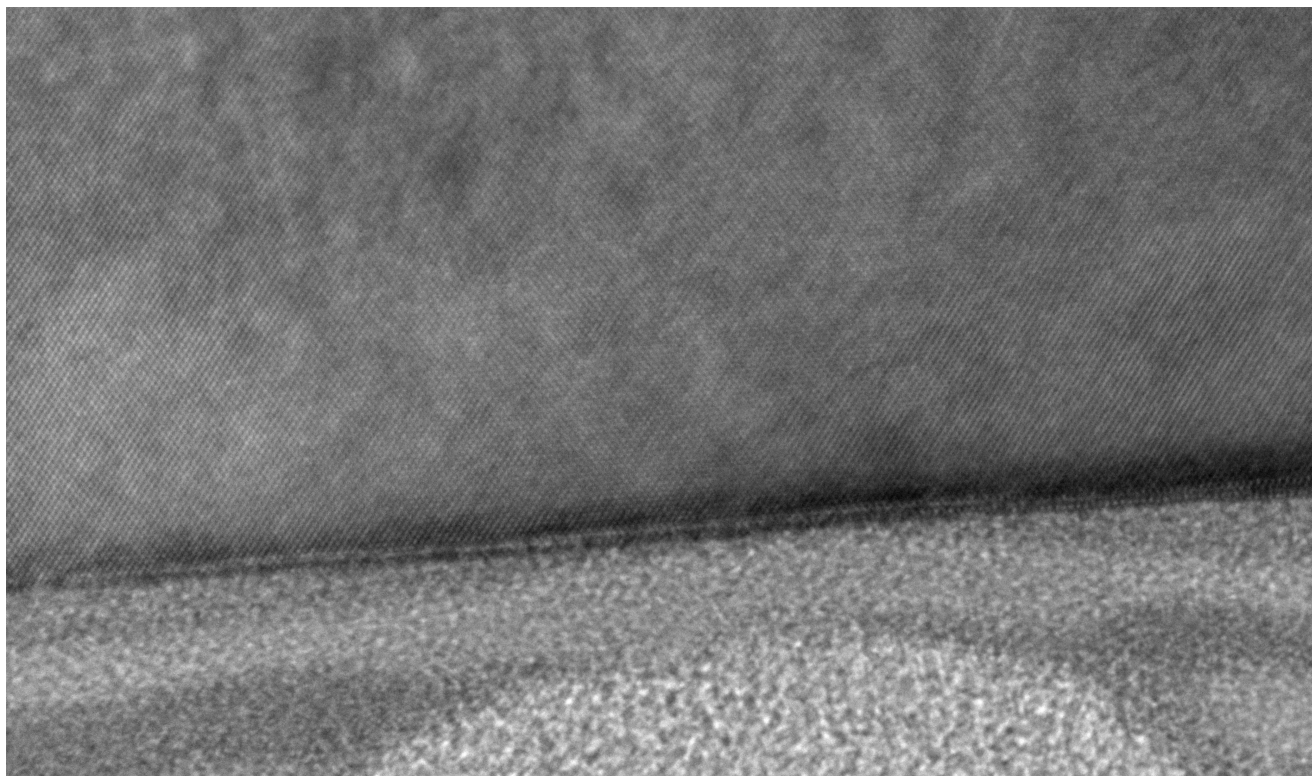# NanoSprint15B: High Sensitivity sCMOS TEM Camera

Introducing the NanoSprint15B:

The NanoSprint15B is AMT's latest product featuring an entirely new sensor that achieves the high sensitivity required for materials and life-sciences. Its fine-pixel, low-noise sCMOS sensor offers a large 15 megapixel sampling region with a high speed 30fps readout.

AMT coupled the sensor's generous field-of-view and ultra-fine sampling with AMT's high performance optics to create a system that is ideal for a wide range of applications. Users can enjoy both its excellent contrast plus the ability to zoom for images that contain both context and detail.

Silicon Lattice AJM May10.tif

Cal: 0.000014 µm/pix
08:34 2022-05-10

Camera: NANOSPRT15, Exposure: 800 (ms) x 2 drift frames, Gain: 1, Bin: 1
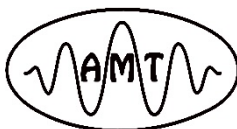**Gamma: 1.00, No Sharpening, Normal Contrast**

5 nm
HV=200kV
Direct Mag: 500000 x
AMT Camera System

NanoSprint 15B Specifications	
Sensor Size [pixels]	5056 × 2960
Phosphor Pixel Size [μm]	8.5 x 8.5
Active Pickup Region [mm]	43 x 25
Digitization	16 bit
Mounting Position	On-Axis
HT Range [kV]	20–200
Optical Coupling	Custom high performance lens
Lens Magnification	0.5
Lens NA $_{image}$	0.22
Lens MTF at Nyquist [%]	>50
Framerate for Display Image [fps]	30
Cooling	20C water
Micro Lenses	Yes
Shutter	Rolling
Exposure Time [ms]	1 - 10,000
Power	100-240VAC
Digital Interface	PCIe
Vacuum Compatibility	$<10^{-7}$ torr
Vacuum Seals	Fixed o-ring
Environment	Electronics and cooling outside of vacuum
X-ray shielding limit	Up to 200kV
Certifications	UL, CE , RoHS
Computer OS	Windows 10 Professional 64 bit

Specifications are subject to change with notification*

NanoSprint15B Rev2