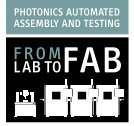
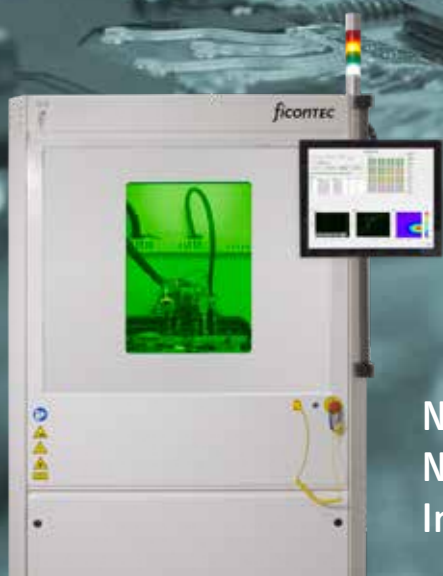


ASSEMBLYLINE

A400 / A800 / A1200 / A1600



Automated photonic device assembly utilizing a new, configurable and modular system approach, complete with a production-optimized housing layout. Made for cassette-to-cassette and in-line high-volume production, as well as for R&D & NPI.



NEW
Next-generation
In-line ASSEMBLYLINE systems

Automated photonic device production

ASSEMBLYLINE systems are high-precision stand-alone and in-line assembly machine solutions designed for automated production (align-&-attach) of photonic devices. They uniquely combine fast-active optical alignment capability and flexible attachment configurations with a tried and tested software control interface, all in an industry-proven design. Optional modules provide additional features, with the high-end models providing automatic tool changing, optical test functionality and wafer processing capability.

Now, ficonTEC's new, next-generation in-line assembly systems feature a redesigned, production(-line)-optimized platform (400, 800, 1200, 1600). They are available in specific in-line configurations as an individual and versatile production cell for existing production lines, or they can be supplied as task-optimized production segments comprising several differently configured systems. In principal, even entire production lines can be envisaged.



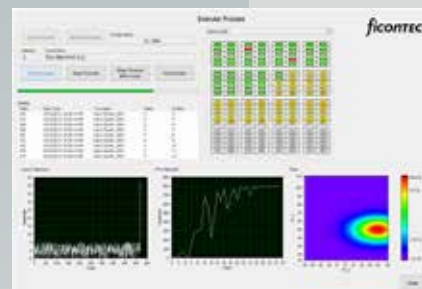
Lens array align-&-attach



Multiple In-line system line-up

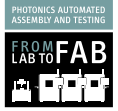
Software Control

PROCESSCONTROLMASTER (PCM) is our user-friendly and process-oriented software control interface that is shipped with all turn-key systems and multi-machine configurations. PCM features an intuitive UI that includes all machine vision, high-resolution positioning and system management routines required to reliably and repeatably drive passive/active alignment and attachment/bonding process hardware. It also comes already fully enabled for automated electro-optical test and characterization tasks, as well as being able to monitor single lines, and even sync parallel lines remotely.



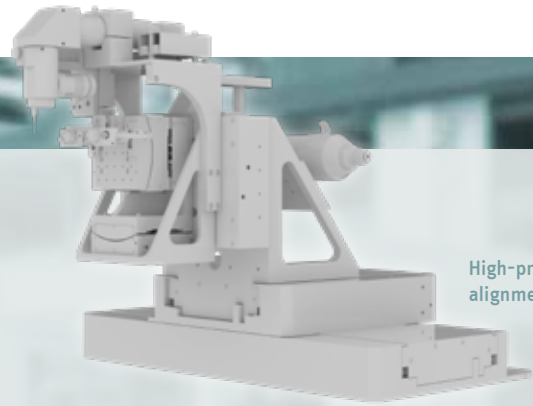
ASSEMBLYLINE

A400 / A800 / A1200 / A1600

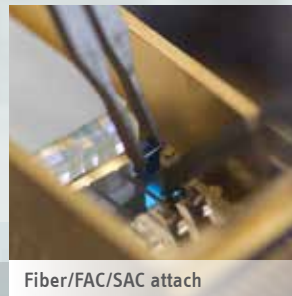


Key features

- ✓ Fully-automated photonic device assembly
- ✓ High-precision AUTOALIGN multi-axis motion
- ✓ Configurable closed-loop fast-active alignment
- ✓ Epoxy dispensing, curing & shrinkage control
- ✓ Multiple chip & wafer handling options



