



	iX Series (High Volume/High Accuracy)		iFlex (High Volume/High Mix)			Hybrid (Modules/Embedded/Memory)	
							
	iX 502	iX 302	iFlex T4	iFlex T2	iFlex H1	Hybrid 5	Hybrid 3
Maximum output per hour	165k	99k	70k	35k	9k	165k	99k
Maximum output IPC 9850/9850A	121k	79k	51k	24.3k	7.1k	21k FC without dipping 16k FC with dipping 41k IC shooting	21k FC without dipping 16k FC with dipping 41k IC shooting
Placement accuracy @ Cp>1	35 micron for chips 25 micron for QFP	35 micron chips 25 micron for QFP	40 micron for chips	40 micron for chips 35 micron for QFP	40 micron chips 25 micron for QFP	25 micron for passives 18 micron for QFP/BGA/FC 10 micron for flip chips ¹ 7 micron for flip chips ¹	25 micron for passives 18 micron for QFP/BGA/FC 10 micron for flip chips ¹ 7 micron for flip chips ¹
- Optional - Under lab conditions							
Minimum component size	0.4 x 0.2 mm (01005)	0.4 x 0.2 mm (01005)	0.4 x 0.2 mm (01005)	0.4 x 0.2 mm (01005)	0.6 x 0.3 mm (0201)	0.4 x 0.2 mm (01005) ²	0.4 x 0.2 mm (01005) ²
Maximum component size	45 x 45 mm (1.77 x 1.77")	45 x 45 mm (1.77 x 1.77")	17.5 x 17.5 mm (0.69x0.69")	45 x 45 mm (1.77 x 1.77")	120 x 52 mm (4.72 x 2.05")	45 x 45 mm (1.77 x 1.77")	45 x 45 mm (1.77 x 1.77")
Maximum component height	10.5 mm (0.41")	10.5 mm (0.41")	15 mm (0.60")	15 mm (0.60")	25 mm (0.98")	10.5 mm (0.41")	10.5 mm (0.41")
Programmable placement force (in steps of 0.1 N) - Optional	1.5 to 8 N	1.5 to 8 N	1.5 to 8 N	1.5 to 8 N	4.0 to 40 N	1.5 to 8 N 0.3 to 1.5 N	1.5 to 8 N 0.3 to 1.5 N
Minimum board size Minimum board size (optional)	50 x 50 mm (2 x 2") 50 x 25 mm (2 x 1")	50 x 50 mm (2 x 2") 50 x 25 mm (2 x 1")	50 x 50 mm (2 x 2")	50 x 50 mm (2 x 2")	50 x 50 mm (2 x 2")	50 x 50 mm (2 x 2") 50 x 25 mm (2 x 1")	50 x 50 mm (2 x 2") 50 x 25 mm (2 x 1")
Maximum board size: - Single lane - Dual lane (per lane) - Dual lane in single lane mode	515 x 390 mm (20.28 x 15.35") N/a N/a	475 x 390 mm (18.7 x 15.35") N/a N/a	555 x 558 mm (21.8 x 22") 555 x 254 mm (21.8 x 10") 555 x 460 mm (21.8 x 18")	555 x 558 mm (21.8 x 22") 555 x 254 mm (21.8 x 10") 555 x 460 mm (21.8 x 18")	555 x 558 mm (21.8 x 22") 555 x 254 mm (21.8 x 10") 555 x 460 mm (21.8 x 18")	515 x 390 mm (20.28 x 15.35") N/a N/a	475 x 390 mm (18.7 x 15.35") N/a N/a
Maximum optional board length	800 mm (31.5")	800 mm (31.5")	845 mm (33")	845 mm (33")	845 mm (33")	800 mm (31.5")	800 mm (31.5")
Maximum optional board width	457 mm (18")	457 mm (18")	N/a	N/a	N/a	457 mm (18")	457 mm (18")
Board thickness	0.3 to 6 mm (0.01 to 0.24")	0.3 to 6 mm (0.01 to 0.24")	0.3 to 6 mm (0.01 to 0.24")	0.3 to 6 mm (0.01 to 0.24")	0.3 to 6 mm (0.01 to 0.24")	≥ 0.3 mm	≥ 0.3 mm
Application specific board transport types						Vacuum-, carrier transport	Vacuum transport
Automatic toolbit exchange	Nozzles	Nozzles	Nozzles	Nozzles	Nozzles, grippers	Nozzles	Nozzles
Maximum tape feeding positions (8 mm)	260 twin tapes 130 single tapes	156 twin tapes 76 single tapes	64 single tapes 128 twin tapes	64 single tapes 128 twin tapes	72 single tapes 122 twin tapes	260 twin tapes 130 single tapes	156 twin tapes 76 single tapes
Feeding options (other feeder types on request)	tape, stick	tape, stick	tape, stick	tape, stick, tray	tape, stick, tray, tubes	tape, waffle pack, tray, direct die, others	tape, waffle pack, tray, direct die, others
Open MES data interfaces	CamX	CamX	CamX	CamX	CamX	CamX, Secs/Gem	CamX, Secs/Gem
Footprint (L x W)	3,720 x 1,705 mm (146.46 x 67.13")	2,760 x 1,705 mm (108.66 x 67.13")	1,170 x 1,844 mm (46.06 x 72.60")	1,170 x 1,844 mm (46.06 x 72.60")	1,170 x 1,844 mm (46.06 x 72.60")	3,720 x 1,705 mm (146.46 x 67.13")	2,760 x 1,705 mm (108.66 x 67.13")

