



SINGLE QUANTUM
Excellence in photon detection

Superconducting Nanowire Single Photon Detection System



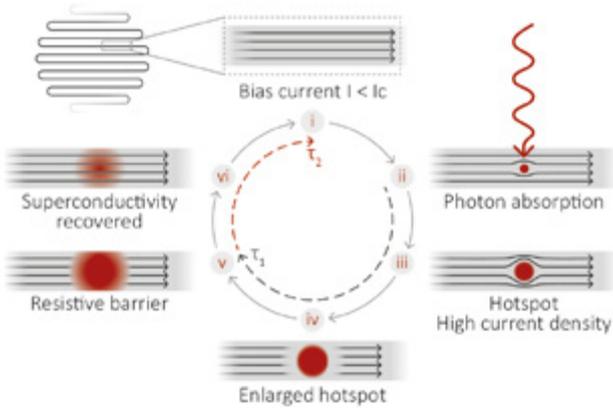
**We make the
world's fastest and
most sensitive
light sensors**

limited
only by
the laws of
physics



Single Quantum Eos R12

Superconducting nanowire single photon detection system



The photon detection

Once a single photon is absorbed in the nanowire, superconductivity is locally broken. As a result, the current is directed towards the amplification electronics and creates a voltage pulse. The detection process takes ~ 10 ps, after which the superconductivity quickly recovers in the nanowire.

Closed-cycle cryostat

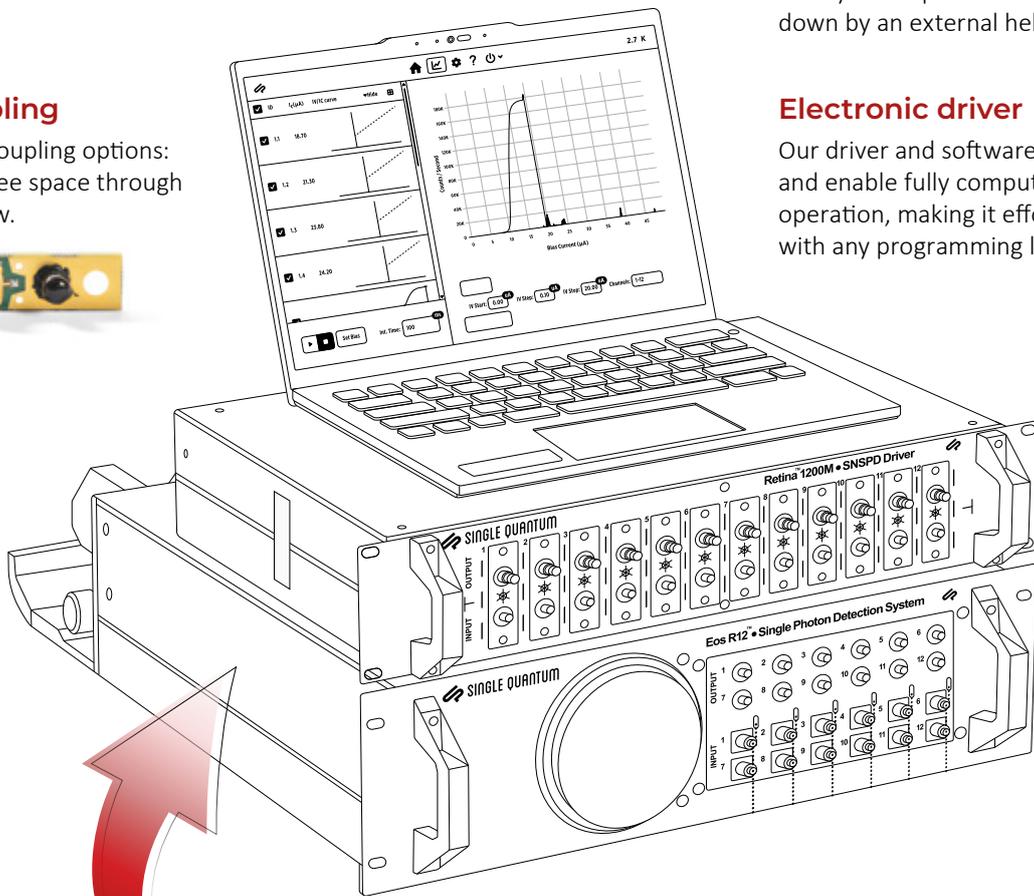
The system operates at 2.5 Kelvin, cooled down by an external helium compressor.

