

make · explore · discover



# SEM modernization

A second life for your SEM -  
new electronics, software and controls.

 point  
electronic

your  
End of  
Support  
solution

## Extend the lifetime of your microscope – with new hardware and software.

Our modernization **adds the latest technology for image acquisition, controls and software** to your electron microscope.

You keep a fully **serviceable system** - 10+ years spare part guarantee for point electronic products.

Bespoke solution - we provide you with a modernization **customized to your specific needs.**

Maintain many of your **established/certified workflows** and **customized add-ons.**

We **simplify operations** through automation.

**We handle the deinstallation** of your old equipment and the on-site **installation** of the SEM modernization for you, in most cases directly in your lab.

Modernizations take around **3 days.**  
This keeps downtime to a minimum.

With our **included training** you will be fit for our applications within 1 day.



# We modernize your SEM

Increase performance and efficiency.



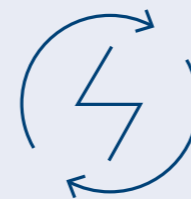
## State-of-the-art technology

- The most powerful and versatile image acquisition system available (DISS6)
- MS Windows 11 with network compatibility
- Simultaneous acquisition of multiple signals and detectors
- Fully integrated automation functions
- High-quality control panels for imaging and stage control, trackball or joystick
- User-friendly, manufacturer-independent control software - faster results from sample insertion to final image



## Reduce costs

- Extended lifetime
- Lower costs of ownership
- Reduced/no downtime
- 10+ years spare part support
- Maintain proven/certified workflows
- Keep customized add-ons, avoiding time and costs for reconfigurations
- Save lab space thanks to compact and integrated design
- Configure customized workflows
- Efficient service with online diagnostic tools



## Sustainable use of resources

- Reduce your company's environmental footprint by upgrading an existing and reliably working instrument instead of scrapping
- Up to 70% lower power consumption
- Shorter repair times & remote support
- Cost effective - save time by avoiding long lasting tenders and purchase processes



# Modernization instead of buying new

Modernizing an existing SEM offers several advantages.



## Costs

Extending the lifetime of an existing SEM through our modernization is more cost effective than the acquisition of a new microscope and all the add-ons you might need for your work. In addition new electronics reduce service costs.



## Service support

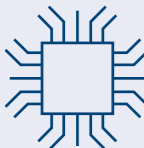
End of support notice from manufacturer due to obsolete electronic parts currently applies to many instruments. We guarantee full service support of your modernized system for 10+ years for all point electronic GmbH products. As the manufacturer of the modernization electronics, we are in full control of our own spare parts supply.



## Lead time

For a new SEM purchase, lead times can be up to 1 year. Applying for the respectively very high budgets also takes time and effort. The delivery time of our SEM modernization electronics is usually very fast\*, and we install it just within 2 - 3 days.

\* Depending on availability of the components.



## Technology and performance

Does your device require better resolution, faster image acquisition or to acquire simultaneously multiple signals? Is it not network compatible, or does it require a remote control option? These functions are included as standard in our SEM modernization.



## Workflow

New devices often mean redeveloping and retraining of existing workflows and add-ons. We keep the modernization as user-friendly as possible. By maintaining established/certified workflows you can keep your customized equipment.

# Your SEM is as unique as your imagination

We change everything that needs changing and retain the core of the column.

## • You keep

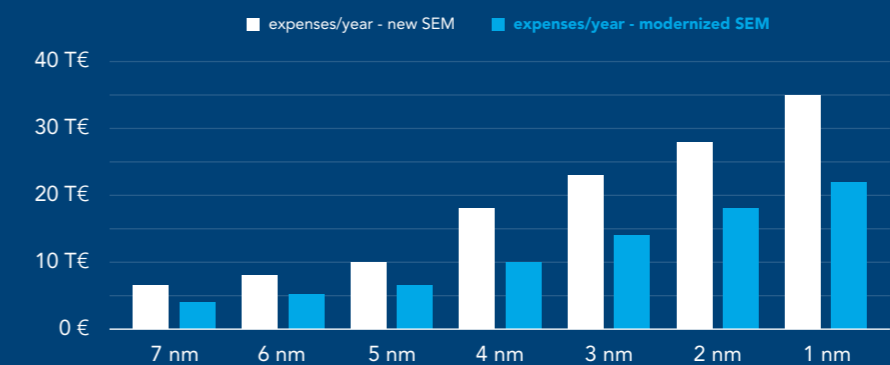
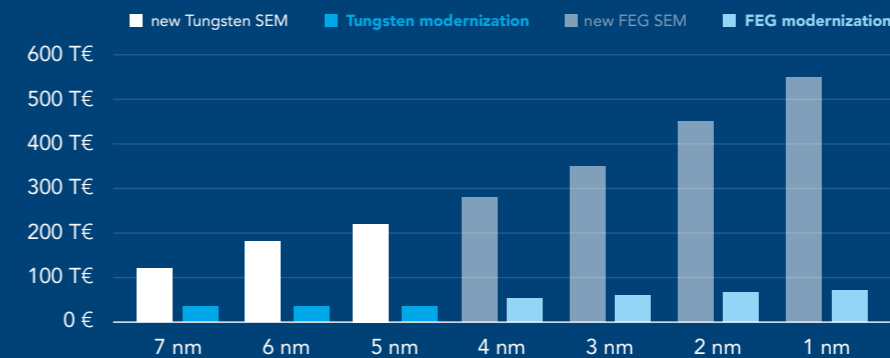
- Your column incl. HV-PSU and pumps
- Your add-ons, according to functionality and your requirements (such as EDX, EBSD, etc).
- Your established/certified workflows
- Your laboratory layout and ancillary equipment

## + We add

- State of the art electronics
- User friendly software with efficient workflows
- Improved performance
- Network compatibility
- Additional techniques
- Reduced costs
- Environmental friendliness

# Costs of ownership

Compared to a purchase of a new electron microscope, our SEM modernization significantly saves costs in the long and in the short term.



