

PARAQUADA SMD Pick & Place System

Version 1.5, May 2017

Configuration

		PARA-4-G2	PARA-4C-G2	PARA-2-G2	PARA-2C-G2
Machine base	Standalone type	●		●	
	Inline type		●		●
	Signal tower (3 color)	●	●	●	●
	Interior lighting LED	●	●	●	●
PCB Handling	Magnetic PCB holder	●		●	
	Inline conveyor 3 stage		●		●
	Conveyor width adjustment		○		○
	SMEMA interface		Manual or auto		Manual or auto
	Conveyor batch mode		●		●
Control and software	Machine PC with Windows 10 OS and 21.5" touch screen	●	●	●	●
	ePlace P&P/Disp. software (En, De, Ru, Pl, Zh, Es, Cs, Ja)	●	●	●	●
	Technical support software	●	●	●	●
Alignment systems	Automatic fiducial recognition	●	●	●	●
	Cognex SMD4 vision	●	●	●	●
	Multi Field of View (MFOV)	○	○	○	○
Dispensing valves ¹⁾ (Max. cartridge size)	Time/pressure valve (30 cm ³)	○	○	○	○
	Archimedean screw valve (30 cm ³)	○	○	○	○
	Volume dispensing valve (50 cm ³)	○	○	○	○
	Jet valve (30 cm ³)	○	○	○	○
	Pneumatic-Jet valve (10 cm ³)	○	○	○	○
Various (extract)	Bad mark sensing with vision	●	●	●	●
	Universal CAD conversion	●	●	●	●
	Automatic Placement constraints	●	●	●	●
	Process Improvement tool	●	●	●	●
	Calibration set P&P / Dispensing	●	●	●	●

● standard feature ○ optional feature

Specifications

		PARA-4-G2	PARA-4C-G2	PARA-2-G2	PARA-2C-G2
Productivity ²⁾	Optimum placement speed Chip	12'300 cph		8'200 cph	
	Speed (IPC 9850)	Chip 10'500 cph QFP 3'000 cph		Chip 7'100 cph QFP 3'000 cph	
	Speed (IPC 9850A)	Chip 10'000 cph QFP 2'600 cph		Chip 6'800 cph QFP 2'600 cph	
	Changeover idle time	< 1min (loading job, adjust conveyor, restart production)			
Feeder	Feeder capacity (8 mm tape)	240	up to 200 ³⁾	240	up to 200 ³⁾
	Feeder type	hyQ or CLM, programmable, intelligent, cassette or single feeder			
Components	Component size range	01005 - 40 x 40 mm incl. leads; with MFOV up to 80 x 70 mm			
	Mass moment of inertia	60g x cm ²			
	Min. lead pitch	0.3 mm (12 mil)			
	Min. ball diameter / pitch	0.2 mm			
	Min. component height	> 0 mm			
	Max. component height	18 mm (25 mm) ⁴⁾			
	Process height	Up to ± 18 mm (0.71") from zero height (other heights on request)			
Accuracy	Linear encoder resolution (x, y)	0.04 μm			
	Rotation axis resolution	0.007° (for all axes)			
	Overall placement accuracy (x,y) Chips	± 51 μm (3σ) ⁵⁾			
	Overall placement accuracy (x,y) QFP	± 39 μm (3σ) ⁵⁾			
PCB	Min. PCB dimensions	20 x 20mm (0.8" x 0.8")	50 x 50 mm (2" x 2")	20 x 20 mm (0.8" x 0.8")	50 x 50 mm (2" x 2")
	Max. PCB dimensions	600 x 430 mm (23.6" x 16.9")	600 x 400 mm (23.6" x 15.7")	600 x 430 mm (23.6" x 16.9")	600 x 400 mm (23.6" x 15.7")
	Extended PCB (less feeders)	on request			
	PCB thickness	0.5 - 3.5 mm (0.02" - 0.13")	0.5 - 5 mm (0.02" - 0.2")	0.5 - 3.5 mm (0.02" - 0.13")	0.5 - 5 mm (0.02" - 0.2")
	PCB edge clearance	3.0 - 5.0 mm (0.11 - 0.2") (varies with PCB thickness)	Top side 3.0 mm (0.11") / Bottom side 5.0 mm (0.2")	3.0 - 5.0 mm (0.11 - 0.2") (varies with PCB thickness)	Top side 3.0 mm (0.11") Bottom side 5.0 mm (0.2")
	Max. Board weight	4kg (8.8 lb)			
	Clearance below PCB	40 mm (1.57")			

