appearance may be made without notice for product improvement.
● Please contact us via our website at <https://industrial.panasonic.com/ww/r/fw>

Model ID

AM100

Model No.

NM-EJM4D



● Mixing a wide variety of machine layouts and a wide range of options to offer you an optimum line suitable for all types of production.



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

Model ID	AM100
Model No.	NM-EJM4D
PCB dimensions	Standard Specification : L 50 mm × W 50 mm to L 515 mm × W 460 mm Long PCB Specification (option) : L 50 mm × W 50 mm to L 1 500 mm × W 460 mm
PCB exchange time <small>*when no component mounted on the bottom side</small>	Standard Specification : 4.0 s (L 515 mm or less) Long PCB Specification (option) : 7.0 s (L 857.5 mm or less) 7.5 s (over L 857.5 mm to L 1 500 mm or less)
Placement speed <small>*at optimum conditions</small>	35 800 cph (0.1006 s / chip)、12 200 cph (0.295 s / QFP □12 mm or less)
Placement accuracy (Cpk ≥ 1) <small>* at optimum conditions</small>	± 40 μ m / chip ± 50 μ m / QFP □12 mm or less ± 30 μ m / QFP □12 mm to □32 mm
Component dimensions	0402 chip ¹⁾ to L 120 mm × W 90 mm or L 150 mm × W 25 mm (T = 28 ²⁾)
Component supply	Taping Tape : 4 / 8 / 12 / 16 / 24 / 32 / 44 / 56 / 72 / 88 / 104 mm Tape feeder specification : Max.160 Tray feeder specification : Max.120 ³⁾ } (Tape : 4 / 8 mm tape (small reel))
	Stick Tape feeder specification : Max.40 Tray feeder specification : Max.30 ³⁾ } (single stick feeder)
	Tray Tray feeder specification : Max.20 ³⁾ Manually setting tray specification : Max.20 ⁴⁾ (Option for the fixed feeder base) Manually setting tray specification in the mounter (2 trays) : Max.20 ⁵⁾ (Option for the fixed feeder base)
Electric source	3-phase AC 200 / 220 V ± 10 V、AC 380 / 400 / 420 / 480 V ± 20 V 2.0 kVA
Pneumatic source	Min.0.5 MPa to Max.0.8 MPa、200 L / min (A.N.R.)
Dimensions ⁶⁾	W 1 970 mm × D 2 105 mm × H 1 500 mm ⁷⁾
Mass ⁶⁾	2 780 kg

Please refer to the specification booklet for details.

- *1 : The 0402 chip requires a specific nozzle / feeder. 0402 placement support is optional.
- *2 : For components with a height of 25 mm or more , a dedicated nozzle is required.
- *3 : In case of single tray.

- *4 : When installed on both sides of the rear fixed feeder base.
- *5 : When rear is fixed feeder base or no supply unit.
- *6 : The machine body plus 3 fixed feeder bases and a DT (dimensions and mass depending on the machine layout).
- *7 : The signal tower and touch panel are not included.

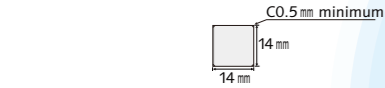
Any-Mix Any-Volume Solution

Concept

One-machine solution for the pursuit of net productivity and high versatility

Equipped with 14-nozzle head which balances between productivity and versatility. Placing components up to 14 mm¹⁾ (diagonal 19.1 mm) in the maximum speed.²⁾

Components ranges from 0402 to 120 × 90 (mm) or 150 × 25 (mm)
*1: for □14 mm-square size components



*2: The optimal tact time may not be achieved due to the weight of component or the surface material of component.

"No supply unit" is selectable for the rear side.

(For details, please contact with our sales representative.)

*3: The measurements indicate the size of the machine with the feeder carts in front and rear.

Improved operability Loading of Autoload feeder.

Program creation using the data creation system (NPM-DGS). For three machines or less, both AM-LNB and NPM-DGS can be used on 1 PC.

Feeders are compatible with NPM / NPM-X / VM series.



