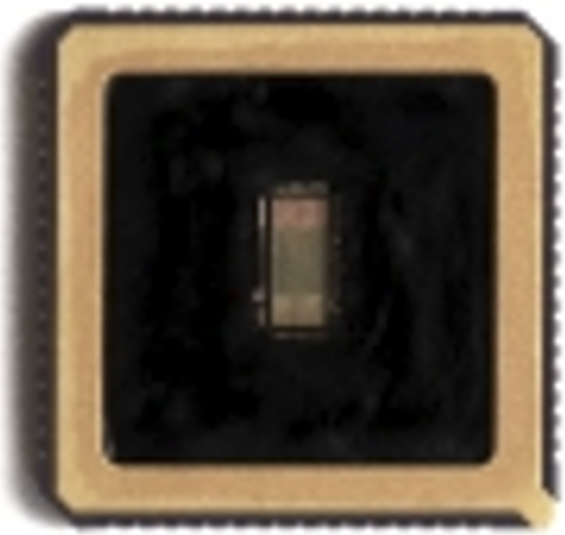
SENSOR CHIP



peo PHOTONICS

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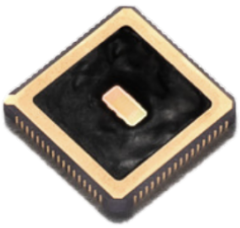
Beyond sensing

Product offering

Asynchronous photon-driven sensor (NV04ASC)

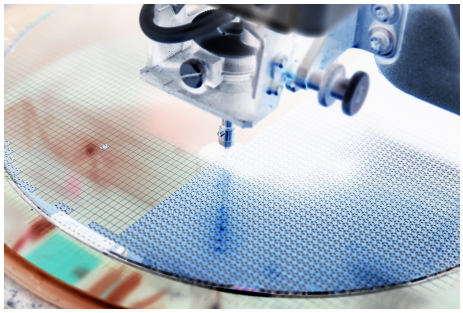


Photon Detection / SPAD Imaging › Sensor Chip

Asynchronous photon-driven sensor (NV04ASC)

The NovoViz NV04ASC asynchronous photon-driven sensor chip is engineered to meet the demands of applications that require both high sensitivity and elevated frame rates, while maintaining a reduced output bandwidth.

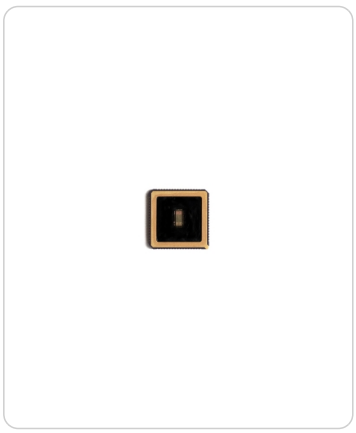
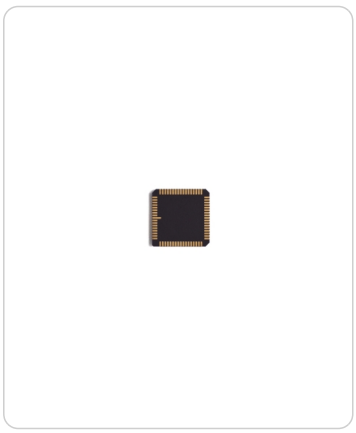
This advanced sensor integrates the advantages of single-photon avalanche diode (SPAD) technology—delivering true single-photon resolution and rapid response times—with the efficiency of event-based sensing, resulting in significantly lower data output rates.



Leveraging an innovative sensor architecture, the NV04ASC streams photon events with nanosecond-level timestamp resolution and minimal latency, all over a standard, cost-effective interface. Its design makes it exceptionally well-suited for high dynamic range imaging, low-light environments, depth sensing, obstacle detection, and visual odometry, among other applications. Owing to its novel architecture, the sensor achieves an effective frame rate of up to 100 million single-photon frames per second, offering substantial performance and efficiency advantages over existing solutions in the market. This combination of high speed, sensitivity, and data efficiency positions the NV04ASC as a versatile solution for next-generation imaging challenges across various industries.

Key Specifications:

- 64 x 48 SPAD pixels
- 100M fps
- 10ns resolution
- Event-driven output

Applications and industries include: machine vision, quantum imaging, medical imaging and automotive.

Need a solution tailored to your project? We can make it happen. Our R&D engineers can customize our technology to meet your specific requirements. Simply complete the contact form, and a member of our team will be in touch shortly.