

**Flexsys™ 4000**  
**Ultra High-Precision**  
**Assembly System**



**An ultra high-accuracy automation platform to  
handle the most demanding assembly processes**

At ATS, we build high-precision process and assembly systems for advanced packaging, multi-chip modules and optoelectronics. ATS Flexsys™ scalable workcells accommodate multiple high-speed operations on a single platform to deliver higher production volumes and dramatically improved yields. With Flexsys™ you get the capability you need today, and the ability to scale up for tomorrow.

## Description

The ATS Flexsys™ 4000 Ultra High-Precision Assembly System provides an automation platform to handle your most demanding assembly requirements. Designed to work with a wide range of tooling, these stand-alone or integrated systems provide maximum performance and capability on a standard machine platform.

## Typical Applications

- In-package or chip-on-carrier assembly
- Active alignment/attach/test
- Die bonding
- Epoxy dispense
- Fiber pigtailling
- Inspection
- Test and measurement

## Specifications

Assembly Platform:	Linear motor/air bearing configuration with linear encoders Vibration-isolated granite base
Operating Envelope:	X: 300 mm, Y: 300 mm, Z: 50 mm Theta: ± 360 degrees
Accuracy:	Post-placement accuracy to less than 1 micron, 3 sigma including all process errors
Repeatability:	Bi-directional X, Y, Z: to 18 nm Theta: 20 arc sec to 0.5 arc sec (Application dependant)
Controls:	PC-based machine controller with Windows HMI
Instrumentation:	GPIB and analog interfaces to industry-standard instrumentation
Safety Compliance:	OSHA, CSA and CE
Clean Room Compliance:	Clean room compatible to Class 100

## Options

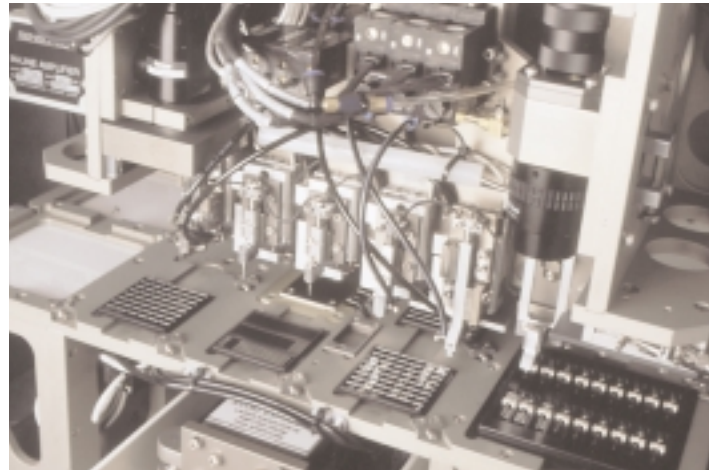
- Epoxy dispensing
- UV and thermal cure
- Force sensing
- Soldering
- Surface probing
- Vision inspection
- Material handling
  - standard ATS modules
  - magazine load/unload

## Features

- Vision-guided placement and alignment
- Automated material handling
- Assembly line integration
- Bar code tracking (1D and 2D)
- Data-driven software design for maximum flexibility
- Industry-standard replacement parts for ease of maintenance

## Typical Products

- Laser and diode emitters
- Transmitters, receivers and transceivers
- MUX and DEMUX components
- Switches
- Couplers
- Tunable devices
- Planar waveguides and arrays
- DWDM modules
- Multi-chip modules



Contact ATS directly for custom or product specific applications outside the scope of this document.



**Automation  
Tooling  
Systems**

ISO 9001 Registered QS 9000 - ISO 9002 Registered

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