

Model ID		NPM-W2				
Front head	Rear head	Lightweight 16-nozzle head V3A	Lightweight 8-nozzle head	3-nozzle head V2	Dispensing head	No head
Lightweight 16-nozzle head V3A		NM-EJM7D		NM-EJM7D-MD	NM-EJM7D	
Lightweight 8-nozzle head					NM-EJM7D-D	
3-nozzle head V2					NM-EJM7D-A	
Dispensing head		NM-EJM7D-MD				
Inspection head		NM-EJM7D-MA				
No head		NM-EJM7D		NM-EJM7D-D		
PCB dimensions	Single conveyor	Batch mounting	L 50 mm × W 50 mm to L 750 mm × W 550 mm	2-positin mounting	L 50 mm × W 50 mm to L 350 mm × W 550 mm	
	Dual conveyor	Dual transfer (Batch)	L 50 mm × W 50 mm to L 750 mm × W 260 mm	Dual transfer (2-positin)	L 50 mm × W 50 mm to L 350 mm × W 260 mm	
Electric source		3-phase AC 200 , 220 , 380 , 400 , 420 , 480 V 2.8 kVA				
Pneumatic source		0.5 MPa, 200 L / min (A.N.R.)				
Dimensions ³		W 1 280 mm × D 2 465 mm × H 1 444 mm ⁴				
Mass		2 850 kg ⁴				
Placement head		Lightweight 16-nozzle head V3A (Per head)		Lightweight 8-nozzle head (Per head)	3-nozzle head V2 (Per head)	
Placement speed ⁵ *at optimum conditions		42 000 cph ⁶ (0.086 s / chip)		35 000 cph (0.103 s / chip)		20 800 cph (0.173 s / chip)
Placement accuracy (Cpk \geq 1) *at optimum conditions		$\pm 40 \mu\text{m}$ / chip ($\pm 25 \mu\text{m}$ / chip)		$\pm 30 \mu\text{m}$ / chip ($\pm 30 \mu\text{m}$ / QFP)		$\pm 30 \mu\text{m}$ / QFP
Component dimensions (mm)		0402 ⁹ chip to L 8.5 × W 8.5 × T 3 / T 6 ¹¹		03015 ⁹⁺¹⁰ / 0402 ⁹ chip to L 8.5 × W 8.5 × T 3 / T 6 ¹¹		0402 ⁹ chip to L 45 × W 45 × T 12 or L 100 × W 40 × T 12
						0603 chip to L 120 × W 90 × T 30 / T 40 ¹² or L 150 × W 25 × T 30 / T 40 ¹² or L 135 × W 135 × T 13 ¹³
Component supply	Taping	Tape : 4 / 8 / 12 / 16 / 24 / 32 / 44 / 56 mm Max.120 (4 , 8 mm tape)		Tape : 4 to 56 / 72 mm		Tape : 4 to 56 / 72 / 88 / 104 mm
	Stick	—		Max.30 (Single stick feeder)		
	Tray	—		Max.40 (Twin tray feeder)		
Dispensing head		Dot dispensing			Draw dispensing	
Dispensing speed ¹⁴		0.16 s / dot (Condition : XY=10 mm , Z=less than 4 mm movement , No θ rotation)			4.25 s / component (Condition : 30 mm × 30 mm corner dispensing) ¹⁵	
Adhesive position accuracy (Cpk \geq 1) ¹⁴		$\pm 75 \mu\text{m}$ / dot			$\pm 100 \mu\text{m}$ / component	
Applicable components		1608 chip to SOP , PLCC , QFP , Connector , BGA , CSP			BGA, CSP	
Inspection head		2D inspection head (A)			2D inspection head (B)	
Resolution		18 μm			9 μm	
View size		44.4 mm × 37.2 mm			21.1 mm × 17.6 mm	
Inspection processing time ¹⁶	Solder Inspection ¹⁷	0.35 s / View size				
	Component Inspection ¹⁷	0.5 s / View size				
Inspection object	Solder Inspection ¹⁷	Chip component : 100 μm × 150 μm or more (0603 or more) Package component : ϕ 150 μm or more			Chip component : 80 μm × 120 μm or more (0402 or more) Package component : ϕ 120 μm or more	
	Component Inspection ¹⁷	Square chip (0603 or more) , SOP , QFP (a pitch of 0.4 mm or more) , CSP , BGA , Aluminum electrolysis capacitor , Volume , Trimmer , Coil , Connector ¹⁸			Square chip (0402 or more) , SOP , QFP (a pitch of 0.3 mm or more) , CSP , BGA , Aluminum electrolysis capacitor , Volume , Trimmer , Coil , Connector ¹⁸	
Inspection items	Solder Inspection ¹⁷	Oozing , blur , misalignment , abnormal shape , bridging				
	Component Inspection ¹⁷	Missing , shift , flipping , polarity , foreign object inspection ¹⁹				
Inspection position accuracy (Cpk \geq 1) ²⁰ *at optimum conditions		$\pm 20 \mu\text{m}$			$\pm 10 \mu\text{m}$	
No. of inspection		Solder Inspection ¹⁷ Max. 30 000 pcs. / machine (No. of components : Max. 10 000 pcs. / machine)			Component Inspection ¹⁷ Max. 10 000 pcs. / machine	

