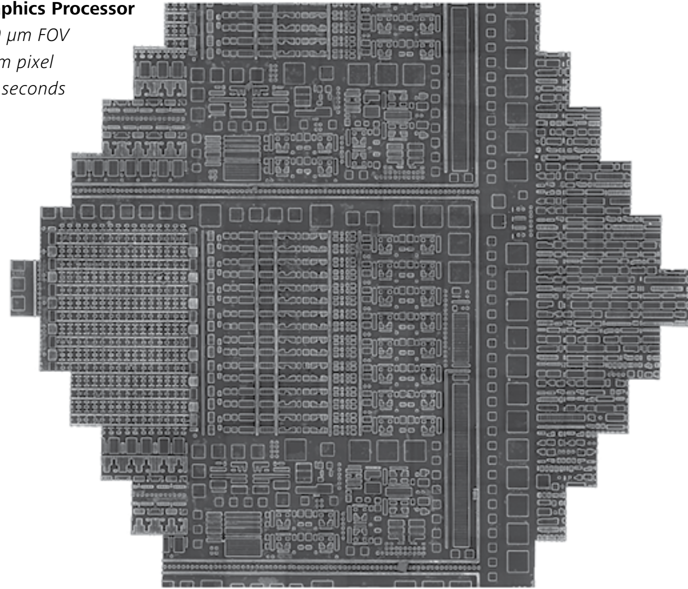
ZEISS MultiSEM

The World's Fastest Scanning Electron Microscope



Graphics Processor
200 µm FOV
5 nm pixel
1.4 seconds

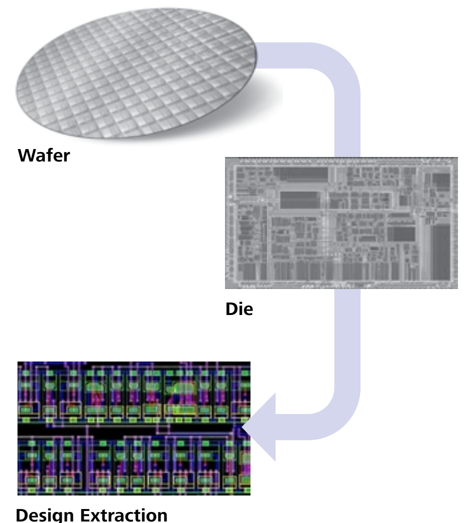
With MultiSEM you unleash the acquisition speed of up to 91 parallel electron beams for your big data collection at high throughput. MultiSEM enables imaging of entire samples with nanometer resolution, providing detailed analysis while retaining macroscopic context.

Highlights

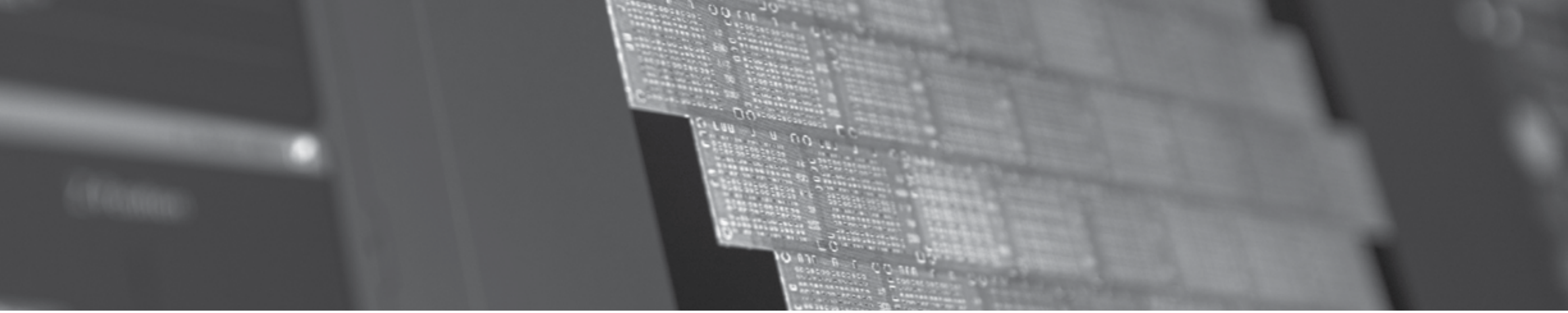
- Image an area of 1 cm² at nanometer resolution in less than 3 hours with 91 beam configuration
- Top net speed up to 2 terapixel/hour
- Continuous 24/7 operation
- Intuitive workflow setup with smart auto-tuning routines to minimize operator complexity

Applications

- Rapid Reverse Engineering to avoid threats through built-in malware
- Circuit extraction of modern micro-electronics to qualify trusted suppliers
- Speed up IC characterization for improved technical intelligence and benchmarking leading to faster time to market



Design validation of trusted suppliers using large area SEM imaging.



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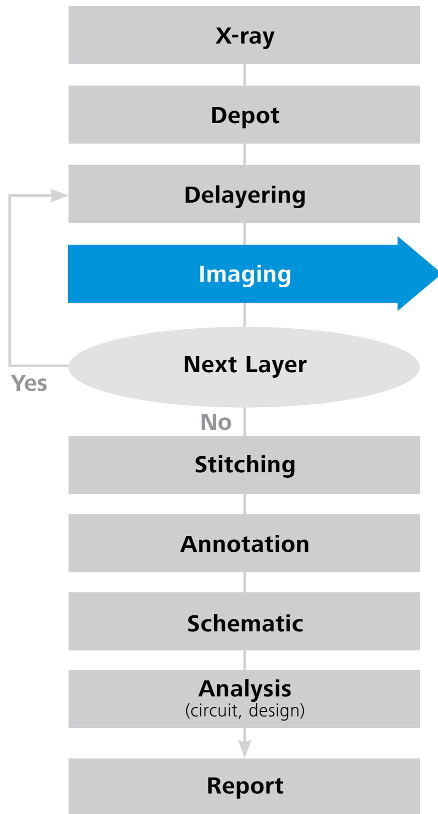
Solutions for Reverse Engineering



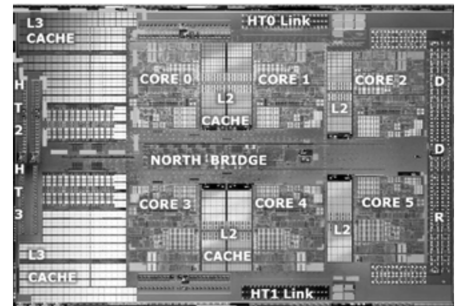
Reverse Engineering Imaging Problem

- Imaging / data collection becomes a bottleneck when many layers must be analyzed.
- Single beam tools are unable to provide the throughput required for fast image capture of large areas.
- >50% of the cost of large reverse engineering projects are spent on imaging and delayering.

ZEISS Solution

ZEISS MultiSEM technology is optimized for ***high throughput*** large area image capture at ***high resolution,*** providing customers with a reliable solution for their Reverse Engineering imaging challenges.

Accelerate Your Image Acquisition for Reverse Engineering



Pixel Size	3 nm	8 nm
Single Beam	>> 3 days	> 1 day
MultiSEM	3 hours	1.5 hours

1 cm^2 sample imaged in hours with MultiSEM compared to several days with single beam SEM.

Get to the Ground Truth Faster – ZEISS Portfolio of Tools for Reverse Engineering

Non-Destructive Analysis

X-ray Microscopes

High Throughput Large Area Imaging

Multi-beam SEM

3D Analysis

Ion Beam Microscopes

FIB-SEMs

www.zeiss.com/pcs-multisem

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