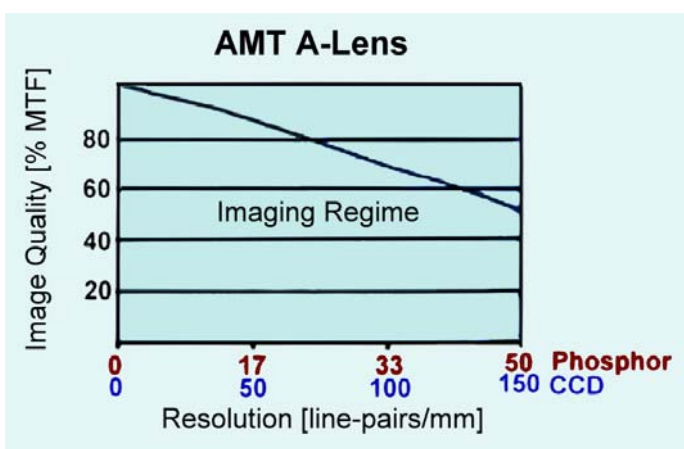
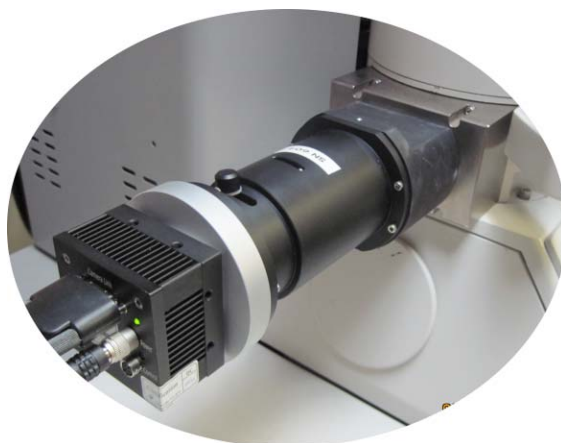


XR50S-A TEM Camera

**Classic Wide Angle Side-Mount
Large 5 Megapixel Format Sensor
Custom Designed, High Performance Lens**

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

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. This lens maintains a >40% MTF @ 150 line-pairs/mm across the entire image to provide unmatched sharpness at its numerical aperture of 0.18 @image). This low f-number gives this camera extremely high sensitivity. The A lens has <1% distortion across the field.

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.

Sensor: Scientific grade, progressive scan

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 dual 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, 14 fps, @2x2 binning, 24 fps, @4x4 binning, 34 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.

Software: A complete digital acquisition and control package dedicated to TEM image acquisition.