¹ Based on Assembléon Metrology @ 3 sigma

² 0201m/03015m capability under development

For extended specifications, not specified in these tables, please contact Assembléon.



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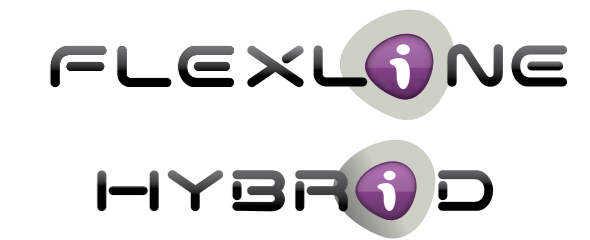
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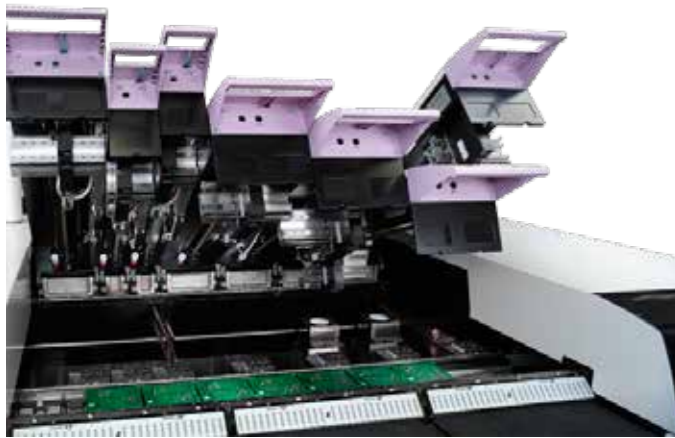
Product overview

Assembléon's SMT portfolio



assembleon.com





Choosing the right concept for combining quality and speed

Parallel placement Since 1993

Single head / single component

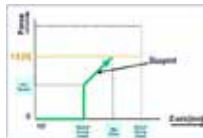


- **100%** component monitoring
- **100%** reliability at highest speeds
- **100%** reliable accuracy
 - 40µ CpK > 1 with laser
 - 18µ CpK > 1 with TPR
 - 10µ CpK > 1 with TPR for flip chip
- **No** component spread

Your value:

- Over **99.95 %** First pass yield

Closed loop placement force control < 1 DPM



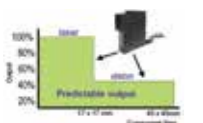
- On **100 %** of the components
- **No** speed decrease
- 6 Sigma approach



Your value:

- **< 1** defects per million placement quality
- **70 %** less rework costs
- **No** cracked components

Best output over all applications

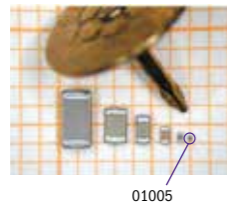


- Wide component range per single head
- No change in head configurations amongst applications
- Optimized balancing over all applications

