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PRESS INFORMATION

19 October 2017

National Quantum Technologies Showcase
Elizabeth II Conference Centre
Westminster, London
November 9th, 2018

TMD invited to exhibit at the National Quantum Technology Showcase 2018 in London

Highlighting the company's scientific capability in providing engineering solutions to quantum industry challenges

TMD Technologies Limited (TMD), a world-leading West London based manufacturer of equipment for the high-tech microwave industry, has been invited to exhibit at the upcoming National Quantum Technologies Showcase in London on the 9th of November 2018 for the second year running.

The invitation to exhibit at this landmark event highlight's TMD's substantial investment in the development of cutting-edge quantum-enabled technology under the UK National Quantum Technology Programme (UK-NQTP). The UK-NQTP a involves large government investment aimed at accelerating the development of UK-based quantum technologies into a position where they are commercially available of the shelf (COTS) products.

Involved from its inception, TMD has been a key partner in the research, development and manufacture of compact frequency-stabilised lasers, hollow-core fibre-based atomic clocks, and compact magneto-optical traps (MOTs).

These technologies have wide reaching applications in both the defence and civilian markets and could either enhance current quantum sensing technologies, produce state-of-the-art portable atomic clocks, atomic clock components and future precision navigation and timing (PNT) systems, or create completely new capabilities altogether.

TMD on show

At the National Quantum Technologies Showcase 2018, TMD will be exhibiting:

***** Demonstration clock – *a live demonstration of the FEMTO facility.*

***** Rubidium and Caesium filled hollow core fibres – *key components for the quantum fibre clock (FEMTO-2ND / QFC).*

***** Rubidium filled miniature cells – *key component for the frequency-stabilised laser packages, which themselves form a key component of many systems (FLAME).*

***** Compact magneto optical traps – *key component for cold atom experimentation and sensor development (gMOT).*

TMD's Quantum Team, from left to right: *Paul Osborn, Development Engineer, Howard Smith, Technology Director; Liam Ward, Senior Design Engineer, Edward Boughton, Principal Engineer; Jamie Forrest, Programme Manager; Richard Patrick, Head of Business Development; & Graham Adams, Line Engineer. In the centre of the photo, TMD's compact gMOT vacuum chamber.*

TMD and its academic and industry partners – a formidable combination in quantum technology

TMD is currently partnering with Kelvin Nanotechnology, the University of Strathclyde and the University of Glasgow to develop compact, portable magneto optical traps (*gMOT*).

The company is also working with the University of Bath and Chronos Technology to develop Rubidium and Caesium hollow-core fibre based portable atomic clocks (*FEMTO* and *QFC*).

TMD has previously been a key partner in a project to develop compact frequency-stabilised laser modules based on Rubidium filled vapour cells, in partnership with Fraunhofer UK and Optocap. This product can be seen at the showcase on the Fraunhofer display stand.

Commented TMD's Head of Business Development, Richard Patrick: "Since the Blackett report on Satellite derived Time and Position, which highlighted the fragility and critical national reliance of GNSS derived time and position information, TMD has been working to provide alternative solutions and contribute towards the UK's world leading position in the emerging multi-billion-pound quantum technology market. For example, working with Chronos Technology and the University of Bath, we are currently building novel solutions for compact, portable atomic clocks. These clocks could be used as either stand-alone timing devices or as hold-over clocks in the event of global navigation satellite systems (GNSS) degradation or denial."

Continued Dr Edward Boughton, Principal Engineer at TMD: "The sensors that these technologies enable have a wide range of applications. The work we are doing with KNT, Glasgow and Strathclyde will lead to portable versions of highly sensitive gravitational and magnetic field sensors, which can be used to conduct underground surveying, sense brain and heart function, and for inertial navigation."

TMD representatives in attendance at the National Quantum Technologies Showcase:

Howard Smith, Technology Director
Richard Patrick, Head of Business Development
Dr Edward Boughton, Principal Engineer, Applied Science
Paul Osborn, Development Engineer, Applied Science
Jamie Forrest, Programme Manager

TMD Technologies Limited – more than 20 years at the top of scientific and technical microwave and RF innovation

For more than 20 years TMD Technologies Limited (TMD) has been a world class designer and manufacturer of professional microwave and RF products. At the company headquarters in Hayes, West London it produces specialised transmitters, amplifiers, microwave power modules (MPMs), high voltage power supplies and microwave tubes for radar, EW and communications applications. A previous Queen's Award winner, it also produces a range of advanced instrumentation microwave amplifiers for EMC testing, scientific and medical applications.

TMD Technologies, LLC, USA

TMD Technologies, LLC is the US subsidiary of TMD Technologies Limited. Based in Baltimore, Maryland, it provides complete technical and commercial support to TMD's customers in the USA, and offers a comprehensive product and repair centre. The Sales and Marketing Department is engaged in the sales of the whole range of TMD's products, as well as new business development in the States.

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