

Mobile World Congress 2017: New Bosch microscanner BML050 for interactive laser projection

Transforming any surface into a virtual user interface

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- ▶ Optical MEMS based scanner
- ▶ Creating flexible and intuitive virtual user interfaces
- ▶ Superior image quality and focus-free projection
- ▶ Bosch booth at MWC: Hall 6, booth 6E20

Barcelona, Spain – "The exciting developments in the Internet of Things are advancing at an amazing pace and Bosch Sensortec continues to drive innovations," says Stefan Finkbeiner, CEO of Bosch Sensortec, "It is not just about how devices communicate or sense their surrounding environments, but increasingly about how technology interacts with human beings. Laser projected virtual interfaces are a new fascinating solution in a world of previously undreamed of opportunities."



A core component of this solution that enables focus-free laser projection and turns any surface into a virtual user interface (UI) is the BML050 - a high-precision MEMS scanner for interactive laser projection applications. The virtual UI solution gives any kind of device a unique personality of its own, enabling technology to interact with people, to make life simpler and more exciting.



With the help of the BML050, a precise on-demand UI can be created for the interconnected world of the IoT, e.g. for home appliances, tablets and social robots. The BML050 is a ground-breaking solution for embedded projectors and augmented reality applications such as games, infotainment and in-car head-up displays. With this solution devices can interact in complex, intuitive and convenient ways to merge their function with our everyday lives.

Bosch technology enables interactive projectors

With the BML050 microscanner Bosch Sensortec is extending its current portfolio by optical microsystems. The scanner includes two tiny MEMS mirrors to project an RGB color laser onto any surface to create a projected image. The BML050 is both compact and power efficient, making it ideal for space- and power-restricted devices.



Bosch Sensortec provides a ready to use projector reference design including an RGB light source. This facilitates fast evaluation and saves design-in time to give early

adopters an important head start. Interactivity is enabled by a photo diode that measures the reflected light intensity pixel by pixel - no calibration required.

Bosch Sensortec's solution provides outstanding projection quality by means of advanced speckle reduction and precise control of the MEMS scanning mirrors and laser diodes. The BML050 projection principle eliminates the need for focus adjustment tasks, and the native laser color-space vastly exceeds industry standards, such as Adobe® RGB.

Robust, compact and easy to integrate solution

Bosch Sensortec's MEMS scanner is based on a well-established and robust core technology housed in compact wafer-level module packages. At the core of our system, there are two independent, hermetically-encapsulated MEMS scanning mirrors, which are optically aligned for fast and easy integration. The BML050 also includes a video processor, control circuits, laser drivers and power management ICs.

The partitioning of the BML050 supports a wide range of applications, significantly cutting down time to market deadlines, giving customers an edge at this early-adopter stage in the market's development.

Bosch Sensortec provides software support for major operating systems and is ready to assist customers with operation and parameter configurations as well as hardware integration and calibration tasks.

The BML050 will be available for selected customer projects in the second half of 2017.

The market research company IHS Markit predicts that between 2017 and 2020, revenues from MEMS scanning mirrors will increase at a healthy CAGR of 18%*.

"MEMS scanners are currently emerging for a wide range of use cases,*" explains Jérémie Bouchaud, Director MEMS & Sensors at IHS Markit. "The Bosch Sensortec MEMS scanner BML050 enables two functions in one product, namely projection display and gesture user interface. Other new use cases of MEMS scanners include e.g. adaptive headlights and automotive head up displays."

Press Contact

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EXPERIENCE BOSCH AT MWC 2017: Monday, February 27, to Thursday, March 2, 2017
at Hall 6, booth 6E20

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*Information based on IHS Markit, Technology Group, MEMS Market Tracker – Automotive, January 2017. Information is not an endorsement of Bosch-Sensortec. Any reliance on these results are at the third party's own risk. Visit www.technology.ihs.com for more details.

Bosch Sensortec GmbH is a fully owned subsidiary of Robert Bosch GmbH that is dedicated to delivering a complete portfolio of microelectromechanical systems (MEMS) sensors and solutions that enable consumer electronics to be connected. Bosch Sensortec develops and markets a wide portfolio of MEMS sensors and solutions tailored for smartphones, tablets, wearable devices and IoT (Internet of Things) applications.

The product portfolio includes 3-axis acceleration, gyroscope and geomagnetic sensors, integrated 6- and 9-axis sensors, environmental sensors, and a comprehensive software portfolio. Since its foundation in 2005, Bosch Sensortec has emerged as the MEMS technology leader in the markets it addresses. Bosch has been both a pioneer and a global market leader in the MEMS sensor segment since 1995 and has, to date, sold more than 8 billion MEMS sensors.

For more information, please visit www.bosch-sensortec.com, twitter.com/boschMEMS

The Bosch Group is a leading global supplier of technology and services. It employs roughly 390,000 associates worldwide (as of December 31, 2016). According to preliminary figures, the company generated sales of 73.1 billion euros in 2016. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected industry. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to create solutions for a connected life, and to improve quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 450 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 120 locations across the globe, Bosch employs 59,000 associates in research and development.

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