

## Factory Automation Option for CLM-3D™ DualBeam™ System

### Enhance performance and productivity

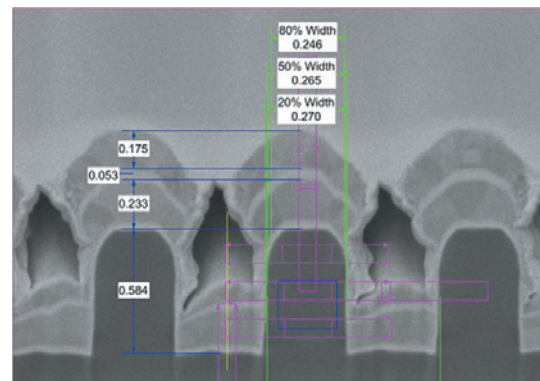
As device geometries continue to shrink, the need for immediate high-resolution analytical capabilities grows. Smaller geometries need to be examined. New processes and materials have to be characterized. The precision FIB milling, high-resolution imaging, and gas chemistries of FEI's CLM-3D deliver the power and flexibility for full three dimensional structural metrology and characterization of 130, 90, and 65 nm processes during ramp-up and production.

Combining FEI's high accuracy electron beam and the industry's leading ion beam technology on a single-chamber platform uniquely qualifies the CLM-3D to provide the high precision cross-sectional information needed by today's IC manufacturers. CLM-3D is an advanced 300 mm DualBeam™ system specifically designed to provide high-resolution SEM imaging, high-throughput FIB milling, and automation capabilities in a fully integrated compact package.

- *Integrates fully automated CLM-3D metrology to the factory host for maximum tool use with less operator time*
- *Supports SEMI Standards for factory automation and communication*
  - E5-1000
  - E30-1000
  - E37-0298
  - E39-1101
  - E84-0303
  - E87-0303
  - E90-0303
  - E40-0702
  - E94-1102

### Productivity Enhancing Option

The in-fab automated structural metrology of the CLM-3D is now complemented with a Factory Automation Software Option. This option allows integration of the FEI system with the factory host, ensuring maximum tool use with minimal operator intervention, and off-line functionality for job creation and data analysis. The result is a decrease in system operator time, allowing you to focus resources on what really matters: what parameters to change to improve process yield.



CLM-3D Factory Automation supports the following SEMI standards:

- **E5-1000**, SEMI Equipment Communications Standard 2 Message Content (SECS-II)
- **E30-1000**, Generic Model for Communications and Control of Manufacturing Equipment (GEM).
- **E37-0298**, High-Speed SECS Message Services (HSMS) Generic Services
- **E39-1101**, Object Services Standard: Concepts, Behavior, and Services
- **E84-0303**, Specification for Enhanced Carrier Handoff Parallel I/O Interface
- **E87-0303**, Specification for Carrier Management (CMS)
- **E90-0303**, Specification for Substrate Tracking.
- **E40-0702** Standard for Processing Management
- **E94-1102** Provisional Specification for Control Job Management

Speed your "time to answer" by performing metrology and structural integrity analysis on a single tool that delivers high resolution images and metrology while linked to your factory host. Factory Automation software was created using third-party software, Brooks iLink™.

**FEI Support/Service**

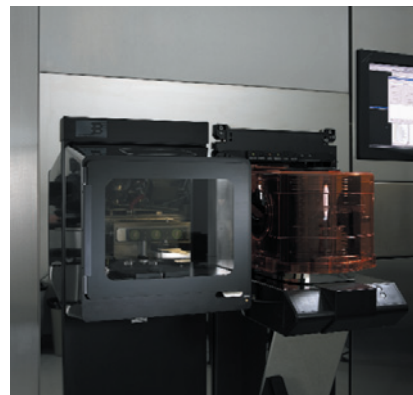
Customer service and support are a key part of FEI's value. Our customer support organization of more than 40 offices around the globe services our worldwide installed base. Support includes system installation, on-site repair, software upgrades, training, telephone support and post-sale applications development.



FEI customer support is never far away with 24/7 Nanotechnology Solution Centers and experienced service crews in more than 40 countries.



FEI's CLM-3D Factory Automation is built on standards established by SEMI, allowing for an integrated manufacturing and analysis process.



Factory Automation Software connects the CLM-3D to the rest of the factory through industry-proven Brooks Automation hardware.

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