Press release
Communiqué de presse
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P4439D

STMicroelectronics reveals affordable and turnkey STGesture™ recognition for touchless control in diverse applications

- *Dedicated FlightSense™ software package enables low-power, low-cost gesture sensing*
- *Full Privacy, thanks to camera-free solution leveraging ToF multi-zone ranging sensor*

Geneva, Switzerland, April 25, 2022 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has launched a solution for touchless gesture-based controls in simple, cost-conscious consumer and industrial applications. The solution comprises free engineering software to be used with ST's VL53L5CX FlightSense™ time-of-flight (ToF) multizone ranging sensor. Gesture recognition with ToF sensors is a breakthrough technology that enables sophisticated interactions with a wide variety of devices.

Initially a feature of high-end vehicles, gesture-based interaction can enhance numerous types of equipment, including kitchen appliances, thermostats, smart-home and smart-lighting controls, laptops, AR/VR headsets, tablets, and smartphones. Also, in today's world, user interfaces able to interpret touchless gestures can help prevent infections from spreading through equipment like vending and ticketing machines, elevator controls, and interactive signage.

ST is now making gesture detection simpler and more affordable for mass-market applications with this latest companion software for its VL53L5CX multi-zone ToF ranging sensor. Together, the sensor and software calculate in real-time the X/Y/Z coordinates of the hand, enabling hand tracking and thus recognition of gestures like tapping, swiping, level control, and more.

Conventional gesture-recognition systems typically use more expensive and intrusive camera-based machine vision. ST's solution lets designers build systems that benefit from greater user privacy and lower power consumption, and that work in the dark without needing external illumination, unlike vision-based solutions. The lightweight gesture algorithm can run on a low-power microcontroller and demands minimal system resources, so is easily integrated in an existing application.

"*Current trends are driving so-called edge devices to become more affordable and energy efficient, as well as more advanced and powerful*," said Eric Aussedat, ST's Executive VP, Imaging Sub-Group General Manager. "*ST is setting the pace with technologies such as our FlightSense imaging product portfolio, which now adds free and ready-to-use software that helps integrate gesture sensing for touchless control in all kinds of consumer and industrial equipment."*

The STSW-IMG035 software package is specially designed for the VL53L5CX multi-zone direct time-of-flight (dToF) ranging sensor and can be used with all STM32* microcontrollers. The VL53L5CX is ST's latest-generation ToF sensor, providing 64 zones with high-accuracy ranging up to 400cm with a wide, square-edged 63°-diagonal field of view.

ST's imaging team will present a webinar about gesture recognition, covering the principles, benefits, and real-life gesture applications, on April 26.

The VL53L5CX sensor is in production now, in a 6.4mm x 3.0mm x 1.5mm 16-pin optical LGA package, priced from $3.90 for orders of 1000 pieces. The turnkey STSW-IMG035 gesture package includes resources including a GUI, example code, and libraries, and is accessible here. Associated software packages and hardware evaluation boards are available here.

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About STMicroelectronics

At ST, we are 48,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with more than 200,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. ST is committed to becoming carbon neutral by 2027. Further information can be found at www.st.com.

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