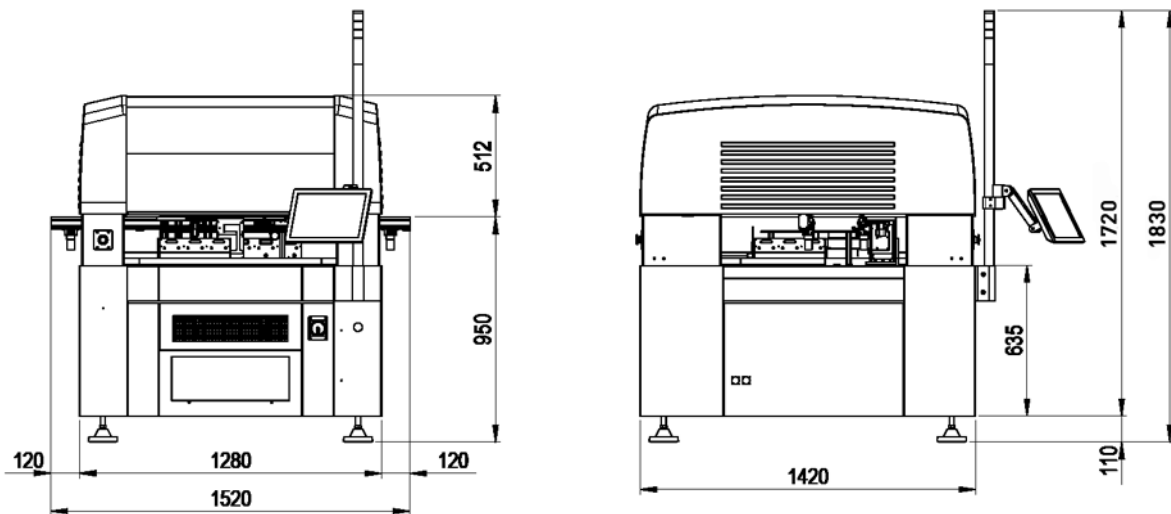


	PARA-4-G2	PARA-4C-G2	PARA-2-G2	PARA-2C-G2
Supplies	Electrical	230 V / 50Hz or 120 V / 60 Hz		
	Power consumption	1 kW		
	Required circuit breaker	16 A / 230 V (Type C16)		
	Required RCD	30 mA (Type B, sensitive to universal current)		
	Min. wire cross selection	1.5 mm ²		
	Earth	TN-S		
	Electrical connector	230V: CEE-16, 16A, 230V, 3P L+N+PE 6h, blue color 120V: CEE-16, 16A, 120V, 3P L+N+PE 4h, yellow color		
	Compressed air	6-7 bar, clean and filtered, not condensed, ISO 8573-1: class 3 (max part diameter 5 µm, dew point < -20°C, oil ≤ 1 mg/m ³)		
	Air consumption	Max. 60 NI / min.		
	Air connection	Push-in connector for outer hose Ø8 mm		
Environment	Performance temperature / humidity	22 - 24°C / 50 - 70% RH		
	Operational temperature / humidity	15 - 30°C / 30 - 70 % RH (non condensing)		
	Noise level	75 dB (A) max.		

Machine Dimensions and Packaging

	PARA-4-G2	PARA-4C-G2	PARA-2-G2	PARA-2C-G2
Machine dimensions and Packaging	Machine footprint	128 x 142 cm (50.4" x 55.9")		
	Operating floor space	210 x 225 cm (82.6" x 88.6")		
	Machine height ⁶⁾	146.2 cm (57.6") / 183cm (72.1") incl. light tower		
	Machine weight	1'260 kg (2'778 lb) w/o feeder / 1'450 kg (3'197 lb) with feeder		
	Floor loading	800 kg/m ² (1.14 lb p sq in)		
	Conveyor height	SMEMA: 940 - 965 mm (37" - 38")		
	Packaging weight	80 kg (176 lb)		

Dimension Drawings



- 1) Consult PARAQUADA G2 System Description for possible valve configurations
- 2) Requires Software ePlace V23.0 and higher. Values reached using hyQ feeder type only.
- 3) Varies depending board size
- 4) On request
- 5) Used speed mode "Accurate", up to 4 different speed modes available. Only applicable at zero height and within performance temperature / humidity range.
- 6) Depending on adjusted feet height

For more information ask for the PARAQUADA G2 System Description

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