



3D X-ray microscope

Zeiss Xradia Versa 520

State-of-the-art X-ray microscope, capable of generating manipulable, three-dimensional renderings of objects in extraordinary detail.

Features and benefits

- Submicron X-ray imaging capability
- First-of-its-kind compositional contrast system, with a true spatial resolution of $0.7\mu\text{m}$ and a minimum voxel size of 70nm
- High-specification XRM features a unique two-stage process based on synchrotron-calibre optics
- Industry-best resolution and contrast
- High-aspect-ratio tomography (HART) mode for flat samples
- Time-dependent (4D)/in-situ tension/compression studies
- Dual-energy contrast optimiser allows imaging of samples that contain a range of materials with similar radiographic contrast

Some applications

- Applications across a number of industry sectors, including oil and gas, aerospace, medical and electronics
- Used to characterise materials, observe fractures and their mechanics and perform in-situ, 4D tensile compression studies
- In electronics it can be used for failure analysis, package construction analysis and manufacturing process optimisation
- Characterisation of additive manufacturing powder feedstock

Technical specification

- Spatial resolution $<700\text{nm}$
- Minimum achievable voxel $<70\text{nm}$
- Two-stage magnification
- Non-destructive interior tomography
- Wide field mode and vertical stitching
- High-accuracy 160kV transmission μ -focus X-ray source

