



**High yield, high throughput ultrasonic flip-chip bonding.**

## MD-P300 Flip-chip Bonder

The MD-P300 Flip-chip Bonder is process-flexible, combining flip-chip and thermosonic bonding in a single, small-footprint solution. The MD-P300 contributes to the cost-effective production (high yield, high throughput) of value-added devices. The MD-P300 can achieve high speed and high accuracy bonding through its low gravity point and lightweight bonding head. The MD-P300 supports 300 mm (12") wafers, and is an ideal solution for COB hybrid assembly in combination with an in-line Panasonic SMT placement machine. The MD-P300 is capable of fast cycle times and a placement accuracy of  $\pm 5 \mu\text{m}$  at 0.5 seconds per IC (dry run) - with thermosonic processes at 0.65 seconds, including process times.

### Key Features

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Easy process exchange

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Real-time inspection

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User-friendly operation

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<https://ap.connect.panasonic.com/sg/en/products/microelectronics/md-p300-flip-chip-bonder>

<b>Model Number</b>	NM-EFF1C
<b>Productivity</b>	C4: 0.65s/IC (including dipping motion)
	Thermosonic: 0.65s/IC (including US process time of 0.2s)
<b>Placement Accuracy</b>	XY (3 $\sigma$ at PFSC conditions): $\pm 5\mu\text{m}$
<b>Substrate dimensions</b>	L 50 × W 50 to L 330 × W 330 (Heating specifications: L 330 × W 220mm)
<b>Die dimensions (mm)</b>	L 1 × W 1 to L 25 × W 25 (Thermosonic: L7 × W7)
<b>Number of die types</b>	Up to 12 product types (AWC specifications) nozzle type
<b>Die Supply</b>	Wafer frame 12 inches (Option: 8 inches)
<b>Bonding Load</b>	VCM head: 1N to 50N (Option: 2N to 100N)
<b>Head Heating</b>	Thermosonic: Up to 300°C
<b>Substrate Heating</b>	Constant heating, Up to 200°C (Heating bonding stage specifications: Max. substrate size L 330 × W 220mm)
<b>Power Source</b>	3-phase AC 200V $\pm$ 10V, 50/60Hz,
	Up to 4kVA (Up to 7kVA for heating specification)
<b>Pneumatic Source</b>	0.4MPa, 50L/min (A.N.R.) (Up to 150L/min for full-featured machine including cooling air)
<b>Dimensions (mm)</b>	W 1380 × D 1640 × H 1430 (without loader / unloader)
<b>Mass</b>	2300kg (without loader / unloader)