

RAYLASE will present digital laser solutions for five core markets at LASYS 2018

Wessling, Germany, Tuesday, 29 May 2018

RAYLASE GmbH will be represented by a stand at LASYS, the international trade fair for laser material processing. LASYS will be held in the Messe Stuttgart trade fair centre from 5 to 7 June 2018.

As an expert in laser deflection components, RAYLASE will present two product innovations to the specialists attending LASYS, namely the SUPERSCAN IV-15 DRILL and the AXIALSCAN-50 DIGITAL II.

The company's overall presence at the fair will focus on five core markets in which RAYLASE technologies and solutions are used. Another unique feature of the RAYLASE exhibit is that all products on display will be DIGITAL. In recent years, RAYLASE has stepped up its efforts in this area in order to meet the high levels of demand for digital laser solutions.

These are the products that users and partners from our five core markets can look forward to seeing at LASYS.

The “additive manufacturing” core market

RAYLASE offers powerful components for this important growth market in the form of 3-axis deflection units such as the **AXIALSCAN-30 DIGITAL II HP**. This module is ideal for large fields with small spot sizes and for 3D applications requiring laser power up to 4 kW. It can be controlled using the SL2-100 protocol with 20 bit resolution or XY2-100 protocol with 16 bit resolution, and offers optimal long-term drift performance for maximum process quality. The pre-focussed Z axis allows the spot position and spot diameter to be adjusted dynamically in additive manufacturing, thereby accelerating and improving the quality of layer hatching.

The new **AM-MODULE NEXT GEN** from RAYLASE is a truly unique product innovation. In addition to direct fibre coupling, a zoom axis ensures ultra-dynamic spot adjustment at the optimal optical operating point, while a fifth axis tracks the focus for process monitoring.

The laser deflection units can be controlled using the **control card SP-ICE-3**. This card can control up to two deflection units or five axes, and modulates the laser energy in accordance with the speed and position of the deflection unit.

The “Precision & Dynamic” core market

In particular in applications on gantries with overlapping movements, the extremely high position accuracy of the **SUPERSCAN V series** is of paramount importance for the structuring and separation of microstructures on wafers and in micromachining. This solution offers minimal drift, extremely low noise and fully digital position feedback with 20 bit resolution.

RAYLASE also offers the compatible machine vision control solution **CLICK&TEACH**. The integrated CMOS camera delivers high-resolution images of the workpiece surface, enabling laser jobs to be quickly set up, easily optimised and perfectly positioned, and allowing quality to be visually inspected both during and after the process.

The “Welding” core market

The **HIGH POWER WELDING MODULE** is the ideal deflection unit for this challenging area of application due to its robust industrial design, innovative temperature management and modular structure. It is designed for laser power up to 8 kW and can be flexibly equipped with various deflection head combinations.

The “Drilling & structuring” core market

At LASYS in Stuttgart, RAYLASE will unveil its new **SUPERSCAN IV-15 DRILL** deflection unit, which was specially designed for this area of application. It offers an aperture of 15 mm, can be equipped with various F-Theta lenses and, thanks to optimised tuning options, can execute short and very fast jumps with higher frequency on the workpiece. SUPERSCAN IV DRILL deflection units for further wavelengths are currently in the pipeline.

Another highlight on display at the trade fair stand is the **SUPERSCAN IV-15 WAFER**, the ideal solution for high-speed structuring of solar wafers in the innovative PERC process. With a positioning speed of 200 rad/s, this 2-axis deflection unit is the fastest product of its kind on the market today, and also boasts the lowest noise, smallest energy loss and minimal heat development.

Trade visitors to our stand at LASYS will be able to get detailed information about the **FOCUSHIFTER DIGITAL II**, a 3-axis deflection unit for drilling and structuring applications. This deflection unit is available for apertures of 10 mm or 15 mm and for various wavelengths. It offers an ultradynamic, digitally controlled Z axis and is ideal for 2.5D and 3D applications.

The “Packaging” core market

RAYLASE will be celebrating yet another product première at LASYS with the **AXIALSCAN-50 DIGITAL II** deflection unit. This 3-axis deflection unit is ideal for large work areas with small spot sizes and laser power up to 5 kW. Three different pre-defined tuning options can currently be stored on the digital servo control, together with additional customer-specific tuning options. “LINESCAN tuning” enables deflection speeds of up to 50 rad/s, while “MICROSTRUCTURING tuning” reduces tracking errors to just 400 µs.

The **SP-ICE-3 control card** is also recommended for use in the application area of cutting, perforating or marking packaging. It controls the processes with high (20 bit) resolution and, thanks to its “Tracking Error Compensation” function, ensures synchronous responses from all axes, thereby making a major contribution towards process quality and efficiency.

In short, a visit to the RAYLASE stand should be at the top of any trade visitor’s to-do list at this year’s LASYS in Stuttgart – two world premières and an insight into our innovative solutions in growing markets are not to be missed.

The RAYLASE team is looking forward to meeting its guests in person at **Stand 4B38 in Hall 4**.

About RAYLASE

RAYLASE GmbH, founded in 1999 and ISO-certified since 2006, offers high-precision components, control cards and software for the fast deflection and modulation of laser beams. With over 100 employees worldwide, RAYLASE stands for innovative technology, the highest quality standards and customer proximity as a value we put into practice every day.

Our components comprise top-quality optical elements, galvanometer scanners and control electronics with an intuitive software interface. They form the cornerstone of industrial laser systems for scanning printed codes, marking textiles and surfaces, welding metal plates and plastics, and cutting and drilling semiconductor wafers and materials such as metal, plastic or glass. Our current focus markets are additive manufacturing, e.g. in 3D printers, welding in different industries and various applications such as marking, cutting and perforating, for example, in the packaging industry.

Press Release



Our customers are companies from a wide range of industries. The electronics, automotive, photovoltaic, textile and packaging industries are using lasers to replace traditional production processes or to implement entirely new ones. In addition, increasing numbers of new industries are discovering the innovative potential of this technology every day. That makes RAYLASE a player in an important global growth market.

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Press Release



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