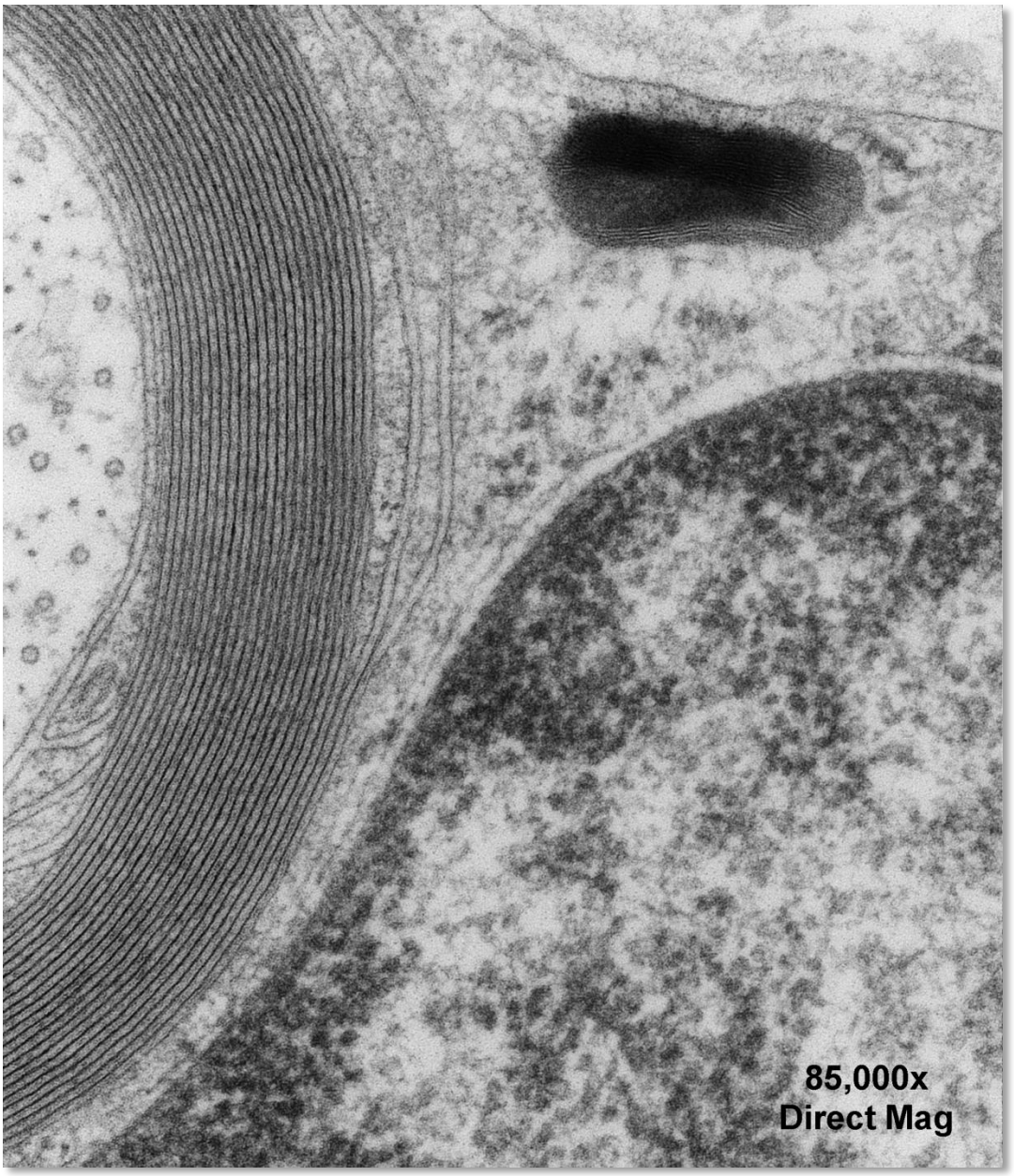
XR50

High Definition Camera for TEM

- *Wide Angle*
- *5 Megapixel Scientific CCD*
- *High Speed Readout*
- *Anti-Blooming Sensor*
- *High Performance Lens*



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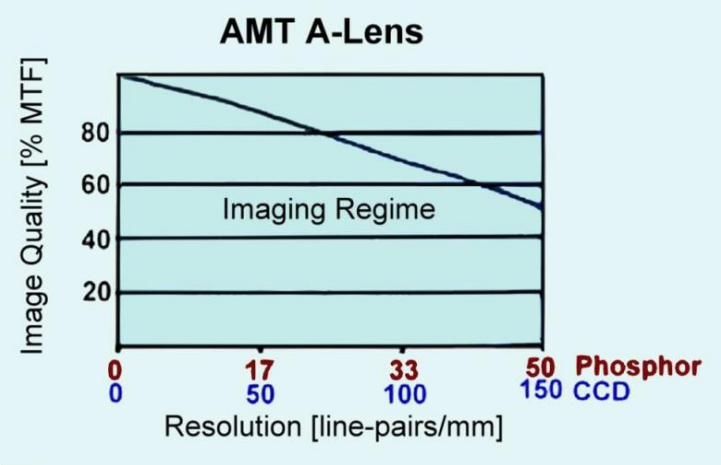
XR50S-A Side-Mount
Retracting side-mount camera mounted on 35 mm port. This is a wide-angle configuration with ~100% photographic field-of-view imaging.

XR50M-A Mid-Mount
This is a multi-purpose configuration with ~30% the field-of-view of photographic plates.

Pixels: 11 μm square pixels at phosphor with 4 to 5 megapixels visible depending on the particular TEM.

Phosphor Characteristics: 23x28 mm phosphor optimized for working electron beam energy.

Optics: Finite conjugate AMT "A -Lens" which combines extraordinary speed with high resolution and <1% distortion across the field. This lens maintains a >40% MTF @ 150 line- pairs/mm across the entire image to combine unmatched sharpness with extremely high sensitivity at a numerical aperture of 0.18 @image



Sensor: Scientific grade, progressive scan CCD sensor (SONY series) with anti-blooming sensor architecture. CCD has 2452 x 2054 x 3.45 μm pixels with 8.4x7 mm active area.

Shutter: Electronic Shutter with no beam blanking or mechanical shutter required with exposures adjustable from 10ms to 10sec. Overlapped shutter mode is used to maintain fast readout at longer exposures.

Digital Interface and Electronics: High speed GigE digital camera interface for both data transfer and control. All electrical components are outside the TEM vacuum for reliability and maintenance.

Data Readout and Dynamic Range: Maximum 60 MHz single port readout of full and sub-area. Data acquired with a 12 bit ADC output and 16 bit integration possible.

Viewing Rates: Maximum viewing speeds at full field: @1x1 binning, 8 fps, @2x2 binning, 16 fps, @4x4 binning, 30 fps.

Vacuum: All electrical components are outside the TEM vacuum for reliability and maintenance. The vacuum seals contain no sliding O-rings or other components subject to catastrophic failure.

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