Please refer to the specification booklet for details.

- *6 : Under optimal operating conditions for the machine with dual lane mode.
- *7 : $\pm 25 \mu\text{m}$ placement support option. (Under conditions specified by Panasonic)
- *8 : The placement angle recognition setting needs to be enabled.
- *9 : The 03015 / 0402 chip requires a specific nozzle / feeder.
- *10 : Support for 03015 mm chip placement is optional.
- *11 : T 6 needs dedicated short nozzles and is $\square 6.5 \text{ mm}$ or less.
- *12 : T 40 is option. (PCB thickness + Max component height \leq T48; so, for T40, the max PCB thickness is 8.0 mm)
- *13 : $\square 135 \text{ mm}$ is option.
- *14 : The values such as tact time and accuracy are varied depending on conditions (e.g. adhesive).
- *15 : A PCB height measurement time of 0.5 seconds is included.
- *16 : The inspection process time differs depending on inspection.
- *17 : One head cannot handle solder inspection and component inspection at the same time.
- *18 : Please refer to the specification booklet for details.
- *19 : Foreign object is available to chip components. (Excluding 03015 mm chip)
- *20 : This is the solder inspection position accuracy measured by our reference using our glass PCB for plane calibration. It may be affected by sudden change of ambient temperature.
- *21 : Intelligent Tape Feeder
- *22 : Auto Setting Feeder

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

Inquiries...

Panasonic Connect Europe GmbH
Factory Solutions

Caroline-Herschel-Straße 100
85521 Ottobrunn
Germany

All data as of January 1, 2026

Ver.January 1, 2026

© Panasonic Connect Co., Ltd. 2026

Panasonic
CONNECT

Electronics Assembly System

Production Modular

Catalogue

2026

Model No.

