

TESCAN Streamline SEM Sample Navigation with new ONCam

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Scanning Electron Microscopes or SEMs are highly sophisticated instruments that are used to characterize materials at the sub-micron levels. TESCAN's latest innovation, Optical Navigation and Correlation Camera (ONCam) continues their mission of increasing user-friendliness. ONCam uses a 14 MP Basler AG camera mounted directly to the chamber to provide a photo-realistic image of samples on the specimen stage at any time. In conjunction with TESCAN's industry-leading Wide Field optics, they take sample navigation to new level as the SEM SE and BSE contrast image can be directly correlated with ONCam photo. Using the quick "click and move" function allows you to confidently identify points of interest e.g. pencil marks and instantly navigate to your desired point of interest for more detailed investigation.

ONCam is equipped with four independent LED segments that use ONCam's advanced minimum intensity stacking algorithm to eliminate reflections in the optical navigation image and is fully integrated into TESCAN's Essence™ user interface software. The seamless correlated imaging capabilities allows direct overlay of the color optical and EM images with adjustable levels of transparency, resulting in a single comprehensive macro-image. Users can also automatically save both the 14MP color photo and the corresponding SEM micrographs for future reference. Furthermore, image acquisition routines can be sped up by selecting points of interest directly on the ONCam navigation image and exporting the coordinates to the optional Essence™ Image Snapper module, which then automatically acquires the images at the desired locations and settings.

While broadly applicable to all kinds of materials, geologicals and biologicals, the new system is ideally suited to use with UHR SEM columns that use short working distances as well as those who use Low Vacuum mode where TESCAN's Wide Field Mode imaging is limited. Here, ONCam extends the field of view to an expansive 165 x 125mm.

TESCAN's intuitive Essence user interface differentiates their systems from all others. It offers every user the flexibility to tailor the interface to their own personal requirements. As such, they can streamline their workflow for maximum efficiency. TESCAN Essence™ is if offered on TESCAN 4th generation SEMs and FIB-SEMs.

Petr Klímek, Product Manager at TESCAN said, "our new ONCam feature is yet another innovation that continues to improve the user experience associated with our microscopes. The reflection free navigation images generated by ONCam can be used for color-based navigation as well as for macro-correlative imaging making it a valuable addition for any system"

ONCam can now be specified on all compatible SEMs and FIB-SEMs.

About TESCAN

TESCAN is a Czech producer of electron microscopes. The company was established in 1991 by R&D employees and service engineers of TESLA Company with the aim to continue in traditional production of electron microscopes in Brno. TESCAN presented its first instrument PROXIMA in 1996. This and other model ranges booked TESCAN its place among renowned world

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producers. Long-term expansion and establishment of subsidiaries worldwide culminated in 2013 with establishment of a holding with a French company ORSAY PHYSICS. This gave rise to TESCAN ORSAY HOLDING, which still keeps its headquarters, production and R&D in Brno-Kohoutovice. Every TESCAN microscope is produced in Brno, even though roughly 95 % of the production travel to customers worldwide. The biggest customers include universities, research centers and industrial and production companies in various sectors. More than 500 TESCAN ORSAY HOLDING employees produce nearly 300 microscopes every year, which constitutes the annual turnover of approx. CZK 2 billion.

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