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STMicroelectronics Reveals World's Smallest Motor Drivers to Streamline Design and Boost Runtime of Battery-Powered Devices for the Internet of Things

- ❖ *World's smallest full-featured motor drivers simplify design and save space in battery-powered and portable applications with unprecedented accuracy and smoothness of motion*
- ❖ *Superior energy efficiency including zero-power mode with best-in-class standby power consumption extends battery life*

Geneva, July 6, 2016 – With the expansion of portable technology in everyday life, new tiny, low-power electric-motor drivers from STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, are enabling sophisticated battery-powered equipment to become smaller and more mobile with extended runtime.

Controlling the motors at the heart of devices like portable medical pumps and drivers, personal wellness devices, portable point-of-sale devices, miniature robots, surveillance equipment, precision tools, and portable printers requires considerable engineering know-how. One of the biggest challenges is to combine logic and power components in a single chip on tight space and power budgets.

ST has now gathered all of these ingredients together in its new line-up of tiny [single-chip motor drivers](#) that meet the needs of the most demanding portable and wearable applications. The combination of low power consumption, small form factor, and outstanding performance of ST's new motor drivers is set to contribute to the widespread adoption of battery-powered IoT devices.

Measuring just 3mm x 3mm, ST's new devices are the [world's smallest single-chip motor drivers](#) integrating all the functionalities to enable product designers to deliver compact, lightweight, and user-friendly innovations into their target markets.

Frugal with battery energy, the drivers operate from a supply voltage as low as 1.8V and support power-saving design with ultra-low, best-in-class standby current of less than 80nA for a zero-power state when the motor is inactive. On the other hand, they

can supply up to 1.3A_{rms} to drive the motor and can therefore be used in a wide range of applications that include robotic positioning systems, printer motors, camera-autofocus mechanisms, toothbrush motors or syringe pumps.

“Our latest STSPIN single-chip devices are proven to simplify precision motor control and cut time to market for new products,” said Domenico Arrigo, General Manager Industrial and Power Conversion Division, STMicroelectronics. “The ultra-low power consumption extends runtime in battery-operated applications and enables designers to enhance portable and mobile devices with high-added-value motorized functions.”

ST’s new low-power, low-voltage STSPIN motor drivers are in production now, in 3mm x 3mm QFN packages, priced from \$0.75 for the STSPIN230 and STSPIN240, and \$0.95 for the STSPIN220, for orders of 1,000 pieces.

Further Technical Information:

The series currently comprises the [STSPIN220 stepper-motor driver](#), [STSPIN230 3-phase brushless-motor \(BLDC\) driver](#), and [STSPIN240](#) with two complete on-chip MOSFET bridges for driving two brushed DC motors. Another device designed to drive a single brushed DC motor with the current capability extended to 2.6A_{rms} will go in production during Q3 2016. The power stage of each device features efficient integrated MOSFETs that minimize energy loss and heat dissipation. Despite their tiny size, there is no compromise in performance or function. The STSPIN220 can drive stepper motors with position resolution of 256 microsteps per step, enabling extremely smooth motion and fine positional accuracy.

In addition, all devices benefit from comprehensive built-in protection features including over-current, over-temperature, and short-circuit protection. These ensure ruggedness and reliability, even in harsh industrial environments, without additional components thereby further reducing cost and complexity.

For further information please visit www.st.com/stspin

About STMicroelectronics

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST’s products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented.

In 2015, the Company’s net revenues were \$6.90 billion, serving more than 100,000 customers worldwide. Further information can be found at www.st.com.

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