NM-EJM7D

NM-EJM7D-MD NM-EJM7D-D

NM-EJM7D-MA NM-EJM7D-A

NPM-W2



NPM
NEXT PRODUCTION MODULAR

*Photograph is NM-EJM7D

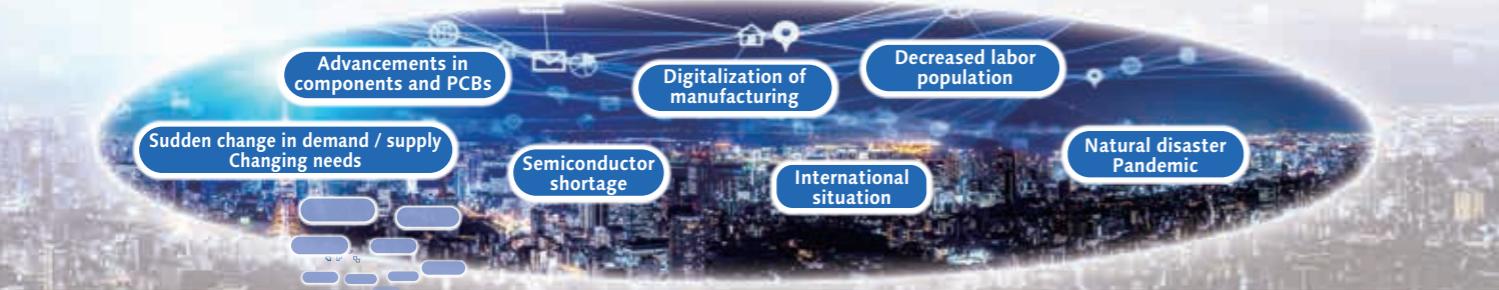


*It may not conform to Machinery Directive and EMC Directive in case of optional configuration and custom-made specification.

