

Overcoming The Challenges Of High Speed Voltage Imaging With New sCMOS Camera Technology

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Abstract

Voltage imaging is an application that demands high imaging speeds in order to capture fast, dynamic signalling events. When imaging at over 1000 fps is required, previous EMCCD and CMOS camera technologies could only operate across tiny regions of interest, losing all context for the voltage activity and missing information on network dynamics. The Kinetix represents new sCMOS camera technologies, with the ultimate sensitivity to capture high-speed, low-light events provided by near-perfect 95% quantum efficiency, combined with the ultimate speed, operating at over 8x faster than typical sCMOS camera technologies. What more could you see if you weren't limited by camera speed? In this presentation, we explore how the new sCMOS technologies in the Kinetix can overcome the challenges of high speed voltage imaging.