

## Brushless 7 Click



PID: MIKROE-4182

**Brushless 7 Click** is, as its name said, a motor driver based expansion board for controlling BLDC motors with any microcontroller. The board is based on [TC78B009FTG IC](#) from [Toshiba](#), which is a three-phase BLDC motor controller that does not require Hall sensors. Some of the main features are a built-in closed loop speed control function that regulates and maintains the motor rotational speed under dynamic power fluctuations and load variations. With precise setting of a speed profile done by the built-in nonvolatile memory (NVM) it eliminates the need for an external MCU for closed loop speed control and makes it perfect solution for applications that include high-speed fans used in servers, blowers, cordless vacuum cleaners, and robot vacuum cleaners.

Brushless 7 Click board™ is supported by a mikroSDK compliant library, which includes functions that simplify software development. This Click board™ comes as a fully tested product, ready to be used on a system equipped with the mikroBUS™ socket.

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	Servers, Blowers, Fans, Cordless vacuum cleaners, Pumps and many more
On-board modules	TC78B009FTG,EL IC from Toshiba is a three-phase BLDC motor controller
Key Features	Sensorless PWM drive, Capable to drive Delta or Wye configured motors, Motor speed control by analog voltage, PWM duty cycle, or I2C
Interface	GPIO,I2C,PWM
Compatibility	mikroBUS
Click board size	L (57.15 x 25.4 mm)
Input Voltage	3.3V or 5V

## Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

[Click boards™](#)

## Downloads

[SSM6K513NU datasheet](#)

[TC78B009FTG datasheet](#)

[Brushless 7 click 2D and 3D files](#)

[Brushless 7 click example on Libstock](#)

[Brushless 7 click schematic](#)

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