

Talos L120C TEM

Proven performance, ready for the future

The Talos L120C TEM provides proven, optimal imaging performance on a platform designed for modular versatility, maximum stability, and operational ease.

Discover the next generation 120 kV imaging platform. Key features of the Thermo Scientific™ Talos™ L120C TEM include modular design and improved optical stability, yielding unmatched ease of use, productivity, operational comfort, and uptime. Talos L120C TEM is an ideal solution for entry level cryo-studies, simple point and click imaging, and a highly efficient instrument for tomography and single particle analysis sample screening with standalone options for EDS and STEM.

In line with the Talos F200 TEM and Titan™ platforms, Talos L120C TEM offers enhancements in automation, vacuum, and optical stability. This is important for experiments in 2D imaging, 3D tomography—at room temperature and cryo-conditions—and adds a key screening element in the single particle analysis workflow.

Versatile detectors

The Talos L120C TEM is an intuitive S/TEM system, which includes the Thermo Scientific designed CETA 16MP camera, and is available with the new digital search-and-view SmartCam™ camera. This allows users to remotely operate the microscope from within the microscope room or from an adjacent room.

Advanced automation

The Talos L120C TEM features easy-to-use software, operating on Windows® 7, which allows for switching between TEM and STEM mode quickly and offers a high level of automation and complete digital control over multiple microscope components including the electron gun, optical elements, vacuum system, and stage. Additionally, the user interface allows for smart presets to save multiple operational conditions across many different applications.

Key benefits

More stability, robust system enclosure, constant power lenses, and remote operation allow consistent use

Automation, multiple auto-functions (autogun, autoalignment) improve repeatability and reproducibility of results

High-quality imaging, 4k × 4k Ceta CMOS camera provides a large field-of-view and live digital zooming with high sensitivity and high speed

Quick sample exchange, robust vacuum system provides a contamination-free environment and fast recovery after airlock

Correlate data, software allows for automated and unattended large area acquisition at multiple scales

Cryo-imaging, observe cryo-specimen with minimal ice growth and automate single particle analysis imaging with EPU software.



Figure 1. Room temp tomogram of a 200 nm section of human macrophages (5 nm gold beads internalized into endosomes, plasma membrane stained with electron dense ruthenium red)

MAPS on TEM

The modular MAPS software platform allows for auto-mated and unattended large area acquisition at multiple scales and provides a single software solution for image and data transfer between multiple imaging platforms such as TEM, SEM, SDB, and light microscopes. Users can quickly and easily correlate data from multiple imaging platforms—ready for input into the optional Amira® software for advanced visualization and analysis.

Ready for the future

With potential to address multiple applications, the Talos L120C TEM is a powerful entry level solution for imaging and tomography, and can be configured as a basic Cryo-TEM imaging platform. Whether your needs are in cryo- or room temperature, or you require optimal 2D imaging or 3D imaging and multi-modality imaging experiments, the Talos L120C TEM is the ideal platform. It is fully upgradeable and can expand as your research needs grow.



Key Specifications

TEM Line Resolution	0.204 nm
TEM Point Resolution	< 0.37 nm
TEM Magnification Range	25 – 650 kx
TEM Magnification Range with Camera	35 – 910 kx
Alpha Tilt Angle (with standard holders)	-90° to +90°
STEM HAADF Resolution with LaB6 (nm)	≤ 1.0
STEM Magnification Range	200 – 2.2 Mx

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