Electronic driver

Our driver and software are unique and enable fully computer-controlled operation, making it effortless to interface with any programming language.

Optical coupling

Detectors offer coupling options: optical fiber or free space through an optical window.



Integrated Pump

The upgraded Single Quantum Eos R12 with integrated pump delivers powerful new features in a compact, industrial-grade design without compromising on performance. Key features include:

- ✓ Integrated vacuum pump with fully automatic cooldown
- ✓ Remote system control for enhanced convenience
- ✓ Clean, rack-mounted setup – the size of the R12, the driver, and the vacuum pump combined is now just 5U

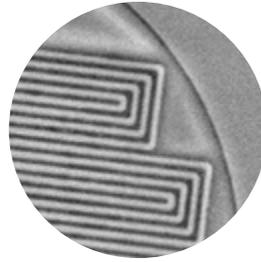
With over 50% space savings, the Eos R12 is now one of the most compact cryostats.

New developments



Eos R48™

Rack-mountable, 48-channel SNSPD system with cryostat, retina driver, and compressor



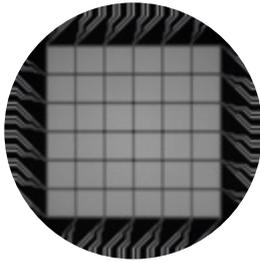
Interleaved Detectors

Photon Number Resolving and Ultra-high Count Rate



Switch 1200™

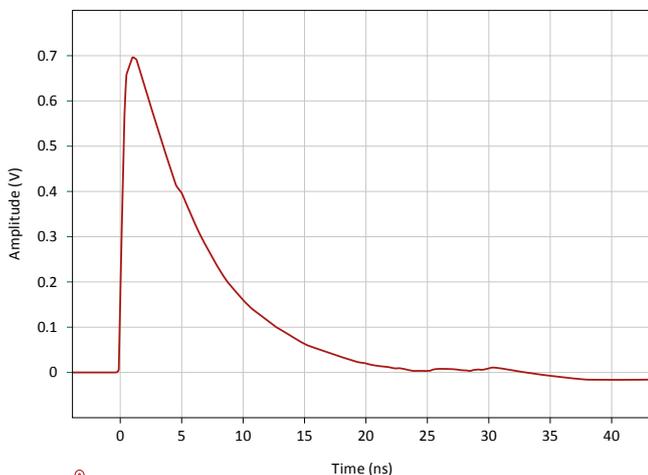
Gating Module



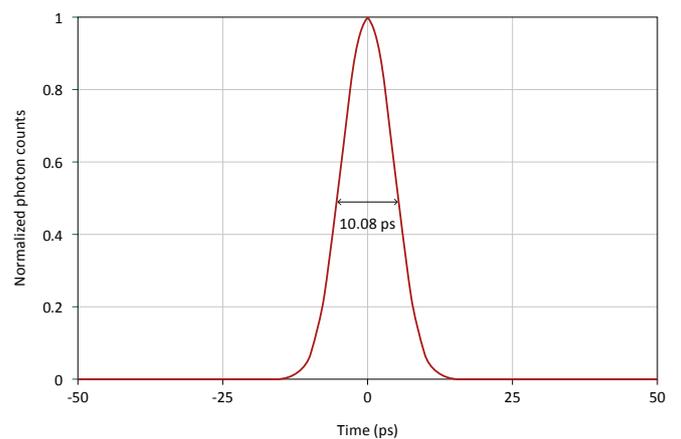
Iris X™

Free space SNSPD camera

Electronics



The best timing jitter on the market



If you are interested in different specifications and industry lines, please visit singlequantum.com/solutions