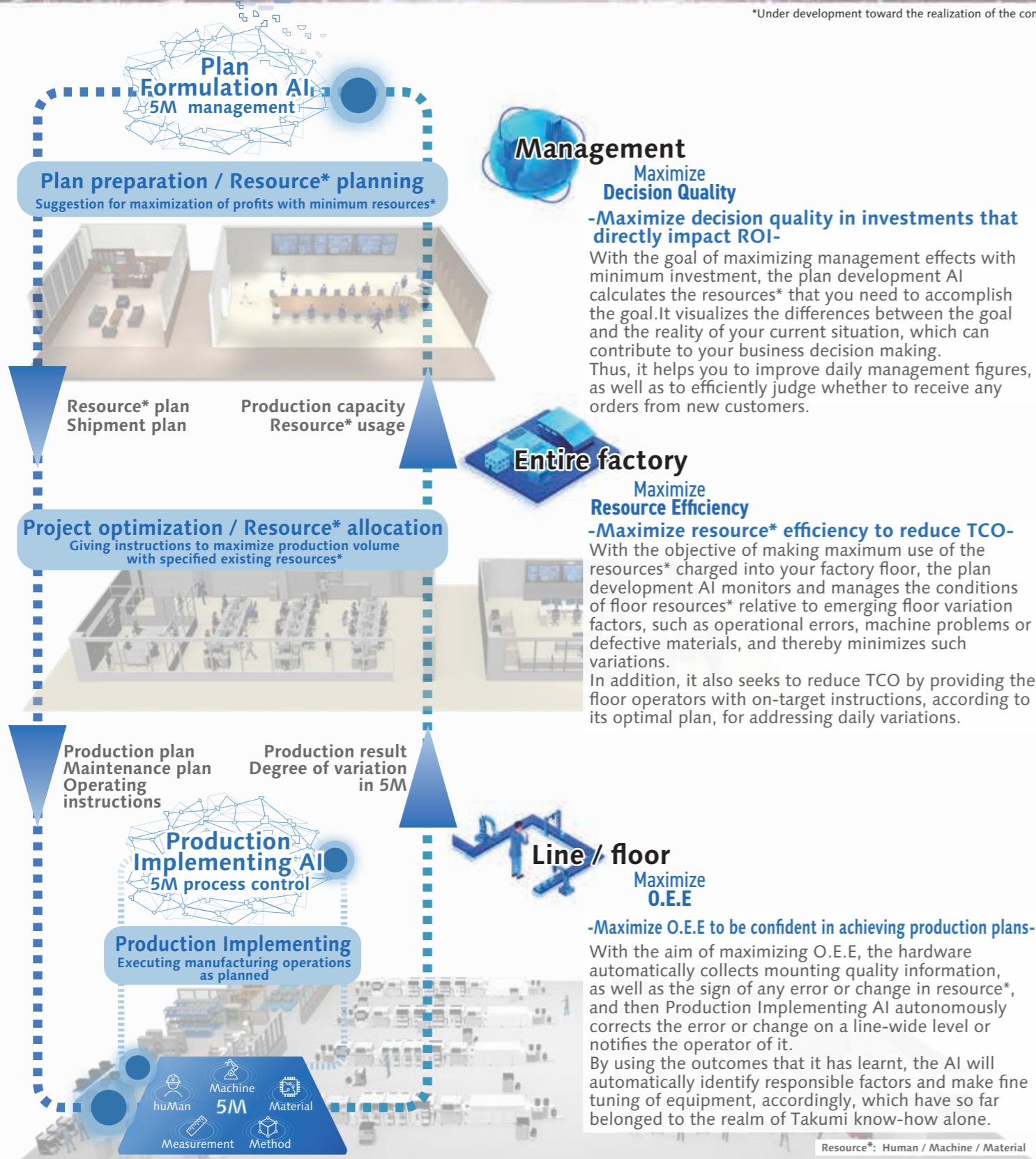
"Autonomous Factory" Concept *

A factory that immediately responds to every situation and continues to evolve autonomously

Ensuring the production of non-defective items through the integrated control of autonomous uninterrupted mounting lines and floors independent of any human intervention and judgment



*Under development toward the realization of the concept



1

Higher productivity and quality with printing, placement and inspection process integration

Depending on the PCB you produce, you can select High-speed mode or High-accuracy mode.