Feeder supply unit^{*4} Max.160

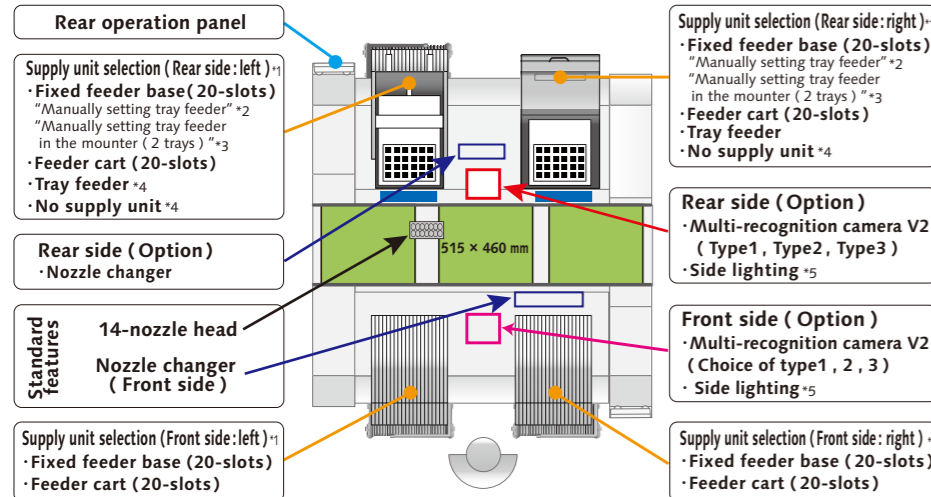
(For the double tape feeder: Max.80)

*4: Select either the fixed feeder base or feeder cart.



Long PCB (1 500 mm) specification

Machine layout



*1: When you select supply units for a machine, the fixed feeder base cannot be mixed with the feeder cart in the machine.
*2: The Manually setting tray is only installable on the rear fixed feeder base (one on each side).
*3: The Manually setting tray in the mounter (2 trays) is installable on the rear fixed feeder base and no supply unit.
*4: Please consult our sales representative.
*5: Multi-recognition camera type3 includes side lighting. You do not have to choose this option.
*The above illustration is an example of machine layout.



Wide range of options

Versatility

- Fixed feeder base options
 - Manually setting tray
 - Manually setting tray feeder in the mounter (2 trays)
 - Reel box
 - Cutting unit & reel holder
- Multi-functional transfer unit
- Grip nozzle
- Rear side nozzle changer
- Rear operation panel
- Rear side camera (Multi-recognition camera V2)
- Side lighting
- Long PCB (1 500 mm) specification
- Tray 1 Pallet 10 Kinds

High productivity

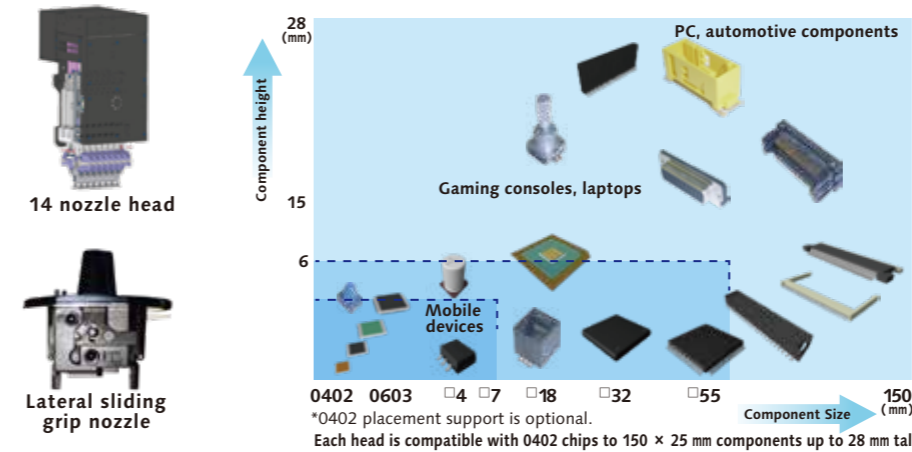
- Automatic changeover
- Support station
- Feeder setup navigation
- Parts supply navigation

Quality improvement

- APC system
- Height sensor (placement height control)
- Multi-recognition camera V2 (Type1, Type2, Type3)
- Automatic replacement of support pins
- Component verification
- PanaCIM-EE ready
- Automatic recovery function for pickup error
- Inspection before pickup (Polarity)

