

Description

The Condor™-486:90 is an ultra-sensitive, fiber-optic coupled camera for use in X-ray imaging applications that demand a large field of view and high throughput. The camera is based upon the CCD 486, a state-of-the-art, scientific grade, 4K x 4K sensor. At more than 60 x 60 mm², the 486 is the largest commercially available CCD and when coupled to a 1:1 imaging fiber-optic, it delivers unsurpassed optical throughput. The camera boasts a low-noise, dual-speed, four-port readout architecture for superior speed and sensitivity. Dark current is virtually eliminated with deep thermoelectric cooling to -60°C. Hard metal seals assure a reliable vacuum and continuous maintenance-free operation. Linear, 16-bit dynamic range and sophisticated features such as anti-blooming control and software control over binning and gain make the Condor™ the ultimate instrument for scientific X-ray imaging. The camera comes standard with a beryllium window for transmitting X-rays while blocking visible light. A range of X-ray phosphors can be selected for your particular application.



Features	Benefits
4k x 4k sensor	High resolution (16 Megapixel)
60 x 60 mm ² CCD	Large field of view
1:1 straight fiber-optic faceplate	Highest throughput, no taper distortion
Four-port readout	Optimal design for speed and sensitivity
Deep thermoelectric cooling	Minimize dark noise
High-performance low-noise electronics	Minimize readout noise
Linear 16-bit dynamic range	Scientific precision and accuracy
Software-controlled binning & windowing	Optimize speed versus resolution



Parameter	Specification
Sensor	CCD 486, scientific grade 1
Resolution	4096 x 4096 pixels
Pixel Size	15 μm x 15 μm
Fill Factor	100%
Fiber Optic	1:1 fiber-optic faceplate
Image Area	61.4 mm x 61.4 mm
Read Noise	< 12 e- @ 1 MHz < 7 e- @ 250 kHz
Full Well	> 80 ke- (single pixel)
Linearity	< 1%
Dark Current	< 0.01 e-/pix/sec
Cooling	- 60 °C
Output Ports	4
Readout Rate	4 MHz (4 x 1 MHz) 1 MHz (4 x 250 kHz)
Binning & Windowing	1x1, 2x2, 4x4 and 8x8 Arbitrary sized centered window
Gain	1.5 e-/ADU (nominal)
ADC Range	16-bit