Press release
Communiqué de presse
Comunicato stampa
新闻稿 / 新聞稿
プレスリリース
보도자료

T4291D

STMicroelectronics Collaborates with Qualcomm Technologies on Unique Sensor Solutions for Next-Gen Mobile, Connected PC, IoT, and Wearable Applications

Geneva, November 10, 2020 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, is extending its leadership in sensor technologies by developing innovative software solutions using technology from Qualcomm Technologies, Inc. through the Qualcomm® Platform Solutions Ecosystem program.

In this program, ST is contributing pre-validated software to OEMs for its MEMS and other sensing devices to deliver advanced features to the next generation of smartphones, connected PCs, IoT, and wearables. Most recently, Qualcomm Technologies has pre-selected ST's latest high-accuracy, low-power, motion-tracking IC with intelligent sensor software, along with ST's most accurate pressure sensor, for use in its latest advanced 5G mobile reference platforms.

The motion-tracking sensor, the new iNEMO LSM6DST is a 6-axis Inertial Measurement Unit (IMU) that integrates a 3-axis digital accelerometer and a 3-axis gyroscope into a compact and efficient System-in-Package. With the industry's lowest power consumption – 0.55mA in high-performance mode and as little as 4μA in Accelerometer-only mode -- the LSM6DST enables always-on high-accuracy motion tracking with minimal impact on power consumption. In concert with ST's low-noise (0.65Pa), high-accuracy (±0.5hPa), and industry-first I3C-enabled LPS22HH pressure sensor, the pair provides highly accurate location tracking while meeting the most restrictive power budgets.

For imaging applications, the LSM6DST fully supports EIS and OIS (Electronic and Optical Image Stabilization) applications as the module includes a dedicated configurable signal processing path for OIS and auxiliary SPI, configurable for both the gyroscope and accelerometer and, in turn, the Auxiliary SPI and primary interface (SPI / I²C & MIPI I3CSM) can configure the OIS.

Benefiting from ST's robust and mature low-power ThELMA[1] process technology, the LSM6DST supports and simplifies integration in low-power circuit designs and offers I²C, MIPI I3C® or SPI from the sensing element to the application. It also contains a 9-kbyte FIFO to allow dynamic data batching and 16 finite state machines that recognize programmed data sequences from the sensor and further reduce system-level power consumption.

[1] ThELMA (Thick Epitaxial Layer for Micro-gyroscopes and Accelerometers) is ST's proprietary surface micromachining process that combines variably thick and thin poly-silicon layers for structures and interconnection, enabling the integration of accelerometer and gyroscope mechanical elements in a single chip.

"*ST has long recognized the importance of sensors in Qualcomm Technologies' solutions and has been a strong collaborator for many years. They have demonstrated leadership in sensors with new interfaces such as MIPI I3C along with the ability to squeeze the power budget on its devices while maintaining or increasing sensor accuracy,*" said Manvinder Singh, Vice President, Product Management, Qualcomm Technologies, Inc. *"We are pleased to have* ST *join our Qualcomm Platform Solutions Ecosystem program to integrate and optimize their advanced sensor algorithms on the always-on, low-power island of our Qualcomm® Snapdragon™ Mobile Platforms. Collaboration with strategic vendors such as* ST *is critical to enabling the fast adoption of 5G technologies in different verticals."*

.

"Having worked closely with Qualcomm Technologies for many years, we've been able to assure sensor performance that meets the demanding requirements of next-generation mobile and wearable devices and software solutions that can be used with the Qualcomm® Sensor Execution Environment. These include advanced features -- such as hinge- or fold-angle detection for smartphones and Mobile PCs -- and enable the seamless integration and faster time-to-market of these features that customers across the globe require," said Andrea Onetti, Group VP and General Manager, MEMS Sensor Division, STMicroelectronics. *"Combining the industry's lowest-power high-accuracy IMU with our high-precision, robust, and extremely stable-over-time-and-temperature pressure sensor, can enable the best possible location accuracy to meet e911 and eCall requirements.*"

Qualcomm and Snapdragon are trademarks or registered trademarks of Qualcomm Incorporated.

Qualcomm Snapdragon and Qualcomm Sensor Execution Environment are products of Qualcomm Technologies, Inc. and/or its subsidiaries. Qualcomm Platform Solutions Ecosystem program is a program of Qualcomm Technologies, Inc. and/or its subsidiaries.

About STMicroelectronics

At ST, we are 46,000 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 our 100,000 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. Further information can be found at www.st.com.

For Press Information Contact:

Michael Markowitz
Director Technical Media Relations
STMicroelectronics
Tel: +1 781 591 0354
Email: michael.markowitz@st.com