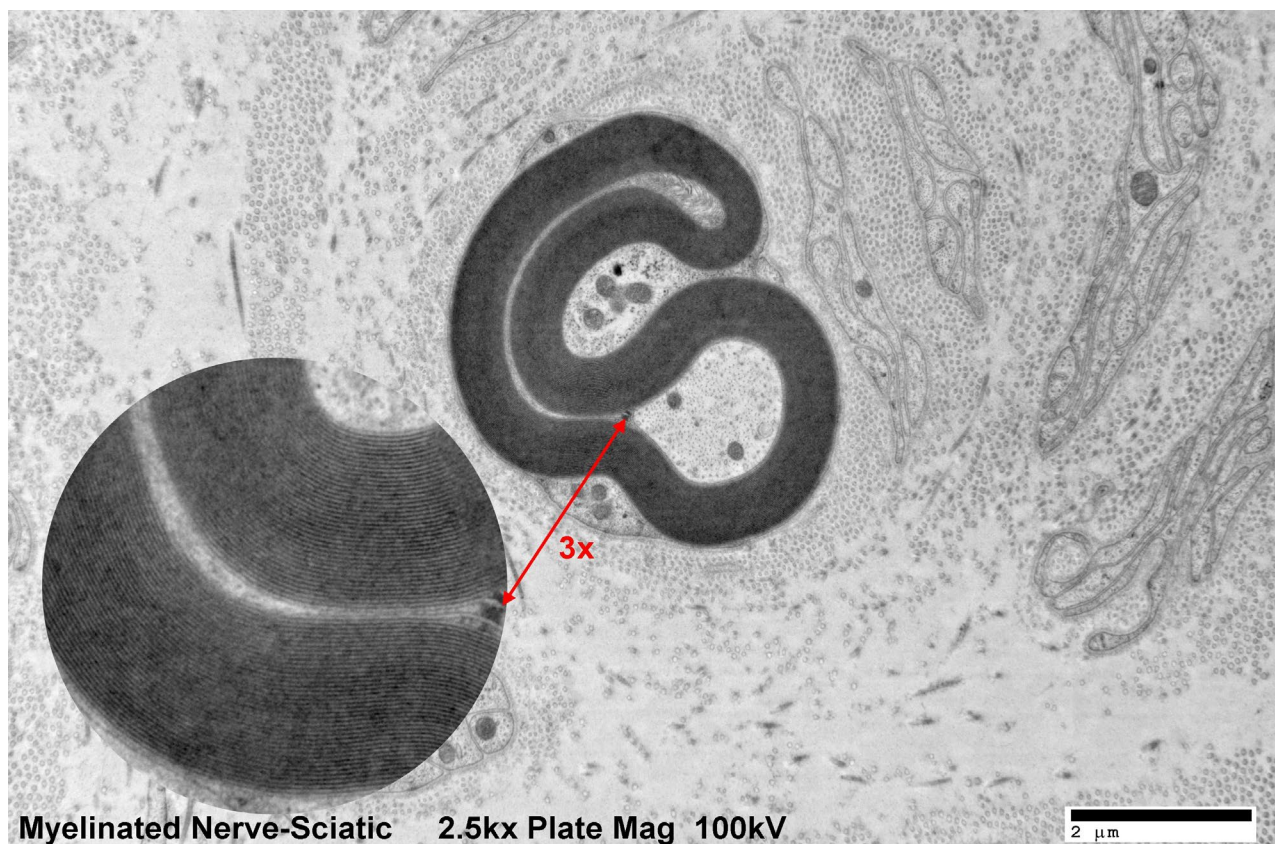# NanoSprint12: 12 Megapixel CMOS TEM Camera

NanoSprint12 System Overview:

The NanoSprint12 product includes an entirely new CMOS sensor that achieves high sensitivity and promotes high speed TEM imaging. This sensor offers a large 12Mpix sampling region while maintaining 55 frames per second [fps] readout.

With its generous field-of-view and 12 Mpix format, the NanoSprint12 is ideal for a wide range of applications. The high 55 fps frame rate allows users to output AVI files at full resolution. This system also comes with real time drift correction as a standard feature. The drift correction is able to work at full resolution and with live frame rates making it very easy to image beam sensitive samples.

Myelinated Nerve-Sciatic   2.5kx Plate Mag 100kV

3x

2 µm

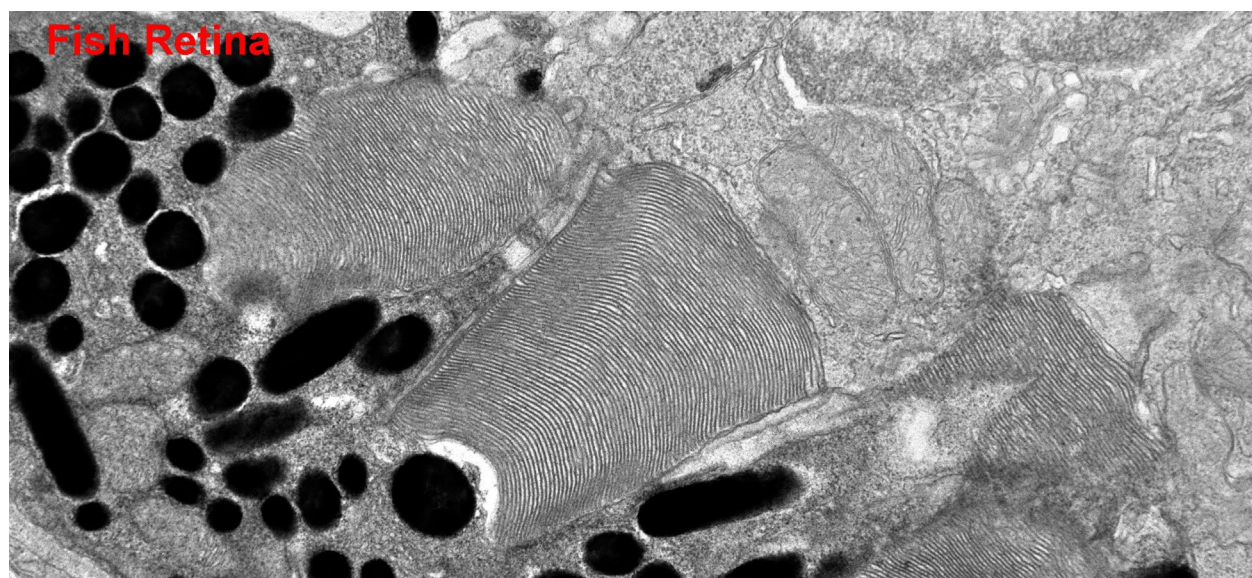**Advanced Microscopy Techniques** 242 West Cummings Park, Woburn, MA 01801
Tel: (978)774-5550 Fax: (978)739-4313
Email: info@amtimaging.com   URL: http://www.amtimaging.com

NanoSprint 12 Specifications	
Sensor Size [pixels]	4096 × 3008
Phosphor Pixel Size [µm]	6.8 × 6.8
Active Pickup Region [mm]	28 x 21
Digitization	$\geq$ 16 bits with frame accumulation
Mounting Position	Side Mount "35mm Port" & 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 [%]	40
Framerate for Display Image [fps]	55 binned
Cooling	Air
Micro Lenses	Yes
Shutter	Global
Exposure Time [ms]	0.1 - 10,000
Power	100-240VAC
Digital Interface	USB 3.0
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

Fish Retina