2

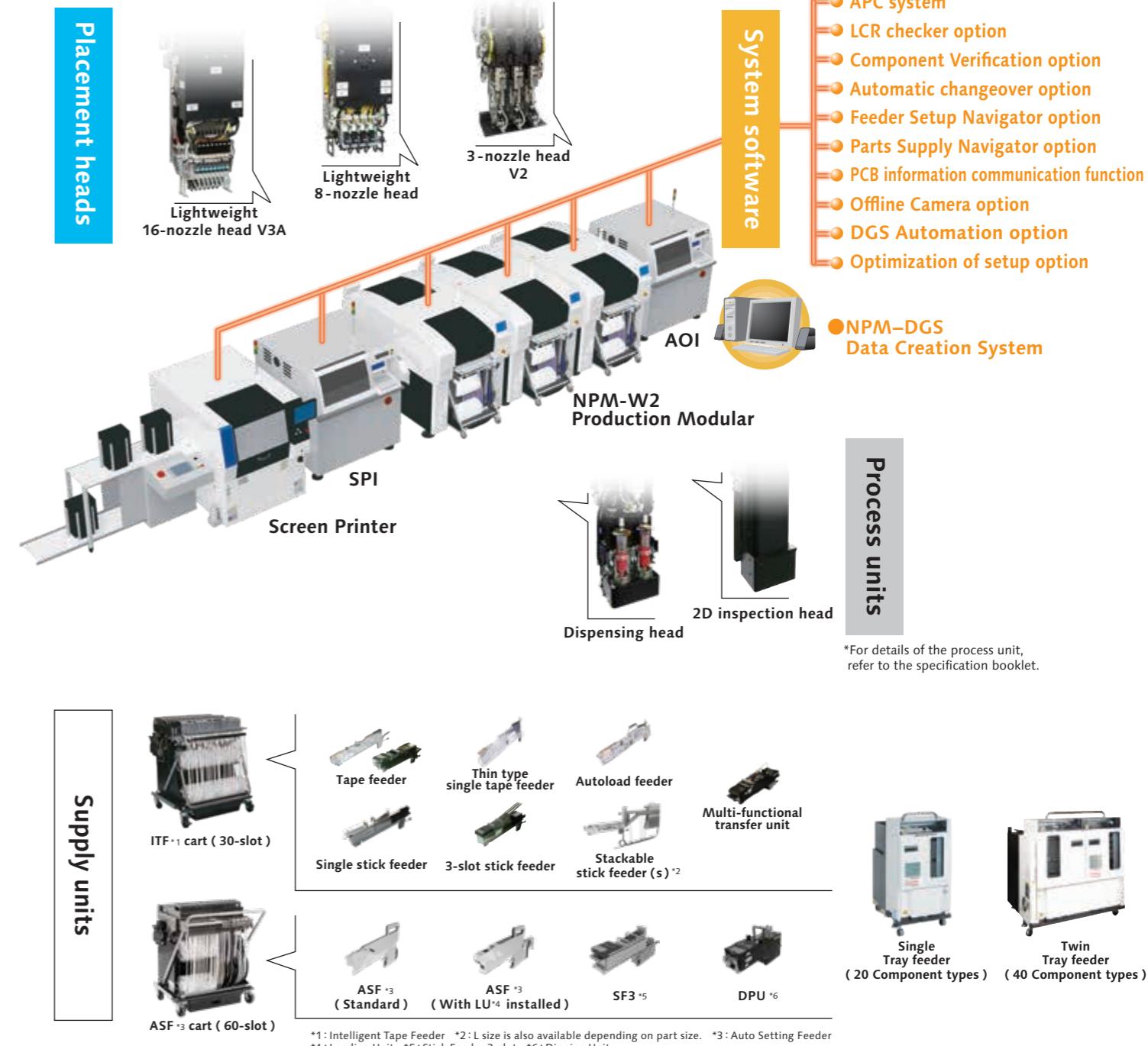
For larger boards and larger components

PCBs up to a size of 750 × 550 mm with component range up to L 150 × W 25 × T 30 mm
The range of available components can be further broadened optionally.

3

Higher area productivity through dual lane placement

Depending on the PCB you produce, you can select an optimal placement mode – "Independent", "Alternate" or "Hybrid".



Features

Simultaneous realization of high area productivity and high-accuracy placement

- ◆ **High production mode** (High production mode : ON)
 - Max. speed : 84 000 cph*1 (IPC9850 (1608) : 61 200 cph*1) / Placement accuracy : $\pm 40 \mu\text{m}$
- ◆ **High accuracy mode** (High production mode : OFF)
 - Max. speed : 70 000 cph*1 / Placement accuracy : $\pm 30 \mu\text{m}$ (Option : $\pm 25 \mu\text{m}$ *2)

*1: Takt time for the machine with the lightweight 16 V3A x 2 heads
*2: Under conditions specified by Panasonic

Lightweight 16NH V3A

The introduction of lightweight 16NH V3A allows the X- and Y-axes to be driven simultaneously during parts recognition, thus improving placement takt through optimal routing.

Multi-recognition camera

- Three recognition functions combined into one camera.
- Faster recognition scan including components height detection.
- Upgradable from 2D to 3D specifications. Conventional recognition camera

Machine Configuration

Rear & Front Feeder Layout

Single Tray Layout

Twin Tray Layout

Automation units

Feeder maintenance unit

Head maintenance unit

60 different components can be mounted from 16 mm tape feeders.

13 fixed feeder slots are available. PoP tray mounting is possible via a transfer unit.

*1: The "Thin type single tape feeder" and "Autoload feeder" require the "Master jig for thin type single feeder" and "Attachment for thin type single feeder".

*2: Intelligent Tape Feeder

*3: Auto Setting Feeder

Versatility

Large Board

Single conveyor (Selection spec.)

Dual conveyor (Selection spec.)

Large Components

High productivity

Employ dual mounting method

Independent changeover

PCB exchange time reduction

Quality improvement

Placement height control function

Operating rate improvement

Feeder location free

Brightness Binning

NG LED nozzle example LED components

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.

Other functions

- Global bad mark recognition function Reduces in travel / recognition time to recognize bad marks.
- PCB standby between machines (with the extension conveyor attached) Minimizes the PCB (750 mm) change time.

Alternate,Independent & Hybrid Placement

Selectable "Alternate" and "Independent" dual placement method allows you to make good use of each advantage.

- Alternate : Front and rear heads execute placement on PCBs in front and rear lanes alternately.
- Independent : Front head executes placement on PCB in front lane and rear head execute placement on rear lane.

Advantage

- Alternate : -No PCB transfer loss
- Independent : -High productivity
-Independent changeover
- Hybrid Placement : -High speed placement of chip components
-Mid- & large-sized components shared

Production Changeover

Feeder cart exchange during the production (option)

Automatic replacement of support pins (option)

Automate position change of support pins to enable non-stop changeover and help save man-power and operation errors.

