Press release
Bosch Sensortec

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Bosch unveils cutting edge Smart Connected Sensors platform for full-body motion tracking
The personal AI feedback coach for improved movement

- Accelerates development of motion tracking applications with hardware, software and ready-to-use wearable reference design.
- Includes up to eight wirelessly connected sensor nodes for qualitative guidance on the end-user's movement execution.
- Improves the user experience across a wide range of use cases, including rehab, sports/fitness and gaming.
- Supports the easy addition of new gestures with a software tool.

Las Vegas, Nevada / Reutlingen, Germany – Unlimited access to a personal feedback coach? That's the dream of many fitness and gaming enthusiasts. With the brand new Smart Connected Sensors platform, Bosch Sensortec ensures that movements and repetitions are not only measured, but that users get qualitative feedback on the movement execution. Specifically designed for full-body motion tracking, this new platform provides a fully integrated hardware and software solution that dramatically cuts development costs and time to market.

Business customers wanting to integrate sensors in their designs are often faced with time-consuming and complicated tasks, combining and tweaking multiple devices to create the necessary hardware and software system. There is no sensor solution available on the market right now that provides wireless and ready-to-use full-body movement feedback. To meet this need and save developers precious time and effort, Bosch Sensortec provides business customers with the full package:

- BHI380, a programmable IMU-based sensor system using AI functionality.
- A wearable reference design (certified CE, FCC, ISED, MSIT, SRRC, MIC, NCC, UKCA) that can be straightforwardly attached to any part of the body without having to handle cable clutter, an external camera or dedicated bodysuits.

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- Software features including gesture and activity recognition, body movement detection, relative body angle information, as well as a feedback coach.

Multiple applications in rehabilitation, fitness and gaming

The possibilities are almost endless. Key use cases will include rehabilitation, fitness, and gaming according to the motto “Move. Prove. Improve.” The Smart Connected Sensors platform provides complex feedback that enables users to properly perform rehabilitation exercises at home, thereby supporting their faster recovery. For highly responsive gaming applications, motion sensors will provide intuitive, accurate control by tracking even the tiniest movements. In the area of sports and fitness, the motion sensors can be used for complete body movement detection, for example to give detailed feedback on how well high-intensity exercises are performed. The sensors communicate wirelessly via Bluetooth Low Energy and thus do not restrict users' movement.

Thanks to the platform principle, the system can be connected to numerous applications, such as wearables, hearables and AR/VR headsets. Engineers will find the Smart Connected Sensors platform easy to use and simple to scale, easily incorporating additional sensors and capabilities into their existing designs. Importantly, the platform enables up to eight nodes with various Bosch Sensortec sensors to be neatly connected to a central node, including Inertial Measurement Units (IMUs), magnetometers and pressure sensors. “For applications using Smart Connected Sensors, our new platform significantly reduces the amount of effort required from designers, enabling them to cut time to market and focus more on their specific expertise,” said Stefan Finkbeiner, General Manager and CEO at Bosch Sensortec.

The sensor platform provides qualitative feedback based on integrated AI features and comes with a pattern creation software tool that helps customers customize their system design. By using this tool, the customer retains control over their data, as there is no need for regular data exchange with Bosch Sensortec.

Availability:

Smart Connected Sensors is available on direct request.

Website:

https://www.bosch-sensortec.com/software-tools/software/smart-connected-sensors

Bosch Sensortec at CES 2024:

The platform will be presented live for the first time at CES from January 9 to 12, 2024. Visit the Bosch booth with the number #17207.

Panels with Bosch experts on Thursday, January 11, 2024:

"Future of Care: How Other Industries Shape Health", 11:00 a.m. (local time), Las Vegas Convention Center / North Wing, session with Dr. Stefan Finkbeiner, General Manager at Bosch Sensortec.

Press photos:

#109bda0a, #42e25bf8, #3449522a, #478cdcce, #6db5e7aa

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Bosch Sensortec GmbH, a fully owned subsidiary of Robert Bosch GmbH, develops and markets a wide portfolio of microelectromechanical systems (MEMS) sensors and solutions tailored for smartphones, tablets, wearables and hearables, AR/VR devices, drones, robots, smart home and IoT (Internet of Things) applications. The product portfolio includes 3-axis accelerometers, inertial sensors and magnetometers, integrated 6- and 9-axis sensors, smart sensors, barometric pressure sensors, humidity sensors, gas sensors, optical microsystems and comprehensive software. 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 18 billion MEMS sensors.

For more information, please visit www.bosch-sensortec.com, twitter.com/boschMEMS, community.bosch-sensortec.com, linkedin.com/company/bosch-sensortec/, youtube.com/user/BoschSensortec

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