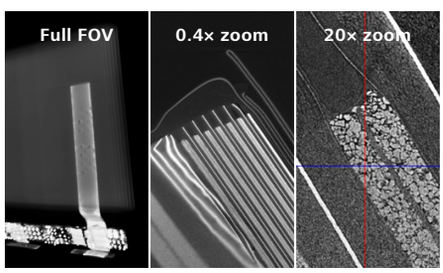
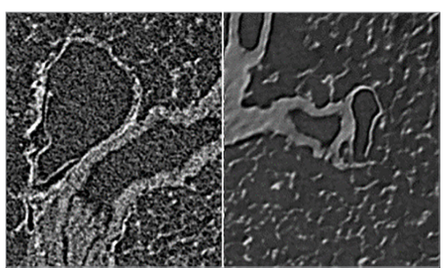
Extend the Limits of Your Exploration with Advanced 3D X-ray Microscopy

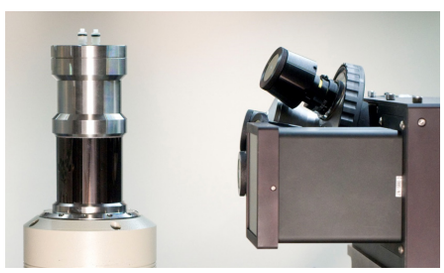
ZEISS VersaXRM 615



Smart watch battery: ZEISS VersaXRM 615 scans the intact battery to identify areas of interest and zoom-in for high resolution imaging.



Stained mouse lung. ZEISS Versa XRM combined with DeepRecon Pro reduces scan time, increases image quality. Standard FDK (L); artifact reduction with DeepRecon Pro (R).



Sample stage with tension/compression stage (L), and detector assembly (R). Even with source to sample distances of several centimeters to accommodate in situ *sample holders, voxel sizes below one micron can be achieved.*

See Beyond Traditional MicroCT

ZEISS VersaXRM® 615 goes beyond the limits of projection-based micro- and nano-computed tomography (CT) systems. Whereas traditional CT systems rely on single-stage geometric magnification, VersaXRM 615 features a combination of synchrotron-caliber two-stage magnification optics that maximize absorption and phase contrast, and a high flux X-ray source to produce faster submicron-scale data across a wide range of intact sample sizes and types. Resolution at a Distance (RaaD) architecture enables high resolution 3D imaging of larger, denser objects including intact components and devices. The optional flat panel extension (FPX) uses FAST Mode to achieve rapid scans of very large samples (up to 25 kg), providing 3D navigation to interior regions of interest.

Achieve New Degrees of Freedom

Boost the performance of your VersaXRM 615 with its advanced capabilities. Provide all of your users with greater success using the award-winning ZEN navx guidance and control system. Software-based enhancements combined with unique XRM technology increase your flexibility. Gain deeper insights with improved image quality and faster throughput using included DeepRecon Pro. Extend experimental capabilities with the rest of the ZEISS Advanced Reconstruction Toolbox (ART). Accelerate post-processing and image segmentation tasks using advanced machine learning with ZEISS ZEN Intellesis. Automate image analysis with ZEISS arivis Pro. Use 3D World ZEISS edition from Dragonfly for advanced 3D visualization and analysis.

Protect Your Investment

ZEISS VersaXRM 615 is built on the established ZEISS Versa® 3D X-ray microscope platform that is upgradeable, expandable, and reliable, offering a variety of capabilities and paving the way for future enhancements to protect your investment. Non-destructively characterize the 3D microstructure of materials *in situ* and observe the evolution of structures over time within a variety of environmental chambers and high-precision *in situ* load rigs. Upgrade to the 40× objective for the highest resolution in this mid-tier offering. Add the ZEISS Autoloader to set and run a series of samples while you focus on other activities. And, VersaXRM 615 seamlessly integrates with other ZEISS micro-scopes to solve your multiscale correlative challenges, from light to electron microscopy.

ZEISS

Seeing beyond

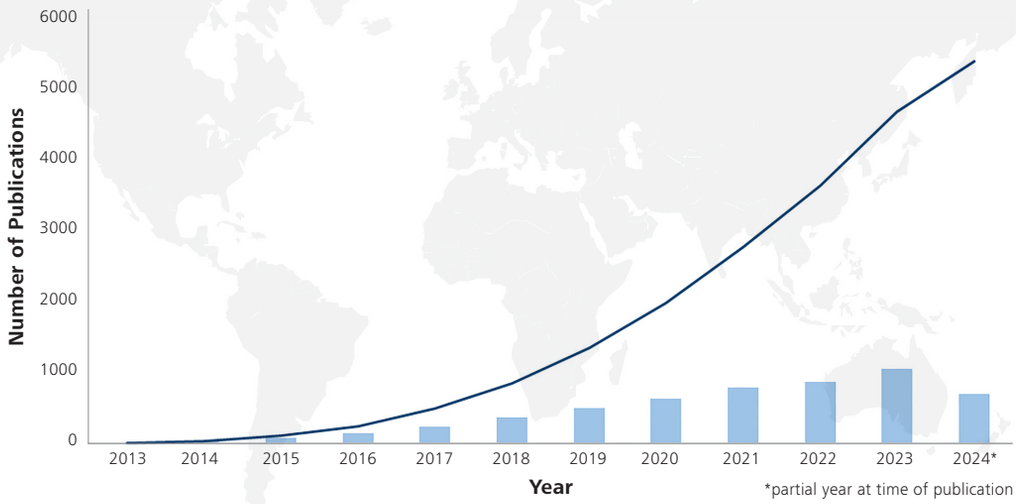
Versa: The World's Most Proven X-ray Microscope