350+
satisfied users

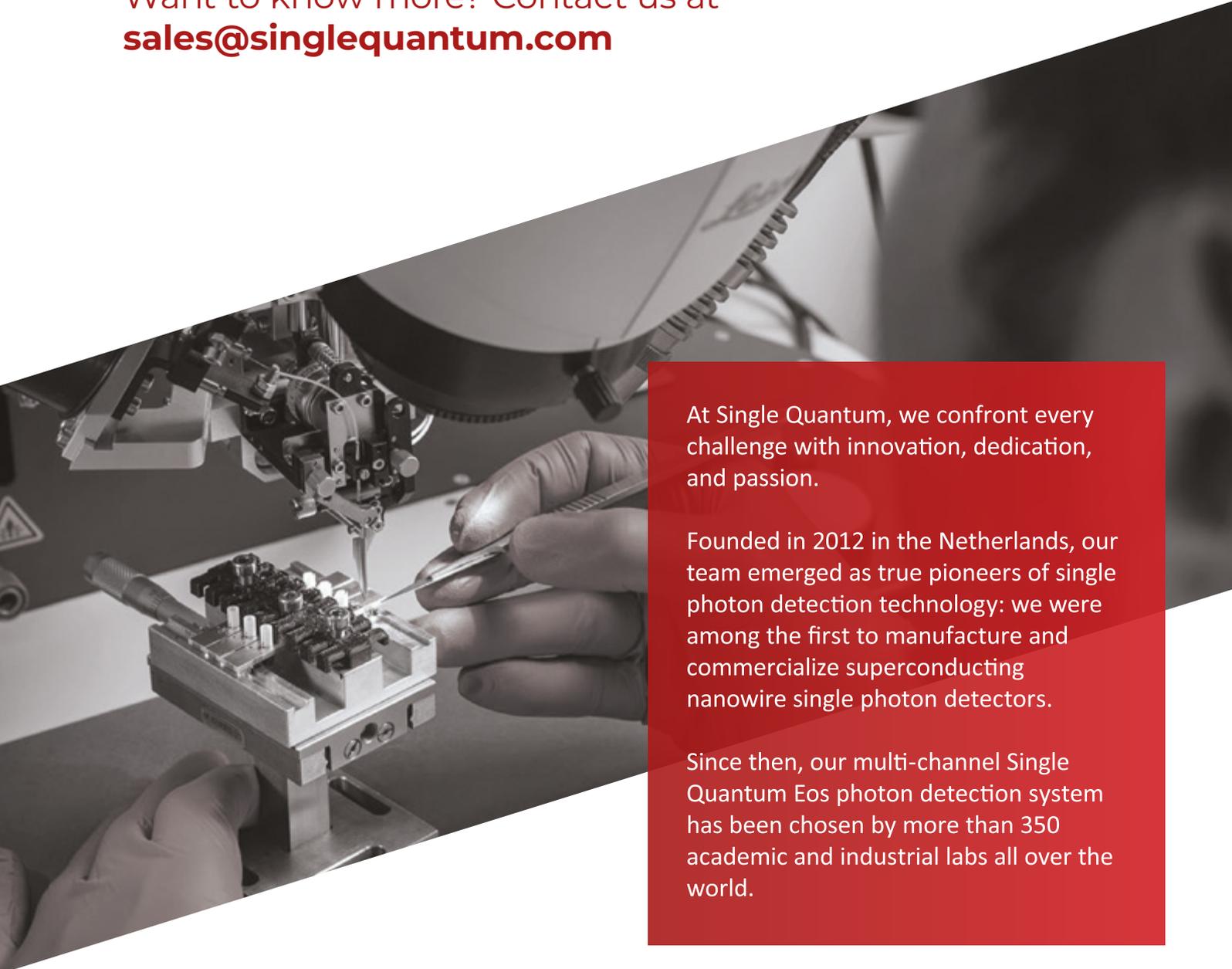


13 Years
of experience



Global sales
network and service

Want to know more? Contact us at
sales@singlequantum.com



At Single Quantum, we confront every challenge with innovation, dedication, and passion.

Founded in 2012 in the Netherlands, our team emerged as true pioneers of single photon detection technology: we were among the first to manufacture and commercialize superconducting nanowire single photon detectors.

Since then, our multi-channel Single Quantum Eos photon detection system has been chosen by more than 350 academic and industrial labs all over the world.

 [singlequantum.com](https://www.singlequantum.com)  [single-quantum](https://www.linkedin.com/company/single-quantum)

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