

Sensor technology from pmd and Infineon enables industry-first 5-axis robot arm for next-level cleaning robots

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- Infineon and pmd supply REAL3™ Time-of-Flight (ToF) technology for Roborock's most advanced robotic vacuum cleaner
- Enabled by 100 times smaller size compared to legacy systems, technology is clearing space for integration of first 5-axis robot arm in robotic vacuum
- Consumers benefit from precise and agile navigation and improved obstacle recognition

Munich, Germany – 28 February 2025 – Infineon, a global semiconductor leader in power systems and IoT together with pmdtechnologies, a leading Time-of-Flight technology expert provide sensor technology to Roborock for its state-of-the-art Saros Z70 robotic vacuum. The standout feature of the smart robot is its industry-first 5-axis robot arm that can move obstacles out of its way and clean in areas that were previously blocked. This innovation is made possible by the small form factor of Infineon's REAL3™ Time-of-Flight (ToF) technology. Unveiled at CES 2025 in Las Vegas, today, Roborock launched the new Saros series in Germany.

Infineon's REAL3 Time-of-Flight, jointly developed with pmd, enables a next level of navigation and object recognition of robot cleaners with best-in-class performance and space efficiency. The technology is 100 times smaller compared to conventional laser distance scanner freeing up space for the integration of the retractable robot arm while maintaining a sleek and slim design, marking a significant advancement in the robotics industry. Furthermore, the integration of an additional Time-of-Flight camera from Infineon guarantees the precise and smooth operation of the robot arm, significantly enhancing the capabilities of the Roborock Saros Z70. For customers, this translates into increased benefits when using the robotic vacuum for home cleaning, as the robot arm can now move blocking objects and clean areas that used to be inaccessible.

"It's a major breakthrough that Roborock, a market leader for robot vacuum cleaners, has recognized the full potential of Infineon's sensor technology and transformed it into an innovative product that consumers have never seen before", said Andreas Kopetz, Vice President of Ambient Sensing at Infineon. "The collaboration is a great example for Infineon reinforcing its position as a leading player in the field of sensors and its goal to make life easier, safer, and greener. Together with customers and partners."

Pioneers from the very beginning.

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Enabling the industry-first 5-axis robot arm for a robot vacuum underlines Infineon's ambitions to further strengthen the competitiveness and go-to-market approach in the area of sensors. To accelerate innovation and value to customers further, Infineon has combined its sensor and RF expertise in a new business unit ([SURF](#), sensor unit and radio frequency) to drive the company's growth in the sensors market. This strategic move will capitalize on the vast potential of the sensor and RF markets, projected to exceed 20 billion US-Dollars by 2027.

[Download](#) the Whitepaper: "Enabling the next generation of smarter self-navigating robots using Hybrid ToF"

About pmdtechnologies ag

pmdtechnologies ag, a fabless IC company headquartered in Siegen, Dresden and Ulm/Germany with subsidiaries in the USA, China and Korea, is the worldwide leading 3D Time-of-Flight CMOS-based digital imaging technology supplier. Started up in 2002, the company owns over 450 worldwide patents concerning pmd-based applications, the pmd measurement principle and its realization. Addressed markets for pmd's 3D sensors are industrial automation, automotive and the wide field of consumer applications like smartphones.

Further information is available at pmdtec.com.

About Infineon

Infineon drives decarbonization and digitalization with its products and solutions. The Company had around 58,060 employees worldwide (end of September 2024) and generated revenue of about €15 billion in the 2024 fiscal year (ending 30 September). Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the OTCQX International over-the-counter market (ticker symbol: IFNNY).

Further information is available at <https://www.infineon.com>

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