



## **Toshiba Collaborates with MikroElektronika to Create Five New Motor Control Click boards™**

*Compact plug-and-play style Click boards™ support standardized connector systems*

**Düsseldorf, Germany, 06 August 2020** – Toshiba Electronics Europe (“Toshiba”) today announces Toshiba Electronic Devices & Storage Corporation’s collaboration with MikroElektronika (“Mikroe”), on a range of new Click boards™ targeting motor control applications. Toshiba’s highly integrated motor control ICs, with a history stretching back more than four decades, are recognized across the industry for their utility in motor control systems.

The plug-and-play style Click boards are compact in size while supporting Mikroe’s convenient and standardized connector socket called mikroBUS™. Mikroe support this range of development boards with software examples which help designers to simplify the integration of the boards when developing prototype systems and undertaking hardware evaluation.

The collaboration introduces five new Click boards for motor control, with two targeting brushed DC motor applications, one for brushless DC (BLDC) motors, and the remaining two supporting stepper motor control.

Targeting brushed motor applications are the DC Motor 6 Click based upon the TB67H451FNG, and the DC Motor 14 Click based upon the TB67H450FNG. Utilizing an advanced PWM chopper-type integrated DC motor driver, they are manufactured on Toshiba’s latest BiCD technology. Their low-resistance H-bridge delivers high currents with minimal heat generation. Four motor operation modes, forward, reverse, short brake and stop, are supported.

For brushless DC motors, developers can turn to the Brushless 7 Click featuring the TC78B009FTG. Capable of driving a BLDC motor without the use of Hall sensors, it integrates a closed-loop speed controller to regulate and maintain the set rotational speed regardless of any dynamic supply voltage or load fluctuations. User-defined speed profiles can be stored in its non-volatile memory (NVM), eliminating the need for an external controller for speed control.

Finally, for those looking to drive stepper motors, two further boards are available. The Stepper 10 Click, featuring the TB67S128FTG is a two-phase bipolar stepping motor driver with an output rating of 50 V / 5 A. It offers low power consumption coupled with the low on-resistance (0.25  $\Omega$ ) of its driver MOSFETs. A simplified control interface allows stepper motor control in both directions from full to 1/128 step sizes. Advanced current detection, active gain control, and multiple error detection features are also integrated.

The Stepper 8 Click is based upon the TB78H670FTG and also supports stepping down to 1/128, allowing noise and vibration generated by the stepping motor to be significantly reduced. Its wide operating voltage range of 2.5 V to 16 V ensures its suitability for USB and battery-powered applications, as does its compact 3 × 3 mm, 16-pin VQFN packaging.

All five Click boards are now available from Mikroe at <https://www.mikroe.com/click/motor-control?silicon-vendor=toshiba-semi>.

Note:

Click board™ and mikroBUS™ are trademarks of MikroElektronika d.o.o.

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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](#). 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](http://www.toshiba.semicon-storage.com).

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