Independent

Alternate

*In alternate mounting , PCBs are mounted while in transfer.

Within same table, feeders can be set anywhere. Alternate allocation as well as setting of new feeders for next production can be done while the machine is in operation.

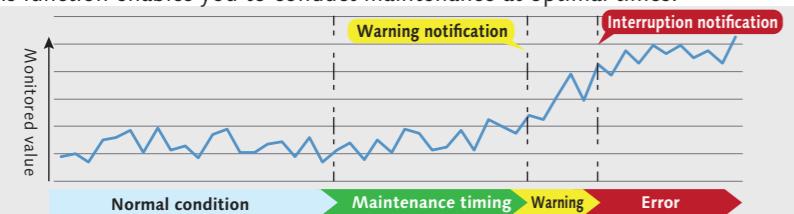
Feeders will require off-line data input by support station (option).

High-quality placement

APC system

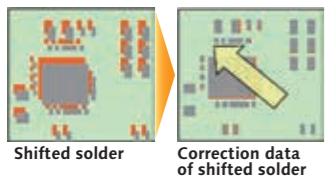
APC-5M: Real-time unit monitoring

APC-5M monitors the conditions of target units in real time and provides notification of the timing of maintenance of each unit or any error condition that could interrupt production, depending on variations in monitored unit values. This function enables you to conduct maintenance at optimal times.



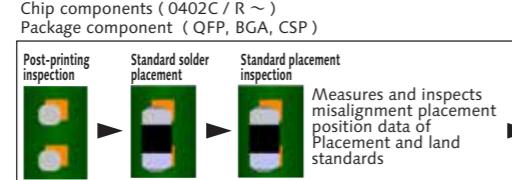
APC-FB *1 Feedback to the printing machine

Based on the analyzed measurement data from solder inspections, it corrects printing positions. (X, Y, θ)



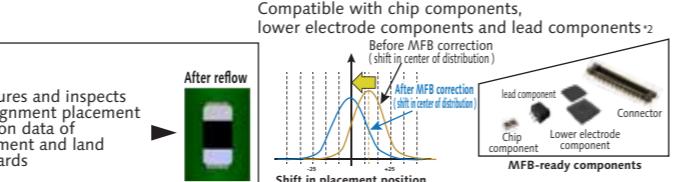
APC-FF *1 Feedforward to the placement machine

It analyzes solder position measurement data, corrects component placement positions (X, Y, θ) accordingly. Chip components (0402C / R ~) Package component (QFP, BGA, CSP)



APC-MFB2 Feedforward to AOI / Feedback to the placement machine

Inspects part location based on APC offset correction position. The system analyzes AOI component position measurement data, corrects placement position (X, Y, θ), and thereby maintains placement accuracy.



*1:APC-FB (feedback) / FF (feedforward) ; 3D inspection machine of another company can be also connected. (Please ask your local sales representative for details.)
*2:APC-MFB2 (mounter feedback2) : Applicable component types vary from one AOI vendor to another. (Please ask your local sales representative for details.)

Misplacement prevention

Component Verification option

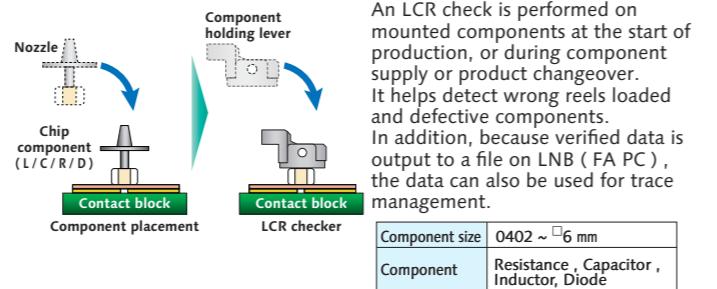
Prevents setup errors during changeover. Provides an increase of production efficiency through easy operation.



Prevents misplacement by verifying production data with the barcode information on changeover components. Because the machine makes verification, you do not need to select target data, separately. If wrong component is set, or verification has yet to be made, the machine is brought to a stop.

