

**FAST  
UNCOMPROMISING**



**HIGH SPEED CCD CAMERAS**



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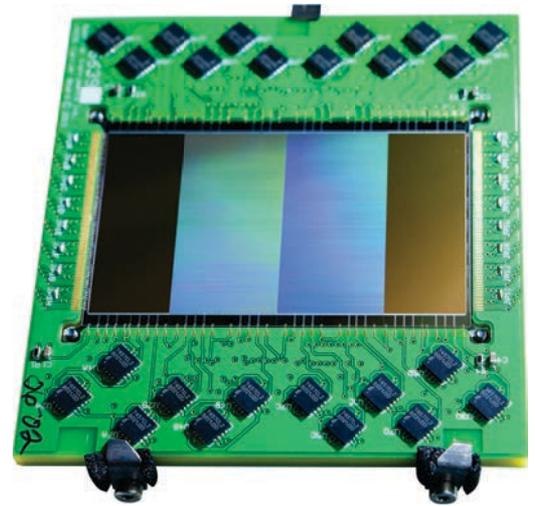


Spectral Instruments is known in the industry for producing the highest quality imaging solutions over a broad range of scientific applications. The latest innovations in technology and imaging sensors are now being taken advantage of in our newest camera designs to combine high speed and quantitative imaging capabilities. Parallel readouts using up to 16 ports are utilized to greatly increase read speed while retaining all the advantages of CCD imaging such as high dynamic range and low read noise.

# HIGH SPEED CCD CAMERAS

## High Speed CCDs

CCDs with an industry leading 16-ports are now being implemented in Spectral Instruments cameras. This method of using large numbers of readout ports on any given single sensor allows for readout time to be greatly decreased while retaining the features typically needed of a CCD such as low read noise and high dynamic range. A 2k x 2k CCD with 16 readout ports was developed by SI, in conjunction with Rayonix LLC, to create a CCD that could achieve multiple frame per second (instead of seconds per frame) performance while retaining the large dynamic range necessary for the x-ray crystallography application. This CCD has now been incorporated into our product line. The split frame transfer architecture with fast parallel transfer times allow an image to storage time of only 1ms. Large format CCDs benefit from the use of the multi-port architecture as well, and a 10k x 10k CCD (95x95mm) is now incorporated into a camera for use in astronomy, neutron imaging, or any other application where a very large field of view is necessary along with high readout speed capabilities.



## History of Innovation

Spectral Instruments has been in the business of making custom high performance CCD cameras for nearly 20 years. From cameras for single use applications to high volume OEM cameras, we have stayed at the forefront of technology to pursue quality and performance in everything we manufacture. See Spectral Instruments for your custom or OEM imaging requirements and find a partner you can trust.



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