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IQD presents its new atomic clock ICPT-1

IQD is pleased to present its new chip scale atomic clock (CSAC), ICPT-1. The ICPT-1 uses the Coherent Population Trap (CPT) method to obtain a very stable frequency and is the perfect addition to IQD’s rubidium oscillator portfolio.

While common rubidium oscillators detect the atomic transition with the help of a rubidium discharge lamp (Rb lamp), the ICPT-1 uses a laser to induce quantum transitions. A major advantage of the laser is a much lower power consumption. Additionally, the life cycle of a Rb lamp is very limited – typically around ten years – whereby the laser has a much longer life expectancy.

Users have the possibility to connect either an external 1 PPS input or take the internal clock for a 1 PPS output for synchronisation in various applications. Whilst in free running mode, relying on the internal clock of the ICPT-1 as the source of the 1 PPS signal, the ICPT-1 offers a suitable holdover behaviour. Digital frequency adjustment and optional 1 second time of day (TOD) counter can be accessed via a UART serial communication interface.

Housed in a 36.0 x 45.0 x 14.5 mm package, the ICPT-1 is smaller compared to traditional rubidium oscillators and comes with a current consumption of only 500 mA @ 3.3 V typically. With its frequency tolerance of 0.05 ppb, its short term stability of 0.09 ppb @ Tau = 1 s and its ageing of only 0.03 ppb per day this product is comparable to common standard Rubidium products.

Among others, the device is ideal for synchronisation or as reference clock in satellite & secure communications, navigation systems and also in financial, utility, security and communications timing applications.

For full details on the ICPT-1 please visit [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com) or for further advice, speak to a member of our Sales or Applications Support team.

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Notes for Editors:

Backed by over 40 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](https://goo.gl/VQD4Jj), [Clock Oscillators](https://goo.gl/EBXVXM), AEC-Q200 [Crystals](https://goo.gl/9ytKG6) & [Oscillators](https://goo.gl/pc9DJm), [VCXOs](https://goo.gl/WkHnAh), [TCXOs](https://goo.gl/EmJBKL), [OCVCSOs & OCXOs](https://goo.gl/MnTFHu), [GPS Disciplined OCXOs](https://goo.gl/kesb3R), and [Rubidium Oscillators](https://goo.gl/Bzqt5W).

Manufacturing capacity totals over 40 million units per month covering quantities from one off specials to multi-million unit orders. In addition, IQD offers customers a range of engineering support services including: application support, custom product design, sample development, electrical testing & screening, frequency/temperature testing, accelerated ageing, circuit characterisation and MTIE/TDEV testing. IQD’s products are specified by leading manufacturers in the aerospace, automotive, communications, computing, consumer and industrial industries throughout the world. The full range of products is available direct through [sales offices](http://www.iqdfrequencyproducts.com/contact/) or via an extensive worldwide [distribution network](https://goo.gl/M4Tz8L). For more information, visit [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com).

Further information:

Becky Long
IQD Frequency Products Ltd
T: +44 (0)1460 270270
E: rebecca.long@iqdfrequencyproducts.com
W: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com/)

**Join us on:**  [**Facebook**](http://www.facebook.com/IQDFrequencyProducts)**-**  [**Twitter**](https://twitter.com/iqdfrequency)**-**  [**LinkedIn**](http://www.linkedin.com/company/iqd-frequency-products-ltd) [**Google Plus**](https://plus.google.com/115636882866960685149/posts#115636882866960685149/posts)