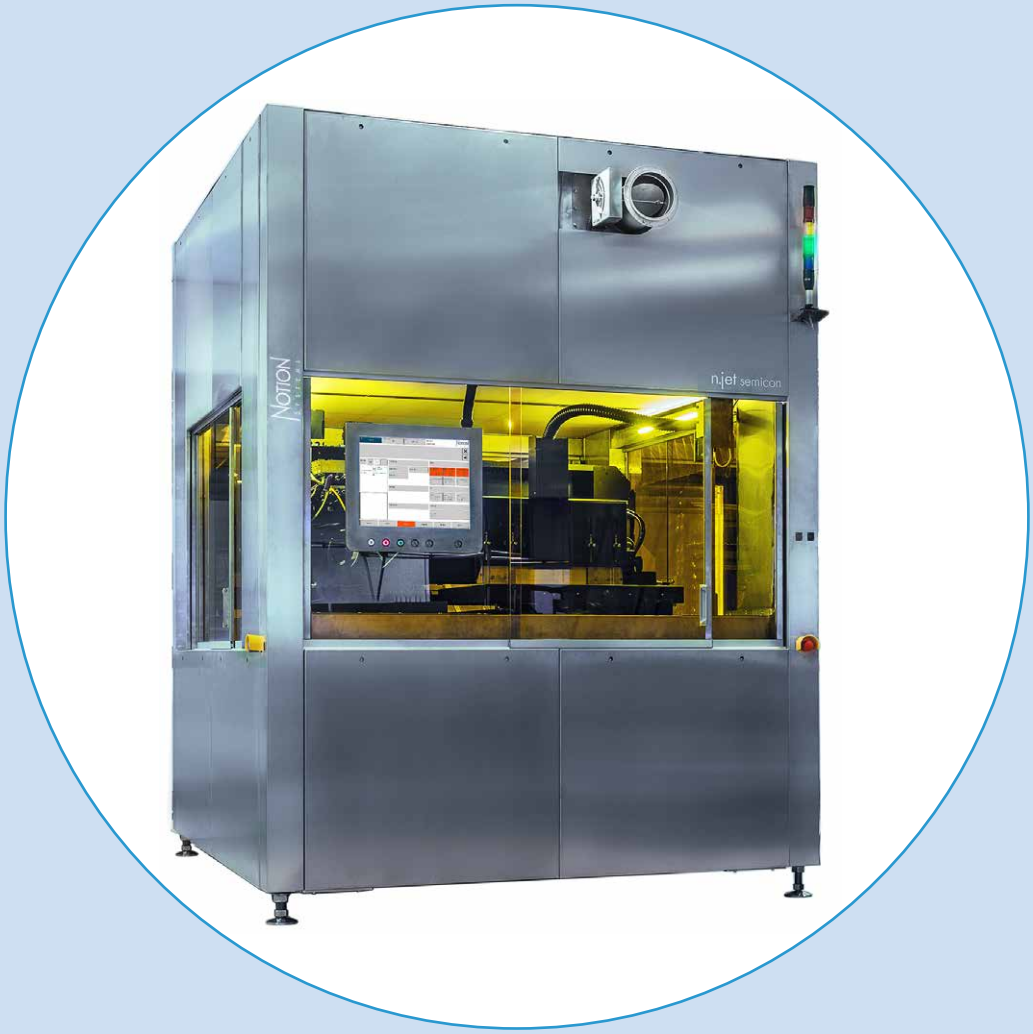
NOTION SYSTEMS

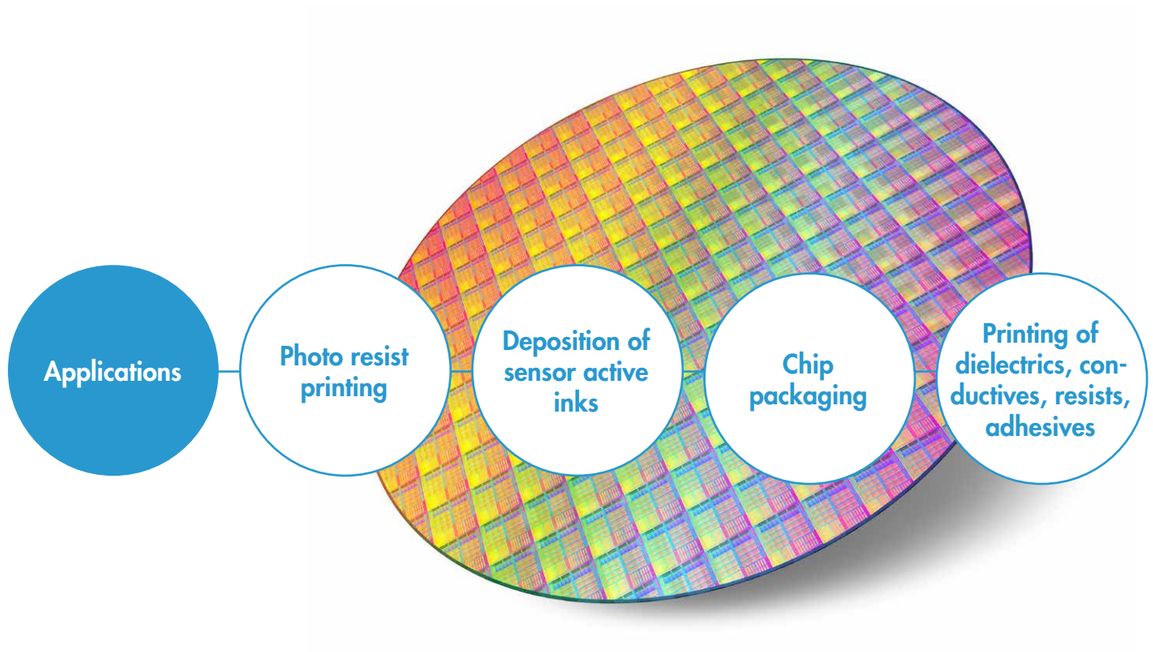
n.jet semicon

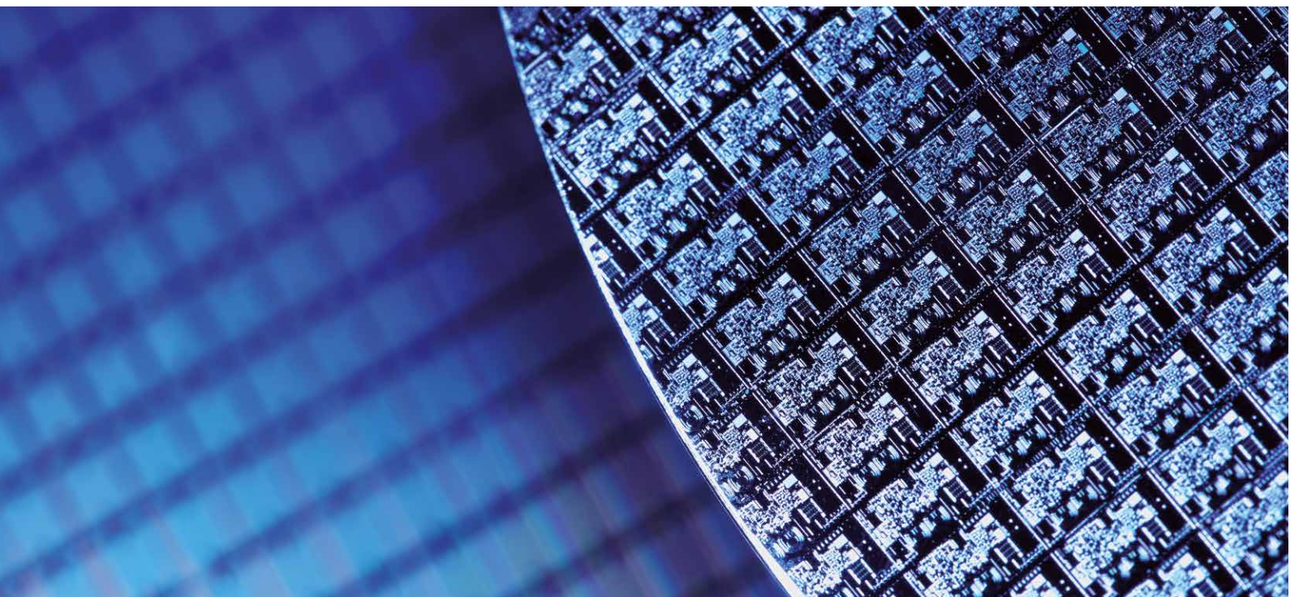


INKJET SOLUTIONS FOR THE SEMICONDUCTOR INDUSTRY

Semiconductor

The n.jet semicon series offers a wide range of processes for frontend, as well as backend processes in the semiconductor industry. The platform comes with integrated edge handling for any substrate type or wafer size, integration with the MES system (e.g., SECS-GEM), and state-of-the-art pre- and post-processing modules.
Our nozzle replacement strategies and our full process control improve yield and process stability. The system can be combined with high-precision dispensing units that further enlarge the window of processable materials within the same platform.

