PRODUCT BRIEF

BLDC motor control Shield for Arduino with MOTIX™ TLE9879QXA40

The BLDC motor control Shield for Arduino incorporates the TLE9879QXA40 chip, which is a member of the **MOTIX™ TLE987x 32-bit motor control SoC** family with integrated 3-phase bridge driver. A single Arduino board can manage up to four BLDC motor control Shields, stacked on top of each other, via SPI communication. Each Shield can be independently controlled and can operate a different application, if desired.

The BLDC motor control Shield supports three advanced motor control algorithms: Field-Oriented Control (FOC), Back Electromotive Force (BEMF), and Hall sensor-based control. It includes a 3x2 pin strip for easy connection to the Hall sensors of an electric motor. Users can also effortlessly adjust the motor parameters of the control algorithms. These parameters can be saved and retrieved from the Shield's flash memory or read and written from the Arduino.

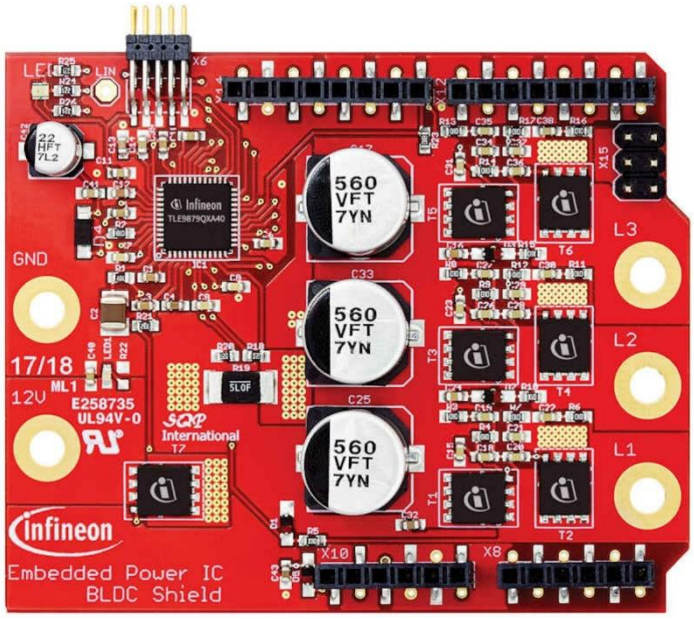
Additionally, the Shield features an RGB LED that can be user-controlled, providing versatile visual feedback. The included Arduino library offers an intuitive API to quickly setup and configure an application.

Key features

- MOTIX™ TLE9879QXA40 32-bit motor control SoC based on Arm® Cortex®-M3 with integrated 3-phase bridge driver
- Implemented motor control algorithms: FOC, BEMF, Hall
- Controlled over Arduino via SPI
- Compatible with the Arduino Uno
- Up to four Shields can be used simultaneously
- Each Shield can be controlled independently
- Motor parameters can be set for each Shield individually

Key benefits

- Achieve high-performance BLDC motor control with MOTIX™ TLE987x, a key component of Infineon's MOTIX™ MCU system-on-chip (SoC) solutions designed specifically for motor control applications.
- Easy to use API allowing the user to quickly set up an application



www.infineon.com/motix-mcu
www.infineon.com/bldcmotorshield

PRODUCT BRIEF

BLDC motor control Shield for Arduino with MOTIX™ TLE9879QXA40

Application examples

- 3D printer
- Multi-axis CNC-milling machines
- Construction robot arms
- Multi-copter and other RC applications
- Side mirrors
- HVAC flaps
- Seat control
- Light regulations
- Wiper

Product table

Sales name	Description	Order number
BLDC_SHIELD_TLE9879	BLDC motor control Shield for Arduino	BLDCSHIELDTLE9879TOBO1
TLE9879QXA40	MOTIX™ 32-bit motor control SoC based on Arm® Cortex®-M3 with integrated 3-phase bridge driver	TLE9879QXA40XUMA2

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neubiberg
Germany

Public

Date: 02/2025

www.infineon.com/motix-mcu
www.infineon.com/bldcmotorshield