



Press Release

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ID Quantique launches the ID1000 Time Controller Series

Introducing the new ID1000 Time Controller Series: the latest addition to ID Quantique's (IDQ) Photonic Quantum Sensing range, a unifying force for single-photon experiments and applications. Count more, post-process less and react faster to single-photon experiments, with this all-in-one time-tagging, coincidence correlation and delay/pulse generation system.



IDQ's range of Swiss-made quantum optical sensing products represent incredible efficiency, speed and precision, with best-in-class reliability and ease-of-use. Our mission is to empower researchers across the globe to explore the technologies needed to create the building blocks for a Quantum Internet, unlocking the immense suite of capabilities and opportunities, as well as social and technological gains, coming from globally distributed Quantum Computing.

Today IDQ is proud to announce the release of its new generation of Time Controller Series – the only device on the market able to measure and control high-speed single-photon experiments and systems from start to finish with the highest timing precision and accuracy. Designed for flexibility, it pairs with IDQ's ranges of single-photon avalanche detectors (SPADs) and superconducting nanowire single-photon detectors (SNSPDs) to expertly solve a variety of experimental challenges. Whether for Quantum Communication, Quantum Computing, time-resolved microscopy, time-resolved spectroscopy, precision LiDAR & OTDR, or any other single-photon application, the ID1000 Time Controller Series will empower users to take their projects to the next level.

The ID1000 Time Controller Series enables users to:

- Observe detection rates for up to five single-photon detectors, up to 300 MHz across all inputs in high-resolution mode
- Measure up to four coincidence histograms between any pair of connected detectors

- Record every arrival time for an exceptionally high number of detected photons (up to 10 MHz in total, with or without coincidence filtering)
- Filter up to four-fold coincidences in real time with the advanced internal processing
- Generate customizable pulse trigger signals with four integrated delay/pulse generator channels, up to 250 MHz per output
- Control up to four gated single-photon detectors, such as the [ID Qube NIR Gated](#)
- Synchronise multiple devices for operation with more than 64 input channels
- Do all this with excellent precision: 3 ps resolution with < 4 ps jitter, and excellent DNL for low-signal applications.

A high-performance and cost-effective device, the ID1000 Time Controller Series lets users be prepared for advanced single-photon applications, such as scalable photonic quantum computing. Each device includes sophisticated internal processing for real-time conditional filtering to coincidence measurements, to directly record three- or four-fold coincidences without the need for any data post-processing or post-selection. Beyond measurement, the ID1000 is a delay/pulse generator. With four output channels of customizable and conditional pulses, it makes it easy to control and react to experiment and single-photon detectors in real time, such as providing the gating signal for up to four ID Qube NIR Gated detectors.

Simpler than ever to use and integrate into a laboratory, ID1000 Time Controller Series devices come with a new-and-improved suite of LabView virtual instruments and Python scripts, and are available in six combinations depending on specific user needs.

ID1000 TIME CONTROLLER SERIES AT SPIE PHOTONICS WEST

The ID1000 Time Controller Series will be displayed at the SPIE Photonics West show (booth # 4223) in San Francisco, USA, 22-27 January.

“We are thrilled to add the new ID1000 Series to the long list of pioneering photon counting solutions ID Quantique has developed over the last two decades” said Marc Niklès, EVP Quantum Sensing at ID Quantique.

Find out how you can get the most out of photonic experiments with the [ID1000 Time Controller Series](#).

For more information, please contact:

Catherine Simondi – VP Marketing & Communications
catherine.simondi@idquantique.com or +41 (0) 22 301 83 71