Your value:

- **100 %** predictability over all applications – now and in future

Sustainable equipment



- **Evolves** with technology
- Guaranteed upgradeability
- Same reliability for any technology
 - **01005** for SMT
 - **Die Stacking** for Semicon backend
 - **Embedded components** for substrates

Your value:

- **100 %** sustainable equipment

Capacity on demand



- Buy or rent capacity only when required
- Full scale-able platform
- Increase and decrease output without floorspace consequences
- CPR doubles output of one SPR
- No calibration required after installation



Your value:

- Save **20%** on initial equipment investment

Lowest energy consumption



- Lowest energy consumption compared to other 100K solutions
- Lowest air consumption
- **70 %** less product rework

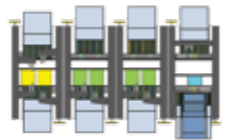
Your value:

- **50 %** less energy consumption



Placement excellence in a smart, flexible package

Ultimate dual lane factory solution



- Independent dual lane
 - Any program on any lane, any time
- Your value:**
- **100 %** production flexibility
 - Production and NPI on same equipment

Fast flexible setups and changeovers



- Fast feeder loading
- Segmented changeovers
- Fast trolley changeover
- Feeder anywhere setup
- Part package flexibility
- No head changes between jobs



Your value:

- **100 %** setup and changeover flexibility

Highest line throughput over all applications



- Combined setups
Single head/Single place predictability
Internal buffer positions
- Tray cashing
 - Continue production on errors
 - Line monitoring

Your value:

- **20 %** or more line throughput

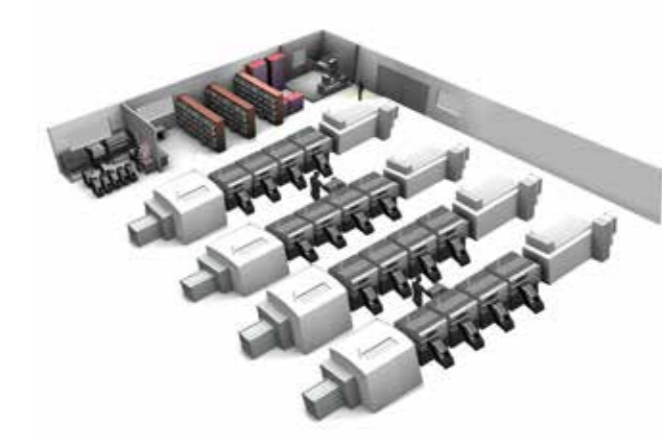
Error-free and fast production ramp-up



- **100 %** re-use of approved parts and programs
- Virtual sticky tape
- Graphical setup lists
- Setup verification
- First component pick teach-wizard
- Easy to use graphical touch screen interface

Your value:

- Plug and play production ramp-up



Assembléon's open data interfaces seamless factory integration

Traceability data (CAMX):



- Reporting of actual placed components
- Trace on job or PCB level (reference designator level)
- Accurate reel information
- With process data option:
 - Skipped placements
 - Process errors
 - Toolbit/feeder/board/mispick counts
 - Reporting of used feeder locations when alternate feeding is used
 - Program summary indicating the amount of boards produced with the current program, including component placement counts
 - Component usage counts per board
 - Component usage counts per feeder
 - Reporting of current/next reel in case of spliced feeders
 - Reporting of used reels from an alternate feeder set

Remote control (Secs/Gem)



- External start/stop machine
- Stop on error
 - Start/stop decisions after program validation

Open optimizer interface (NPI)



For seamless integration in front-end optimizers

Performance data (CAMX)



- Machine status
- Active program name
- Board-count and status
- Pick-count and placement-count per head, feeder-position and package type
- Feeder-events
- PPM-levels
- Error-events
- Feedback on consumed components per reel based on unique ID of that reel
- With process data option:
 - Skipped placements
 - Process errors
 - Toolbit/feeder/board/mispick counts
 - Accurate component usage counts per board

Material database (SOAP):



- Real-time parts consumption per feeder
- Real-time detection of feeder insertions and/or removals

CAMX interface protocols according IPC 2541, 2545 and 2551
Also available: SECS/GEM