



QC LASER BASED SYSTEMS NOW AFFORDABLE

Tuneable mid-IR Quantum Cascade (QC) laser-based systems are now being commercialised for a wide range of applications thanks to improved reliability and reduced costs.

Manufacturers have driven the major technology developments through improved component yield, reproducibility, quality and reduced lead-time.

Cascade Technologies, the world-leader in the development of QC laser based instrumentation, has once-again broken price and performance barriers by releasing a new generation of compact, affordable and high-performance laser systems.

The Scottish-based spin-out company - expert in spectroscopic techniques and development of high speed multi-gas analysers based on the integration of mid-IR QC lasers – has introduced a laser system alongside a series of QC lasers with wavelengths spanning from 4 to over 10µm.

The laser system – including a laser - is selling for under £10 000 (\$20 000) and includes Laser head, electronics control and software.

In addition, Cascade has also developed a £2,500, 1.5 Sample/s digitiser/averager card with Plug & Play connectivity.

The new Cascade AV1500 is a high performance digitizer/averager aimed at satisfying high speed signal capture and averaging requirements in various fields of scientific, research & development, as well as manufacturing test applications.

The AV1500 can digitise one channel with 8-bit precision across voltage ranges spanning from ±10 mV to ±1.5V and is capable of sampling 650 MHz bandwidth signals. Using onboard FPGA averaging, the AV1500 also has the ability to co-add data up to 65 000 times 2Kpoints, effectively providing 16-Bit resolution.

Cascade Technologies Business Development Director, Richard Cooper, believes the introduction of low cost laser systems and lasers has been a major milestone for company.

He added: "For QC laser based instrumentation to reach volume production and reduced market prices, the major technology development challenges involve improved component yield; reproducibility; quality; reduced lead-time and cost.

"In the past year, Cascade Technologies has developed strategic agreements with global suppliers for critical components.

"The major challenges have been overcome, allowing price reductions for these leading edge products."

Ends

Notes to editors

- **Cascade Technologies** uses its revolutionary, patented core technology – based around the application of Quantum Cascade Lasers – to design, develop and supply innovative solutions for a wide range of global markets. These include the monitoring of greenhouse and general industrial emissions, hazardous gases, and explosives and drugs. Based at Stirling University Innovation Park, Cascade Technologies currently has world-class scientists and engineers working under development and supply agreements on several revolutionary products for key blue chip clients, whilst further bespoke product development, manufacturing, marketing and distribution agreements are being sought with customers worldwide. The company’s technology provides highly specific and sensitive measurement, whilst its portable size offers cost savings compared to competitive offerings. It is also immune to many outside influences that typically affect sensors of this type. For Cascade Technologies’ scientific products, visit www.ctscientific.com

Issued by Beattie Communications (www.beattiegrou.com) on behalf of Cascade Technologies.

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