

# FIBERLINE

## F300 / F1200



Fiber-optic production machines available as flexible, stand-alone table systems for R&D and process development, and as high-precision, modular assembly cells complete with production-optimized housing layout for high-volume manufacturing.



**NEW**  
Next-generation  
FIBERLINE fiber-optic production systems

## Fiber-optic component & device production

The FIBERLINE family of systems are designed for production of all fiber-optic and waveguide-based components and devices. They can be flexibly configured for all fiber attach tasks, including fiber & fiber-array connectorization, fiber align-&-attach to waveguides and even silicon photonics packaging. They uniquely combine fast-active optical alignment capability and modular attachment configurations with a tried and tested software control interface, all in an industry-proven design.

Just as other product families, FIBERLINE systems also utilize our AUTOALIGN multi-axis motion systems – high-end translational and rotational stages with multiple degrees-of-freedom (from 3 up to 12 or more). Combined with our state-of-the-art real-time motion controllers, they guarantee easy and accurate sub- $\mu\text{m}$  pivot-point positioning and alignment. FIBERLINE's modular and expandable concept is also customizable with a range of optional modules providing additional functionality, including testing or qualification (F1200 only).



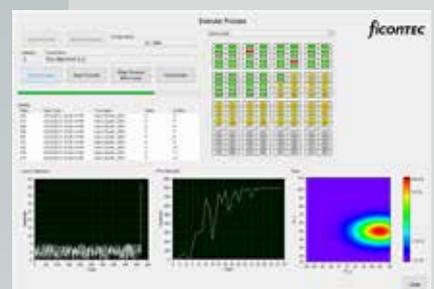
## Software Control

PROCESS CONTROL MASTER (PCM) is our user-friendly and process-oriented software control interface that is shipped with all turn-key stand-alone systems and multiple machine configurations. PCM features all machine vision, high-resolution positioning and system management routines required to reliably and repeatably drive align-&-attach process hardware. PCM also comes already fully enabled for automated electro-optical test and characterization tasks.

PCM also monitors and logs single system or production line performance, and can even sync parallel lines remotely. New for 2020 is an optional AI-derived machine learning layer to monitor, collate and analyze process data and operational-critical process steps, thus simplifying the path to establishing process metrics and to optimizing overall system performance.



High-level function interface



Freely configurable operator screen

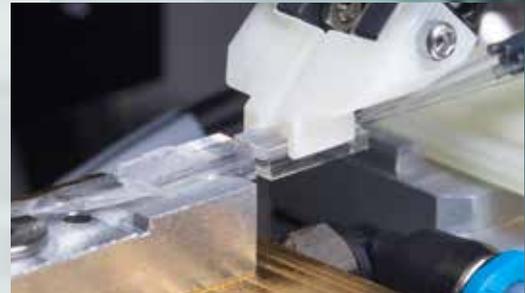
# FIBERLINE

## F300 / F1200



### Key features: F300

- ✓ Manual or semi-automated fiber-optic assembly
- ✓ Custom fiber pick-ups and chucks
- ✓ Closed-loop fast-active alignment
- ✓ UV epoxy dispensing, curing & shrinkage control
- ✓ All common fiber connectors types & laser wavelengths



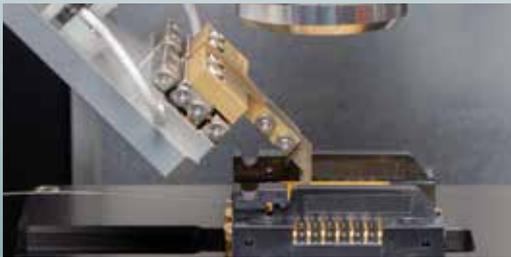
Custom gripper for fiber array alignment

### Key features F1200: (supplemental to F300)

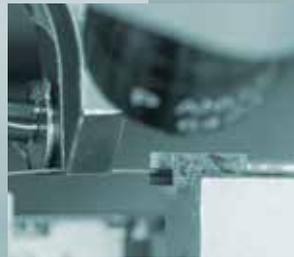
- ✓ Fully-automated assembly & handling
- ✓ Custom vacuum tools, thermal epoxy
- ✓ Pick-&-place, feed IN/OUT options
- ✓ Single/dual conveyor
- ✓ Chip & wafer-level handling and processing
- ✓ Optional beam test & characterization

### General tasks & applications

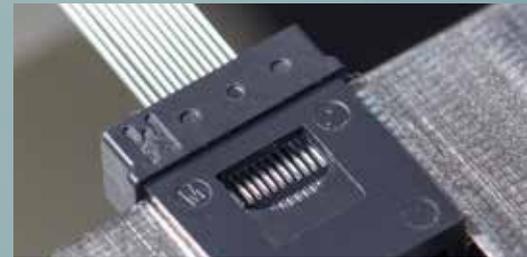
- Fiber-optic assembly/pigtailing/connectorization
- FTTX transceivers, HPLD modules (F1200)
- Planar waveguides (F1200)
- PICs, Silicon Photonics (F1200)
- Hybrid integrated photonics (F1200)



Fiber pigtailling of packages



Align-&-attach of pm-fiber



Multi-fiber connector insertion



### 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 single, 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, micro-optical systems, sensing from bio-med to automotive to IoT, 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

ficonTEC Service GmbH  
Achim, Germany

T +49 4202 51160-0  
info@ficontec.com

For ficonTEC subsidiaries  
and distributors around the globe:

[www.ficontec.com/locations](http://www.ficontec.com/locations)



Core system specifications	 F300	 F1200
Motion system	gantry system with minimum 3-axis high-precision alignment*	gantry system with minimum 6-axis high-precision alignment*
Handling options	none	single or dual conveyor
Wafer capable	no	up to 6"
Machine vision	standard/dual positioning and observation camera options	
Feed options	none	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	table system w/o enclosure	suitable for Jedec or Auer boats, or for customer trays
Minimum connections	400 VAC (or country specific), air/vacuum, 100 Mbit/s network	
Cleanroom compliance	ISO 6**	
Dimensions (w x b x h, mm)	1500 x 1000 x 1500/1800	1200 x 1200 x 1600/2000
Weight (typ., kg)	700	1800

\* alternative multi-axis configurations optional \*\* others available on request

FIBERLINE F1200 systems are suitable for applications in high-volume manufacturing (HVM). Custom systems and special purpose cells and robotic systems can be flexibly designed and incorporated to suit customer requirements. Automated fiber handling functionality is available in other product lines on request.