

FOR IMMEDIATE RELEASE:

Excelitas Technologies Unveils First PCO sCMOS Camera with Photon Counting Sensitivity

New pco.edge 9.4 bi CLHS combines ultra-low readout noise with high quantum efficiency to deliver exceptional imaging for advanced imaging applications



Pittsburgh, Pa., January 22, 2025 – [Excelitas Technologies® Corp.](#), the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets, today introduced the [pco.edge 9.4 bi CLHS sCMOS Camera](#).

Combining exceptional image quality, photon counting sensitivity, and a large image circle, the pco.edge 9.4 bi CLHS delivers ultra-low readout noise, high resolution and outstanding modulation transfer function (MTF). It is an ideal solution for challenging and demanding microscopy, life sciences, and physical sciences applications such as lightsheet fluorescence microscopy (LSFM/SPIM), structured illumination microscopy (SIM), confocal spinning disk microscopy and dual-image acquisition for spectral analysis, HDR imaging and polarization studies.

The sensor incorporates microlenses and a full pixel height deep trench isolation for crosstalk suppression resulting in an excellent MTF. Further, the camera provides a large image circle by using a high-resolution 9.4 MPixel image sensor with a square pixel size of 4.6 μm . It is equipped with CLHS FOL channels – all aligned in one compact plug – and capable of transmitting up to 4.9 GByte/s. Paired with a reliable software suite and professional assistance, service and support, the pco.edge 9.4 meets the demands of advanced imaging systems.

Key specifications and features include:

- **Ultra Low Readout Noise:** Excellent photon counting performance enabled by readout noise $< 0.3 e^-$.
- **High Quantum Efficiency of up to 85%:** NIR-enhanced with 30% QE at 900 nm for applications demanding sensitivity in the near-infrared spectrum.
- **Large Image Circle:** Covers a 21.6 mm image circle, offering versatility in a range of optical setups.
- **High Modulation Transfer Function (MTF):** Microlenses and full pixel-height deep trench isolation ensure outstanding optical performance.
- **High Resolution and Favorable Pixel Size:** 9.4 MPixel sensor with 4.6 μm pixel size optimized for lower magnifications and detailed imaging.
- **High-Speed Data Transmission:** CLHS Fiber Optic Link channels transmit up to 4.9 GByte/s.
- **Dual Image Recording:** Captures two square images side-by-side, supporting image splitting for spectral, HDR, or polarization-based applications.



"By combining photon counting capabilities, excellent MTF and high resolution with a reliable software suite and outstanding customer support, the pco.edge 9.4 bi CLHS Camera reaches new performance levels for PCO imaging technology. It also offers an unmatched price-performance ratio, empowering manufacturers to achieve their most demanding imaging goals," said Alexander Grünig, Director Product Line Advanced Imaging Systems at Excelitas.

Excelitas will debut the pco.edge 9.4 bi CLHS in San Francisco, CA at [SPIE BIOS](#) Booth #8530 from January 25 – 26, 2025 and at [SPIE Photonics West](#) Booth #641 from January 28 – 30, 2025. For more information, visit <https://www.excelitas.com/product/pcoedge-94-bi-clhs-scmos-camera>.

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About Excelitas Technologies Corp.

Excelitas is the leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of photonic technologies, offering leading-edge innovation in sensing, detection, imaging, optics and specialty illumination for customers worldwide.

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