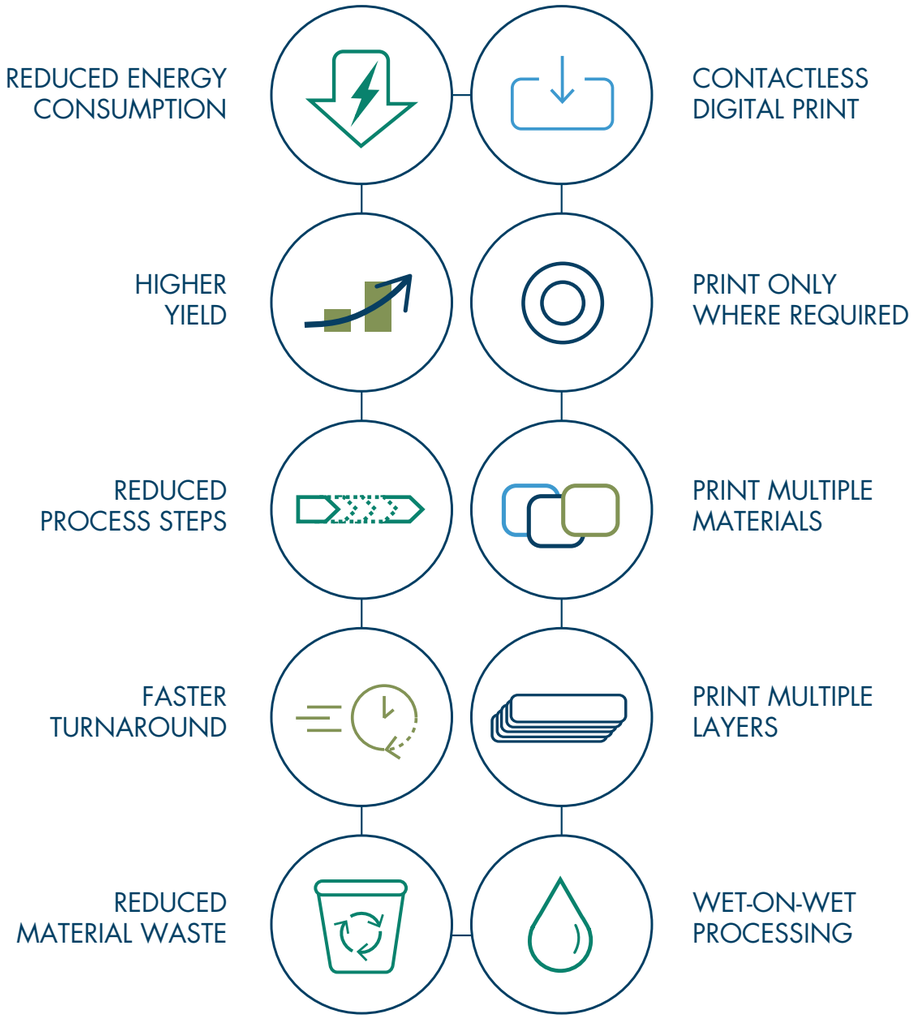




Advantages of Inkjet Printing

Inkjet is a non-contact, digital printing technology which creates fine structures of 30 microns and below. The fully digital non-contact printing enables wet-on-wet processing without the need for masks or screens.

Inkjet is used to replace established subtractive process sequences and reduces waste and energy consumption, which makes electronics production more economical and ecological.



Main features

PRODUCTION INKJET SYSTEM

- High precision inkjet printing
- Drop placement accuracy of better than 5 micron
- High uniformity
- Up to 8 different fluids in one print
- Supports printheads from all major manufacturers

Usability & Maintenance

The n.jet semicon platform features solutions for a large variety of applications. Our print strategies increase platform usability and process yield by minimizing the need for manual intervention or manual mechanical alignment of the printheads.
Our field proven advanced printhead maintenance system increases platform uptime. No direct contact to the printhead nozzle plate results in higher jetting stability and longer printhead lifetime. Our automated nozzle calibration and advanced nozzle replacement strategies provide you with full process control and reliable results.

