

Maxim Integrated Enables Dynamic Gesture Sensing for Automotive Applications at Industry's Lowest Cost and Smallest Size

MAX25205 provides swipe and hand-rotation sensing at 10x lower cost and up to 75 percent smaller size than time-of-flight camera-based systems

SAN JOSE, Calif.—Sept. 22, 2020—Designers of automotive systems can now add dynamic hand-gesture controls with greater ease at the industry's lowest cost and smallest size with the **MAX25205** data acquisition system from Maxim Integrated Products, Inc. (NASDAQ: MXIM). Featuring integrated optics and a 6x10 infrared (IR) sensor array, the MAX25205 detects swipe and hand-rotation gestures without the complexity of time-of-flight (ToF) cameras at 10x lower cost and up to 75 percent smaller size.

- [Information about Maxim Integrated's Automotive infotainment solutions >](#)
- [Information about MAX25205, including how to order >](#)
- [Hi-res image >](#)

Automakers predict driver safety will improve when gesture and proximity sensing replace knobs and touch screens for infotainment, phone, side mirror, climate, trunk, sunroof and reading lamp controls. Most gesture-sensing systems in today's cars are based on ToF cameras that also bring high costs and complexities, which many manufacturers wish to avoid.

Maxim Integrated's optical-based MAX25205 enables the most hand gestures at a solution cost that is up to 10x lower than ToF camera-based systems. Additionally, the gesture and proximity-sensing sensor features a high level of integration and comes in a small 4mmx4mm chip size, which is up to 75 percent smaller than ToF camera-based solutions. This gesture solution offers a great complement solution to the voice command, as there are scenarios where voice command is not effective. Another benefit of a gesture solution is that the automotive displays do not become smeared with many fingerprints as customers use their touch screens.

Key Advantages

- **Lowest Cost:** Enables swipe and rotation gestures sensing at lower cost than a ToF camera; Allows developers to avoid complex software development and maintenance programs
- **Smallest Size:** 60 photo diode array, LED driver and internal LDO result in a total solution size that is significantly smaller than ToF camera solutions; Can be paired with a small microcontroller, rather than the larger microprocessors that more complex solutions require
- **Versatility:** Delivers 9 gestures, including swipe, rotations, air link and 3x2 proximity zones with low lag time in a single chip compared to a competitive solution that requires 3 chips and a complicated microprocessor; Cost reduction makes gesture-sensing feasible for automotive, consumer and

industrial applications such as smart home hubs, thermostats and others, all without touching the device

Commentary

- “Although ToF-based systems enabled gesture-sensing in luxury models, automakers are hopeful to add this stylish and life-saving feature to higher volume product tiers as well,” said Sachin Garg, associate vice president at [MarketsandMarkets™](#). “What designers need is a lower cost alternative to today’s systems in order to make the economics of gesture-sensing controls more feasible for non-luxury models.”
- “Maxim Integrated’s MAX25205 is a game changer for the automotive industry,” said Szu-Kang Hsien, executive business manager for Automotive Business Unit at Maxim Integrated. “By offering the most dynamic gesture control for automotive applications at the lowest cost, automakers can avoid the prohibitive costs of time-of-flight camera solutions and offer gesture sensing in more car models. It offers a stylish, cool factor to cars, especially for laid back drivers who prefer to use gesture for control with the added benefit of keeping their touch screens dirt-free.”

Availability and Pricing

- The MAX25205 is available at Maxim Integrated’s website; Pricing available upon request
- The [MAX25205EVKIT#](#) evaluation kit is also available at Maxim Integrated’s website

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About Maxim Integrated

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