



Toshiba launches new high-resolution micro-stepping motor driver IC with integrated current sensing

New device offers low BOM cost, high motor current and ultra-silent operation

Düsseldorf, Germany, 06th February 2020 – Toshiba Electronics Europe GmbH has launched an additional device to its line-up of micro-stepping motor driver ICs. The new TC78H670FTG is a dual channel high resolution micro-stepping motor driver IC that is capable of driving motors with a wide range of operating voltages. The new device is intended for a broad variety of consumer applications including 3D printers, cameras, security cameras, portable printers, handheld scanners, pico-projectors and battery powered medical devices.

The IC can drive a micro-stepping motor of up to 128 steps and with a voltage ranging from 2.5 V to 16 V at currents of up to 2 A. The output on-resistance ($R_{DS(ON)}$) is only 0.48 Ω as the TC78H670FTG uses Toshiba's latest CDMOS process, thereby reducing voltage loss and heat generation inside the driver. An ultra-low standby current of just 0.1 μ A

prolongs battery life and the ability to operate with a 1.8 V to 5.0 V interface allows connection to a wide variety of hosts and microcontrollers. As a result, the device is suited for use in USB powered and battery powered applications as well as with standard 9-12V system devices.

The micro-stepping control allows motors to be operated smoothly and quietly with reduced vibration and improved rotation angle accuracy. Safety features such as over current detection, thermal shut down and open-load detection are incorporated. The sophisticated motor driver is housed in a compact QFN16 package with a footprint of just 3 mm x 3 mm which, along with the elimination of the two bulky and expensive current sense resistors by incorporating on-chip current detection, contributes to significant cost and space saving in designs.

Mass production starts today.

Follow the link below for more information on Toshiba's motor driver IC line-up.

<https://toshiba.semicon-storage.com/eu/semiconductor/product/motor-driver-ics/stepping-motor-driver-ics/detail.TC78H670FTG.html>

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) is the European electronic components business of [Toshiba Electronic Devices and Storage Corporation](#) (Toshiba). TEE offers European consumers and businesses a wide variety of innovative hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. The company's broad portfolio encompasses integrated wireless ICs, power semiconductors, microcontrollers, optical semiconductors, ASSPs and discrete devices ranging from diodes to logic ICs.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing design, manufacturing, marketing and sales. Company president is Mr. Tomoaki Kumagai

For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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