# PRESS RELEASE

**IQD joins the White Rabbit Collaboration, an initiative launched by CERN**

**Quantum-precision timing and synchronisation**

Crewkerne (UK), October 9, 2024 – Within the framework of the WR Collaboration, IQD, a company of the Würth Elektronik eiSos Group, is working closely with GMV and CERN: the latter are at advanced prototyping stages of the development of a new White Rabbit Switch Version 4, while IQD is adding holdover function to the switch by developing an expansion board product containing IQD’s ICPT-1 rubidium oscillator, a quantum atomic clock.

The ICPT-1 provides security and accuracy of signal continuity in case of temporary signal losses with its exceptional holdover ability, and can enable stability of accurate signals down to the picosecond level. This is the first time that holdover has been addressed in the open-source White Rabbit Switch device, and IQD is at the forefront of this technology.

Technical director, Nick Amey, explains “We are honoured to be a member of the White Rabbit Collaboration and to provide this technology as open-source for the benefit of global standardisation. Large data transfer networks such as financial and trading systems, security and navigation networks, and satellite communications all require sub-nanosecond accuracy, stability and holdover, and we are proud that our products are part of maintaining these global standards.”

“As IQD is at the forefront of developing this technology, we have the opportunity to address real industry requirements and we look forward to partnering with network managers to discover what level of holdover is necessary to make this technology useful, such as how many picoseconds holdover is required and for how long?”

“We very much look forward to working with IQD and GMV to deliver the new White Rabbit Switch with enhanced holdover capabilities. It’s great to have them on board, as founding members of the White Rabbit Collaboration, an initiative created to support the uptake by industry of the WR technology and foster its impact on society.” Says Javier Serrano, Chair of the White Rabbit Collaboration Board and co-inventor of the technology at CERN.

The WR Switch Version 4 commercial product development programme is part of the quantum positioning, navigation, and timing systems program, with funding from the UK Government via Innovate UK.

**Available images**

The following images can be downloaded from the Internet in printable quality: <https://kk.htcm.de/press-releases/wuerth/>

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| Image source: CERN**IQD joins the White Rabbit Collaboration, an initiative launched by CERN, to provide quantum-precision timing and synchronisation** | Image source: IQD**IQD’s ICPT-1 rubidium oscillator, a quantum atomic clock.** |
| Image source: CERN**Nick Amey, Technical director at IQD Frequency Products. presenting ICPT-1 Holdover concept at Cern-White Rabbit Summit March 2024.** |

About the White Rabbit Collaboration

Launched at CERN in March 2024, the White Rabbit Collaboration is a global, membership-based community. Its objective is to develop and support the White Rabbit high-performance open-source technology, enhancing its industry adoption through dedicated support, training, collaborative R&D projects, and a testing ecosystem fostering trust in products that incorporate the open-source technology. At CERN, the WR Collaboration Bureau – a dedicated team composed of senior White Rabbit engineers and a community coordinator – will facilitate the day-to-day running of the Collaboration’s activities and support its members.

**Further information at** [**https://www.white-rabbit.tech/**](https://www.white-rabbit.tech/)

About IQD

Backed by over 50 years’ experience in the manufacture of frequency products, IQD is a recognised market leader in the frequency control market and part of the Würth Elektronik eiSos Group, one of the leading European manufacturers of passive components. With active customers in over 80 countries, IQD offers one of the most comprehensive frequency product ranges available, from low cost commercial grade product to that used in high reliability industrial and automotive applications including: Quartz Crystals, Clock Oscillators, AEC-Q200 Crystals & Oscillators, VCXOs, TCXOs, OCVCSOs & OCXOs, GPS Disciplined OCXOs, and Rubidium Oscillators.

Further information at [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

About the Würth Elektronik eiSos Group

Würth Elektronik eiSos Group is a manufacturer of electronic and electromechanical components for the electronics industry and a technology company that spearheads pioneering electronic solutions. Würth Elektronik eiSos is one of the largest European manufacturers of passive components and is active in 50 countries. Production sites in Europe, Asia and North America supply a growing number of customers worldwide.

The product range includes EMC components, inductors, transformers, RF components, varistors, capacitors, resistors, quartz crystals, oscillators, power modules, Wireless Power Transfer, LEDs, sensors, radio modules, connectors, power supply elements, switches, push-buttons, connection technology, fuse holders and solutions for wireless data transmission. The portfolio is complemented by customized solutions.

The unrivaled service orientation of the company is characterized by the availability of all catalog components from stock without minimum order quantity, free samples and extensive support through technical sales staff and selection tools.

Würth Elektronik is part of the Würth Group, the global market leader in the development, production, and sale of fastening and assembly materials, and employs 7,900 people. In 2023, the Würth Elektronik Group generated sales of 1.24 Billion Euro.

Würth Elektronik: more than you expect!

Further information at www.we-online.com

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