FEI Helios NanoLab 600 Focused Ion Beam (FIB Dual beam)

Vacuum system:
EDWARDS XDS10 Scroll pump
Sample stage: 5-Axes motorized X-Y-Z-rotate-tilt stage
Step size: 100 nm (Minimum)
High vacuum: 10^-10 mbar

Travel:
X, Y-Axis: 150 mm
Z-Axis: 10 mm
Tilt range: -5° to +60°

Repeatability:
1 µm at 0°
2 µ at 52°

Electron optics:
Magnetic immersion lens
Ultra-high brightness emitter
Source: SCHOTTKY Field emitter
Accelerating voltage: 350 V to 30 kV (Continuously adjustable)
Beam current: 1 pA - 22 nA

Resolution:
0.9 nm at 15 kV
1.4 nm at 1 kV

Ion optics:
Sidewinder Field emission focused ion beam optics
Liquid Gallium ion emitter
Accelerating voltage: 0.5 kV to 30 kV (Continuously adjustable)
Beam current: 1.5 pA - 20 nA
Imaging resolution: 5 nm at 30 kV
Milling resolution: 10 nn on Cr thin film

Scanner:
High-resolution digital scanning engine
Resolution: 512x442, 1024x884, 2048x1768, 4096x3536 pixels
Minimum dwell time: 25 ns/pixel
Electronic scan rotation by 360°

Patterning system:
Maximum resolution: 64k x 64k
Minimum dwell: 25 ns/pixel
Maximum dwell: 25 ms/pixel
Multiple pattern shapes
Complex milling pattern through bitmap import

Detectors:
In-lens SE and BSE True Lens Detector (TLD)
Everhart-Thornely SE Detector (ETD)
14-Segements solid state STEM II detector
Chamber viewing IR CCD camera

Controller:
Microscope controller
LCD Monitor, 19"
Screen resolution: 1280x1024
Optical mouse

Chamber door mounted interface for manipulators
Broad beam plasma source ion column (Focus 250 µm)
Manuals included
Does not include manipulator.