

## Technical specifications and configurations

	Nanome x neo 180	Microme x neo 180	Microme x neo 160
X-ray detector	Option 1: Waygate Technologies high dynamic 200 µm pixel resolution detector DXR250RT Option 2: Waygate Technologies large size 100 µm pixel resolution detector DXR S100 Pro		Option 1: Waygate Technologies Superior 85 µm pixel resolution detector DXR S85 Option 2: Superior 75 µm pixel resolution CMOS detector
Geometric magnification	DXR250RT: max. 1,970x; DXR S100 Pro: max. 2,185x		max. 1,970x
Total magnification 27" 2K monitor	DXR250RT: max. 36,800x; DXR S100 Pro: max. 40,700x		DXR S85: max. 84,800x; CMOS: max. 96,000x
Detail detectability	up to 0.2 µm		up to 0.5 µm
X-ray tube type	Low maintenance open nanofocus tube with unlimited lifetime, transmission type, 170° cone angle, collimated		Low maintenance open microfocus tube with unlimited lifetime, transmission type, 170° cone angle, collimated
Max. tube voltage/power on target	180 kV / 20 W	180 kV / 20 W	160 kV / 20 W
Filament	Diamond/window for up to 3 times faster data acquisition at the same high image quality level		
Filament	Tungsten hairpin, pre-adjusted in plug-in cartridges for fast and easy exchange		
Manipulator	high-precision vibration-free synchronized 5-axes manipulation		
Max. inspection area	460 mm x 360 mm (18" x 14"), 610 mm x 510 mm (24" x 20") without rotation table		
Max. sample size / weight	680 mm x 635 mm (27" x 25") / 10 kg (22 lbs.)		
ovhm – oblique view rotation	continuously adjustable view angle up to 70°, rotation 0° – 360°		
Control	Joystick or mouse control (manual mode) and CNC (automatic mode)		
Manipulation aids	Sample navigation map based on camera or X-ray overview image, click'n-move-to function, click'n-zoom-to function, automatic isocentric manipulator movement		
Positioning aid	laser crosshair		laser crosshair optional
Anti-Collision System	may be deactivated for maximum magnification (tube touching the sample)		
System dimensions (D x H x W)	2,160 mm x 1,958 mm x 1,590 mm (85" x 77" x 62.6"), (without control console) 2,772 mm x 1,958 mm x 1,770 mm (109" x 77" x 69.7"), (with control console)		
Min. transportation width:	1,770 mm (69.7") (with control console)		
Max. weight	appr. 3,250 kg / 7165 lbs		
Radiation safety	The radiation safety cabinet is a full protective installation without type approval according to the German StrSchG / StrSchV and the US Performance Standard 21 CFR, Subchapter J. For operation, other official licenses may be necessary. Exposure rate < 1 µSv/h emission limit, measured at 10 cm distance from accessible surfaces.		
Dose Reduction	Dose manager – combined with Shadow target inside the X-ray tube, the low-dose bundle enables real-time dose monitoring and up to 60% dose reduction for radiation protection of sensitive inspection samples. Dose manager is also available without Shadow target		
Image processing software	Phoenix X act: comprehensive CAD based X-ray inspection software comprising image enhancement functions, measuring functions and fast and easy automated CAD based programming for automatic inspection BGA module (standard): intuitive automatic view based BGA solder-joint evaluation incl. automatic wetting analysis VC module (standard): intuitive automatic view based voiding calculation software package incl. capability of multiple die attach voiding evaluation		
Software Configuration (Option)	X act BGA check strategy: automated CAD based analysis of BGA solder joints X act PTH check strategy: automated CAD based analysis of PTH solder joints QFP module: automated QFP solder joint evaluation QFN module: automated inspection of QFN / MLF solder joints PTH module: automated pin-through-hole solder joint evaluation C4 module: view based evaluation of round solder joints with background structure, such as C4 bumps ML module: view based registration of multilayer printed circuit boards Quality review: visual interface for rework and failure indication FLASH!™: Waygate's exclusive image optimization technology		
Hardware Configuration (Option)	Tilt / rotate unit: tilt ± 45° and rotation n x 360° for samples up to 2 kg Manual bar code reader: for product identification		
PlanarCT (Option)	PlanarCT module: Non destructive 2D slice and 3D volume board evaluation incl. 3D viewer software		
Computed Tomography (Option)	Volume acquisition / reconstruction software: phoenix datos x Upgrade package for combined 2D / 3D (computed tomography) operation CT-unit: precision rotation axis Max. geom. magnification: 100 x (CT) Max. voxel resolution: down to 2 µm, resolution depending on the sample size. The nanoCT* function of the Nanome x allows a higher image sharpness.		

For more detailed information or to request a demo, please visit our website or contact us.