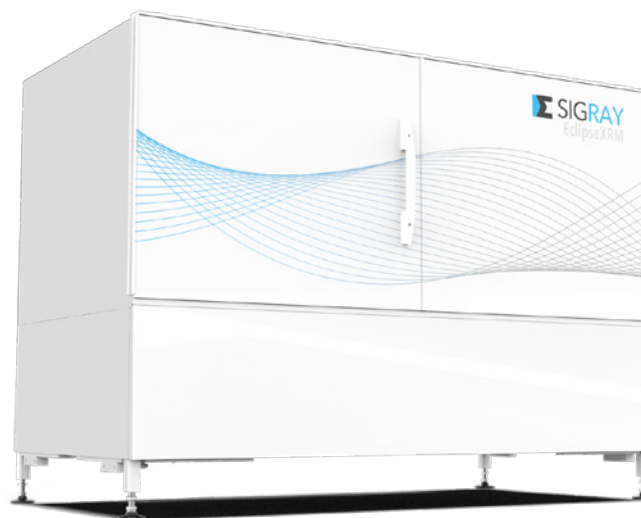


EclipseXRM-900 Product Specifications



TECHNICAL SPECIFICATIONS

System Performance Specifications

Spatial Resolution (JIMA Target)	0.3 μm
Spatial Resolution (at 50 mm working distance)	0.7 μm
Minimum Achievable Voxel	<50 nm

X-Ray Source

	Nanofocus	Multi-Spectral (MSS)
Availability	Standard	Optional
Source Type	Open-Tube Transmission	Sealed-Tube Reflection
Voltage Range Stable X-Ray Spot +/- 1 μm	40 - 160 kVp	10 - 50 kVp (Target-Dependent)
Maximum Power	16 W	50 W (Target-Dependent)

X-Ray Filters

X-Ray Filters	Motorized filter wheel
X-Ray Filters	Low & High Energy Filter Sets Standard, additional filter sets available by request

Motion Control: Positioners

Sample Stage Load Capacity	10 kg (air bearing) 25 kg (mechanical)
Sample Stage Travel (X/Y/Z)	100 x 40 x 100 mm (air bearing) 50 x 100 x 50 mm (mechanical)
Sample Stage Travel (Rotation)	360 deg
Source Travel (Upstream/Downstream)	>280 mm
Detector Travel (Upstream/Downstream)	>800 mm



EclipseXRM 900

Product specification

X-Ray Detectors

	HyperCapture-Pro	UltraVision-HDX
Availability	Standard	Standard, with options
Spatial Resolution	0.3 μm	0.3 μm
Max 3D Field of View	120 mm	21 mm (100 keV) 42 mm (150 keV)
Max 3D FOV (offset)	180 mm	32 mm (100 keV) 63 mm (150 keV)

Expanded Capabilities

Offset Tomography	Standard
Helical Tomography / Vertical Stitching	Standard
Python API	Standard (Open Source Library)
In Situ Kit Compatibility	Standard
Flat Panel Detector	Standard
Interior Cameras	2, Standard
Sample Handling Robot	Optional
Multi-Spectral (Dual) X-Ray Sources	Optional
In Situ Kits	Optional: Compression, tension, heating, cooling. Others upon request.
Data Analysis Software	Optional: <ul style="list-style-type: none"> • ORS Dragonfly • ThermoFisher Avizo • VG Studio

Safety and Electromagnetic Compatibility (EMC)

Safety and EMC Standards/ Directives	CE Mark
Radiation Safety	<1 μSv / hr

UltraVision-HDX Detector

	Standard	Optional
Availability	Standard	Optional
Energy Range (keV)	10-100	10-150
Sensor Size (Pixels)	5k x 3k	5k x 3k
Sensor Size (mm)	22 x 13	43 x 25
Pixel Size	4.3 μm	8.5 μm
Bit Depth	12 bits	12 bits

HyperCapture-Pro Detector

Sensor Size (Pixels)	3k x 2k
Sensor Size (mm)	145 x 114
Pixel Size	50 μm
Speed	9 fps
Bit Depth	14 bits

3D Reconstruction Software

GigaRecon Package w/ GPU Acceleration	Standard
GigaView 3D Viewer + Basic Measurement Package	Standard
Iterative Reconstruction Add-On	Standard
Outlier Removal and Radiograph Optimization Toolkit	Standard
AI-Enhanced Tomography Artifact Suppression Toolkit	Standard
Batch Reconstruction Add-On	Optional
Propagation Phase Retrieval Add-On	Optional
Python API for 3D Reconstruction Automation	Optional
Typical Reconstruction Time (1k x 1k x 1k)	<<1 min



EclipseXRM 900

Product specification

System Control

Instrument Software	
Instrument Control & Data Acquisition	XRM Companion™
Reconstruction	GigaRecon™
3D Viewer	GigaView™
Computer Workstation (Windows)	
Operating System	Windows 11 (Windows 10 Pro downgrade available upon request)
Central Processing Unit (CPU)	16-Core AMD Threadripper Pro
Graphics Processing Unit (GPU)	NVIDIA GeForce 4090 (additional cards available upon request)
Storage Capacity (HDD/SSD)	OS: 1 TB M.2 SSD Hard Drive: 4 TB SSD Swap Space: 2 TB M.2 SSD (RAID0)
Memory (RAM)	256 GB DDR5 (Standard), up to 1 TB (Optional)
File sharing network speed	2 x 10 GbE
Computer Workstation (Linux)	
Operating System	Rocky Linux 8.7
Central Processing Unit (CPU)	16-Core Intel Core i9
Graphics Processing Unit (GPU)	Onboard Video
Storage Capacity (HDD/SSD)	OS: 500 GB M.2 SSD Storage: 4TB SSD
Memory (RAM)	32 GB DDR5
File sharing network speed	2 x 10 GbE
Peripherals & Accessories	
Display Monitor	32" Widescreen 4K UltraHD Display
Keyboard	Standard
Mouse	Standard

Sample Handling Robot (Optional)

Station Positions	14
Maximum Sample Dimensions (diameter)	50 mm
Maximum Sample Dimensions (height)	No Limit (See: Sample Stage Travel)
Maximum Sample Weight	3 kg

In Situ Environment Cells (Optional)

Stage Type	Tensile/Compressive Tensile/Compressive + Heat Tensile/Compressive + Heat/Cool
Maximum Load	Up to 0.1/0.2/0.5/5 kN
Load Rate	0.03-2 mm/min
Load Accuracy	1% of full range scale
Maximum Extension	10 mm