

Brushless 10 Click



PID: MIKROE-6136

Brushless 10 Click is a compact add-on board that provides precise control over brushless DC motors. This board features the TC78B016FTG, a 3-phase sine-wave PWM driver from Toshiba Semiconductor. The TC78B016FTG features Intelligent Phase Control for automatic motor phase adjustment, eliminating manual calibration, supporting an external power supply from 6V to 30V, and adjusting current output up to 3A. It also includes various control and diagnostic features such as rotational speed output, brake function, speed command, and safety detections with visual indicators. The onboard DAC also offers additional tunability for motor control enhancements like lead angle control, output duty cycle, motor lockout, and PWM frequency selection. This Click board™ is ideal for applications requiring efficient and reliable brushless motor control, such as in fan motors or devices where precise speed and direction control are essential.

Brushless 10 Click is fully compatible with the mikroBUS™ socket and can be used on any host system supporting the [mikroBUS™](#) standard. It comes with the [mikroSDK](#) open-source libraries, offering unparalleled flexibility for evaluation and customization. What sets this [Click board™](#) apart is the groundbreaking [ClickID](#) feature, enabling your host system to seamlessly and automatically detect and identify this add-on board.

Mikroe produces entire development toolchains for all major microcontroller architectures.

Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.



ISO 27001: 2013 certification of informational security management system.
 ISO 14001: 2015 certification of environmental management system.
 OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).

Specifications

Type	Brushless
Applications	Ideal for applications requiring efficient and reliable brushless motor control, such as in fan motors or devices where precise speed and direction control are essential
On-board modules	TC78B016FTG - 3-phase sine-wave PWM driver from Toshiba Semiconductor
Key Features	Built-in auto lead angle architecture (Intelligent Phase Control), Hall amplifier, selectable rotational speed command, selectable PWM frequency, adjustable minimum duty and speed ration in PWM, lead angle control, rotation direction, break, diagnostics, and more
Interface	GPIO,I2C
ClickID	Yes
Compatibility	mikroBUS™
Click board size	L (57.15 x 25.4 mm)
Input Voltage	3.3V or 5V,External

Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

[Click Boards™](#)

[ClickID](#)

Downloads

[Brushless 10 click example on Libstock](#)

[Brushless 10 click 2D and 3D files v100](#)

[TC78B016FTG datasheet](#)

[DAC43608 datasheet](#)

[Brushless 10 click schematic v100](#)

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