Automation & Process Integration

The n.jet semicon platform comes with optional wafer handling for various substrate sizes and can be equipped with further pre- and post-processing stations to provide a fully integrated solution to your process requirements:

- Robot handling from / to cassettes incl. wafer mapping & prealignment
- Plasma cleaning, hotplates, UV curing, and more

Dimensions & Specifications

Substrate size:	200 / 300 mm
Precision:	Automatic nozzle calibration
Repeatability:	Better than 1 µm
Drop placement:	Better than 5 µm
Maintenance:	Preventive printhead maintenance

OPTIONS

- Dropwatch & Drop formation analysis
- Stage temperature control 0-60°C
- Rotary stage
- Dispense system
- 100 % pre and post inspection of target areas
- HEPA / laminar flow / glove box
- Hot & cool plates
- Barcode reader
- SECS / GEM interface

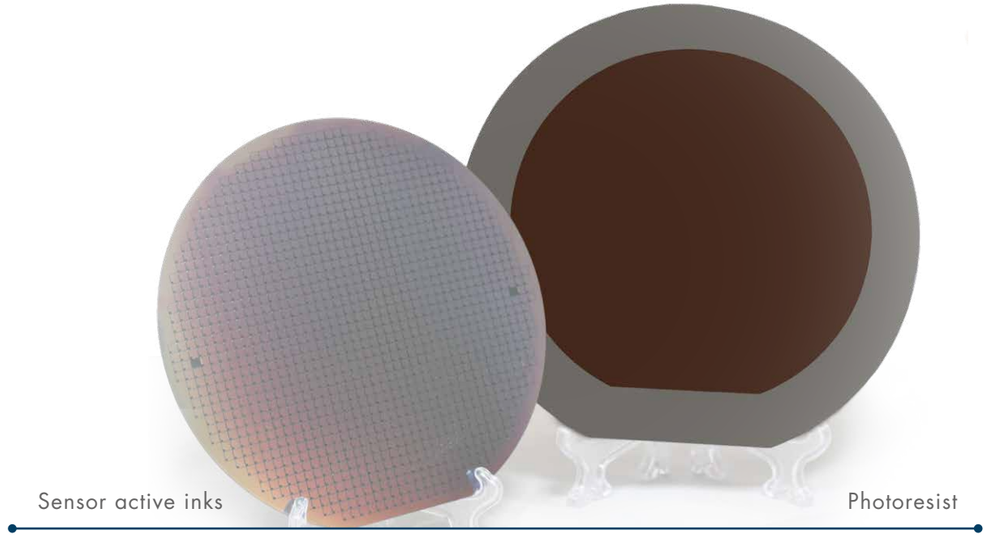
The Best of two Worlds

Notion Systems and Osiris International team up to provide end users in semicon industry with the best possible solution for digital, additive processes.

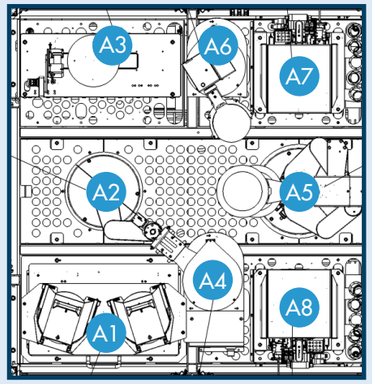
End users will profit from:

- State-of-the-art, field-proven handling and post-processing technology for semicon applications provided by the experts from Osiris International
- Modular, field-proven n.jet platforms, process technology and expertise in scale-up of functional inkjet processes provided by the experts from Notion Systems
- An integrated solution that combines the best of two worlds

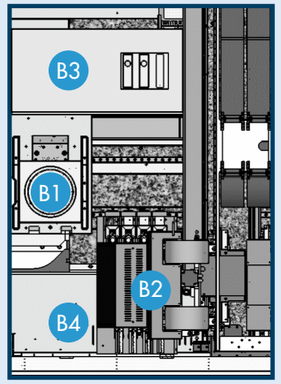
Application Example



Cluster System



A: Loading & post-processing



B: Inkjet

A1 - Wafer cassettes I/O
A2 - I/O robot (A1, A3, A4)
A3 - Pre-alignment & OCR
A4 - Wafer transfer buffer
A5 - Process robot
(A4, A6, A7, A8, B1)
A6 - Flipping unit
A7 - Post process tower I
(HP & UV stack)
A8 - Post process tower II
(HP & cool plates stack)

B1 - Inkjet print stage
B2 - Inkjet process unit
B3 - Maintenance area I
B4 - Maintenance area II

n.jet semicon & Varixx Series

Our automation partner
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