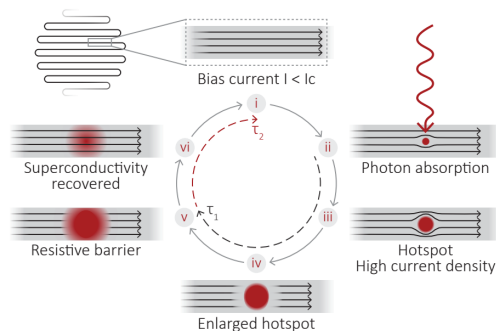




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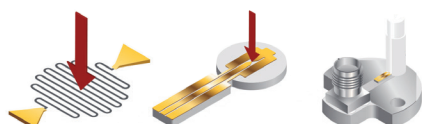


The photon detection

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.

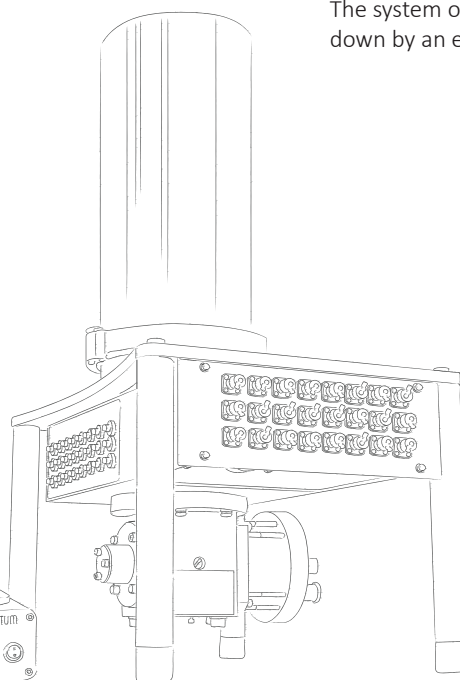
Fiber coupling

Each detector is coupled to an optical fiber without requiring manual intervention.



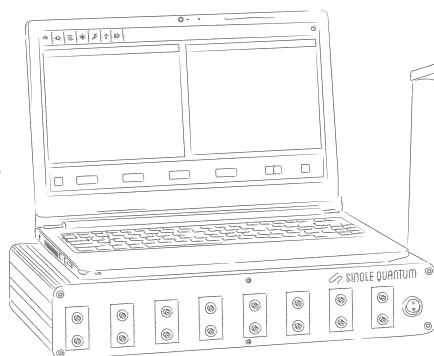
Closed-cycle cryostat

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.



Plug-and-play

The design ensures continuous operation of more than 10,000 hours.

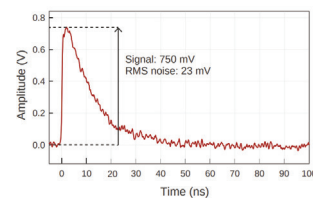
Single Quantum Eos

Superconducting single photon detection system

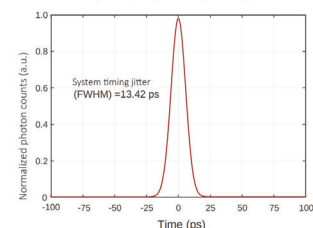
Specifications

Optimization wavelength	800 nm	900 nm	1064 nm	1310 nm	1550 nm
System detection efficiency	$\geq 90\%$	$\geq 90\%$	$\geq 85\%$	$\geq 85\%$	$\geq 90\%$
Timing jitter	≤ 15 ps	≤ 15 ps	≤ 15 ps	≤ 15 ps	≤ 15 ps
Dark count rate	≤ 1 cps	≤ 1 cps	≤ 10 cps	≤ 10 cps	≤ 1 cps
Maximum count rate	≥ 80 MHz	≥ 80 MHz	≥ 50 MHz	≥ 50 MHz	≥ 50 MHz
Ultra-high count rate detectors	≥ 800 MHz	≥ 800 MHz	≥ 600 MHz	≥ 600 MHz	≥ 600 MHz

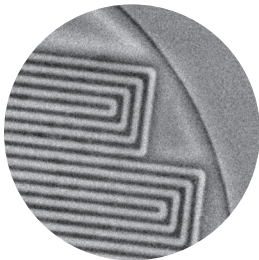
Detector output @1550 nm



The best timing jitter on the market

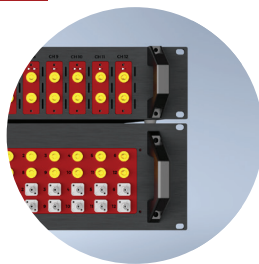


New developments

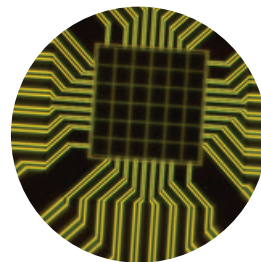


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At Single Quantum, we confront every challenge with innovation, dedication, and passion.

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 200 academic and industrial labs all over the world.

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