

## PRESS RELEASE

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### **NexGen Wafer Systems Introduces SERENO: A Versatile, High-Throughput Wet Etch and Clean Solution with Integrated Metrology for 6", 8", and 12" Substrates**

*NexGen Wafer Systems is excited to announce the launch of SERENO, its latest multi-chamber platform designed for Wet Etch and Clean applications.*

*SERENO combines high performance with exceptional flexibility, offering integrated metrology for precise substrate and layer thickness control, as well as surface roughness control. Its onboard chemical supply system supports multiple process chemicals with integrated mixing, blending, and comprehensive analytics, ensuring maximum adaptability across a wide range of applications.*

*With a compact footprint of less than 12 m<sup>2</sup> and a throughput of up to 200 wafers per hour, SERENO is designed to deliver unmatched efficiency and versatility in wet chemical processes. Tailored for both FEOL and BEOL applications, SERENO addresses the semiconductor industry's increasing demands for higher performance, precision, and cost efficiency, positioning it as a future-proof solution for evolving manufacturing requirements.*

## Delivering High Performance in a Compact Design

The SERENO platform offers maximum flexibility regarding wafer-handling capabilities and process control. It supports various substrate types for 6", 8" and 12" wafers. Its versatile handling system supports wafer thicknesses ranging from ultra-thin wafers below 100µm to bonded wafers exceeding 2mm in total thickness. High-performance process chambers combined with innovative chemical dispensing and scanning control offer maximum freedom, leading to outstanding on-wafer performance.

**“With SERENO, we provide Wet Etch and Clean solutions that deliver high throughput in a compact footprint while maximising the flexibility and performance advantages of Single-Wafer Technology,”** said Christian Kleindienst, Chief Marketing Officer at NexGen Wafer Systems. **“Our SERENO platform addresses our customers’ demand for flexible, high-performance Single-Wafer solutions that reduce operational costs and present a highly attractive alternative to traditional batch tools.”**

## Key Features of the SERENO Platform

- **Throughput:** Up to 200 wafers per hour
- **Footprint:** ~12m<sup>2</sup>
- **Advanced Process Control:** Customizable wafer scanning and precise fluid dispensing enable optimal process performance across all dimensions.
- **Integrated Metrology:** Built-in thickness and roughness metrology provide real-time feedback, ensuring process uniformity and quality.
- **High-Performance Chambers:** Industry-leading liquid flow and exhaust performance ensure reliable cross-contamination-free processing.
- **Versatile Chemical Supply:** Onboard storage for up to three process chemicals with dual 90-litre tanks ensures uninterrupted processing.
- **Flexible Wafer Handling:** Supports 6", 8", and 12" wafers, including ultra-thin and fragile substrates, with bridge tool functionality for multiple wafer sizes.

## Applications for SERENO Include:

- **Surface Clean**
  - Particle removal
  - Polymer removal
  - Residual removal
  - Backside/Bevel cleaning
  - Incoming wafer cleaning
- **Film and Metal Etch**
  - Backside/Bevel film etch (Silicon Nitride | Silicon Dioxide | Polysilicon)
  - Metal Etch (Ti | Ni | Ag | Au | Al | W | Cu ...)
  - UBM (Ag | Ni | Ti ...)
- **Substrate Etch**
  - Thinning
  - Stress relief
  - Surface conditioning
  - Vias reveal
- **Supported Substrate Types**
  - Si | SiC | GaN | GaAs | Al<sub>2</sub>O<sub>3</sub> | ZnO

## Availability

The SERENO platform is now available for orders, with first deliveries starting in Q1 2025. Contact NexGen Wafer Systems at [sereno@nexgenws.com](mailto:sereno@nexgenws.com) for more information or to schedule a demonstration.

## About NexGen Wafer Systems

Headquartered in Singapore, NexGen Wafer Systems is a global supplier of wet etch and clean solutions for the semiconductor industry. With engineering and manufacturing facilities in Austria and an international team of over 100 professionals, NexGen supports its customers worldwide in all major semiconductor manufacturing regions.

Through its research and demonstration lab in Singapore, NexGen offers customers a versatile and effective means to showcase and develop wet etch and clean process solutions collaboratively. All within quick development cycles tailored to the industry's fast-paced R&D timelines.



With over 200 process chambers installed globally, NexGen is advancing steadily toward its vision of becoming an international leader in dedicated surface treatment applications.

Further information is available at [www.nexgen-wafer-systems.com/sereno](http://www.nexgen-wafer-systems.com/sereno)

A general press information about NexGen Wafer Systems can be found here

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