*Wireless scanners and other accessories to be provided by customer.

LCR checker



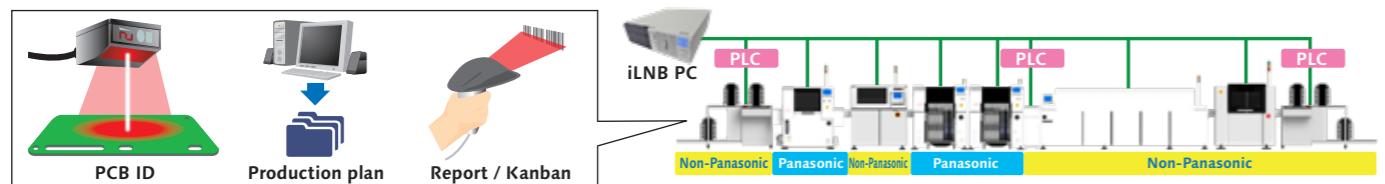
Changeover ability

Automatic changeover option

All machines, including NPM, in SMT line are connected via iLNB, which allows automatic changeovers to be performed sequentially, starting from the first machine in the line.

Trigger for changeover

You can select from among the following three methods: PCB ID reading using an external scanner, Production plan, and Report / Kanban reading.



Feeder setup navigator option

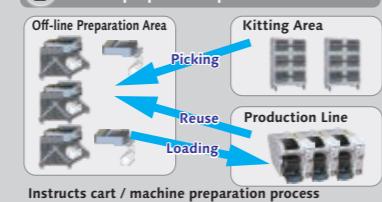
It is a support tool to navigate efficient setup procedure. The tool factors in the amount of time it takes to perform and complete setup operations when estimating the time required for production and providing the operator with setup instructions. This will visualize and streamline setup operations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

1 Gross Production Time Estimate



Production completion time is estimated based on setup time and available human resource.

2 Feeder preparation process instructions



Instructs cart / machine preparation process in three steps: load, remove, and relocate.

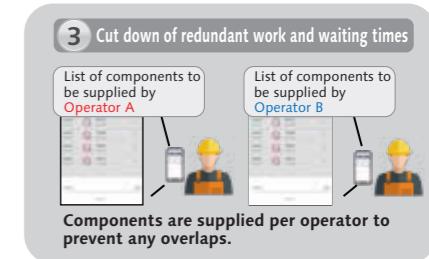
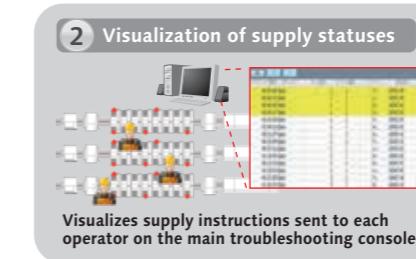
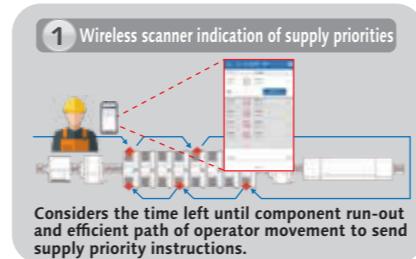
3 Instruction Display on Tablet Device



Instructions can be checked from anywhere.

Operating rate improvement

A component supply support tool that navigates efficient component supply priorities. It considers the time left until component run-out and efficient path of operator movement to send component supply instructions to each operator. This achieves more efficient component supply.



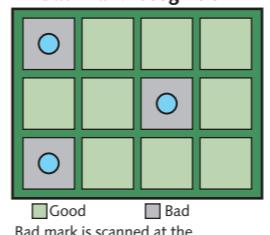
*PanaCIM is required to have operators in charge of supplying components to multiple production lines.

