Overview
The Nebula is Angstrom Engineering’s pinnacle of automation, engineering precision, and collaboration with you, our partner. These integrated vacuum systems are designed specifically to meet your process and research needs. The number and type of modules are chosen by you, and provide room for future expansion potential. Each module can be engineered to meet your technological and application requirements using proven components and sub-assemblies. Our goal is to deliver a robust engineered system backed by our world renowned client support.

Process Module Options
Substrate cleaning and preparation stations using plasma or ion beam sources
Several vacuum deposition modules are available for PVD, CVD and ALD
Substrate and mask storage cassettes can accommodate 25 or more as needed
Distribution modules using SCARA robots are sized to meet your needs
Glovebox environments can be integrated to various modules

Substrate Size/Throughput
Substrate sizes up to 200mm x 200mm can be easily accommodated and the modules can be designed for use with larger substrates if desired. Throughput depends on process duration and complexity. However, the AERES software platform optimizes layer to layer transitions to reduce overall process time.

AERES Integrated Software
Simple to use yet highly advanced integrated software platform
PC/PLC controlled recipes for single, batch, or automated processes
Advanced data logging and process tracking ensure consistent and repeatable processes
High resolution control provides impressive low rate stability and consistent doping ratios
Central control station manages each module and schedules the processes in each chamber
Each module can be pulled offline and run independent from the system
Complex recipes can be created and modified easily
Automatic PID control loop tuning significantly reduces process development time

From the time it was delivered, this laboratory system has performed nearly flawlessly, arguably extending our capabilities well beyond those currently attainable by any organic thin film laboratory in the world. I attribute the success of this entire system to the excellence of the engineering as well as the cooperative nature of the Angstrom team in taking our best designs and making them better during the system construction process.

Dr. Stephen Forrest
University of Michigan
Connectable vacuum modules:

- Sample and mask handling chambers
- Vacuum deposition modules
- Integrated robotic sample and mask handling

Service and Support: Our Commitment
An Angstrom system in your lab makes us partners; we become part of your team. We guarantee **same day** response to any service inquiry regarding parts, technical support, and software support.

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