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Emerging approaches for a flexible and energy-efficient readout

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In a standard active pixel sensor, every pixel records brightness information which is sent out to the acquisition system through some sort of readout mechanism. Depending on the experiment requirements, a readout mechanism ranging from a completely serial readout to a completely parallel readout has been proposed by the research community. Like every other circuit design, each readout mechanism has an associated tradeoff in terms of power, performance, or area (PPA). In this review, we will introduce some of the readout approaches and present a comparison of emerging approaches for a flexible and energy-efficient readout.

Early Career

Yes

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