PCB information communication function

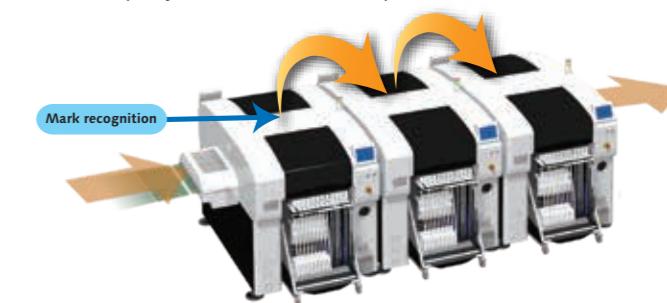
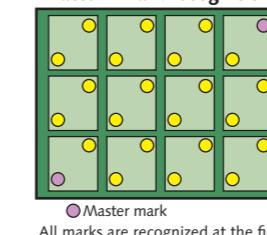
Information of mark recognitions done on first NPM machine in line is passed on to downstream NPM machines. Which can reduce cycle time utilizing the transferred information. The machine can also obtain bad mark information from its upstream third-party machine as well. (option)

Subject for communication

Bad mark recognition



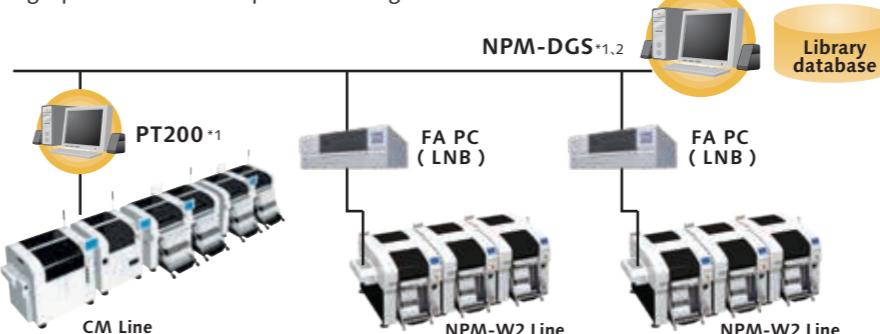
Pattern mark recognition



*Please refer to "Specification" booklet for details.

Data Creation System

This is a software package that provides integrated management of component library and PCB data, as well as production data that maximizes mounting lines with high-performance and optimization algorithms.



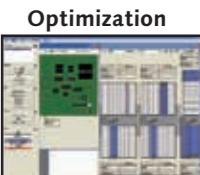
*1 : A computer must be purchased separately.

*2 : NPM-DGS has two management functions of floor and line level.

NPM-DGS (Model No.NM-EJS9A)



Allows you to import CAD data and check polarity, etc., on the screen.



Realizes high productivity and also allows you to create common arrays.



Update production data on PC during production to reduce the loss of time.



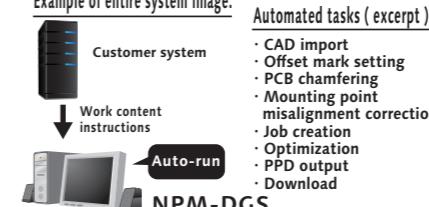
Allows unified management of the component library including mounting, inspection and dispensing.

DGS Automation option

Automated manual routine tasks reduce operation errors and data creation time. Manual routine tasks can be automated.

By collaborating with the customer system, the routine tasks for creating data can be reduced, so it contributes to a significant reduction in production preparation time. It also includes the function to automatically correct the coordinates and angle of the mounting point (Virtual AOI).

Example of entire system image:



Offline Camera unit V2

New component data can be created offline without relying on an individual operator's skill and proficiency, thus contributing to quality improvement and O.E.E maximization.

Thanks to adoption of a new component recognition camera and a wider variety of dedicated software functions, it now enables you to create component data more efficiently.



Offline Camera unit V2

Optimization of setup option

In production involving multiple models, setup workloads are taken into account and optimized. For more than one PCB sharing common component placement, multiple setups may be required due to a shortage of supply units. In order to reduce the required setup workloads in such a case, this option divides PCBs into similar component placement groups, selects a table (s) for setup and thus automates component placement operation. It contributes to improving setup performance and reducing production preparation time for customer manufacturing various kinds of products in small quantities.