High-precision alignment unit



Fiber/FAC/SAC attach



Adhesive dispensing

General tasks & applications

- Pick-&-place
- Precision adhesive dispensing
- Thermal or UV curing
- Chip-to-package assembly
- Fiber/FAC/SAC align-&-attach
- Active mirror align-&-attach
- Active VBG spectral tuning
- HPLD module assembly
- PICs, Silicon Photonics
- Hybrid integrated photonics



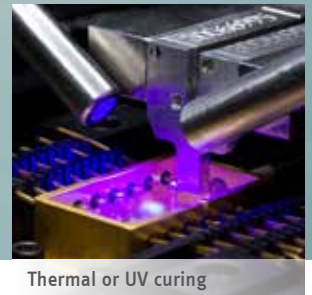
Silicon Photonics



Pick-&-place



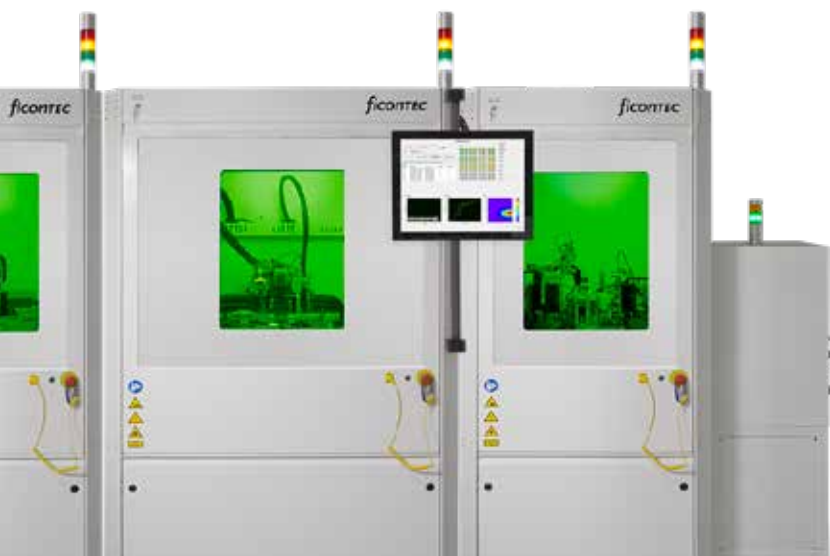
Fiber alignment



Thermal or UV curing

Flexible, modular & (re-)configurable

- State-of-the-art feed IN/OUT options
- FAB & HVM-ready – scalable and parallelizable
- Single systems slot into existing production lines
- Daisy-chain multiple systems for production segments
- Operate, monitor and sync parallel lines remotely
- Add and/or swap modules to re-configure & re-purpose



What we do

ficonTEC is a recognized market leader for automated assembly and testing systems for high-end opto-electronic components and photonic devices, including PICs. Considerable process capability and dedicated assembly technologies have been accumulated in serving requirements for telecom and datacom, high-power diode laser assembly, sensing from bio-med to automotive, micro-optical systems, and more.

A unique and modular approach to production equipment design means that each system delivered is the automated and optimized embodiment of a customer-defined process.

Contact us





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Core system specifications	 A400	 A800	 A1200	 A1600
Motion system	4-axis alignment	gantry system with minimum 6-axis high-precision alignment*	gantry system with minimum 6-axis high-precision alignment* or cantilever system w/o multi-axis system	cantilever system with minimum 6-axis high-precision alignment*
Working area (max) (w x b x h, mm)	100 x 200 x 200	100 x 300 x 50**	200 x 300 x 50**	200 x 100 x 50**
Handling options	single conveyor		single or dual conveyor	
Wafer capable	no		up to 6"	up to 12"
Machine vision	standard/dual positioning and observation camera options			
Feed options	suitable for Jedec or Auer boats, or for customer trays			
Software features	ergonomic, flexible and powerful process software – extended operator-less control – remote control server option			
Physical features	rugged steel-base production cell - access door lifts vertically without affecting footprint			
Minimum connections	400 VAC (or country specific), air/vacuum, 100 Mbit/s network			
Cleanroom compliance	ISO 6***			
Dimensions (w x b x h, mm)	400 x 1200 x 1600/2000	800 x 1200 x 1600/2000	1200 x 1200 x 1600/2000	1600 x 1200 x 1600/2000
Weight (typ., kg)	600	1300	1800	2500

*alternative multi-axis configurations optional **working area with 6-axis system ***others available on request

ASSEMBLYLINE systems are suitable for in-line applications in high-volume manufacturing, including multiple production lines operating in parallel and in sync, optionally via remote control. Custom systems and special purpose cells and robotic systems can be flexibly designed and incorporated to suit customer requirements.