42+
Countries publishing Versa XRM papers

3
On average, new ZEISS Versa XRM publications *every day*

6000
Versa XRM publications *and counting…*

400+
Unique institutions listed as authors or co-authors



Imaging	ZEISS VersaXRM 730	ZEISS VersaXRM 615	ZEISS Xradia 515 Versa
Spatial Resolution[a]	450 nm	500 nm	500 nm
Resolution Performance[b] (ZEISS Resolution Target at 160 kV/LE6, equivalent to 1.3 mm Al and 40x-P objective)	500 nm		
Resolution at a Distance (RaaD)[c] (50 mm working distance)		1.0 µm	1.0 µm
Resolution Performance at a Distance (ZEISS Resolution Target at 140 kV/LE4, equivalent to 0.6 mm Al)	700 nm @ 50 mm 750 nm @ 100 mm		
Minimum Achievable Voxel[d] (Voxel size at sample at maximum magnification)	40 nm	40 nm	40 nm
X-ray Source			
Architecture	Sealed transmission, fast activation	Sealed transmission, fast activation	Sealed transmission, fast activation
Voltage Range	30 – 160 kV	30 – 160 kV	30 – 160 kV
Maximum Output	25 W	25 W	10 W
Detector System			
ZEISS X-ray microscopes feature an innovative detector turret with multiple objectives at different magnifications. Each objective features optimized scintillators that deliver the highest absorption contrast details.			
Standard Objectives	0.4×, 4×, 20×	0.4×, 4×, 20×	0.4×, 4×, 20×
Optional Objectives	40×-P, Flat Panel Extension (FPX)	40×, Flat Panel Extension (FPX)	40×, Flat Panel Extension (FPX)
Stages			
Sample stage load capacity, 25 kg; travel (x-50 mm, y-100mm, z-50 mm)			
Features			
Control System	ZEN navx	ZEN navx	Scout-and-Scan
Scout-and-Zoom	Volume Scout in ZEN navx	Volume Scout in ZEN navx	Manual or with 3D World ZEISS edition
Flat Panel Extension (FPX)	Optional FPX: FAST or STEP mode	Optional FPX: FAST or STEP mode	Optional FPX: STEP Mode only
Wide Field Mode	4×		
Vertical Stitch	■	■	■
XRM Python API	■	■	■
ZEISS SmartShield	SmartShield, SmartShield Lite	SmartShield, SmartShield Lite	SmartShield
Source Filters	Automated Filter Changer (AFC) 24-filter capacity, 12 standard filters included	Single manual filter holder, 12 standard filters included	
High Aspect Ratio Tomography (HART)	■		
Dual Scan Contrast Visualizer (DSCoVer)	■		
ZEISS LabDCT for Diffraction Contrast Tomography	Optional		
GPU CUDA-based Reconstruction	Dual	Dual	Dual
Secondary High Performance Workstation	■	■	Optional 1 year or perpetual license
ZEISS Autoloader	Optional	Optional	Optional
ZEISS Versa *In Situ* Interface Kit	Optional	Optional	Optional
ZEISS DeepRecon Pro	Included with 2-year license	Included with 2-year license	Optional
ZEISS DeepScout	Optional	Optional	Optional
ZEISS PhaseEvolve	Optional	Optional	Optional
ZEISS MARS	Optional	Optional	Optional
ZEISS OptiRecon	Optional	Optional	Optional
ZEN AI Toolkit with Intellesis	Optional	Optional	Optional
3D World ZEISS edition from Dragonfly	Optional	Optional	Optional

[a] Spatial resolution measured with ZEISS XRM 2D resolution target, normal field mode, optional 40×-P (730) or 40x (615, 515).
[b] Resolution performance measured with ZEISS XRM 2D resolution target, normal field mode, optional 40×-P objective
[c] RaaD working distance is defined as clearance around axis of rotation (sample radius). Resolution is measured with ZEISS 2D resolution target.
[d] Voxel is a geometric term that contributes to but does not determine resolution and is provided here only for comparison. ZEISS specifies resolution via spatial resolution for Versa XRM, the true overall measurement of instrument resolution.

Carl Zeiss Microscopy GmbH
07745 Jena, Germany
microscopy@zeiss.com
www.zeiss.com/VersaXRM615

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