

Enabling a world of enhanced perception

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Qurv develops wide-spectrum image sensor technologies and integrated solutions to enable next-gen computer vision applications, addressing the expanding needs of an autonomous and intelligent new world. Qurv's technology leverages current CMOS scalable manufacturing and quantum materials to unlock new levels of performance, reliability and function in XR devices, service robots and automotive.

Qurv image sensors based on CMOS compatible quantum materials such as 2D materials and colloidal quantum dots are sensitive to visible (Vis), near-infrared (NIR) and short-wave infrared (SWIR) light. [1,2] Sensitivity in the range beyond silicon CMOS imager sensitivity ($>1\ \mu\text{m}$ wavelength) provides for dramatically reduced sunlight interference and eye safe LIDAR operation. Furthermore, sensitivity in the SWIR range can enable true night vision, all weather vision and molecular vision.

References

- [1] Akinwande, D., Goossens S., *et al.* Graphene and two-dimensional materials for silicon technology. *Nature* vol. 573 507–518 (2019).
 - [2] Goossens, S. *et al.* Broadband image sensor array based on graphene-CMOS integration. *Nat. Photonics* (2017)
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Figures

Figure 1: . The accessible electromagnetic spectrum with different imaging technologies and their respective spectral range. The icons illustrate the advantages for different types of use cases enabled by the different ranges of the spectrum.