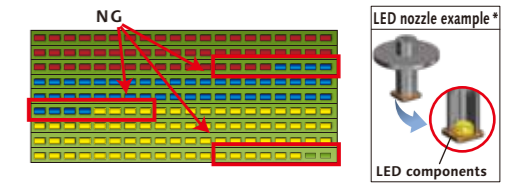
Versatility

Parts adaptability



LED Placement

Brightness Binning

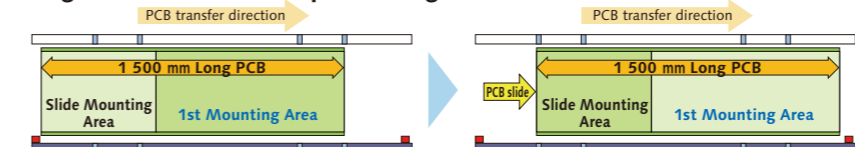


Avoid mixing of brightness and minimizes component and block disposal. Monitors remaining component count to avoid component exhaust during operation.

*Please ask us for nozzles that support LED components of various shapes

Long PCB (1 500 mm) specification option

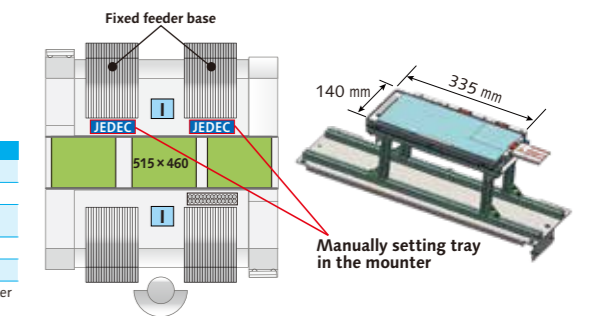
By dividing long PCBs into two mounting areas and sliding in the lengthwise direction, expands lengthwise to a maximum of 1 500 mm.



Specification	Standard Specification	Long PCB (1 500 mm) specification
PCB dimensions	L 50 mm × W 50 mm to L 515 mm × W 460 mm	L 50 mm × W 50 mm to L 1 500 mm × W 460 mm
Placement dimensions	L 50 mm × W 44 mm to L 515 mm × W 454 mm	L 50 mm × W 41 mm to L 1 500 mm × W 451 mm
PCB exchange time	4.0 s	7.0 s (L 857.5 mm or less) 7.5 s (over L 857.5 mm to L 1 500 mm or less)
PCB standby	Loader side 1 piece and unloader side 1 piece (total 2 pieces)	PCB can not standby.
Height sensor teaching jig	Available with NPM Series, NPM-X Series, and VM Series.	For long PCB (1 500 mm) specification only
Bottom side mount possible range	The range with the support pin does not interfere.	The range with the support pin and 1 500 mm PCB holder does not interfere.

Manually setting tray feeder in the mounter (2 trays) option

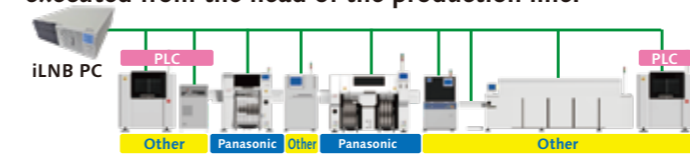
Without reducing the number of rear feeder supply, pallet parts can be supplied. (Installing 2 trays, up to 10 kinds with Tray 1 Pallet 10 Kinds)



High productivity

Automatic changeover option

iLNB connects all the equipment of the SMT production line including AM100, and automatic changeover can be executed from the head of the production line.



Triggers of automatic changeover
Selects from 3 types of external scanner, production plan or planning form.



Off-line setup support station

With the support stations, offline feeder cart setup is possible even outside of the manufacturing floor.

Two types of Support Stations are available.

- Component verification station
 - Batch Exchange Cart Setup: Provides power to all feeders in cart.
 - Feeder setup: Provides power to individual feeders.
 - Component verification: Navigator that indicates any location where feeders need exchange.

- Power supply station
The simpler type of station composed of the batch exchange cart setup and the feeder setup features.

Feeder setup navigator option

It is a support tool to navigate efficient setup procedure. The tool factors in the amount of time it takes to perform and complete setup operations when estimating the time required for production and providing the operator with setup instructions. This will visualize and streamline setup operations during setup for a production line.

