



## STSPIN32F0: 32-bit MCU-based BLDC motor driver

A three-phase, half-bridge gate driver and a 32-bit MCU integrated in a 7x7 mm QFN package



### KEY FEATURES AND BENEFITS

- High integration with embedded 32-bit STM32F0 MCU with ARM® Cortex®-M0 core
  - 48 MHz, 4-Kbyte SRAM and 32-Kbyte Flash memory, 12-bit ADC
  - 1- to 3-shunt FOC supported
  - Communication interfaces: I<sup>2</sup>C, UART, and SPI
  - Complete development ecosystem available
- High performance three-phase gate driver
  - Wide application range: 600 mA current capability to drive a wide range of MOSFETs in applications up to 45 V
  - Robust: real-time programmable over-current, cross-conduction, under-voltage and temperature protection
  - Integrated bootstrap diodes reduce BOM costs
- Design flexibility with operational amplifiers and comparator
  - Cost-effective sensorless systems or accurate control with Hall-effect sensor feedback
- High efficiency, with on-chip generated supplies for MCU, driver and external circuitry
- Compact design with a 7x7 mm QFN package



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