Purchase costs for a new SEM, compared with a modernization in relation to resolution capabilities\*

\*depending on model and configuration

Annual service costs of a new SEM, compared with a modernized SEM in relation to resolution capabilities\*

# From old into state-of-the-art

Every modernization we offer is a specifically tailored solution for our customer's needs and the continuous development of our products.



We modernize selected models of all microscope manufacturers:

- ZEISS / LEO / Cambrigde
- Philips / FEI / Thermo Fisher Scientific
- other models on request

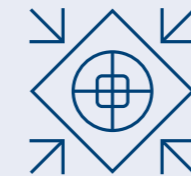
# We modernize your SEM

What's included.



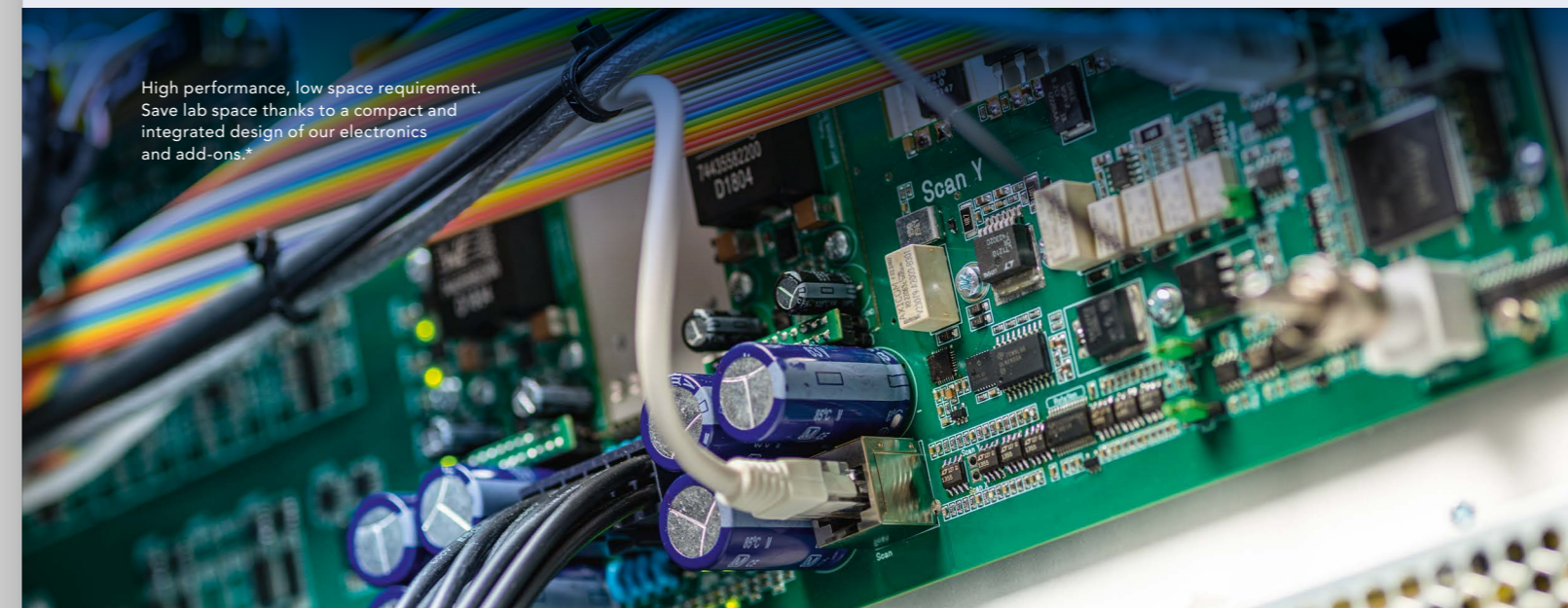
## Controls and acquisition modernization

- New SEM control electronics and software, based on latest Windows version
- Versatile and fast scanning system, based on DISS6 - simultaneous signal acquisition for up to 20 signals (SE, BSE, EDS, WDS, etc.), image resolution of up to 500 MPixels, scanning speed down to 10ns dwell time
- Automatic vacuum, gun, stage and detector controls
- New control panels for column, detector and stage control: SEM control, plus trackball or joystick
- Software for MicrosoftWindows 11, with full network compatibility
- Existing detectors and add-ons are supported down to Windows 7
- PC and display(s)



## The modernization unlocks access to techniques like

- Electrical failure analysis with EBIC and EBAC/RCI
- Atomic-number discrimination with BSE detectors
- Live and quantitative topography measurements with BSE
- Micro-analysis with EDS detectors and mapping



High performance, low space requirement. Save lab space thanks to a compact and integrated design of our electronics and add-ons.\*



## point electronic GmbH - an expert you can rely on.

We are **among the pioneers in the field of electron microscopy** and developed one of the world's first digital image acquisition systems. Today - 30 years later - its further developed version is one of the **best image acquisition systems on the market.**

We look back on a long tradition in the **development of highly specialized instruments and technologies for imaging and signal processing.** We are driven by the mission to improve the performance of electron microscopes and to enable our customers.

**Service is in our genes.** point electronic GmbH started as a service company for electron microscopes. The company evolved through the development of our own products.

Trust is very important to us. We are a 2nd generation **family business**, motivated from the beginning by the passion and engineering principles to **get the best out of an electron microscope.**

Our team of **engineers, software developers and production employees** contribute to that commitment.

Extensive modernization experience - **global customers** already benefit from the performance enhancement for their SEM.

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